Future-Oriented Training and Consulting

STATISTICAL PROCESS CONTROL PROGRAM

Statistical Process Control (SPC)

for Quality Teams

Equipping quality teams to detect variation early and drive continuous improvement.

Proven SPC Frameworks Structured frameworks for monitoring and controlling process performance.	**Executive Discussions** Case studies, simulations, and executive discussions from real processes.
SPC Charting Tool Exposure Hands-on exposure to SPC charting and analysis tools.	**Continuous Process Improvement** The skills to detect variation early and drive continuous improvement.

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Program Overview

This program builds practical expertise in applying statistical methods to monitor and control process performance.

Through case studies, executive discussions, simulations, and hands-on exposure to SPC charting and analysis tools, participants will develop the skills to detect variation early and drive continuous process improvement.

Program Objectives

- **Understand SPC Fundamentals:** Grasp how statistical methods reveal process behavior.
- **Distinguish Common and Special Cause Variation:** Separate normal variation from signals worth acting on.
- **Build and Interpret Control Charts:** Construct charts that reveal process stability over time.
- **Apply SPC Charting Tools:** Use software to automate charting and analysis.
- **Respond to Process Signals:** Take timely action when charts indicate a problem.
- **Sustain Process Improvement:** Apply monitoring and review practices long-term.

Target Audience

This program is designed for quality professionals applying statistical methods to process control, including:

- **Quality Engineers** monitoring and controlling process performance.
- **Process & Manufacturing Engineers** optimizing production process stability.
- **Quality Managers** overseeing quality performance programs.
- **QA & QC Technicians** collecting and charting process data.
- **Six Sigma & Continuous Improvement Professionals** applying SPC within improvement projects.
- **Entry-Level Quality Professionals** building foundational SPC skills.
- **Consultants & Quality Advisors** guiding clients on SPC implementation.

Program Impact

Participants will leave this program with practical SPC skills. Graduates will return to their organizations ready to detect variation early and drive continuous process improvement.

Program Outline

MODULE 1: Foundations of Statistical Process Control

- Core statistical concepts behind SPC
- How SPC reveals process behavior over time
- Overview of common SPC applications
- The quality professional's role in SPC
- Common pitfalls in early SPC adoption

MODULE 2: Common and Special Cause Variation

- Distinguishing normal from abnormal variation
- Understanding process capability and stability
- Collecting data suited to SPC analysis
- Hands-on exposure to data collection tools
- Avoiding common data collection errors

MODULE 3: Building and Interpreting Control Charts

- Selecting the right chart type for the data
- Calculating control limits and centerlines
- Hands-on exposure to SPC charting software
- Interpreting patterns and out-of-control signals

MODULE 4: Responding to Process Signals

- Investigating root causes of special cause variation
- Taking corrective action without overreacting
- Documenting responses and outcomes
- Using response tracking tools
- Building a complete SPC response protocol

MODULE 5: Continuous Improvement and Ongoing Practice

- Using SPC data to drive improvement projects
- Monitoring process capability over time
- Updating control limits as processes improve
- Sustaining process improvement beyond the program