

Title: An Integrated Model for Managing Organisation-wide Improvement and Innovation Efforts

Abstract:

In the highly competitive and volatile business environment where rapid technological advancements are creating disruptive changes at a rapidly increasing rate, managing improvement and innovation is a matter of survival and sustainability for most organizations. Until the end of the last century, organizations were improvement focused using a number of methodologies. Since the turn of the century innovation has become a necessity for all types of organizations. While improvement methods are well developed, innovation methodologies are still emerging. Many of these methodologies have come to the lime light one after the other as “flavour of the month” and in most cases have not been successful primarily due to lack of integration with the strategic management framework of organization. Managing one singular program of improvement is relatively easier, however, in the current business climate; organizations need to integrate multiple programs to drive improvement as well as innovation encompassing all levels of the organization. They also need to work together with customers and suppliers to improve processes and bring out innovations across the value chain. This article proposes an integrated approach to manage improvement and innovation programs in a cohesive framework, which is required to stay focused and succeed.

Introduction:

The Quality movement all over the world has been evolving over the decades. Prior to 1980s, standardization and problem solving were the main concerns addressed by quality function, which was perceived as a technical function mainly in manufacturing industries. In 1980s, the concept of Total Quality Management (TQM) gained currency and the idea of Quality spread across industries. The idea of continuous improvement became very popular thanks to the champions such as Masaki Imai. Organisations world over learnt the Kaizen philosophy, which emphasized upon participation of employees at shop floor level in continuous improvement activities. Employee suggestion scheme and QC Circles became popular initiatives for involvement of employees. Meanwhile, quality professionals focused on traditional QC and QA.

In 1990s, Business Process Re-engineeringⁱ became new “in” thing. The emphasis shifted to making dramatic improvements using developing power of IT and computing. More techniques for breakthrough process improvement such as Theory of Constraintsⁱⁱ, Just-In Time and Six Sigma emerged. In the first decade of this millennium, lean and Six Sigma specially became popular as breakthrough improvement methodologies. While this was going on, the models of Business Excellence or organizational excellence were developed in US and Europe. Continual Improvement and Innovation are embedded as important components in these models.

Finally, during the last five years the focus has shifted to Innovation and methodologies such as TRIZ (Theory of Inventive Problem Solving)ⁱⁱⁱ have started gaining attention.

Thus the quality discipline has grown as a management function from a technical function. At the same time it has become increasingly complex. The succeeding waves of improvement and innovation

methodologies and techniques have added to the confusion. The promoters and gurus of various methods at times have been adding to the confusion by claiming primacy of their respective methods over the others.

The improvement methods such as 5S, QC Circles, Kaizen, TPM and Six Sigma are “hard” methodologies, which are very well structured. Their outcomes and process can be well defined. However when it comes to Innovation related methodologies and techniques such as lateral thinking of Edward D Bono, Theory of Inventive Problem Solving (TRIZ) etc. are not so well structured.

Most of the methodologies and techniques described thus far have been used by a number of organizations across the world during last three or four decades. However their success rates have been very small. It is said that 60-70% of Six Sigma programs fail to achieve the expected results. The main reasons for the failure of such programs are often cited as lack of commitment by top management and lack of alignment with the business strategy. However, the root causes of these reasons are seldom investigated.

Total System Intervention (TSI)^{iv} which is a meta-methodology based on Systems Thinking provides a set of methodologies and tools for investigation of root causes of problems rooted in organizational culture, structure and politics. These methodologies help in diagnosing the dominant problems in the organization and improving the organizational effectiveness. These methodologies include Idealised Planning (Russell Ackoff), Soft Systems Methodology (Peter Checkland), Viable Systems Model (Stafford Beer) and Critical Systems Heuristics (Werner Ulrich).

The question now is how an organization can effectively integrate and align improvement efforts at all levels from shop floor to middle management and up to the top management team. The diagram below depicts a conceptual framework for integrating improvement and innovation activities at various levels in an organization.

