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Beyond Six Sigma—Heart-centred improvement

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What should the next generation of Quality be? Our belief is that re-issuing of existing methods, or more sophisticated techniques, is not the answer.

We need a heart-centred approach to organisational improvement in contrast to the technical and commercial emphasis of traditional programmes.

By connecting the challenges of organisational change to people's innate love for learning and problem solving, we create improvement programmes which are in harmony with human nature and produce lasting results.

It is our belief that this needs to be the predominant force in the next generation of the Quality movement.

Process Management International has worked around the world for over 20 years for global clients such as Rolls-Royce, Airbus, GlaxoSmithKline, BMW, International Paint, and many others including health, police and local government organisations. Jan and Jane have addressed many conferences, including the ANQ in Delhi, Taipei and Singapore. PMI are partners with the UK's Chartered Institute for Quality, the world's oldest professional quality association.

This paper is built upon our practise as leaders and consultants. Our propositions for basic principles of human development arise as much from our experience as leaders and parents as from academic study. Our convictions arise from our observations of changed behaviours and from comments made by clients who have themselves led from the heart.

Structure of the paper

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 2. Reminder of what most improvement programmes have been trying to accomplish and how have they measured up against their expectations.

1. Background of improvement and transformation programmes

In order to lead better business programmes in the future, it helps to have an appreciation of the history. (the appendix provides some more background on typical programmes and their shortcomings.)

Over the last thirty years many organisations across the world have sought to improve their performance by means of quality-based improvement efforts. Through the 1980s and early 90s the emphasis was on product quality, and a wide range of tools were demonstrated to be effective. However, although there were many individual examples of success within organisations, much of the efforts were limited to manufacturing and there were few overall corporate business transformations.

Since the mid 1990s, Six Sigma and Lean have been heavily promoted for business improvement, sometimes separately, sometimes in combination. They bring project methodologies to provide structure and discipline in the use of the quality tools. They demonstrated that the approach could produce results across all of society, into service, government and not-for-profit organisations, as well as manufacturing.

However, whilst many of these programmes repaid their investment through project-based improvements, few have led to comprehensive and lasting transformation of performance across the whole system.

The history shows that the tools work when properly applied, and that the various methodologies are good structures for improvement and problem solving projects. However, something more is needed for sustained behaviour change, and for transformation of performance across the whole system of the organisation.

2. What is the special ingredient for the next generation of improvement?

Human beings have a remarkable capacity for change and improvement. They get deeply involved in a wide variety of activities such as a football team, a voluntary organisation, or political or religious movements. History is full of examples of breakthrough—the collective achievement of unprecedented results—in such circumstances. Those who participate in or closely observe these breakthroughs can see that people can achieve results beyond their expectations, and get enormous satisfaction, when working together towards the common goal for its own sake.

The world of business and government organisations also has inspiring examples of change and improvement, but many more of compromise and disappointment. There is often rather too much organisation, targets and discipline, and not enough spirit.

The heart-centred approach—combining innate characteristics we have for contributing to optimisation together with improvement methodologies and tools—can lead to remarkable power to drive the programme achievements. In addition it also engages with participants at a deeply personal level.

Applying this learning leads to change and improvement programmes which;

- appeal to our intrinsic motivations to make the world a better place, to serve our customers or society more effectively,
- reveal the capability within us to make a difference,
- establish improvement principles that guide the whole approach, and
- provide methodologies to enable us to exercise more control over our environment and influence on the system in which we work.

The potential is already there

Anyone who has observed a child developing knows that we are born with the inclination to learn, improve and solve problems. We are also born with the need to communicate, to belong and to socialise. These basic truths are often forgotten when improvement programmes are devised. They emphasise control, overcoming resistances and other coercive methods. Yet why should we need to force people to do what is already a natural inclination?

In line with great social change movements, we have found in our improvement and development programmes that people have the potential to achieve more than they have done before or even thought possible.

