



# STATISTICAL PROCESS CONTROL – PREVENT PRODUCTION WASTE

## SMI LEARNING OBJECTIVE

**SMI SKILL ONE** Brainstorm and Discuss PDCA Implementation Problems in Production Department!

**SMI SKILL TWO** Implement SPC 2021 Plan – Develop SPC Objectives, Strategies and Action Plan

**SMI SKILL THREE** Select and Improve on Present SPC Process – SPC Action Plan Do's and Don'ts

**SMI SKILL FOUR** Develop Ishikawa/Fishbone Chart – Identify Production Defects and Root Causes

**SMI SKILL FIVE** Practical SPC Workshop – Plotting, Interpreting, Spotting Trends and Action to Take!

**SMI SKILL SIX** Discuss BEST Presentation Graphs – Discuss your Preferred SPC Visuals!

**SMI SKILL SEVEN** Brainstorm Production Capability/Stability Strategies – Achieve Defect Reduction

## WHO SHOULD ATTEND?

Quality, Production, Process, Design, Technical, R&D – Executive, Engineers, Supervisors, Inspectors and People involved in Quality Improvement and Six Sigma Implementation



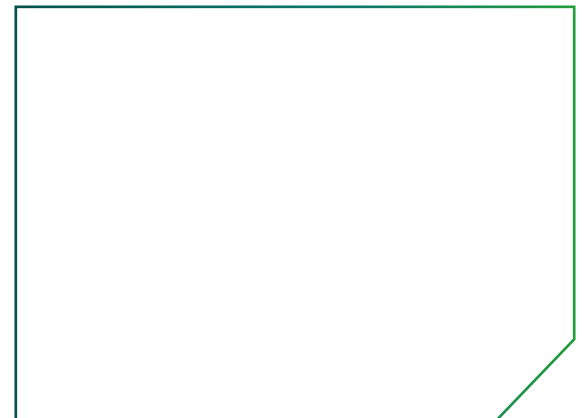
## “ THE WORLD HAS CHANGED ”

The IMPOSSIBLE Happened! A Worldwide Shutdown 2020; this CHANGES EVERYTHING in Quality Improvements and a NEW NORMAL will emerge!

A Worldwide Recession, Business Model Change, Work from Home, Communication Delays, Reduced Investments, Compulsory Health Screening, IT Dependence, etc.

The more 'adept' companies will achieve Profits Faster. We MUST expect Supply Chain Disruptions, Vendor Financial Meltdown, Lack of Materials, Slow Operations, Unpredictable Demands and a myriad of NEW CHALLENGES, NEVER EXPECTED!

Production/Quality Professionals requires Rethinking 'Traditional' Strategies, Persuade Stakeholders to CHANGE and Support New QCC Initiatives – Creative Strategies, Practical Solutions and Move Away from Current Practices – It requires a Paradigm Shift!





# STATISTICAL PROCESS CONTROL – PREVENT PRODUCTION WASTE

Smart Production –  
Reduce Production  
Costs, Rework and  
Scrap

## PART A “ STATISTICAL PROCESS CONTROL – PREVENT PRODUCTION WASTE ”

1. **The ‘Smart’ Quality 2021** – Customer Orders, High Rejects, Material Quality, Cost Pressure, etc.
2. **SPC – Implement Production Process Control** – RIGHT Quality, Pro-Active Action and Output!

## PART B “ SPC – PRODUCTION PROCESS CONTROLS ”

### 1. STEP ONE – IDENTIFY ‘RIGHT’ PRODUCTION PROCESS

- A. **Prepare for SPC** – Quality Costs, Data, Decision Making, Causes, Preventive Action and Results
- B. **Select HIGH VALUE Process** – Product/Process Measurements, Data Collection and Control Limits
- C. **SMI Skill ONE** – Brainstorm your Production SPC – Before and After SPC for Visible Waste Reduction

### 2. STEP TWO – DEFINE ‘CORRECT’ PRODUCTION PROCESS

- A. **Develop Process Flow Charts** – Identify Raw Material to Finished Product Work Flow
- B. **SPC Pro-Active Strategies** – Stakeholders Commitment, Involvement, Corrective Action and Follow-up
- C. **SMI Skill TWO** – Implement SPC 2021 Plan – Develop SPC Objectives, Strategies and Action Plan

### 3. STEP THREE – SELECT ‘CRITICAL’ PROCESS POINTS

- A. **Production SPC Implementation** – List Correct Parameters, Justify and Select Preferred SPC
- B. **Setup SPC Monitoring Process** – Control Charts, Process Capability, Excessive Variations and Metrics
- C. **SMI Skill THREE** – Select and Improve on Present SPC Process – SPC Action Plan Do’s and Don’t

### 4. STEP FOUR – TRACK and DETECT QUALITY VARIATION

- A. **SPC Implementation** – Develop SPC Tracking System, PIC, Report Variation and Corrective Action
- B. **Discuss and Propose Corrective Action** – Present Solutions to Waste/Rejects Confidently
- C. **SMI Skill FOUR** – Develop Ishikawa/Fishbone Chart – Identify Production Defects and Root Causes

### 5. STAGE FIVE – CRITICAL STAFF COMPETENCY DEVELOPMENT

- A. **THREE Tier SPC Training** – Production/Process Team, Executives/Supervisors and Inspectors
- B. **Visualise and Brainstorm Defects** – Simplify Complex Problems and Present Solutions
- C. **SMI Skill FIVE** – Practical SPC Workshop – Plotting, Interpreting, Spotting Trends and Action to Take!

### 6. STAGE SIX – PREPARE, MAINTAIN and CONTROL CHARTS

- A. **Construct Visual Charts** – Histogram, Upper/Lower Limit, Frequency, Information Value, etc.
- B. **Interpret SPC Chart Relationship** – Brainstorm, Testing Hypothesis and Hidden Information
- C. **SMI Skill SIX** – Discuss BEST Presentation Graphs – Discuss your Preferred SPC Visuals!

## PART C “ SPC – PRODUCTION PROCESS STABILITY ”

### 7. STAGE SEVEN – PRODUCTION CAPABILITY VS STABILITY

- A. **Verify and Justify Process Stability** – Misleading CP and Cpk Data, Deviations, Process Confirmation, etc.
- B. **Reduce Product Defects** – Customer Expectations, Specifications, Corrective Action, etc.
- C. **SMI Skill SEVEN** – Brainstorm Production Capability/ Stability Strategies – Achieve Defect Reduction