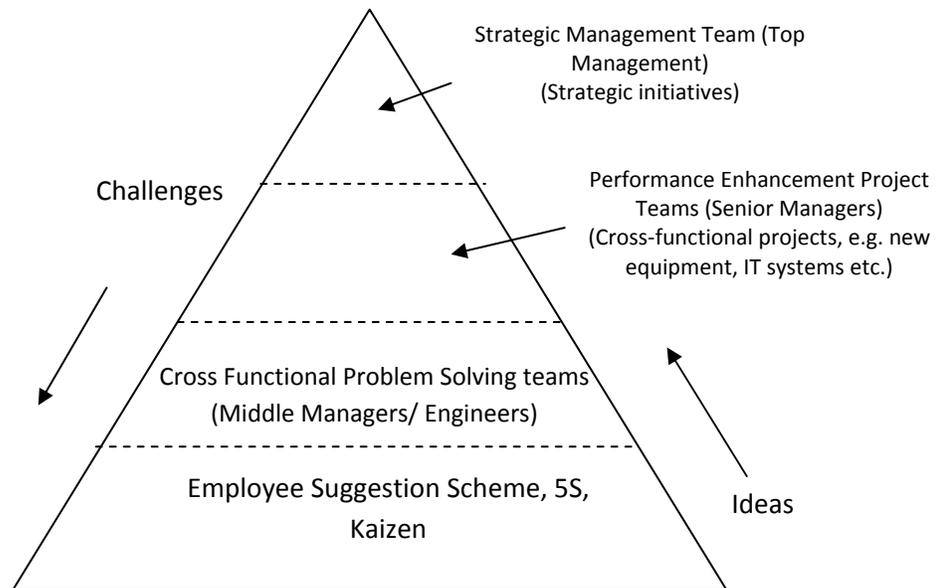


Figure-1 Dubal's Framework for Organisation-wide Improvement

Dubai Aluminium (Dubal) is one of the largest Aluminium smelters based in Dubai. Dubal is well known for its world-class Employee Suggestion scheme which was set up in early 1980s and has won a number of international accolades. Dubal has over the years developed a management structure, processes and practices to align and link the improvement efforts at four levels of the organization, which is depicted in Figure-1. Dubal has a philosophy that top management’s job is to give challenges to the people and people at all levels have the capabilities of coming up with ideas to meet those challenges, provided they are well motivated and looked after. The improvement efforts are driven and monitored by well structured committees at various levels (area, departments, plant, management committee and Board of Directors). This model in practice has been quite successful and Dubal has received many accolades including Dubai Quality Award (Gold).

Figure-2 depicts an enhanced model which integrates more modern methodologies and techniques..