It is a common occurrence in our programmes for people in their 40s and 50s to discover that they can lead and stimulate change after years of just managing the status quo; forever fixing problems that reappear. “I wish I had learned this approach 20 years ago” is a common observation. Furthermore, these people have seen fads come and go, and it would be understandable if they were disillusioned. Yet, given the right leadership and method, they discover a new life and, in many cases, a new way of life.

Although the tools and methods are appreciated, people find themselves inspired by our overall approach which focuses on uncovering their innate capabilities and love for learning and improvement. Being taught cooperation, how to use data honestly, and putting the customer first, feels right because it is right! Being helped to find out about, and build upon, one’s inner strengths in an improvement project or training course is a life-enhancing experience.

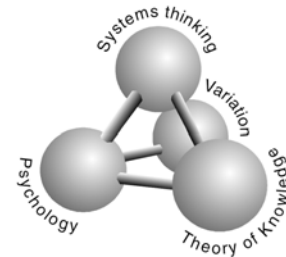
We should not be surprised at this. Artists, composers and authors have often credited their ideas to discovery as much as creativity. When asked to explain the beauty of one of his sculptures, Italian architect, painter, & sculptor Michelangelo Buonarroti (1475 - 1564) replied “I saw the angel in the marble and carved until I set him free”.

Our thesis is therefore that we are born with an innate disposition for enquiry, exploration and a desire to improve our world and this is a hugely untapped treasure.

The next generation of improvement needs an approach that recognises this potential and realises it for the benefit of both individuals and their employers. Once people realise that the programme is to be built upon principles that relate to them as they want to be, they are ready to take off.

3. A system of Improvement principles

Dr W Edwards Deming started developing his ideas in the 1930s, and was one of the prime movers behind the quality revolution eventually adopted in the West from 1980. His original voice was always a philosophic one, looking at the big picture, but it was lost in the rush to train and apply tools in the 1980s. He proposed his System of Profound Knowledge (SoPK) from 1987, the culmination of his lifetime of practise across the world. We have found it to be an immensely powerful system of principles not only for improvement but for any work we have with our customers.



Deming’s model consists of four key parts. It is not necessary to be expert in any one part, but it is important to understand them all, their relationships and the implications of their interactions.

The model provides guidelines for thinking about the organisation, how it is affected by each dimension. It is always useful whether or not one has methodologies or tools to apply. We summarise below some examples of thinking about your organisation under each category. As you gain in confidence in the robustness of the model, you will see the value in looking at any given situation from each part in turn, then at all of them together.

3.1 Systems thinking

“A system is a network of interdependent components that work together to accomplish the aim of the system”.

W Edwards Deming, *The New Economics*, MIT Press 1993

Systems are everywhere in our life and work. The whole organisation is a system, each part a smaller system that integrates with other parts. Projects are systems that run once (though with useful similarities to other projects) whilst processes are small systems that repeat.

Many aspects of systems thinking do not require methods or tools to change one’s approach to work;

- If there is no aim, there can be no system. Everyone in a system needs to understand the common aim.

- “What are we trying to accomplish?” is always a key question.
- Cause and effect are separated in time and space. Consider the consequences beyond one’s own part of the system.
- Every process has suppliers and customers. The most effective systems have collaborating networks of customers and suppliers who understand and trust each other.
- Reducing waste in a system leads to less consumption of resources and energy as well as an improvement in quality and business performance.
- Feedback from customers into the system.

3.2 Understand theories of variation

A useful general definition of quality is the aim to get your processes “on target with minimum variation”, not just conforming to requirements.

- Variation is a natural characteristic of all systems. If no variation is visible in the measures it is probably a false indication.
 - “How will we know if a change is improvement?” demands that we understand the difference between noise and a signal.
- Variation can be identified as common cause (noise, random, not attributable to any single factor) and assignable cause (a signal worth investigating). Confusing these causes and making decisions without knowledge is tampering and increases variation.
- Standardised operations reduce variation.

3.3 Apply theories of knowledge

This part of the System is concerned with applied learning—how to predict and plan, understand evidence and take informed decisions.

