

Ain't Misbehaving: Behavioral Methods Applied to Lean Six Sigma

In our last Column we kicked off a series about the behavioral side of BPM and improvement, arguing that improvement takes more than a set of tools for defining, measuring, analyzing, improving and controlling. It's well-known that underneath any improvement project there are behaviors of performers, leaders and practitioners that have to be identified, shaped and guided in order to achieve desired results. But while recognition of the need for managing the behavioral side of change is widespread, little, if any robust methodology is included in most projects. So this series is about pulling to the forefront of improvement projects some concepts and tools that can make behavioral change as "engineer-able" as a business process.

In this Column we will focus on a particular brand of improvement—i.e., process improvement—and explore how the behavioral elements of a typical process improvement effort can be more effectively addressed throughout the stages of a project. There are a number of well-known process improvement methodologies but as Lean Six Sigma (LSS) has become the most widely used, it's the ideal vehicle to conduct our exploration of behavior change in process improvement projects. (In writing about this subject, we will have to rely on some generalizations about LSS and how it is practiced, but we think that's not too risky. While there are many different providers of LSS training and thus some minor differences in concepts, tools and emphasis, we believe there is enough commonality among practitioners that we can make general statements about them without being wildly inaccurate.)

We're not the only ones who believe that behavior change is an integral part of improvement. "Being able to manage the human side of a process change is vital. Heck, some say that's 80% of the battle in many DMAIC projects," writes Jeff Cole of PEX.ⁱ "When process improvement efforts fail, it's typically not because of an error on the technical side but due to a failure in fostering acceptance of the change."ⁱⁱ With that said, we must start by recognizing that practitioners of LSS (Belts, Champions etc.) typically receive little, if any training explicitly directed at understanding, analyzing or changing behavior. "Unfortunately, the industry standard of 2 – 4 weeks of training given to LSS professionals only covers the process tools and not the people tools," notes Dr. Scott Thor, a Master Black Belt.ⁱⁱⁱ There are some traditional change management practices and tools in the typical LSS approach that address stakeholder management and communication, but that's about it. "Belt performance continues to be highly unpredictable, with the major culprit being variability in Belt soft skills"^{iv} (e.g., change management skills, team facilitation, communication, coaching up and down, etc.).

The focus in LSS is on tools (lots of them) for collecting data, measuring and diagnosing performance, determining the causes of gaps, designing and testing possible solutions, and the like. All important stuff, but what about the magnitude of a process change in its effects on the behaviors of individual performers, teams and leaders?

And what—besides painting a vision of the future, being "champions", and clearing away barriers—must leaders do to make the desired changes come about? In the standard LSS approach, the behavioral issues are at best vaguely recognized and dealt with largely in theoretical terms if at all. So in this Column we will highlight the specific places where typical

DMAIC projects could be modified or supplemented to better identify, understand and address behavioral matters.

Project Definition & Launch

It is essential that from the onset, behavioral issues and opportunities be characterized and annotated in project deliverables so both project teams and key stakeholders learn the performance implications being influenced by process, human behavior and technology. Behaviorally annotating Value Stream Maps or SIPOC/IPOs with behavioral issues/opportunities affecting current or desired performance begins to develop clarity and urgency about the need to address behavior change.

Typically, “stakeholdering” amounts to identifying the important leaders for a given LSS effort and enlisting their support as the project is initiated. (What an awful word, “stakeholdering”. Of course it’s not really a word at all but a grating piece of jargon you may hear used to describe the activities performed by leaders and other key supporters of change efforts.) A sponsor and champion are nominated (one of these might be labeled the process owner; other times there is no formal process owner) and sometimes a leadership team of senior executives. Central to stakeholdering is creation of a communication plan that specifies what, when, where and how information about the project will be disseminated. So what’s wrong with this approach?

For one thing, there tends to be an over-reliance on the sponsor and champion roles. While the people in these roles are certainly important, there are often many more people in middle-management, non-supervisory or technical Subject Matter Expert (SME) roles who are key to implementing and sustaining a process change.

For another, stakeholdering is often largely a front-end/back-end activity. That is, time and energy are invested by leaders in the initial stage of starting up a project, communicating the need, vision and goals and later there is activity as the project rolls to a conclusion. But in between, not much is expected. Phase-gate reviews with Champions are part of many LSS training programs but in practice, vary widely in occurrence and quality of dialogue.