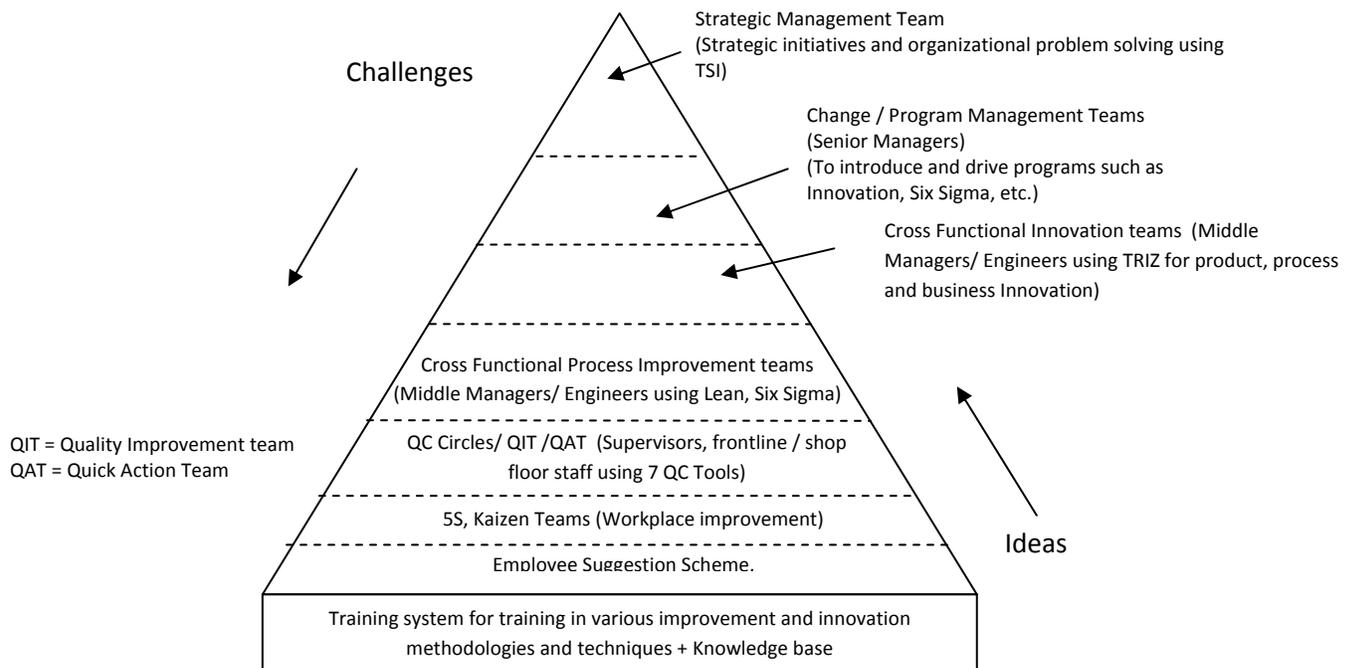


Figure-2 The Enhanced Framework for Organisation-wide Improvement & Innovation

The above model integrates improvement and innovation methodologies in a structured and logical way and thus avoids duplications and ideological conflicts amongst the champions and specialists. Without such an understanding champions of each method claim superiority of their methods over the others and people in organizations waste precious management time in fruitless debates of this method versus that method. In their book Built to Last (Jim Collin et al) have said that visionary organizations exploit the power of “and” and avoid the tyranny of “or”. This model helps achieve the same purpose. It helps in exploiting the power of various methodologies appropriately at appropriate levels. However, it is not

to say that the techniques used are strictly segregated at various levels. A QC circle could also use creativity and innovation techniques (e.g. lateral thinking, Contradiction Matrix of TRIZ) where needed.

How this model is being promoted in Dubai:

Dubai Quality Group (DQG) is a non-profit organization consisting of corporate and individual members. It was set up in 1994 under Dubai's Drive for Quality program initiated by His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Prime Minister of UAE and Ruler of Dubai to realize his vision to make Dubai a global center of excellence.

Dubai Quality Group established a Continual Improvement Sub-group (CISG) in 2008. Its mission is to promote learning and application of methods and techniques for improvement and innovation. CISG has been organizing an annual symposium since 2009 on the occasion of World Quality Day in November each year. In this event, CISG conducts Kaizen, Breakthrough Process Improvement, Innovation and Quality Quiz Competitions. In the Third Continual Improvement and Innovation Symposium which was held on 17th November 2011, a total of 19 companies from 9 different industry sectors (manufacturing, health care, banking, services, infrastructure etc.) submitted 80 case studies in various categories. Five case studies were shortlisted after a systematic process of evaluation. The short listed teams were invited to make presentation of their improvement and innovation cases in front of an audience and a Jury. The members of the jury asked probing questions to the teams after each presentation and finally three awards were declared in each category and gold, silver and bronze trophies were given away.

The symposium also included three key note speeches addressing change management, innovation and breakthrough process improvement. (Please visit www.dqg.org to see the details).^v

The CISG is planning to introduce one more competition in the 4th symposium in 2012, which will be a competition of best practice in implementing an integrated approach for managing organization wide improvement and innovation.

Conclusion:

The proposed model provides a conceptual framework and also a structure using which an organization can build and manage various improvement and innovation programs exploiting the benefits of various methods and techniques. It can help organizations to develop a road map and most importantly, it can help in avoiding unnecessary debates, duplications and conflicts. It can optimize the management efforts and align them so that the organization derives maximum benefits.

ⁱ Attributed to Hammer and Champy

ⁱⁱ Attributed to Eliyahu Goldratt

ⁱⁱⁱ Attributed to Generich Altshuller

^{iv} Attributed to Robert Flood and Michel Jackson

^v Keynote speeches by Mr. Steven Hacker, ASQ, Mr. Aditya Bhalla, QAI and Mr. S. Ilango, SRF Overseas. Please visit www.dqg.org to see the details of the First, Second and Third Symposia.