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Heart, Soul, & Spirit: It has EVERYTHING to Do with the Bottom Line

By Jerry Shih

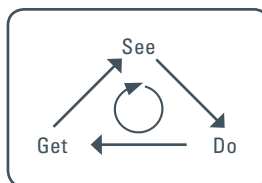


What separates an effective organization from an organization that just shifts from one management fad to another? *Substance vs. Form*. In a high-performance organization, one can never successfully sell the “soft stuff,” the latest management concepts, or the latest technology, on their own merits. One has to make the connection to the financial bottom line. The intent of this article is to increase readers’ insight and awareness, in an analytical way, that the “soft stuff” directly impacts the bottom line.

Introduction

With 20+ years of experience in both the private and public sectors, I have often experienced large gaps between concepts and practices. As a businessperson and a management practitioner, I have a strong need to bridge the gap between the two to impact the financial bottom line, or profitability. Along the way, I have come to appreciate a simple model: I see, I do, I get (Covey, 1989).

How you *see* leads to what you *do*; what you *do* leads to what you *get*; and what you *get* reinforces how you *see*. The highest leverage point to influence the results one *gets* is at the *see* level.



This article is written from an employee standpoint and is written for anyone who has employees reporting to them. The goal of this article is to show that the “soft stuff” and the

hard, clear results are inseparable. Given time and conscious learning, this paradigm shift will lead to discovering different ways of doing things that will in turn lead to a different result and a different organizational capability.

Analytical Linkage

Analytical linkage reveals the logical reasons for the correlation between the “soft stuff” and the financial bottom line. First, the pieces that are linked together will be introduced. Second, you’ll make your way through the linkage process. Finally, some questions will be addressed about utilizing the linkage that has been made.

Pieces to be Linked

Three simple and yet seemingly unrelated ideas will be introduced as foundation pieces for integration:

1. $V = f(P, Q, S)$
 - Value is a perception and is a function of price, quality, and service. Price is quantitative. Quantitative elements are what one would normally consider as the “hard stuff” of a business. They are direct and measurable when looking at the bottom line. Quality and service are more ambiguous and are what one would normally consider as the “soft stuff.” They are more nebulous and therefore much less direct and much less measurable when looking at the



Chair's Message

By Ken Sadler

What's new with the Quality Management Division:

We continue to work with 11 other divisions on the first joint Technical Committee Conference. The conference includes pre-conference tutorials October 27–29, 2014, and the two-day main conference October 30–31, 2014. This is the first conference organized by several different divisions and interest groups, and if you are not already registered, please do so as soon as possible. For more information please check out the conference website at www.asqtcconference.com. Book your rooms quickly since the conference room rate is very attractive and we expect that all the rooms will be taken before the end of September.

QMD has made a strong commitment to our student members and has agreed to pay their conference registration for the TCC conference. We hope to see many student and regular members at the conference.

During July 2014 we were able to get together and start the development of our annual strategic plan for 2015. Some of the highlights follow:

1. With the creation of our new Vice Chair of Students, Stephanie Thompson, we have developed strategic initiatives to engage more students within our division. Some of the specific activities include approval of student scholarships, approval of student conference support, growing student sections, providing speakers to student groups, and encouraging students to participate in articles for the *Quality Management Forum* and our eblast newsletter.

2. Continued global member involvement and support. Denis Devos is our new Vice Chair Global and is continuing his efforts to engage and grow our global membership. He recently participated in a conference in Singapore and continues to get country representatives for QMD. Under Denis's leadership we hope to significantly increase our global representation.
3. We continued to focus on member deliverables, which include QMF, Eblast newsletter and information for our web site that is open to all members of ASQ and the general public. We have discussed making our *Quality Management Forum* more e-reader friendly, increasing the number of eblasts to eight per year and increasing content for our website. Recent discussions have also included providing members with webinars.
4. Our new Education Chair Doug Wood has led discussion about how we can bring more educational content to our members, and Doug will work to provide more content over the next year. This group may actively assist with the webinars and new course offerings.

We continue to reach out and seek new member volunteers.

Let me know if you have any concerns or suggestions for improvement. I look forward to hearing from many of you,

Ken Sadler
Quality Management Division Chair
sadler@ns.sympatico.ca

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bottom line. To magnify the challenge of measurement, look at the income statement of any organization. The revenue number is the result of price times quantity. However, there are not any revenue measurement numbers that show the direct results of the qualitative elements on the income statement.

- A fundamental assumption is also being made here: human beings are always seeking ways to maximize the value package one receives. Each person might place different weight on P, Q, or S components of the value package, yet everyone is always looking for ways to maximize the perceived value of the whole package. Perhaps the best way to illustrate this notion is with an example. Say you had to make a choice between two apples. Both apples cost the same, are the same shape, and the same size. Which would you choose? What if one apple had a bruise and the other did not. Which apple would you choose then? If you noticed the bruise, the odds greatly favor you picking the apple without the bruise. Why? Because the apple without the bruise is a package of better value.

2. Maslow's hierarchies of needs (McLeod, 2007)

- The main idea is that human needs—physiological, safety, love, esteem, and self-actualization—are arranged in a hierarchy of dominance. That is, physiological needs have primary influence until they are relatively fulfilled. Hunger, thirst, and the need for air drive our actions until they are met; their satisfaction then reduces their power to motivate us. Successively higher needs, from safety to self-actualization, acquire power to motivate us as each level of needs is satisfied. Satisfaction at each level activates a new, higher level of needs.

3. Profit=Revenue-Expense

- Profit, or the bottom line, equals revenue minus expense. Often, people's salaries and benefits are the biggest part of expenses. When organizations are under the pressure to improve their bottom line, they often cut people because salaries and benefits make up such a large part of the expense equation.

Integration Process

Let's start with the idea of bartering: bartering just means exchanging things of "equal value." Equal value is really in the eyes of the beholder. When a person agrees to work for an organization, and when an organization agrees to hire the person, the foundation for the exchange has been established. Some subtle questions are embedded within this employee-employer exchange:

1. As an employee, what are the elements of the value package one seeks in an employer?
2. As an employer, what are the elements of the value package one seeks in an employee?

3. What happens when the elements of the value package change with time?
4. What happens when the weight placed on each element of the value package changes with time?

As an employee, the elements of the value package one seeks from an employer might include:

- **Price:** salary, benefits, stock options, bonuses
- **Quality:** personal growth and development, security, opportunity
- **Service:** chance to be part of something bigger than oneself, pride, dignity

As an employer, the elements of the value package one seeks from an employee might include:

- **Price:** time, part of one's life
- **Quality:** courage, risk-taking, initiative
- **Service:** skills, knowledge, perspectives, experience

There are probably as many elements as there are organizations or people. Listing all the elements is not as relevant as recognizing that in a bartering arrangement the employee or the employer is *always* seeking the best value package in the transaction. When the employee or the employer senses that the exchange is no longer fair, then the seeds of frustration are sown.

When an employee changes employers, the employee brings all of the qualitative elements s/he possess to a new employer. The only thing the employee cannot bring to the new employer is the time spent in the past work/jobs. It is gone. Since time cannot be recaptured, an employee will always seek the best value package for giving up a part of his/her life and for contributions, based on their quality and services elements, to be made with the new employer. Again, every employee will need to define for him or herself what the best value package is.

Globalization and the information revolution have diminished the value package offered by the employer to the employee. The resulting competition has eliminated two qualitative elements an employee highly values: security and opportunity. Unless the employer replaces the value eliminated, the employee will develop a sense of unfair exchange and frustration and will seek ways to recreate a sense of fairness.

How feasible is it for an employer to replace the value of the qualitative elements eliminated with higher salary and benefits? Not very. Employees' salaries, benefits, and bonuses show up on the employer's income statement (Revenue-Expense=Profit) as an expense. Global competition is making it very difficult to raise prices, increase volumes sold, and generate more revenue. When

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an employer increases the price side of the value package offered to an employee to offset the qualitative elements lost, expenses increase and profit decreases. The stockholders will not be happy.

Let us suppose that an employer can just increase the salary and benefits of the employee to offset the lost value an employee derived from a sense of security and opportunity. How much money will it take to re-establish the employee's sense of fairness? If one believes in Maslow's hierarchies of needs, it would have to be a high number. When an employee's physiological and safety needs are met with the current salary and benefits, the sense of value derived from each additional dollar drops. Economists called this phenomenon the Law of Diminishing Marginal Return. If an employer cannot replace the value of the qualitative elements lost with other qualitative elements, then the employer leaves the employee with no choice but to push for a higher salary and additional benefits to recreate a sense

of fairness. The value an employee derives from each additional dollar drops, and the expense for the employer steadily increases. The employer's profitability will be on a continuous decline and the employee will still not be satisfied. This is not a good situation for the employer *or* the employee.