Third, most LSS toolkits contain very limited tools for stakeholdering. Identifying the roles of sponsor, champion, process owner is often all that is formally done but is labeled as “stakeholder management”. And the primary tool after that is the communications plan.

So what could be done differently?

We emphasize a more systematic and on-going stakeholder management process of behavioral deliverables for key leaders, pathfinders and SMEs. Most important is that throughout all project phases, the project team deliverables, with emphasis on the behavioral deliverables, are reviewed and discussed and improvement issues are addressed. This means key stakeholders develop an understanding of behavior (why people do or say what they do), can discuss alternative future-state scenarios impacting behavior, and understand the implications of changing behavior in the desired future-state.

A lot of effort is spent in the initial Define Phase to identify stakeholders at all the appropriate levels. Once stakeholders are identified in the Define Phase and defined as “key” (beyond the Champion, Sponsor, etc.), each is assigned to a project team

member. After each stakeholder interaction, the assigned project team member updates a “Key Leader Engagement Plan” to document what deliverables were discussed and status issues (support, more discovery, or not supportive and why). We suggest these stakeholder updates be done at the end of all phases with the possible exception of the Measure Phase.

Understanding & Changing Behavior

Something that would help LSS and other process improvement methodologies is a set of principles and tools for understanding the basics of human behavior as they relate to process performance. These are readily available from many sources, including some originators of BPM. Geary Rummler was one such luminary and his work is still a good place to start if one wants to get better at addressing behavioral issues in process improvement.

In his 1990 book, *Improving Performance*^v, Geary Rummler identified three levels of performance (Organization, Process and Job) that must be planned, designed and managed in order for any organization to achieve lasting results. Rummler became associated with process as his book helped both trigger and promulgate the 1990's reengineering fad and BPM movement but he always recognized that the job level is where performance actually happens. As such, if a process redesign has any hope of success, it must ultimately be anchored in the daily tasks of people doing the process work.

In *Improving Performance*, Rummler also provided a model^{vi} of the key job-level variables that have to be understood and managed if one wants effective performance of a given job or performer. The model posits that a performer is not an independent entity doing a job in perfect isolation but instead is operating in a “human performance system”, surrounded by things that influence what the performer does, and if you understand the effects of those variables on a given performer, you may be able to shape and predict future performance. If you change one or more of those variables, you may be able to change the performance in some way (continue it, stop it, increase it, etc.) That's kind of it: a simple but helpful behavioral model that can help an improvement practitioner examine job-level performance, analyze what is happening and why, and then to design solutions of performance deficiencies.

In our own work we have updated the HPS model (Figure 1) to emphasize the key element of behavior. Of the variables shown in the model there are two types; the first are antecedents (performance specifications, all forms of task support, and the performer's knowledge and skills acquired through training, experience, education, etc.) These antecedents, while certainly of value, tend to be relatively weak in affecting the performer's decisions and actions because they all happen or are in place *before* the desired behavior (that is, before the performer executes a task). The remaining two variables—consequences and feedback—happen after the performance and thus are likely to be far more influential in determining future performance. *Why?* Because consequences are what actually *happen* to the performer at the time of performing the task. And feedback, if clear, relevant and timely, can greatly shape the performer's actions next time, reinforcing what was done well and modifying what needs improvement.

So in our own approach to performance improvement, we concentrate heavily on designing peer, team and leader consequences and feedback into our future-state

processes. Our own shorthand for this approach is A-B-C (antecedents-behavior-consequences). We focus on those variables throughout an improvement project:

- We introduce basic A-B-C concepts via Behavioral Value Stream Maps or Behavioral SIPOCs/IPOs with leaders and other key stakeholders during the Scoping/Define Phase.
- In the Analyze phase, we identify the behavior dynamics influencing as-is process performance to develop the Behavioral Annotated ProcessSM (see Figure 2) deliverable. We use selected Key Behaviors to illustrate A-B-C variables (especially Consequences) for the project team to progress their understanding of behavior change. This understanding improves the quality of key leader stakeholder discussions of behavioral deliverables. In our opinion, the Analyze-to-Improve Phase stage-gate is the most critical point to establish the need for behavior changes required to improve process performance.
- In the Improve phase, we design not just changes in the process flow or the enabling technologies but more important, incorporate into the future-state process design the key behaviors of both performers and leaders needed to improve and sustain desired performance. This approach provides a more comprehensive and systemic view of the important performance enablers, especially the key behaviors and associated behavioral metrics, needed to optimize performance. This is in accordance with the greatest lesson we have learned—that behavioral issues ignored will continue to cause undesired performance regardless of any other changes, especially technology, you might make. In the Improve phase we will also design the specific reinforcement strategy and techniques for supervisors and leaders to use in implementation and the Control & Sustain phase that follows.
- In the Control & Sustain Phase, we utilize Leader Coaching Plans to support critical behaviors (the most important of the key behaviors), Leader Control Plans and Sustainability Reviews to pinpoint leadership role/responsibilities to reinforce Critical & Key Behaviors and recognize improved performance.

