Comparison of Improvement Approaches

All methods require a cross-functional team of subject matter experts. They also use standard project management methodology to assure a plan is developed and managed to. Finally, they utilize many of the common quality improvement tools (check sheets, praetors, cause-effect diagrams, run charts, flow charts, scatter diagrams, histograms, force-field analysis, etc.). The greatest differentiator to the different methods is the discipline required.

	EXPRESS	PDCA or PDSA	DMAIC
Characteristics of the Approach	Speed in understanding problem, generating ideas to improve, prioritizing to develop an improvement agenda, and documenting needed action plans.	This approach is the philosophy behind EXPRESS and DMAIC. EXPRESS emphasizes Planning & Doing; however, they should never end without Checking and Acting. DMAIC is a robust PDCA (meaning it emphasizes fixing the measurement system first…and proving cause & effect to assure the sickness is cured and not the symptom), plus it adds a "preventative maintenance" aspect to the improvement to assure things stay fixed.	Measurement Driven ("In God We Trust, All Others Bring Data") Emphasis on Understanding & Controlling Variation and Improving Process Capability
When to Use the Approach	When there is low risk and high speed needed in making a change. This is especially helpful when "a process has always been this way", and there is reluctance to change.	EXPRESS & DMAIC are the means to doing PDCA. Which method to use is dependent upon the risk-impact versus speed of execution.	Whenever the intent is to not only improve the process, but to maximize the process management discipline around a process to assure proactive improvement rather than reactive activity.
Process Description	**Pre-meeting** - Educate champion - Define the problem and its scope - Document the process - Establish team **During meeting** - Present process & problem - Brainstorm possible root-causes	**PLAN:** Describe the Problem **PLAN:** Describe the Current Process **PLAN:** Identify and Verify Root Causes **PLAN:** Develop a Solution and Action Plan **DO:** Implement the Solution **CHECK/STUDY:** Review and Evaluate	**Define Phase** - Identify problem and scope, include measurable improvement target (e.g., improve by 50% the percent of widgets done within spec days of request made) - Establish team **Measure Phase** - Evaluate and improve measurement system (reliable, include effect & cause data)

	Column 1	Column 2	Column 3
	- Brainstorm solutions - Prioritize solutions via payoff matrix - Target improvement initiatives - Document action plans - Present action plans & get approval **Post-meeting** - Execute action plans - Check results - Decide whether to document and execute additional action plans of other improvement initiatives identified in the workshop(s) - Document lessons learned and apply elsewhere if possible	**ACT:** Reflect and act on learnings	- Baseline performance, translate improvement gap targeted **Analyze Phase** - Understand data (variation, cause & effect) - Identify cause or causes of variation **Improve Phase** - Identify improvements needed to address (using LEAN as well as addressing process, people & technology improvements) - Design & develop improvements needed - Test improvements developed (refine if needed) **Control Phase** Identify and establish controls needed to assure improvements stick (measures, poke-yokes, etc.)
Outcomes	Incremental improvement	Generally incremental improvement unless cycles of improvement are followed consistently.	Continuous improvement
Accountabilities **Project Management:** **Documentation:** **Cycles of Improvement:**	- Project charter - Flow chart (as is & to be) - Payoff matrix off all ideas for improvement - Action plans - Project management documentation to assure action plan sequencing & execution - Improvements in process design, documentation and other enablers, etc. - Documented lessons learned	Team Leader and Facilitator PDCA Story Board	- Project charter - Flow chart (as is & to be) - Baseline process capability - Improved measurement system - Validated cause-effect of problem to factors involved - Project management documentation to assure execution in all phases - Improvements in process design, documentation and other enablers, etc. - Higher process capability - Controls to assure process stays stable and in control - Documented lessons learned