

COURSE CONTENT
QUALITY DEFINED – VOC, CTQ, KANO MODEL
EXERCISES
EVOLUTION OF THE QUALITY FUNCTION - A JOURNEY FROM QUALITY MEASUREMENT TO SIX SIGMA
APPRAISAL & PREVENTION IN PROCESSES
CORRECTION, CORRECTIVE ACTION, PREVENTIVE ACTION
GOALS OF SIX SIGMA
SIX SIGMA TEAM FORMATION – IMPLEMENTATION LEADER, CHAMPION, BB, GB, YB.
CROSS-FUNCTIONAL COOPERATION / BOUNDARYLESS COLLABORATION IN SIX SIGMA ORGANIZATION
ROUTE FOR ACHIEVEMENT OF MANAGEMENT GOALS:
Q-C-D GOALS VS. FUNCTIONAL GOALS.
THE PROCESS APPROACH
CTPS
DASHBOARD
IMPROVING EFFECTIVENESS & EFFICIENCY OF PROCESSES
DPU & DPMO – CALCULATING PROCESS CAPABILITY (SIGMA LEVEL)
FOR DISCRETE DATA
CALCULATING SIGMA LEVEL FOR ENTIRE ORGANIZATION
EXERCISES
COST OF QUALITY – IMPACT ON SIGMA LEVEL OF A PROCESS
PHIL CROSBY’S FINDINGS
EXERCISES
MOTOROLA’S JOURNEY FROM 3.4 TO 6.0 SIGMA
SIX SIGMA – BASIC PRINCIPLES
HOW SIX SIGMA IMPLEMENTATION COULD FAIL
DO’S AND DONT’S
CULTURAL CHANGES REQUIRED WHILE IMPLEMENTING
LEAN SIX SIGMA
IMPORTANCE OF STUDYING VARIATION IN LEAN SIX SIGMA
INTRODUCTION TO DESCRIPTIVE STATISTICS
CENTRAL TENDENCY (MEAN – MEDIAN - MODE)
SPREAD (RANGE – STANDARD DEVIATION)
USE OF EXCEL ‘DATA ANALYSIS’ TOOLS FOR DESCRIPTIVE STATISTICS
INTERPRETATION ABOUT PROCESSES USING DESCRIPTIVE STATISTICS
SEVEN TOOLS OF QUALITY– FLOWCHART, CHECKSHEET,
PARETO CHART, HISTOGRAM, FISHBONE, SCATTER DIAGRAM / CORRELATION COEFFICIENT, CONTROL CHARTS

EXERCISES
USE OF EXCEL & MINITAB IN RESPECT OF THE 7 QC TOOLS
USE OF SPC IN SIX SIGMA – CALCULATING PROCESS CAPABILITY Cp, Cpk
BREAKTHROUGH IMPROVEMENT AND CONTINUAL IMPROVEMENT
CALCULATING PROCESS CAPABILITY (SIGMA LEVEL)
FOR VARIABLE / CONTINUOUS DATA
EXERCISES
DMAIC METHODOLOGY FOR PROBLEM SOLVING & PROCESS IMPROVEMENT:
DEFINE: PROJECT CHARTER – SIRPORC
MEASURE: PLAN FOR COLLECTING DATA RELATED TO CTQs AND
CTPs – MSA - COLLECTING BASELINE DATA – MEASURING
CURRENT PROCESS CAPABILITY.
ANALYZE: VALUE ANALYSIS OF PROCESS MAPS – FINDING ROOT
CAUSES – UNDERSTANDING CAUSES OF VARIATION –
ESTABLISHING CORRELATIONS – SHORTLISTING SOLUTIONS.
IMPROVE: FINALIZING SOLUTIONS – RISK ASSESSMENT AND RISK
REDUCTION (USING FMEA) – PILOT (VERIFICATION) – VALIDATION.
CONTROL: STANDARDIZATION OF NEW PROCESSES -
DOCUMENTATION – TRAINING – CONTROL CHARTS FOR
MONITORING – AUDIT PLANS.
DMAIC CASE STUDY – DEFECT REDUCTION
LEAN MANAGEMENT (THE SEVEN WASTES)
VALUE STREAM PROCESS MAPPING – VALUE ANALYSIS
DMAIC CASE STUDY – WASTE ELIMINATION
QUIZ SSGB – 01
QUIZ SSGB - 02 (MULTIPLE CHOICE)
FAILURE MODE & EFFECT ANALYSIS (FMEA)
EXAMINATION (90 MINUTES, OPEN BOOK)