AUSTRALIAN CONTINUOUS IMPROVEMENT GROUP

PROBLEM SOLVING – QUICK REFERENCE GUIDE

Problem Solving Step	*Questions to Ask*	*Tools to Use*
1. **D**efine the Issues	• What is the process involved: - what are the inputs and outputs? – who are the customers and suppliers? • How well are the customers satisfied? • Can quality or cycle time be improved: - what would most benefit customers? – what would most make your job easier, more efficient or more effective?	• Brainstorming • Process Mapping • Pareto Chart • Benchmarking
2. Collect **I**nformation	• What are the cycle times (minimum, maximum, average), distances, output rates, quality of the process steps? • How does the process vary with time or other variables? • What are our other customers' expectations and how well are they being met?	• Process Mapping • Check Sheet • Run Chart • Histogram
3. **A**nalyse causes	• What does the variability tell us about the process? • How does performance compare to "best practice" levels? • Where are the greatest opportunities for improvement? • What are the causes of long cycle times and poor quality? • How can customer satisfaction be improved?	• Histogram • Run Chart • Pareto Chart • Brainstorming • Cause & Effect • Why-Why • Statistically Designed Experiments
4. **G**enerate solutions	• What performance targets should we set? • What processes can be eliminated entirely or greatly simplified? • What process steps can be eliminated? How can we reduce cycle time, travel distance and wasted materials and effort? • Which are the critical activities which add value for the customer? Can they be sped up or made more effective?	• Brainstorming • Value Adding Analysis • Force Field Analysis • Customer Needs Mapping • Failure Modes & Effects Analysis
5. Implement **N**ew processes	• Which alternative solution proposed by the team has the best change of working, the greatest impact on key measures and are visible in their effect? • Does the implementation require the approval and/or cooperation of anyone else? How should we communicate with those people?	• Process Redesign • Setup Reduction • Pull Scheduling • Housekeeping
6. Check **O**utcomes	• What measures will tell us that we have made gains? • How long should we measure before deciding that a gain has or has not been made? • What should we do next if the solution implemented has not been successful?	• Check Start • Run Chart • Statistical Process Control
7. **S**ustain the **E**ffort	• What training and procedures must be implemented to make sure that the gains we have made will not be lost?	• Training • Procedures

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