- Every operation within every organisation is an opportunity for learning, which we define as comparing the results with what was expected and understanding the implications of the difference.
- The Shewhart (Plan- Do- Study- Act) cycle provides a model for learning. Starting with an initial Study, take care first to understand the current situation, then develop theories and test them by experiment. The same thinking should be applied to everyday processes, not just within improvement activities.
- A third question completes the set started above;
 - What changes shall we make that will result in improvement?
- Another aspect of knowledge is to use the disciplines of Operational Definition, so that people use words in the same way to mean the same thing.



3.4 Psychology

Psychology refers to the whole range of human aspects of change, such as motivation, communication, reward systems, ambition, feelings and so on. One can understand issues of psychology better as one considers the other aspects of the System of Profound Knowledge and how they relate to psychology. Here are some examples:

- Understanding and improving the system should make the environment a better place to work, by being more aligned to customers’ needs and so that people are more able to do the good job they would want to do anyway.
- Learning how to respond appropriately to different causes of variation makes for less arbitrary decision making, and in turn to less everyday aggravation.
- Developing an atmosphere of knowledge sharing for learning and improvement rather than judgement makes for much more constructive communication and relationships.

4. Leading the change toward heart-centred improvement

Consider improvement as a *way of thinking* first, then decide which methodologies and tools are needed in its realisation. In order to lead the improvement it is the leader's way of thinking that must change.

Create and lead an improvement system

All change is a process—the inputs are the current situation in the widest sense—which must be reworked to produce the improved state that is desired. A change programme is therefore a collection of processes that must cooperate in order to achieve the goal.

All change is also a first. Although it may appear to the contrary, no-one else has ever been in exactly the same situation, or has the same goals as yours. Every change journey is different and therefore cannot be copied. The following work streams are all needed and must be coordinated in an improvement system.

The tasks of leaders in heart-centred improvement:

- Build structures for learning from experience, and sharing the learning (good and bad) across the organisation. Most reviews are value judgments about whether a target has been met or not. Under these circumstances people do not provide all the information needed, and mistakes get repeated, errors are hidden until they come to light under pressure.
- Lead their team in developing guiding theories (explanations) and operating principles for their system. These may not be obvious, in fact they may turn out to be counterintuitive. Respectfully contracting to help each other challenge our assumptions and illustrate our 'blind spots' is an important leadership model for others to follow.
- Enable their people to achieve by creating a suite of improvement projects that will deliver the required change in both process and people and enable learning in tangible form. The initial projects must be selected to demonstrate the value of the approach, ensuring that everyone who encounters the activities experiences the personal commitment to heart-centred improvement and learning. Subsequent projects can build on this demonstration.
- Sponsor learning for people in projects and processes. Projects need support to maximise chances of success, but the sponsorship and review by leaders must illustrate the style and provide an appreciation of the learning as well as the tangible application of the tools.
- Develop training programmes that integrate personal development together with methodologies and tools. The tools work when used properly—it is the job of project support and training programmes to ensure that people are able to use them properly. Wisdom is as important as skill or technique.

Becoming a heart-centred leader

Programmes that succeed owe as much to how people are and how they personally change, as to what they do and what is achieved. Sustainable improvement follows when the majority of key people at all levels feel different in themselves, only then can real behaviour change develop.

The following are some of the characteristics of leaders who are on the way to personal transformation. This is a process that is never completed, but gets more and more valuable as the years go by, growing towards wisdom.

- They show optimism and determination when things get difficult, as they will. There has never been a human achievement that proceeded smoothly from idea to execution. Leadership reputations are forged in the furnace of surprise and crisis. How the leaders react when times are hard will influence everyone in the programme. So leaders must try to use new methodologies and tools and, admit that they make mistakes in doing so, and thus encourage others to persist.
- They practise innovation in what they do and how they do it. Doing things the old way and expecting improved results is delusion—but very common. Heart-centred leaders take advice on what they could do differently, take risks in changing themselves, and identify the benefits of doing so.
- They lead with constancy of purpose over many years, not being distracted by short-term circumstance, from the top.

- They provide a development framework to enable others to be the kind of leaders they would like to be, even if it does not quite match the standard pattern.
- They build robust authentic relations with customers, suppliers and clients, and help them develop the same.
- They help other leaders to understand the self-defeating habits we all have, and how to overcome them.
- They actively seek new theories on how people operate, share them with their teams and develop mechanisms on how to build on them.