Over-reliance on LSS Professional

A consequence of simplistic stakeholding as we described it earlier is that the management hierarchy may be insufficiently involved in an improvement effort. Instead, leadership is ceded to the project team leader—in LSS, many times this is the process expert (Master Black Belt, Black Belt, etc.). This causes leaders to remain distant during the project itself but even more problematic is the “handoff” from the Belt to the leaders when entering the Control & Sustain Phase. Without adequate stakeholder management throughout the project and a solid plan for the transition, the Belt remain in charge too long, thus eroding leadership responsibility for owning, sustaining and scaling the results. When asked “If you (LSS Deployment leaders of mature, greater than 3 year programs) could make one improvement in your organization’s deployment to boost LSS total ROI, what would it be?” In a study written about by Robert Crescenzi, the most frequent answer cited (40% of respondents) was broader leadership and Champion engagement.^{vii} We suggest that a project team leader from the business, not the Belt, be appointed by the Champion or Sponsor to eliminate the perception that the Belt (versus the business) owns the project. The Belt is responsible for facilitation of the DMAIC project methodology. It is leadership’s role and responsibility to own the project, its outcomes, the associated process and the behavior changes needed to improve performance.

In our work we have designed “Leader Sustainability Plans” and “Sustainability Reviews” to define, action and reinforce the leadership responsibilities for sustaining and scaling (where possible) project gains. In addition, behavioral and process metrics have been imbedded into Result & Recognition Meetings to ensure meaningful performance management dialogue in leadership team meetings.

Conclusion

In conclusion, we turn again to Dr. Thor, who neatly sums up both the shortcomings of LSS practices and the way to become more effective: “Improvement is becoming more about understanding people and why they do what they do, and how to get them to do what is best for the organization. In some ways we (LSS experts) have failed to realize that all process improvement projects are about change; not only process change, but also people change. When I look back on the 100+ projects I’ve done in the last several years and identify what the major changes were, most are related to changing the behaviors of people working in the process, which the standard LSS tools don’t really address well. Sure, we need the tools to improve the process, but that’s only 20% of the success equation. The remaining 80% is centered on behavior change. What we need now is an integration of behavioral tools into the LSS methodology to better equip LSS professionals to deliver sustainable results.”^{viii}