There are many examples in the marketplace where employers can underpay and yet obtain quality employees. Those employers are successful at developing individuals' potential as well as helping them grow and generating a sense of purpose and meaning. These employers have been able to deliver the qualitative elements of the value package. Many employers have created a vision statement for the company or think that they are developing people. But do the employees FEEL they are a part of something purposeful and meaningful? Do the employees FEEL they are being developed and that they are gaining experience? Do they FEEL they have ten years of experience, or do they FEEL they have one year of experience repeated ten times? From an employee standpoint, what is more valuable: 10 years of experience or one year of experience 10 times? When an employee does not FEEL the *qualitative* elements, the employee will seek to increase the *quantitative* elements of the value package in order to maximize the value package received. And once again the expenses of the organization will increase, and its bottom line will decrease.

Some Questions about Utilizing the Linkage Made

The linkage raises some interesting questions for increasing the value an employer can deliver to an employee. The value can be increased through the qualitative side of the value package. If an employer is successful with the qualitative side, the possibility is very real for decreasing the quantitative side of the value package. The financial bottom line will improve. Some of the qualitative or "soft" questions might include:

1. Employees value personal development, so many organizations spend a lot of money on training. Are training and development synonymous? Can personal development happen without spending a lot of money on training? Are organizations creating developmental plans that deliver real growth and impart actual integrated knowledge to the employee? How does one create personal developmental capabilities of supervisors, managers, and leaders?
2. The intention of a company's vision statement is to communicate the aspirations of the organization and to create a spirit that all employees are a part of something meaningful and purposeful. What does it take to really create a spirit within all employees that they are a part of something bigger than themselves?
3. Employees place value on a sense of security or opportunity. Competition is making it difficult for employers to maintain that sense. How does an employer substitute the value an employee places on security or opportunity?
4. The linkage suggests that an employer needs to create a mindset that an employee is a customer. To stay competitive

A New QMD Sub-Group on LinkedIn!

Having just launched in 2012 the "Organizational Excellence Technical Committee," the OETC LinkedIn Group now has over 700 members from 70 countries participating in rich, experiential discussions on various Excellence Frameworks.

Are you interested in the use of excellence criteria such as Baldrige, EFQM, and others to help organizations of all types attain higher levels of performance? Then join the QMD's Organizational Excellence Technical Committee (OETC) on LinkedIn. The OETC goals are to be a reference point on excellence frameworks and models; to contribute to a body of knowledge on excellence models; to promote the use of international, national and local excellence programs; to share case studies, lessons learned, and success stories about performance; to make assessment tools available; and to show how quality methods and tools integrate with excellence models. Also visit our webpage for a list of resource materials at <http://www.asq-qm.org/organizational-excellence>.



for the best and brightest employees, the employer needs to think about creating the best value package in the marketplace for its “customers.” How many bosses think or treat their employees like customers? How many employees feel their bosses think or treat them like a customer? What would it take to make this paradigm shift happen?

Closing Thought

Globalization and the information revolution are fundamentally changing the competitive landscape for all participants. In today’s business environment, sooner or later, even the most advanced technologies or best practices become commodities, widely available to all players. Earlier users of advanced technologies or the creators of best practices can expect only a short duration of competitive advantage. They will not guarantee that you will be a durable winner for having had them. The only competitive advantage an organization really has is its people, who can learn and change rapidly, innovate continuously, and implement change initiatives faster and more comfortably.

The above linkage crystallized for me what leadership is about:

- Leaders help people create a sense of
 - meaning,
 - purpose, and
 - focus.

- Leaders help to bring out people’s
 - heart,
 - soul, and
 - spirit.
- Leaders help people build a sense of
 - confidence and
 - competency.

By treating the qualitative elements as second-class citizens, an organization would be neglecting valuable opportunities to improve the bottom line. Competition, resulting from globalization and information revolution, is making the qualitative elements of value packages delivered to employees a crucial factor in a company’s success.

References

Covey, S. (1989). *The 7 habits of highly effective people: Powerful lessons in personal change*. New York: Simon & Schuster.

McLeod, S. (2007). Maslow’s hierarchy of needs. <http://www.simplypsychology.org/maslow.html>, (updated 2014).

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Using TRIZ to improve Employee Engagement in an Organization

By Johnny Chow

Introduction

Employee engagement is getting more important to organizations today as businesses realize human productivity and engagement correlate with performance. Stein (2007) concluded that “Happy workers make successful companies,” and he co-developed the “Benchmark of Organizational Emotional Intelligence.” Today business leadership is looking at Human Resources as a strategic partner, and employee engagement is certainly one of the keys that drive business results. There are many human capital management and employee engagement publications, and it is very challenging and time consuming for leadership and managers to digest and implement all this information quickly and effectively. TRIZ as an inventive tool can design and develop matrices and inventive principles to assist in this process. This paper discusses how the initial approach of using TRIZ for employee engagement improvement fits well with employee engagement even though TRIZ started with engineering contradiction problems.

Organizations are facing several tough challenges in human resources and talent management. Pursuit for talent and personnel management has become highly important in today's businesses, and companies are competing to attract and keep the right talent for their organization. This paper reviews the challenges and opportunities involving employee engagement in an organizational environment to ultimately improve business results and performance. This study attempts to research the available literature on employee engagement improvement and will apply TRIZ (in Russian meaning Theory of Inventive Problem Solving) methodology. Darrell Man's 40 Inventive Principles will be applied and evaluated for accuracy or relevancy of the methodology

to obtain the right solution to improve employee engagement. Prior related employee engagement and TRIZ literature will be reviewed regarding the application of these inventive principles to address typical constraints. This research will touch on the contradiction and criticality of business results in correlation with employee engagement results. For this paper the questions to be answered are (1) Can TRIZ provide a better, faster, more effective and executable solutions? (2) Can we use TRIZ-specific tools for employee engagement applications? and (3) TRIZ is not an HRM or behavioral management science tool, so is it still relevant? The steps that will be applied are (a) Find existing solutions or principles in the area of the research and then correlate them with TRIZ's 40 Inventive Principles (this is to prove that the solutions of that domain area also fall within TRIZ) and (b) Use TRIZ tools to complement the existing tools in that domain.

What is Employee Engagement?

Aon Hewitt defined employee engagement as the “emotional and intellectual involvement” that encourages employees to perform their best at work. Global recession has caused salary freezes, compensation cuts, and layoffs, which make it difficult to sustain high employee engagement levels. Nevertheless many employers are working hard to develop and maintain a highly engaged workforce. Employee engagement dynamics vary significantly within different industries or different regions (Aon Hewitt, 2010).

Organization Business Results versus Culture and Employee Engagement

Today one of the most critical components in organizations is employee “value,” and it is not great speeches, banners or the notice

boards. Do all managers and executives “walk the talk”? Thinking and acting like Toyota's “respecting people” value and recognizing that company's successes is rather encouraging. Most of us may relate the astonishing “Toyota Production System” or Lean manufacturing to Toyota's success, but it is actually their “values.” Respecting people is a rather reciprocal process—you get what you give. A company's culture, values, and engagement are so critical that if these are not well in place, the organization's strategy will keep changing as expediencies are often challenged. A bad culture or low employee engagement can make a good strategy fail, while a good culture or high level of employee engagement, though they do not necessarily ensure the success of the business strategy, will build an environment for success.

Most organizations know and take good care of their high performers, but very few organizations try to develop the average performers. Toyota's “respect for people” philosophy goes after the average performers in the organization, where Toyota actively develops their skills and capabilities. Engaged employees deliver better performance versus “disengaged employees.” Engaged employees understand their role and responsibilities within the business strategy, have a strong “connection and commitment” to the company, and try to go “above and beyond” (Aon Hewitt, 2010).

What is TRIZ?

