PRISM: Addressing High-Value Business Challenges

Over the years, Lean Six Sigma at 3M has not stood still, but rather has continually evolved since first launch. Evidence of this is 3M’s strategy of continually developing and adding new tools and techniques to the Lean Six Sigma toolbox over the years.

Initially 3M only had the DMAIC toolset, and belts worked to fit most problems into that methodology. Now belts have a number of additional tools, such as DFSS, Lean, NSI, PPU and others at their disposal. Having the right tools or combination of tools and knowing to apply them has been a key success factor for solving 3M’s business problems most effectively and efficiently.

Another new methodology has been in development inside 3M over the past few years which has, in pilot stage, shown very promising results. That new problem-solving methodology, called PRISM (Problem Resolution with Integrated Systems Methods), addresses complex challenges of high value with the potential for great payoffs to 3M.

“PRISM provides a practical way of dealing with complex business challenges that have high economic value. It addresses the need for more strategic and systemic business solutions rather than the sub-optimal solutions of process-oriented methodologies,” said Sergei Dovgodko, Lean Six Sigma coach, Lean Six Sigma Operations, and developer of this exciting new business problem-solving method at 3M.

Dovgodko and a number of other Lean Six Sigma professionals have been working over the past few years to develop and test this new process and the toolset. Today, he is part of the PRISM Business Problem Solving Team in Lean Six Sigma Operations (LSSO), a group which provides support to 3M businesses and corporate groups facing complex, high value challenges.
In 2005, while re-thinking the accumulated Six Sigma project experience, LSSO coaches hypothesized that the benefits of a DMAIC project are proportional to the “social” complexity of the underlying challenge. Projects with high benefits tend to have many stakeholders with contradicting interests locate in various parts of 3M. Yet, the effectiveness of the DMAIC toolset seemed to decline as the complexity of business challenges increase.

In response, Dovgodko and the team in LSSO developed the first version of PRISM, not as a substitute to Six Sigma DMAIC but rather as a “problem analysis” front-end to the DMAIC process. To pursue business results, PRISM offered a “collective problem solving” approach rather than “process improvement” thinking.

“The novelty of PRISM is that it’s a team-based, problem solving process that integrates qualitative inquiry, systems thinking frameworks, and ideation methods. Our key proposition is that qualitative interpretive methods executed by business teams are by far more effective in dealing with complex business problems than generally accepted quantitative methodologies, such as Six Sigma DMAIC methodology,” said Dovgodko.
PRISM methodology is based on interpretive methods rather than just scientific method, and business actions are mostly driven by collective interpretation of factual data. Arriving at collective meaning of the situation is essential to a coherent and comprehensive response to complex challenge. PRISM uses qualitative analysis in the context of a “business system framework” to come up with collective understanding of the real problem, followed by ideation techniques to design comprehensive solutions.

“Solving complex problem requires tools and methods that work with ‘rich’ qualitative data which reside in hearts and minds of people. Qualitative methods, when applied in context of the ‘business system framework,’ offer not only superior discovery of the actual problem, but also systemic solutions with a high-level of organizational buy-in. PRISM systematically builds organizational momentum by implicitly connecting and aligning the stakeholders in the process of problem solving,” Dovgodko said.

The output of the PRISM process is an action plan that includes a number of well-aligned projects which can employ a variety of structured methodologies and tools to achieve the desired outcomes. For example, if one project is about a channel management issue, a corresponding set of channel management tools and methods may be used. If a project is about process improvement, Six Sigma DMAIC or Lean tools may be used. If another project within the cluster relates to product development, the DFSS toolset can provide benefit. Finally, the issues of buy-in and communication could be addressed with corresponding Change Acceleration Process (CAP) and communication tools.

PRISM addresses much larger challenges than a typical Lean Six Sigma Black Belt project with the target opportunity somewhere between $5-100 Million. When applied to challenges of this scale, PRISM also produces an integrated set of strategies and related projects that become a part of the strategic and operating plans of the organization.
The overall project cluster can be truly transformational in nature and might take more than a year to implement. PRISM has been successfully tested in a number pilot projects within 3M businesses and service areas, and it shows great potential for substantial contributions to 3M’s continued success. If applied systematically, PRISM can become a competitive advantage as it helps businesses be better attuned to changes in external environment, see true internal capability, and respond in a comprehensive and coherent manner.

According to Dovgodko, PRISM has been well received by business teams because it elevates the importance of the social and human dimension of complex business challenges. The decision makers appreciate collective inquiry into the challenge and a search for creative cross-functional solutions. And, it appeals to management because of its promise to solve extremely difficult challenges.

“The inquiry process leads to profound shifts in management’s thinking of the business capabilities and its operational and strategic environment. As a result, PRISM creates strong organizational momentum toward solving the challenge,” said Dovgodko.