

Rx for Six Sigma? **. . . Add Critical Thinking!**

Improve Process Improvement

Six Sigma teams seek to improve organizational processes. But, how can these teams improve their own process – the process they use to think together? One benefit of [Critical Thinking](#) training is its practical thinking framework dramatically improves collaboration.

The **BPI** thinking tools are not limited to specific quality issues. Any issue that arises inside or outside the teams can be addressed using the **BPI** thinking framework for collaboration.

The standard quality tools emphasize data collection, data organization, and creativity. They are weak in the area of critical thinking. The **BPI** thinking framework incorporates critical thinking thereby filling this gap.

In addition to the standard quality tools, Six Sigma adds other tools that are highly specialized and require significant time and effort to use (e.g. DOE). **BPI** tools will help assure that these special tools are used to best advantage.

Using the **BPI** thinking framework allows teams to define the need and match the best tool to that need. This assures each tool is used within its area of strength and applicability.

6 Sigma Steps and BPI's Critical Thinking Tools

Here is how the **BPI** critical thinking tools can be used to help teams execute the Six Sigma steps (DMAIC).

DEFINE: Each Six Sigma project is a project and therefore teams will benefit from having a common thinking process to manage [Projects](#). Especially useful is the **BPI** Agree step for defining and clarifying the project scope (purpose, deliverables, resources, customers, stakeholders, constraints & criteria for success).

MEASURE: Once measures are in place, problems are revealed. The **BPI** Problem Inventory is part of the [Problem-Solving](#) process and can be used by teams to list

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problems; edit the list so each item is significant and requires independent action; set priority; and then determine what type of analysis is needed for each problem.

ANALYZE: Problem Solving, the **BPI** cause analysis process, allows teams to logically test potential causes before (and often instead of) using more complex methods (e.g. correlation – regression, hypothesis testing, multivariate studies). This enables a dramatic improvement in the use of the team's time and efforts. The more complex tools are used only if needed and on very well defined issues and variables.

IMPROVE: This Six Sigma step provides the team with more information from design of experiments, simulation, optimization analyses and so forth. Using the Decision-Making process, the team can take this new information, develop solutions and make the best-balanced choice based on costs, benefits and risks. Implementing the best solution requires **Planning***.

CONTROL: Two critical thinking tools apply here: Decision Making to determine the best process controls to use and to decide on the best translation opportunities; and **Planning*** to develop a master plan for overall implementation.

* **Planning** is part of our standard 1-day Decision Making workshop.

What Six Sigma experts say:

Lean-Sigma Expert, Motorola Business Partner

"Critical Thinking will provide ... a quicker return on investment."

Master Black Belt, Chrysler Black Belt Core Group

"Most issues go through the path of not needing (statistical) tools now. We like to think we are reserving our (statistical) tools (to when needed and) preventing a waste of our time."

Master Black Belt, Chrysler Black Belt Core Group

"This tool helps with the group dynamics part of the team equation (by structuring participation)."

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Black Belt / Training & Development Manager, Merck, Sharp & Dohme – Australia

"Six Sigma tends not to be useful in one off cases, or for special cause variation ... Some of the heavy-duty tools can also be over-sophisticated for some routine problems. ... Within (the Six Sigma) process (the **BPI** root cause analysis) could be used to ... eliminate ... causes of variation that are leading to either off center, or variable process output."

Black Belt / A "Famous" USA Turbine Company.

"As a Six Sigma, Black Belt, I saw how the techniques taught in your class could be used to enhance 6 sigma projects. I handle transactional type projects in Information Technology . . . and I saw how the Concern Analysis and Problem Solving (tools) could complement and speed up the Define and Root Cause Analysis Phases (for our teams)."

[The above was from an unsolicited email sent to us from a workshop participant from that "famous" company. It is published without a specific company attribution because a top company executive complained. He is convinced there is no need to help Six Sigma teams think and collaborate more effectively. This is unfortunate. Our experience has shown that each process improvement tool set has strengths and weaknesses. The more esoteric the tool, the more likely it will not apply very well to many types of issues despite having an excellent fit for a few. We did not set out to convince Six Sigma experts that our critical thinking tools can help their teams. The Six Sigma team members themselves tell us this after they attend our workshops. Our advice to this less than open-minded executive comes from Harry S. Truman (USA's 33rd President) and repeated by John Wooden (legendary basketball coach of UCLA): *"It's what you learn after you know it all that counts."* We wish him well.]

Summary

Thinking Skills Determine Success!

Any process improvement tool or strategy is only as effective as the thinking that's driving it! Training people in critical thinking has been **BPI's** exclusive area of expertise for more than 35 years. We have yet to discover a team that could NOT benefit from better, thinking skills. [Contact](#) us today for information about how our fast-paced, highly interactive [Critical Thinking](#) and [Project Management](#) workshops can improve your thinking and your teams' effectiveness.