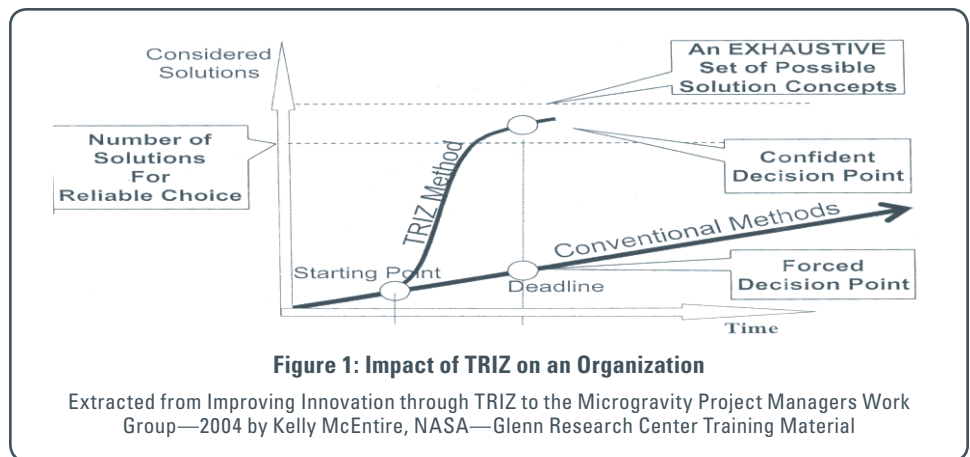
TRIZ is a Russian acronym for Theory of Inventive Problem Solving (TIPS). TRIZ stands for “Teorija Reschenija Izobretatel'skich Zadac.” It was designed by Genrikh Altshuller in 1950. TRIZ was an attempt to develop a methodology to

support the generation of new ideas and breakthrough solutions in a systematic way. TRIZ is an inventive and powerful methodology based on empirical data. TRIZ is also a “problem solving, analysis and forecasting toolkit” derived from global patent literature, and Altshuller claimed breakthrough quality improvement and accelerated innovation speed through evaluation of design patent evaluations (Hipple, 2005). Based on 40,000 patents, Altshuller identified and grouped 40 Inventive Principles with a Contradiction table set to address more than 1,200 contradictions with 39 standard parameters (Tong et al, 2006). Today TRIZ is taking off as more global companies and organizations are embracing it as the “best practice” for inventive problem solving

McEntire (2004) indicated the benefits of TRIZ implementation in various areas: allows problem solving based on fixed algorithm; is an easy algorithm to follow, which is repeatable; develops better and more innovative solutions; enhances credibility and wins more proposals; reduces the number of trial and error solutions; saves time, money and reduces risk; works on any type of problem; innovates new products and failure prediction (per Figure 1).

TRIZ Qualitative Survey

Using a qualitative approach, an interview with Dr. Mark Barkan was conducted on April 21, 2013. Dr. Barkan is a TRIZ Master, and he’s the current MATRIZ Executive Director. MATRIZ is the International TRIZ Association established to promote the use of TRIZ methodology and certification worldwide. A few unstructured questions were asked regarding the importance of TRIZ and its application for different problems and different levels of people and industries. TRIZ is a general system of study based on the 40 Inventive Principles needed to find appropriate principles that would apply to our problem (Barkan). Barkan is currently the mentor of General Electric TRIZ Level 3 in Germany, and according to him General Electric indicated TRIZ is



the Six Sigma for the 21st century. Barkan researched and is currently promoting the Education of New Era (ENE) where he said, “to learn how to swim just throw someone into the water” and “for ENE just throw them into the problem.” Currently there is a demand to teach people how to think or be creative in this borderless and unpredictable world—Think, Learn, and Innovate instead of Learn, Think, and Innovate (Barkan).

Can TRIZ be applied in Non-Technical disciplines like Human Resource Practices?

Business today and globalization force organizations and companies to compete not only for “faster, better and cheaper” but also to be “more innovative.” Innovation has been much more critical in business and leadership for organizational success. However, innovation is easier said than done, and in today’s marketplace it is no more a luxury or something “nice to have,” but rather a necessity. Today’s business is intensely competitive and “dynamic” with global information technology, networking and technology changes that keep businesses under tremendous pressure and create constant demands for speed, cost, and value—whether it be small or large organizations. However there is no proven effective tool to accelerate business innovation. With the progress and success of TRIZ in product innovation, more and more professionals are looking at TRIZ. Samsung in Korea employs over 100 full-time TRIZ specialists, and each innovative project goes through TRIZ

expertise and methodology (Souckov, 2007). TRIZ Masters are upbeat and believe in the value of TRIZ application on management problems—“Management-TRIZ” (Müller, 2005). Recent studies show that several TRIZ experts have started to apply TRIZ methodology to business and management problems.

To continue in business, survive, and sustain competitive advantage, knowledge and innovation are the key resources needed. Human Resources and managing people are no exceptions to these challenges. Many studies have identified the critical success factors of human resource practices for best business performance. Bozbura & Ersin (2009) researched integrated human resource practices with TRIZ methodology and established a cross learning and verification among the uses of the TRIZ Human Resources Capital model.

What are the Drivers for Improving Employees’ Engagement?

Employee disengagement is one of the gold mine resources within an organization. Disengaged employees choose not to bring their best imagination or their passion to work. However, these are what companies today need most of employees in order to compete in the marketplace (Martinuzzi, 2013). Hamel indicated that managers need to ask, “How do we create a work environment and a sense of belonging and purpose to develop creativity and passion?” instead of, “How do we get people to serve our company?” (Martinuzzi, 2013).

**(USING TRIZ TO IMPROVE EMPLOYEE ENGAGEMENT
IN AN ORGANIZATION, continued from page 7)**

Martinuzzi (2013) indicated that research shows one of the critical factors affecting engagement is relationship with the immediate manager, and that stressed employees leave because of bad managers. Good managers are “personally involved,” “delegate and utilize their employees’ talents,” “do not withhold recognition,” “actively foster a sense of community and belonging,” and provide “feedback and coaching.” Therefore companies need to conduct a “reverse 360 assessment” to give employees an opportunity to evaluate their managers, for development purposes. We need to understand what drives people from the new-school manager; using the carrot and stick approach is not effective today for encouraging engagement and accountability. Daniel Pink found that after salary and financial needs, what next motivates people is “Autonomy (ability to direct their own lives), Mastery (drive to improve at something that matters to them) and Purpose (desire to do something larger than current).” He added, “Get to know your people on a human level and focus on what they need to do even better. Fairness is respecting and treating all people the same way so that performing well is not a ‘function of who you know,’ but what you know” (Martinuzzi, 2013).

Spigener & Angelo (2001) commented on Deming’s 14 points that specifically relate to employee engagement.

- Point 1: Create constancy of purpose toward improvement of product and service, with the aim to become competitive, to stay in business, and to provide jobs
- Point 8: Drive out fear, so that everyone may work effectively for the company
- Point 14: Put everybody in the company to work to accomplish the transformation. The transformation is everybody’s job.

Doing these things will promote employee engagement. Most employees are motivated more by environmental (conditional and emotional) effects than by rewards. Having happy people do their job is different from having people happy to do their job. Leadership must pursue creating an environment and structure where people are happy to work. Marshall (2011) indicated you can also ask your superior what you can do to be a better associate and on the other side ask your associate what you can do to be a better leader. He noted that there is a high correlation between happiness in your personal life and happiness in your work life. Applying TRIZ with Human Capital Management—Employee Engagement Human Resources Management is a broad challenge that may lead to various conflicts. TRIZ is an inventive problem solving approach for these kinds of conflicts. TRIZ researchers successfully work around the conventional trade-offs where most other designers miss.

Darrell Mann developed the Business and Management Contradiction Matrix for TRIZ (Mann & Domb, 1999, and Mann, 2004). Mann and Domb researched TRIZ application for business and management, which led to research into human resource management. This study aims to evaluate how the application of the 40 Inventive Principles integrate with the TRIZ Contradiction Matrix and how the matrix can be applied to human resource management, specifically in employee engagement. The TRIZ Contradiction Matrix sets out a 39 X 39 matrix with three or four most appropriate strategies to solve design problems involving the 1,482 (39 X 39 minus 39) most common contradiction types. Contradiction is always part of TRIZ; however, there are methods to eliminate contradictions, and designers need to exploit this well during the design process (Mann, 2004).

40 Inventive Human Resources Principles

Altshuler’s 40 Inventive Principles were integrated into Human Capital, along with Mann and Domb’s (1999) “40 Inventive Principles with Business Examples.”

