

	Purpose	Key Tools			Key Outputs	
Define	To establish a quantified problem statement, objective and business case that will become the foundation to your Six Sigma project. Conduct stakeholder analysis, select team members and kick-off your project.	<p>Primary Metric</p>	<p>Process Map</p>	<p>Project Charter</p>	<p>Project Plan</p>	<ul style="list-style-type: none"> * Process Map * Gather VOC * Translate VOC to CTQ's * QFD/HOQ * COPQ * Primary & Secondary Metrics * Establish Project Charter * Stakeholder Analysis * Team Selection * Project Plan
		<p>C&E</p>	<p>SIPOC</p>	<p>FMEA</p>	<p>Cpk</p> <p>Process Capability Report for H8K</p>	<ul style="list-style-type: none"> * Early Y=f(x) Hypothesis * Detailed Process Map * SIPOC * Cause & Effect Diagram * Cause & Effect Matrix * FMEA * Basic Statistics * Normality Test * Capability Analysis * Gage R&R
Measure	Refine your understanding of the process. Assess process capability relative to customer specifications. Validate measurement systems. Brainstorm potential x's.	<p>Normality Test</p>	<p>ANOVA</p>	<p>2 Sample t-test</p>	<p>Equal Variances</p>	<ul style="list-style-type: none"> * Narrowed Y=f(x) * 1 & 2 Sample t-tests * 1 & 2 Proportions tests * Equal variance tests * Normality tests * ANOVA * Moods Median * Mann Whitney * Paired t-test * Chi-Squared test
		<p>C&E</p>	<p>SIPOC</p>	<p>FMEA</p>	<p>Cpk</p> <p>Process Capability Report for H8K</p>	<ul style="list-style-type: none"> * Early Y=f(x) Hypothesis * Detailed Process Map * SIPOC * Cause & Effect Diagram * Cause & Effect Matrix * FMEA * Basic Statistics * Normality Test * Capability Analysis * Gage R&R
Analyze	Conduct data collection and planned studies in order to eliminate non-critical x's and validate critical x's. Establish a stronger and quantified Y=f(x) equation.	<p>Pugh Matrix</p>	<p>Linear Regression</p>	<p>Binary Logistic Regression</p>	<p>DOE</p>	<ul style="list-style-type: none"> * Refined Y=f(x) * Pugh Matrix * Correlation * Simple Linear Regression * Multiple Linear Regression * Binary Logistic Regression * Full Factorial DOE * Fractional Factorial DOE
		<p>Control Plan</p>	<p>SOP's</p>	<p>Communication Plan</p>	<p>SPC</p>	<ul style="list-style-type: none"> * Control Plan * Training Plan * Refined FMEA * Communication Plan * Standard Operating Procedures * Five-S Audit * Poke Yoke * Visual Controls * Statistical Process Control
Improve	Design, test and implement your new process or product under live operating conditions. Pilot solutions if feasible before broadly deploying expensive improvements or products.	<p>Control Plan</p>	<p>SOP's</p>	<p>Communication Plan</p>	<p>SPC</p>	<ul style="list-style-type: none"> * Control Plan * Training Plan * Refined FMEA * Communication Plan * Standard Operating Procedures * Five-S Audit * Poke Yoke * Visual Controls * Statistical Process Control
		<p>Control Plan</p>	<p>SOP's</p>	<p>Communication Plan</p>	<p>SPC</p>	<ul style="list-style-type: none"> * Control Plan * Training Plan * Refined FMEA * Communication Plan * Standard Operating Procedures * Five-S Audit * Poke Yoke * Visual Controls * Statistical Process Control
Control	Plan, communicate, train and implement your product or process solutions. Ensure control mechanisms are established. Use Poke Yoke, visual controls, SOP's and SPC wherever possible.	<p>Control Plan</p>	<p>SOP's</p>	<p>Communication Plan</p>	<p>SPC</p>	<ul style="list-style-type: none"> * Control Plan * Training Plan * Refined FMEA * Communication Plan * Standard Operating Procedures * Five-S Audit * Poke Yoke * Visual Controls * Statistical Process Control
		<p>Control Plan</p>	<p>SOP's</p>	<p>Communication Plan</p>	<p>SPC</p>	<ul style="list-style-type: none"> * Control Plan * Training Plan * Refined FMEA * Communication Plan * Standard Operating Procedures * Five-S Audit * Poke Yoke * Visual Controls * Statistical Process Control