Above all this, such leaders build their whole approach to work on improvement principles such as the System of Profound Knowledge, and draw on methods for understanding and managing systems and projects. They have an appreciation for the right time and place for the many tools, and can either apply them personally or have built a cadre of likeminded managers, facilitators and consultants who can be called in as needed.

In conclusion

Connecting with innate characteristics for learning and contributing, and applying the methodologies properly, allows us more personal control in their lives and inspires us to make things better.

Improvement programmes should therefore have at their heart the question; how can we make it easier for people to do what they want to do anyway to contribute to the wellbeing of the organisation?

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Appendix 1: Definitions

One of the disciplines of the Theory of Knowledge is Operational Definition. This is to ensure that when we use the same words we mean the same thing, and that different words mean different things. Hence we need to ensure that the key words in this paper are well defined.

Principle

A high level idea, concept or guideline.

Improvement Principles enable us to examine and interpret the world with the intention of changing it for the better. Deming's System of Profound Knowledge is the most robust set of principles we have found.

Operating principles provide the foundations for managing our organisation. They need to be developed for the organisation, reflecting its view of the world and the challenges it faces.

Methodology

A structure that defines the system to be applied. Improvement methodologies include PMI's Improvement Cycle, the Six Sigma DMAIC and DMADV models, or the 8D process for automotive industry problem solving. There are also methodologies for programme design or learning review.

Tool

A procedure for measuring, learning, evaluating, decision making etc. There are dozens of quality tools, such as Pareto, Process Flowcharting, matrices etc. They should be used in accordance with the needs of the situation, informed by the methodology. Almost all tools provide insight into all of the aspects of the System of Profound Knowledge, and their effectiveness is greatly increased if the relationships are understood by their users.

Appendix 2: Some history of typical improvement programmes

Approaches to developing and improving businesses have long been a struggle between principles and techniques. Great minds such as Ohno, Deming and Taguchi have developed profound and lasting principles. Organisations selling training and consultancy have promoted techniques (and jargon) in order to have something to sell.

Six Sigma

Motorola developed Six Sigma in the 1980s, to drive comprehensive transformation in reliability of new electronic devices. They chose a radical target to force step changes—a Six-Sigma process will be achieving about 3.4 Defects Per Million Opportunities (DPMO). This worked well for them in electronic new product development and gained a lot of attention.

Six Sigma became the fashion after Motorola publicised the benefits. Others noticed the tools and made the connection with the results, often missing the whole system change that Motorola had undergone. Many large-scale programmes were launched, mostly dominated by training, to be applied to problem solving projects with large financial targets.

Programmes usually repaid their investment several times over, and countless claims for efficiency and problem solving have been reported to conferences across the world.

In 2007 there is a growing disquiet

There are signals that the Six Sigma bandwagon might have had its day. In many organisations that funded large-scale programmes it is no longer the default method, in spite of good payback from the projects. There are few self sustaining transformation examples.

Our client base indicates that people are looking for more than what classic Six Sigma has given them or what they see elsewhere.

In summary; Six Sigma makes progress—but rarely is it transformation.

How Classic Six Sigma misses the opportunity

Publicity and programmes emphasise management and control but not necessarily a personal “leadership” approach. We see a rather superficial attention to change, referring more to “How to overcome resistance” as opposed to “How to build readiness”

There is, in our view, an over-emphasis on the tools especially the statistics. More than 150 tools are taught in some Black Belt courses, far too many for individuals to be able to apply without artificially introducing them in unsuitable situations.

There is a “Belt hierarchy”, extending from a lowly “white belt” to the peaks of “Black Belt or even “Master Black belt”. This commonly causes resentment amongst the rest of the organisation.

Financial targets and rewards associated with projects can often lead to the same distortions they produce in other aspects of reward systems.

There is often very little in the programmes people describe to us about learning as a principle, and the consequent need to develop a programme and adjust its approach in the light of experience, as opposed to design and deploy in the old style.