A qualitative voting approach was conducted using Six Sigma Green Belt students (Six Sigma Institute, Hong Kong). The question asked—based on the 40 Inventive Human Resources Principles—was What are the appropriate practices that will effectively improve employee engagement? Eighteen students participated and were divided into three teams, and each team took 13 or 14 of the 40 principles. The responses are below:

- Principle 1 SEGMENTATION: Empowerment
- Principle 2 TAKING AWAY (Extraction): Compensation, Promotion
- Principle 3 LOCAL QUALITY: Work Design (Change work hours, change administrative rules, performance appraisals), Work Environment
- Principle 4 ASSYMETRY: Open Door Policy, Improve Communication Channels
- Principle 5 COMBINING: Improve Communication Channels, Develop more Social Activities, Cultural Integration
- Principle 6 UNIVERSALITY: Team Building
- Principle 7 NESTING: Career Maps Investment to Employee, Maslow’s Hierarchy of Satisfaction
- Principle 9 PRIOR COUNTERACTION: Social Activities
- Principle 12 EQUIPOTENTIALITY: Leadership Training, Career Management
- Principle 13 OTHERWAY ROUND: Rotation
- Principle 21 SKIP: Suggestion System Freedom of Expression

	Employee Satisfaction	Employee Motivation	HR System (Human Capital)	Management Leadership	Knowledge Sharing	Employee Commitment	Value Alignment	Structural Capital	Process Execution	Knowledge Integration	Development (Education)	Retention of Key People	Relational Capital	Knowledge Generation	Business Performance	Skills & Competences	Strategy Execution	Innovation capability	Culture & Values
Employee Satisfaction	+		1, 15, 37			1, 10,		28	1, 32,				1				3	21	
Employee Motivation		+	1, 15, 20	12	4, 24	4	10	20, 28	1, 32,					25			3		
HR System (Human Capital)	10, 26	10, 14	+	12	22	14	11, 33	4, 12, 14, 28		17, 40,		28	29, 31,	1, 25, 30	1, 8, 9		3, 18	13, 15, 21	10, 14, 16, 24
Management Leadership	12	14	12	+	10, 22,	1	12	12, 26	1, 12	25	7	2, 28	1		1, 8, 12		3	3, 30,	6
Knowledge Sharing	4	4, 5		4, 6	+	4	4		4, 15		7	1, 4, 28		4	1, 4	4		4	4
Employee Commitment	3, 7	7	20	17		+			1, 39			2		1					
Value Alignment	4	5		5		7, 8	+		1						1, 5				
Structural Capital	14, 28, 35		1, 18	6, 15, 17	22, 29, 31,	1, 7, 18	7, 22, 29, 33	+	17	17, 31, 40	7, 26, 33	1	25, 27	1, 22, 30, 40	1, 8	19, 22	17, 21, 38	1, 21, 30,	7, 13, 16
Process Execution	3, 16, 28, 35	5, 10, 16, 20	1, 3, 18	12, 18, 40	29, 31, 40	4, 18, 24	16, 20, 29, 33	28	+	17, 20, 31	33	1, 2, 28	3, 29, 36	22, 30, 40	1, 29	22, 25	20, 21, 38	15, 21, 30,	6, 29, 32
Knowledge Integration	7	7								+		2			1				
Development (Education)	3, 26		3	3		3	3	3		3, 23	+			3	1		1, 3	1, 3	1
Retention of Key People	3, 4, 7, 28	7, 24	1, 2	6, 15, 17	10, 29	1, 2, 4	3, 9	4	1, 15	17	7	+	1, 27	2	1	25			7, 10,
Relational Capital	3				10	2	8	4	1	23, 25		1, 28	+		1, 16	8	1		6
Knowledge Generation	3, 14		1	6		1, 6, 18	11, 22			21				+	1		1	1	
Business Performance	3, 10, 14, 28	5, 10, 13,	1, 6, 13, 18, 28, 37	3, 6, 12, 18, 33	22, 28	24	33	4, 12, 19	3	21, 22	7, 26	2, 9, 28	3, 31, 32,	1, 22	+	18, 22, 33	18, 21, 38	15, 21, 30	1, 10, 16, 29
Skills & Competences					22		11		1, 11	17	7		1, 31	22, 30,	1, 8	+			11
Strategy Execution	3, 26	5	2, 3	6, 12, 17				4, 12	1, 15, 17, 34	17	7	1, 2		25, 30,	1, 16, 32		+	1	10
Innovation capability	3					8	8		1	21, 23	7		3, 29		1, 8, 29		1	+	11, 13
Culture & Values	6, 28	6		12		8	6, 8, 29	6, 26		6	7	28	29	22	1, 8	6		6	+

Figure 2: Human Capital Management 19X19 TRIZ Matrix

Extracted from: F. Tunç Bozbura, Füsun Ersin (2009), TRIZ in Human Capital Management, 13th International Research / Expert Conference—Trends in the Development of Machinery and Associated Technology, Tunisia

- Principle 22 TURN THE HARM TO ONE'S GOOD: Encouraging Freedom of Expression
- Principle 23 FEEDBACK: Open Door Policy, Communication Channels, Social Activities
- Principle 25 SELF-SERVICE: Employee Involvement
- Principle 26 USE OF COPIES: Employee Satisfaction Surveys
- Principle 28 MECHANICAL PRINCIPLES REPLACEMENTS: Differentiation in Wage System (Incentive payment)

- Principle 29 PNEUMATIC AND HYDRAULIC STRUCTURES: Flexible Management Climate
- Principle 31 POROUS MATERIALS: Flat Organizations Remove Communication Barriers between Hierarchy
- Principle 32 CHANGING COLOR: Increase Social Responsibility Projects
- Principle 40 COMPOSITES: Decrease Hierarchy, Human Capital Management—Engagement 19 X 19 TRIZ MATRIX

Looking at the challenges and problems of human resource management, 19 critical elements were identified as the contradiction parameters: “(1) Employee Satisfaction; (2) Employee Motivation; (3) Human Capital (HR System); (4) Management Leadership; (5) Knowledge Sharing; (6) Employee Commitment; (7) Value Alignment; (8) Structural Capital; (9) Process Execution; (10) Knowledge Integration; (11) Training (Development, Education); (12) Retention of Key People; (13) Relational Capital; (14) Knowledge

(USING TRIZ TO IMPROVE EMPLOYEE ENGAGEMENT IN AN ORGANIZATION, continued on page 10)

(USING TRIZ TO IMPROVE EMPLOYEE ENGAGEMENT IN AN ORGANIZATION, continued from page 9)

Generation; (15) Business Performance; (16) Culture and Values; (17) Skills and Competencies; (18) Strategy Execution; (19) Innovation Capability. These parameters are grouped into four areas: Human Capital Competencies: Human Capital Deliverables; Human Capital System; and Human Capital Practices” (Bozbura & Ersin, 2009). Fifteen of the 19 criteria came from Bontis’ study on human capital, which was based on intellectual capital, organizational learning, and knowledge management literature (Bontis, 2002). The following four criteria were selected from human capital literature about effects on organizational success (Bozbura & Ersin, 2009).

Bozbura & Ersin researched and developed a 19X19 matrix based on various articles and literature studied. However in this area, human capital management, exist certain subjective and complexity structures that have been suggested to achieve higher accuracy based on the 19X19 matrix contradiction pairs. As shown in Figure 2 the intersections of same contradictions indicated as “+” denote no contradiction. Nineteen contradiction parameters are listed on the left column “improving” and on the top of table “worsening,” while the numbers within the boxes cross-reference to the 40 Inventive Human Resources Principles (item 5.2 in Figure 5). Employee engagement is Employee Satisfaction (1st of the left column) is implemented to improve, the worsening parameters that are indicated in the intersection of conditions in the two parameters to satisfy the principles for the solution. The boxes of both “improving” and “worsening” combinations that have no interaction are left empty. For Employee Satisfaction the intersection of HR System (Human Capital) is demonstrated with principles 1, 15, 37; Employee Commitment with principles 1, 10; Structural Capital with principle 28; Process Execution with principles 1,

32; Relational Capital with principle 1; Strategy Execution with principle 3; and Innovation Capability with principle 21.

Conclusion

Employee-engagement is getting to board room discussions in many organizations. Employee engagement is critically important for improving an organization’s productivity and talent management. Today business leaders are looking at human resources as a strategic partner, and employee engagement is one of the keys to understanding what drives business results. Thinking back to Jim Collins and his book *Good to Great*, it’s more important to have the right people on the bus and sitting on the right seat first before we try to drive the bus anywhere.

There are many publications annually about human capital management and employee engagement, and all this information is difficult and time consuming for leaders and managers to digest given their busy schedules and workloads. It is believed TRIZ as an inventive tool can design and develop matrix and inventive principles to assist them well. This study set an initial approach of the use of TRIZ in employee engagement to demonstrate an appropriate application of TRIZ methodology. TRIZ started with the application to engineering contradiction problems. Due to the limitations of the subjectivity of employee engagement, this approach and model should be improved by other TRIZ experts to improve its objectivity and accuracy.

Beatty et al (2003) indicated that human capital management could be set with a few different matrixes designed to focus on culture, operational excellence, product (service) leadership, and customer intimacy. Thus an Organization Engagement TRIZ matrix can be designed according to its culture, values and beliefs.