Figure 1
The Human Performance System

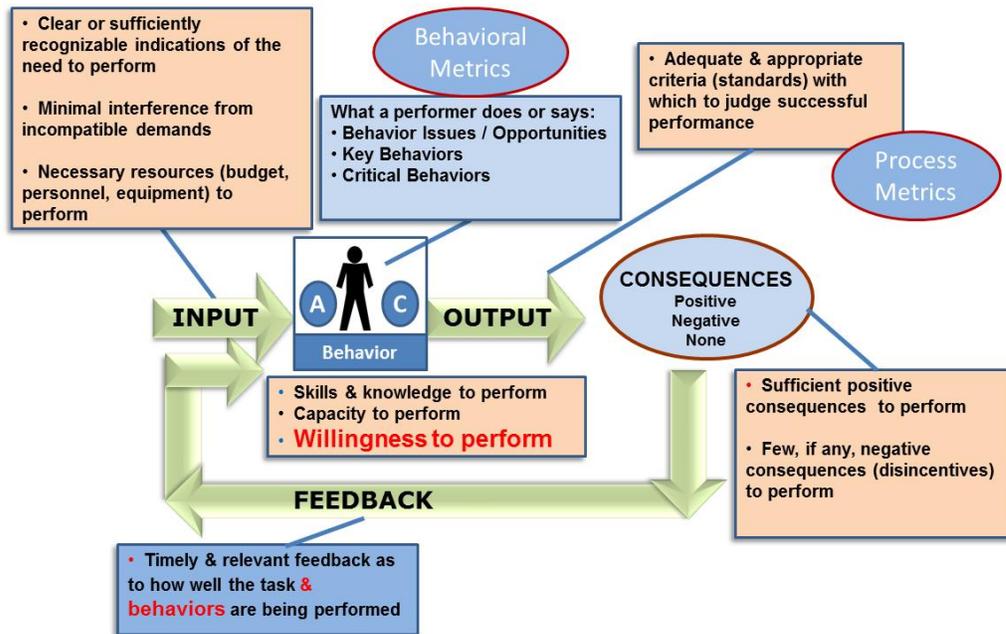
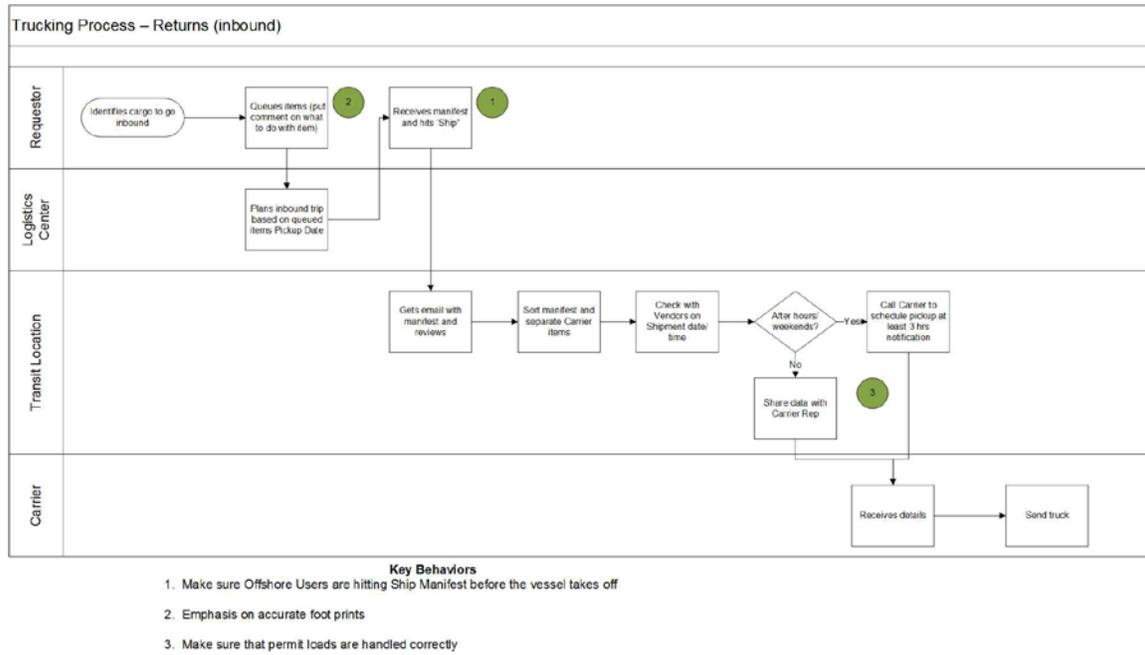


Figure 2
Behavioral Annotated
Proce



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References

ⁱ Cole, Jeff, "A Few Thoughts on Six Sigma Change Management", Process Excellence Network, December 1, 2008

ⁱⁱ Cole, Jeff, "The Secret Formula for Managing Change", Process Excellence Network, September 14, 2011

ⁱⁱⁱ Thor, Dr. Scott, Master Black Belt, Variance Reduction International.

^{iv} Crescenzi, Robert, "Maximizing the ROI of a Lean Six Sigma Deployment", iSixSigma, May/June 2010.

^v Rummler, Geary A. and Alan P. Brache, *Improving Performance: How to Manage the White Space on the Organization Chart*, Jossey-Bass, Inc., San Francisco, 1990, 1995.

^{vi} Ibid, 1995 edition, page 71

^{vii} Robert Crescenzi, *Maximizing the ROI of a Lean Six Sigma Deployment*, iSixSigma, May/June 2010.

^{viii} Thor, Dr. Scott, Master Black Belt, Variance Reduction International.