

# CPCIP Annotated Template

**1 REQUEST CPCIP**

- Explain Symptoms clearly
- Identify gaps between expected and current
- Get facts straight
- ❖ Describe problem, opportunity
- ❖ Send to Coordinator

**REVIEW CPCIP GUIDELINES**

- ✓ Can clearly explain issue or opportunity
- ✓ Cannot be completed "immediately"
- ✓ Duplicate CPCIP does not exist
- ✓ Gap exists between expected & experience
- ✓ Root cause is unknown
- ✓ Complexity of resolution exceeds ability of one person to resolve

**2 CPCIP COORDINATOR'S REVIEW**

- Identify who is involved
- Review CPCIP Guidelines
- Review requester information
- ❖ Assign CPCIP
- ❖ Communicate assignment

**3 INTERIM/CONTAINMENT**

- What is the impact on:
  - Quality ?
  - Customer service ?
- Risks involved ?
  - Exposure
  - Management of risks
  - Containment/minimize risk options
- System dependencies
  - Cause -> Effect -> Risk Assessment
- ❖ Actions necessary
  - Document & Date
  - Implement

**4 ROOT CAUSE ANALYSIS**

- Talk to all involved
- Collect data to understand the process (also see Problem Solving Tools section)
  - Flow Charts, Information flow
  - Pareto Analysis to prioritize
  - Scatter Diagrams to see relationships
  - Analyze historical trends
- Resolution - Utilize cross functional teams
- 5 WHYS
- Need to determine combination of events or situations that produced all of the facts specified
- Utilize problem solving tools (see Problem Solving Tools section)
- Analysis of Variation - What has changed ?
  - No two things in life are perfectly identical
  - Strive to reduce variation to create a stable process
  - Goal of 3rd Generation of Quality
- ❖ Document & Date
- ❖ Communicate to Customer

**COMMON CAUSE "CHRONIC"**

- Inherent in any process all the time
- Impact varies day to day, month to month
- Individually little effect, Collectively can add up to significant variation
- Process is stable if it only has common causes of variation - predictable & within statistical control
- No such thing as THE cause
- Long term solution required
- Not improved by people in the process (only)
- Needs management attention
- Fundamental process change necessary
- Mfg. Environment type of changes::
  - Material; Equipment; Manpower; Methods; Measurement
- Service Environment type of changes:
  - Customer; Employees; Products; Services; Work Environment; Procedures

**SPECIAL CAUSES "ASSIGNABLE, SPORADIC"**

- Not inherent - result from special circumstances
- Disrupts the usual flow of work
- Appear sporadically
- Originates outside the process
- Contributes small or large amount to total variation - bigger impact than any single common cause
- Unstable & unpredictable
- Elimination does not improve the process
- Something significantly different or disruptive has occurred
- Need to identify what was different and what corrective action is necessary to prevent reoccurrence
- Corrective actions are typically short term and without management intervention

**EXAMPLE OF COMMON & SPECIAL CAUSES**

Consider tracking the departure and arrival time of a commuter train over several weeks

- Common Causes of Variation:
  - minor weather delays, slight fluctuations in dispatching traffic
- Special Causes of Variation:
  - power failure forcing track shutdown, rising flood waters forcing rerouting

**IMPLEMENTATION UTILIZING SHEWHART PDCA**

- PLAN (addressed in previous steps)
  - Identify problem, process to be addressed
  - Describe improvement to current process
  - Root Cause - Develop effective workable solution
- ❖ DO
  - Document plan - what, who, when, how
  - Implement
- ❖ CHECK
  - Where the desired results obtained?
  - Has the root cause been addressed?
  - Assess the solutions effectiveness
  - Assess solution effect on the system
  - Utilize Paynter Chart to track reduction; removal; improvement due to actions taken
- ❖ ACT
  - Permanent ? - Type of variation correctly addressed
  - Improve - standardize to other places in the system
  - Has preventive mode been achieved?
- ❖ Date & Route for Approval
  - Congratulate and recognize

## PROBLEM SOLVING TOOLS

**SEVEN BASIC TOOLS**

- Cause & Effect diagrams
- Checksheets
- Control chart
- Flowchart
- Histogram
- Pareto chart
- Scatter Diagram

**SEVEN MANAGEMENT & PLANNING TOOLS**

- Affinity diagram
- Arrow diagram
- Matrix chart
- Prioritization matrix or matrix analysis chart
- Data analysis chart
- Process Decision Program Chart
- Interrelationship digraph
- Tree diagram

**TOOLS FOR IMPROVEMENT**

- Design of Experiments
- Quality Function Deployment
- Root Cause Analysis
- Brainstorming
- Nominal group technique
- Force field analysis
- Storyboarding
- Paynter Chart

❖ Indicates key CPCIP documentation actions

Indicates Critical Escalation Date & Activity

**CPCIP => Corrective or Preventive Continuous Improvement Process**