References

- Aon Hewitt Engagement 2.0 Report, 2010
- Beatty, R., Huselid, M. & Scheiner C E. (2003). New HR metrics: Scoring on the business card. *Organizational Dynamics*, 32 (2), pp. 107–121.
- Bontis N. & Fitz-enz, J. (2002). Intellectual capital ROI: A causal map of human capital antecedents and consequents. *Journal of Intellectual Capital*, 3 (3), pp. 223–247.

- Bozbura, F. & Ersin, F. (2009). TRIZ in human capital management. 13th International Research / Expert Conference—Trends in the Development of Machinery and Associated Technology, Tunisia
- Hipple, J. (2005). The integration of TRIZ with other ideation tools and processes as well as with psychological assessment tools. *Creativity and Innovation Management*, 14 (1), pp. 22–33.
- Mann, D. & Domb E. (1999). 40 inventive (management) principles with examples. *The Online TRIZ Journal*. September.
- Mann, D. (2004). *Hands-on Systematic Innovation for Business and Management*. Lazarus Press 7.
- Martinuzzi, B. (2013). How to get disengaged employees to go the extra mile. American Express Open Forum (online).
- McIntire, K. (2004). Improving innovation through TRIZ to the microgravity project managers work group. NASA—Glenn Research Center Training Material.
- Müller, S. (2005). The TRIZ resource analysis tool for solving management tasks: Previous classifications and their modification. *Creativity and Innovation Management*, 14 (1), pp. 43–58
- Spigener, J. & Angelo, P. (2001). What would Deming say? *Quality Progress* 34 (3), pp. 61–64.
- Souchkov, V. (2007). Breakthrough thinking with TRIZ for business and management: An overview. ICG Training & Consulting
- Stein, S. (2007). *Make Your Workplace Great: The 7 Keys to an Emotionally Intelligent Organization*, San Francisco: Jossey-Bass.
- Tong, L.H., Cong, H.C. & Lixiang, S. (2006). Automatic classification of patent documents for TRIZ users. *World Patent Information* 28, pp. 6–13

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Appendix

40 Inventive HR Principles. Extracted from: F. Tunç Bozbura, Füsün Ersin (2009), TRIZ in Human Capital Management, 13th International Research / Expert Conference—Trends in the Development of Machinery and Associated Technology, Tunisia.

1	SEGMENTATION	Cost Analyses Training Analyses Empowerment Work Design
2	TAKING AWAY (Extraction)	Advancement opportunities. -(Compensation, Promotion, Job enrichment)
3	LOCAL QUALITY	Work Design (Change work hours, Change administrative rules, Performance appraisals) Promotion developing Working environment Outsourcing Hire Consultant
4	ASSYMETRY	360 Appraisals Strategic Management Open Door Policy Improve Communication channels
5	COMBINING	Improve communication channels White Collar / Blue Collar Compensation equivalency Develop more social activities Cultural Integration
6	UNIVERSALITY	Team building Team leadership Training Analyses Outdoor training Managing diversity
7	NESTING	Career maps Investment to employee Maslow's Hierarchy of Satisfaction
8	COUNTERWEIGHT	Mergers Hire Consultant Change recruitment system
9	PRIOR COUNTERACTION	Work Design Working hours Social Activities Prior to a lay-off, prepare compensation, outplacement, and communication packages for all affected employees
10	PRIOR ACTION	Psychological counseling Mobbing training Improve communication channels
11	EARLY CUSHIONING	Recruitment
12	EQUIPOTENTIALITY	Leadership training Career Management Rotation
13	OTHERWAY ROUND	Rotation Change HR Rules Change Recruitment system Change Performans Appraisal system Apply BPR in HR
14	SPHERIDALITY	Change work design Change Organizational chart Rotate leadership of a team
15	DYNAMICITY	Empowerment Technique Training Leadership training Team training Project training process management flexible organization structure
16	PARTIAL OR EXCESSIVE ACTION	Continuous improvement (Kaizen) Continuous training 360 Appraisals
17	ANOTHER DIMENSIONS	Authority by a manager to subordinate Changing organizational hierarchy
18	MECHANICAL VIBRATIONS	Continuous Audit System Continuous HC Metrics analyses Continuous HR scorecard
19	PERIODIC ACTION	Periodically Audit System Periodically appraisals Periodically HR metrics
20	USEFUL ACTION CONTINUITY	Kaizen Lean HR Continuous Improvement
21	SKIP	Free flow of information Innovation culture Knowledge creation Suggestion system Freedom of expression
22	TURN THE HARM TO ONE'S GOOD	Free flow of information Encouraging to freedom of expression Suggestion system Competition for new ideas
23	FEEDBACK	Knowledge sharing Advanced User friendly Network Information system Open Door Policy Communication Channels Social Activities
24	INTERMEDIARY	Hire Consultant
25	SELF-SERVICE	Performance center Self evaluation system design Employee involvement
26	USE OF COPIES	Outsourcing Cost analyses for reduction 6 Sigma Employee satisfaction surveys
27	CHEAP SHORT-LINES INSTEAD OF COSTLY LONG-LIFE	Hire project-base employee Hire part time employee
28	MECHANICAL PRINCIPLES REPLACEMENTS	Differentiation in HR functions Differentiation in Recruitment interview Differentiation in wage system (incentive payment etc)
29	PNEUMATIC AND HYDRAULIC STRUCTURES	Flexible organization structure Flexibility describes changes in the size of the workforce, depending on short-term changes in market conditions Flexible management climate
30	FLEXIBLE SHELLS AND THIN FILMS	Changing physical work conditions Delegate and leave people as free as possible
31	POROUS MATERIALS	Flat organizations Remove communication barriers between Hierarchy
32	CHANGING COLOR	Change Physically work environment social activity Increase social responsibility projects
33	HOMOGENEITY	Network organization T group training
34	REJECT AND REGENERATION OF PARTS	Hire Consultant Project based working
35	CHANGE OF PHYSICAL AND CHEMICAL PARAMETERS	Change performance criteria Change recruitment criteria Change wage system Change promotion system
36	PHASE TRANSITIONS	Relational Capital
37	THERMAL EXPANSION	Structural Capital
38	STRONG OXIDIZERS	Change the firm's strategic focus Recruitment of different cultures Merging Strategic partnership
39	INERT ATMOSPHERE	Strengthen Hierarchy Apply rules effective Strengthened The controls
40	COMPOSITES	Multi-disciplinary project teams. Employ different personality types Decrease Hierarchy

Quality Management Journal Preview

QMJ vol. 21, no. 4 Executive Briefs

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

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.

Lean Six Sigma: A Fresh Approach to Achieving Quality Management

Jay Arthur

Quality management researchers have identified that successful implementations of Six Sigma have a positive return on investment, but they have not always investigated why these companies succeed or fail, as well as the negative effects of unnecessary training.

A Denver, CO toll-road organization—E-470—decided to take a different approach to implementing a quality system, hoping to increase their chances of success. They took a project-oriented approach, focused on delivering results quickly. This involved giving employees just enough training in key methods and tools, but not the entire Lean Six Sigma body of knowledge, so as not to overwhelm and confuse them.

The organization's project-focused approach proved to be a success; E-470 is one example of how using this results-focused approach can save time and money and produce bottom-line results.

Everything Is 5S: A Simple yet Powerful Lean Improvement Approach Applied in a Preadmission Testing Center

Dennis R. Delisle and Valentina Freiberg

Healthcare organizations today are tasked with doing more with fewer resources, so they must be purposeful in their approach toward improving systems and processes. There is a recent trend by hospitals involving the slow but steady adoption of performance improvement approaches, such as lean and Six Sigma; hospitals that use the philosophy and tools of lean are positioned to improve clinical outcomes, operational efficiency, and customer satisfaction.

5S, which stands for sort, store, shine, standardize, and sustain, has traditionally been used as a lean tool, although it may actually have more potential when deployed as a quality management and improvement framework. This paper tests the use of 5S as a quality management framework. In particular, a preadmission testing (PAT) center of a 900-bed urban academic medical center applied 5S to the patient flow process to analyze and improve the preadmission testing processes.

Through the use of lean thinking and the 5S framework, a team of lean practitioners and PAT staff was able to streamline patient throughput and eliminate waste, thus showing that the 5S framework can be an effective, simple way to design and improve processes in a relatively short period of time.

Strategies for Environmental and Traditional Quality Efforts During New Product Development: Balancing Complementarity and Conflict

Gülru F. Özkan-Seely

A current trend in the environmental movement is design for environment (DfE), which is a concept that integrates environmental considerations into the product design and development process to minimize a product's environmental impact. Successful DfE practices in product design and development balance environmental considerations with cost, performance, safety, functionality, and quality criteria. DfE's purpose is to embed both positive environmental and functionality attributes into the product's form and function.

