

# DMAIC QUICK REFERENCE

Phase	Activities	Tools
<b>Define</b>	<ul style="list-style-type: none"> <li>✓ Identify opportunity and select your project</li> <li>✓ Define the goals, objectives, and scope</li> <li>✓ Form your team; identify key resources and stakeholders</li> <li>✓ Understand the VOC/CTCs</li> <li>✓ Create a high level process map</li> </ul>	Project Charter Stakeholder Analysis House of Quality Pareto IPO (prioritization) Matrix IPO/SIPOC Diagrams Value Stream Mapping
<b>Measure</b>	<ul style="list-style-type: none"> <li>✓ Understand the process and create detailed process maps</li> <li>✓ Plan for data collection; refine metrics</li> <li>✓ Validate the measurement system</li> <li>✓ Collect and present baseline data</li> <li>✓ Measure current performance</li> </ul>	Maps (physical, logical, time value) MSA Data collection plan Graphical analysis (histogram, run chart, etc.) Capability analysis
<b>Analyze</b>	<ul style="list-style-type: none"> <li>✓ Perform gap analysis</li> <li>✓ Identify causes of poor performance</li> <li>✓ Find non-value added activities, sources of waste/defects</li> <li>✓ Collect data and screen list of potential causes</li> <li>✓ Find and prioritize the root cause(s) of the problems</li> </ul>	Cause and Effect Diagrams 7 Wastes TAKT/Cycle Time Graphical analysis Statistical analysis Narrow the focus tools Designed experiments Historical data analysis
<b>Improve</b>	<ul style="list-style-type: none"> <li>✓ Identify improvement opportunities</li> <li>✓ Test/screen solutions</li> <li>✓ Pilot/measure/validate improvement</li> <li>✓ Mistake proof the process</li> <li>✓ Update process maps/SOPs</li> </ul>	Designed experiments Graphical analysis Statistical analysis 5S, SMED, Single Piece Flow, Layout / Cell Design Poka Yoke, Standard Work FMEA Capability analysis
<b>Control</b>	<ul style="list-style-type: none"> <li>✓ Monitor new process</li> <li>✓ Validate success</li> <li>✓ Implement control plan</li> <li>✓ Summarize best practices/lesson learned</li> <li>✓ Handoff to process owners</li> <li>✓ Communicate/Celebrate</li> </ul>	Control charts Control plans FMEA Project Storyboard