The research presented in this article uses a model focused on the management of environmental quality and traditional quality of a product during its design stage. It provides insight to the

manager about how to allocate efforts and resources to increase the level of environmental and traditional quality embodied in a particular product, which allows the manager to increase the utility, or value, attributed to a product and the revenue earned.

This study also provides insights about how attribute complementarity and conflict affect environmental and traditional quality levels and how this influences managers' decisions to pursue higher levels of quality of each. In addition, it shows that the nature of the quality advancement sought is critical in determining the manager's quality optimization strategies.

A Multilevel Framework of Six Sigma: A Systematic Review of the Literature, Possible Extensions, and Future Research

V. Arumugam, University of Strathclyde; Jiju Antony, Heriot-Watt University; and Kevin Linderman, University of Minnesota

Six Sigma is a multilevel phenomenon that involves both the organizational and the project level. This paper reviews the literature on Six Sigma and researches the relationship between Six Sigma and business performance. The authors

find this important for the following reasons: 1) to assess how Six Sigma affects performance; 2) to determine the usefulness of Six Sigma as a resource for competitive advantage; and 3) to clarify conflicting accounts of the relationship between Six Sigma and business performance.

The authors tracked the development of this research based on the literature from 2000 to 2012 and they synthesized various perspectives into a comprehensive multilevel framework linking leadership, Six Sigma dimensions at both the organizational and project level, and performance outcome. A multilevel framework can help one better understand the Six Sigma phenomenon and the theory that underpins this phenomenon. It shows the evolving interdependencies among various factors that are proven and are potentially linked to Six Sigma deployment and performance.

To carry out their research, the authors reviewed 186 papers. Through this research they were able to bring together a number of different perspectives of Six Sigma, understand how Six Sigma influences business performance through various dimensions, and consider the cumulative implications of various studies and findings, stimulating practical insights and future research.

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QMF Book Summary

The Dip*

By Russell T. Westcott

This is a real little book, both in dimensions and number of pages. But it delivers a large message, one so pertinent that it should be shared with family, friends, colleagues, employees, customers, and suppliers.

Author Seth Godin strikes a chord that will resound with many readers: This “little book teaches you when to quit and when to stick.” It speaks to people who feel like giving up often—or even some of the time. Belatedly, people either persistently stick with something longer than they should, or just give up and quit. “Society assumes you’re going to quit, and businesses and organizations count on it.”

There are often benefits for that tiny minority of folks who can stay with it a bit longer than most. And, often, extraordinary benefits go to those with the sense to quit early and refocus on a new *it*.

In choosing what’s best for you, do you purposely make your choice from the best available, be it people, job, fruit, transportation, or furnishings? The reward for your choice of #1 far outweighs #2–10. (Using statistical analysis, a Pareto chart demonstrates this.) Scarcity and price are differentiators for #1.

Want the highest salary? Then work to be perceived as the best of the best. In our global world the amount of variety available is mind-boggling. Even so, the world is getting smaller because of specialization. This translates to striving to be the best in the world in a specialty that is or will be in demand—overall that means more places in which to win, but higher stakes to get there.

Godin makes a shocking observation: “Being well-rounded is the secret to success” is wrong advice. School and society taught us that when something gets too difficult, move on and focus on the next thing. No. The exceptional

specialist in doing something best gets rewarded, and that applies to organizations as well as individuals. Mediocre doesn’t cut it.

The architecture of quitting is explored: “Strategic quitting is the secret of successful organizations” (and people). A chart contrasting effort expended versus results achieved depicts an early upswing followed by a “dip.” “A Dip is the long slog between starting and mastery.” For example: a person’s aspiration to become a medical doctor encounters a med school requirement called *Organic Chemistry*. That is a Dip that confronts the aspirant, and if he or she fails, it prevents entry into med school. And, if becoming a CEO attracts you, check out a CEO’s résumé and you’ll see the quarter of a century it took to surmount the Dip. Godin says that aspiring CEOs “lean into the Dip...pushing harder, changing the rules as they go.”

Next, is the “Cul-de-Sac,” a French word for “dead end.” Godin advises: “When you find one, you need to get off it, fast . . . Stick with the Dips that are likely to pan out, and quit the dead-ends to focus your resources.”

The “Cliff” is next to consider. “It’s a situation where you can’t quit until you fall off and the whole thing falls apart.” (The enhancement of pleasure from smoking, as you approach the “cliff” and are diagnosed with emphysema, is an example.)

“The Cul-de-Sac and the Cliff lead to failure. The Dip is where success happens.” Of the three choices, the quitting in the middle of the Dip, which is common, must be avoided if you wish to succeed. Adversity may be your ally in a competitive world, as it gets harder you have a better chance of differentiating yourself from the competition. If the adversity leads you to quit, all is lost.

A Jack Welsch (GE) story states that Jack quit dead ends (divisions that weren’t #1 or #2 in their industry), in order to free up resources for other endeavors. Godin notes that being mediocre is easier than quitting; quitting is hard. “It’s human nature to quit when it hurts, but it’s that reflex that creates scarcity . . . Quitting when you hit the Dip is a bad idea. If you can’t make it through the Dip, don’t start.”

Seven reasons for how you could fail to become the best in the world all relate to hitting the Dip and quitting:

1. Run out of time
2. Run out of money
3. Get scared
4. Not be serious about it
5. Lose interest (mediocre will suffice)
6. Focused short-term; long-term too hard
7. Picked the wrong it to be best at (lack the talent)

The treatise concludes with some personal questions to ask yourself (*What ifs*):

- Am I panicking?
- Who am I trying to influence?
- What sort of measurable progress am I making?

Whether you are an individual facing a personal decision or an organization executive facing a decision that can risk the fortunes of hundreds of people or collapse of the organization, you owe it to yourself and others you affect to learn more about *The Dip*.

*Godin, Seth, *The Dip*, New York: Portfolio (Penguin), 2007, 80 pages.

Russ Westcott is an ASQ Fellow, CQA, and CMQ/OE. He is editor of the *ASQ Certified Manager of Quality/Organizational Excellence Handbook*, 4th ed.

Book Review

By Robert Spencer

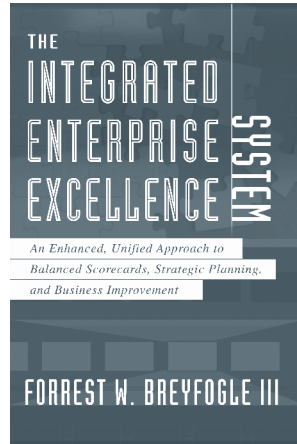
*Integrated Enterprise Excellence
Volume II—Business Deployment:
A Leaders' Guide for Going
Beyond Lean Six Sigma and the
Balanced Scorecard*

Forrest Breyfogle III
Austin, TX: Citius Publishing, 2008

*The whole can be other than the sum
of the parts...*

In this second volume on Integrated Enterprise Excellence (IEE) Forrest Breyfogle gives us the roadmaps to implement business process improvement from a holistic perspective, looking beyond sub-process performance to the level of how the organization as a single system actually performs in reaching business goals. We usually hear the misinterpretation of gestalt theory as, "The whole is greater than the sum of the parts." This is actually a correct statement for many Lean Six Sigma projects that obtain remarkable improvements through a standard disciplined methodology. In contrast, the statement by psychologist Kurt Koffka was actually, "The whole can be other than the sum of the parts." IEE begins from a different reference point and then, using the same standard toolset, achieves a more rational monitoring of business system performance.

This feature is especially apparent in how Breyfogle early on brings Deming's seven deadly diseases into the justification for IEE. Deming gave us these seven conditions as particularly troublesome in any effort to build quality into a system for



long-lasting competitive advantage. These diseases (Breyfogle calls them "guiding lights") are crucial to understanding organizational management and quality leadership, yet these factors are often overlooked in process improvement projects. It becomes much more difficult to ignore the impacts of the diseases in an IEE business process management system. Here is the list of the seven, to refresh our memories.

1. Lack of constancy of purpose (in planning products and services)
2. Emphasis on short-term profits (short-term thinking and push for quarterly financial results)
3. Evaluation of performance (annual reviews from management perspective)
4. Mobility of management (job hopping)
5. Management by use of visible figures only (little consideration of the unknown or unknowable)
6. Excessive medical costs
7. Excessive costs of liability

To illustrate these points, consider how the evaluation of performance in many organizations is to have associates prepare their annual goals with only a loose tie-in to corporate goals. Once these individual goals are approved by managers, everyone goes "head down" on their own future, meeting attendance drops, and communication suffers. All of these consequences work against a common effort for alignment of performance that benefits the whole organization.

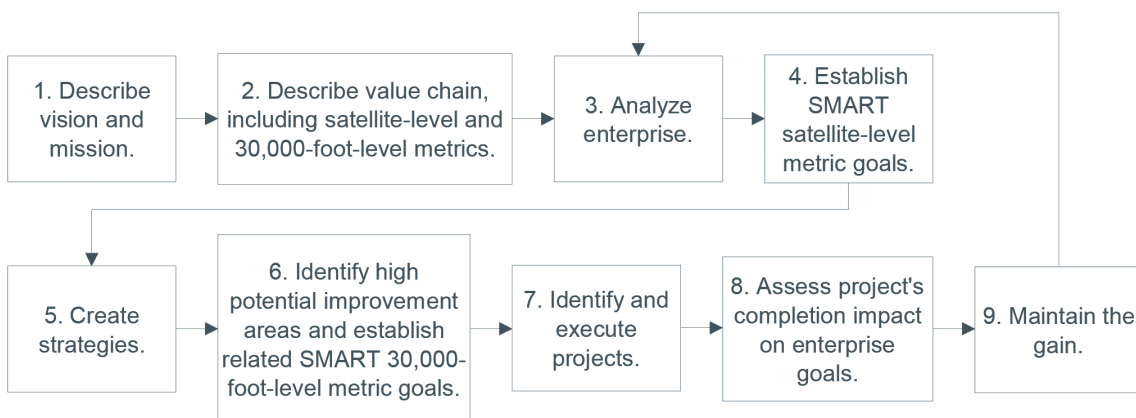
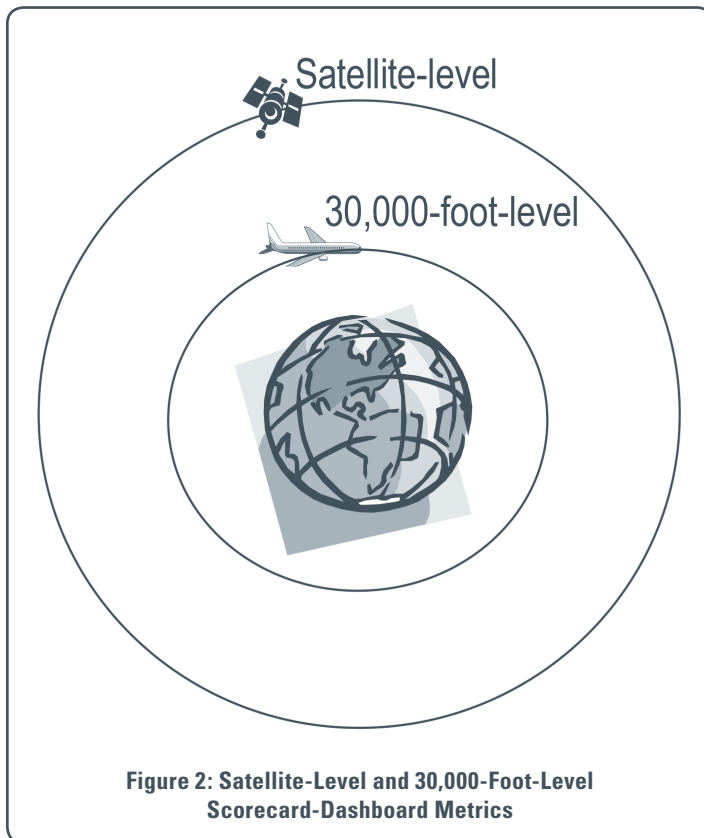


Figure 1: Aligning Projects with Business Needs Through the E-DMAIC Roadmap

(Book Review,
continued from page 15)



This 500-plus page textbook is full of practical examples showing ways to create Lean and Six Sigma projects that embrace an enterprise perspective, support strategies consistent with business goals, and promote a clear understanding of what to measure and report. There is certainly more content in this book than can be fairly communicated in a book review. Therefore, I will limit this review to pointing out some highlights within the DMAIC Analyze phase of the IEE Enterprise-DMAIC (E-DMAIC) process (See Figure 1).

At the outset, we need to keep a couple of points in mind regarding IEE and E-DMAIC. First, performance metrics in the IEE system have a regular reporting at the enterprise level so that special and common cause process variation has a high-level-viewpoint separation (See Figure 2). This 30,000-foot-level perspective provides the opportunity to make predictive statements of what futuristically is expected from processes, if nothing were to change. With this form of measurement reporting, additional insight is gained into how the organization is actually performing and what can be done to improve its overall performance. Secondly, E-DMAIC is used to establish a long-lasting enterprise system for measurement and improvement that is refined over time where performance-measurement-improvement needs pull for projects that positively impact the business as a whole.

I have chosen to look at just the E-DMAIC Analyze phase to demonstrate the original thinking Breyfogle has brought to traditional Lean Six Sigma improvement projects. Similar examples of innovative ideas are found in the other E-DMAIC phases, but the new practices covered here should bring an immediate boost in effectiveness of most business process improvement projects.

Do You Have a Strategy?

An organization must have a strategy characterized by an integrated, overarching concept on how the business will achieve its objectives. E-DMAIC uses scorecard metrics tracked over time to determine business performance before financial goals are established. Then SMART goals are created (Specific, Measurable, Actionable, Relevant, and Time-based). Specific projects then become apparent to achieve these goals. The key here is that goals are based on analysis of “what is” before committing to “what is wanted.”

Theory of Constraints (TOC) in Development of Strategic Plans

Theory of constraints focuses on reducing system bottlenecks as a means to continually improve the performance of the entire system. Rather than viewing the system in terms of discreet processes, TOC addresses the larger systematic picture as a chain or grid of interlinked chains. Improvements attempted anywhere along the chain must be evaluated for their potential influences elsewhere in the chain. Such impact analysis is not typically done in a process-centric “push for project creation” improvement program.

Lean Assessment

A first step in understanding a process is to observe it in operation under usual and unusual circumstances. However, most process improvement projects begin with financial expectations and the amount of cost (dollars or percentage) that need to be removed. Observation worksheets and standardized work charts are ideal ways to collect, summarize, and evaluate process observations. Breyfogle suggests the following four opportunities for identifying target areas for improvement.

Workplace

- Organization and layout
- Standardized work
- Visual controls

People

- Effectiveness
- Quality at the source

Systems

- Workstation tool reliability

- Cellular flow
- Batch reduction or elimination
- Pull vs. push systems
- Point of use implementation

A Lean assessment template matrix is presented in the book's appendix.

Enterprise Process Value Stream Mapping

An additional consideration here is that the E-DMAIC system offers a framework for measurement and improvement that aligns well with the Toyota Production System. In IEE, high level monitoring (satellite-level financial metrics and goals) lead to scorecard and dashboard metrics (30,000 foot-level operational metrics and goals). The need to achieve satellite goals then pulls for application of the most appropriate Lean and Six Sigma tools. If the goal is a reduction in lead time or inventory, then Lean tools should be considered and a kaizen event may be the best means to obtain timely results.

Innovation and Creation Process

IEE is more of a business system than traditional Six Sigma and Lean Six Sigma deployments. In IEE, the focus is on a system that has predictive performance measures and goals that pull for projects that will be beneficial to the “big picture.” In the

IEE system, emphasis is given to creating financial benefits that are felt by the entire company, not just at the individual sub-process measurement level. Creativity is used to formulate an enterprise improvement plan that identifies potential projects that are sensitive to the voice of the process, are in direct alignment with business goals, and are responsive to voice of the customer expectations.

In the absence of creativity, most improvement teams find only evolutionary improvements and conventional causes. Creativity increases the chance of finding unconventional causes and revolutionary improvements. IEE satellite-level metrics can track overall value to an organization, both from a financial and customer point of view. A closer view of the value from processes then can be obtained from operational and project 30,000 foot-level metrics. Creativity can be used to clarify “places of most potential” in the IEE project value stream, so that only the most promising projects are undertaken to add value for the organization and its customers.

If some of these ideas strike a chord with you, then you definitely will want to read this entire book on Integrated Enterprise Excellence to learn more about how to change your perspective on the design of a business process management system.

Robert Spencer is the editor of the Quality Management Forum.

Coach's Corner: Supporting my Team!

By J.R. McGee

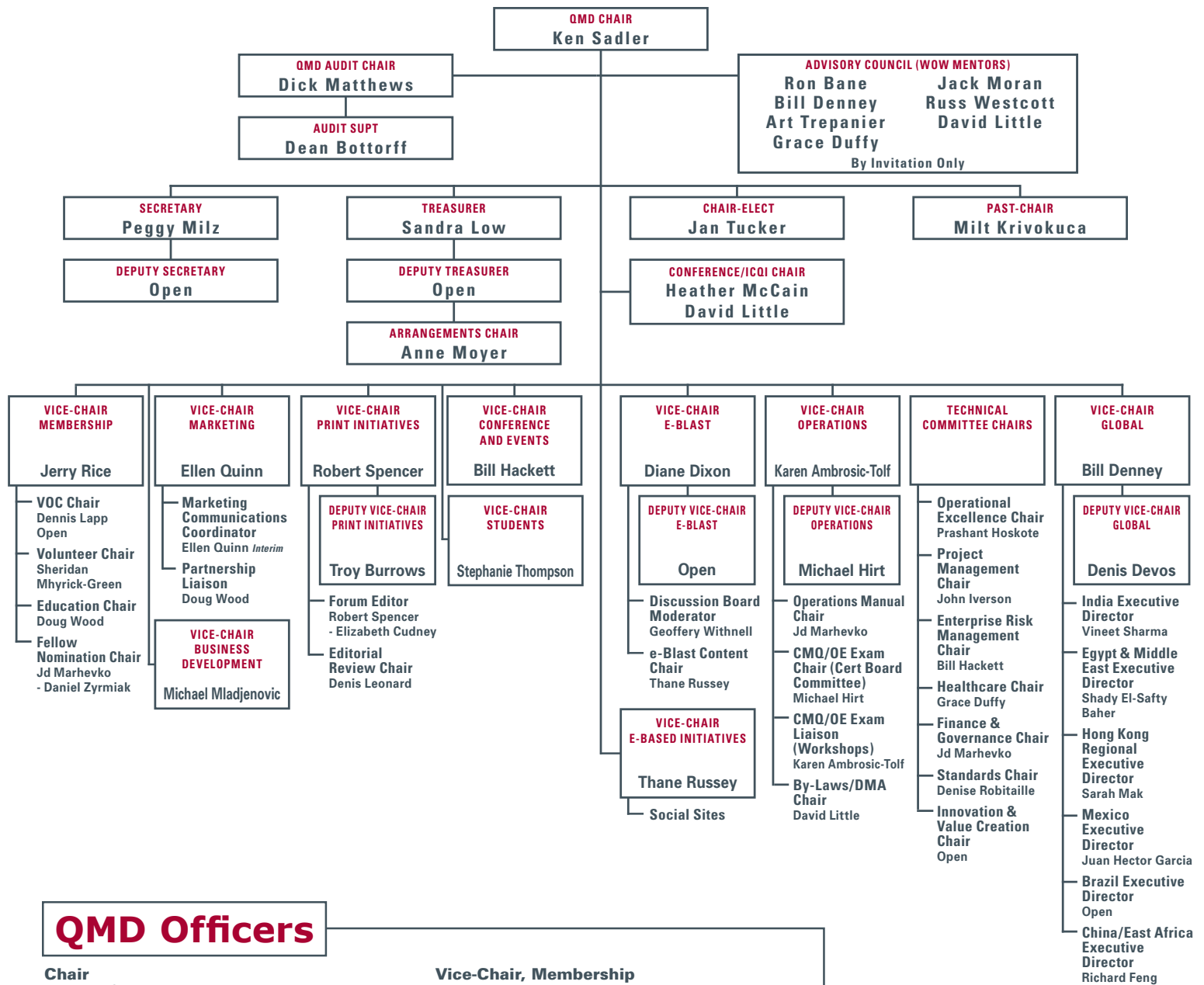
In our last column, we talked about frustration. Apparently, this really hit a nerve as several people have approached me about various frustrations that concern them in the workplace. The one that I think touches the most people in quality management is, “How do I ensure my team gets appropriate recognition and support for the work they’ve done and the results they’ve produced?”

It can be incredibly disheartening to you as a manager, and to your people as contributors, to work “over and above” and yet find that there is little to no appreciation for what you’ve accomplished. As most of us have found out, it’s easy to be taken for granted in the workplace. Depending upon what else is happening in other parts of the organization that also demands attention, this can be a major issue for us and our people. I have worked

with teams that have done amazing things that were absolutely eye-watering, with levels of effort that bordered on the superhuman, only to have the executive team respond with a shrug, or worse, tell them they expect that level of commitment every day. Now don’t get me wrong . . . I’ve spent most of my life working with Special Forces in the realm of counter-terrorism, and I was the program manager for fighter pilot training facilities around the world. I set and demand very high levels of expectations for myself and I accept nothing less than the best my teams have to give. But nobody can routinely deliver 150% 8-hours a day 6-days a week. So when people do something truly awesome, one of our prime jobs as a quality professional/leader is to ensure it is appropriately recognized and valued by the organization.

A very good friend of mine had an experience like this with his student team development week for a major university last month. As part of the team-building experience, they completed a major Lean Six Sigma 5S event in two labs on campus. They included a machine shop and related areas that had not been “deep cleaned” in decades. They set *very stretch* goals for themselves and exceeded even those in less time than anyone at the university believed possible. They worked from sunup until close to midnight every day for seven straight days on this project and poured heart and soul into what they were doing. As is typical of such projects, an out-brief was scheduled with one of the top administrators at the university. He was specifically invited both to show him the value that had been delivered,

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and for him to provide supportive feedback and constructive appreciation to the team for what they had accomplished against all odds.

Most of you with experience already know where this story is going The administrator did not see the team in the first lab he visited and was heading home until my friend tracked him down and applied serious arm twisting to get him to at least spend a few minutes with his team. The message to the team (and to my friend) could not have been clearer: "You and your efforts are no big deal." When building a team or creating a culture of excellence, all your hard work and sweat equity can go up in smoke in mere seconds if this happens. And while this is a pretty egregious example, this is exactly what happens to us and our teams far too frequently.

Let's look at how to get in front of this to ensure it doesn't bite us when and where we least expect it.

1. Avoiding this problem begins when you are in the initial planning stage for your team's project. Take the invitees on a pre-event tour of the area so that they will have context for the improvements they will see. Find out their availability and schedule your team around them to ensure they can support you fully. Decide very early on what the deliverables for the project are going to be and how they will be "packaged." Most good project plans begin with the end in mind and build backwards. This is no different.
2. Decide who the audience is going to be for your team's efforts. Invite them early and often. A major failure mode I've fallen into myself and seen with others is to invite once and assume they will show up. Invite them officially during the initial tour, and then do a multi-media follow-up. Face-to-face, e-mail, phone calls, and getting your out-brief on the staff meeting agenda items are all effective ways to reach somebody multiple times.

Don't become a pest, but make sure they know how important this is, and what they can expect to see and hear at the team session.

3. Spend time coaching the invitees on their role in the out-brief or meeting. Don't just assume that when they see or hear the results they are going to swoon. Understand how each invitee typically responds and develop a plan to tailor the out-brief for them. Let them know what you are trying to accomplish with the team so that they are fully aware that this is about more than just the results of the activity. If possible, arrange a photo op with them and your team for publication. Often, invitees are looking at your accomplishments in the light of everything else that is going on in the organization, and without insight they are going to provide their normal response to something that you know to be "above and beyond." Never assume people know what you are trying to do just because *you* know...
4. Make certain invitees know that they will be expected to comment appropriately on the team's results at the end and to give your team encouragement for the "bigger picture goals" you are trying to achieve with these activities. I hate to say it, but not everyone is focused on team-building and development of our people. Be aware of what is going on in their
5. If, despite your best plans and actions, you get to the finish line and it "blows up" on you, have a plan prepared ahead of time as to how you will handle the situation. Most importantly, keep your emotions in check! Do not let your ego write a check you will regret cashing later. Use the situation as a learning opportunity for your team and work with them to figure out how to overcome the adversity and make something positive out of your experience. Thinking this through ahead of time can make all the difference!

If we plan and strategize the encouragement and acknowledgement of our people's success like we plan our projects themselves, we will make certain we are rarely if never faced with a catastrophic disappointment. It's our job as quality leaders to protect our team members and help them achieve their full potential as our future quality professionals!

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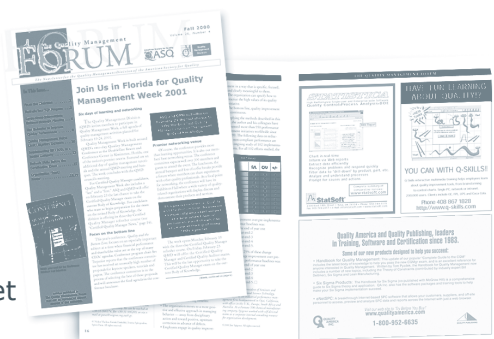


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