

Statistical Techniques; e.g. MSA, SPC

Objectives; Understand the basics of these Statistical Tools & how to implement them effectively in your organization.

1-day workshops

Measurement System Analysis (MSA)

- ◆ Course / Delegates' Objectives
- ◆ Measurement System Variability
- ◆ ISO/TS 16949:2009 Requirements
- ◆ Measurement System Error
- ◆ Location errors; 'Bias', 'Linearity', 'Stability'
- ◆ Spread errors; 'Repeatability' & 'Reproducibility'
- ◆ Gauge R&R Studies; Variable & Attribute
- ◆ Analysis of Results – 'Data sheets', 'Graphical'
- ◆ Auditing MSA
- ◆ Workshop; 'Implementing MSA'.

FEEDBACK EXAMPLES

"Gave me the understanding that I wanted."

"Good use of practical exercises to demonstrate theory"

Statistical Process Control (SPC)

- ◆ Course / Delegates' Objectives
- ◆ Goal of Standards, e.g. ISO/TS 16949:2009
- ◆ Process Control
- ◆ Variation / Distribution
- ◆ Location of a Process; 'Its Setting'
- ◆ Spread of a Process; 'Its Variability'
- ◆ Variables & Attributes; 'Types of data.'
- ◆ Control Charts; 'Understanding & developing.'
- ◆ Process Capability; 'Calculating & reviewing.'
- ◆ Auditing SPC.
- ◆ Workshop; 'Implementing SPC'.

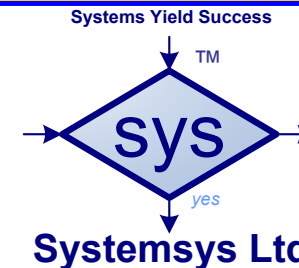
FEEDBACK EXAMPLES

"Ease with which complicated mathematics was conveyed to everyone."

"Showing how to apply SPC in the workplace."

'SPC' Ref. published article;

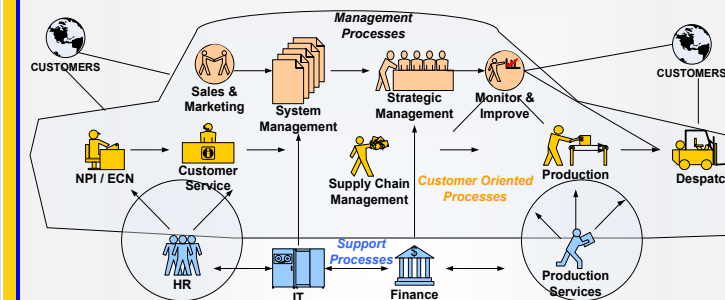
ICA 'Quality World'. Request a copy, e.g. tel., e-mail, website.



Core Tool Training

sys wants to help you improve your business using the Process Approach & obtain third party Approval.

This is done by providing Training, including NPI, see page 2, FMEA, see page 3, & SPC / MSA, see page 4, & Consultancy Support, see separate brochure.



Example 'SYSTEM MAP' Showing 'Sequence & Interaction' of Key Processes

Products are delivered by professionals with competency in:

- ◆ Third party assessment,
- ◆ Group management positions
- ◆ Training & qualifying third party assessors.

We cover standards such as:

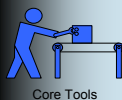
- ◆ ISO9001:2008 & ISO/TS 16949:2009

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New Product Introduction e.g. APQP & PPAP



Objective; Understand New Product Introduction /sign-off Frameworks and how to implement them effectively.

1-day workshop

- ♦ **Course / Delegates' Objectives**
- ♦ **Quality Planning: Why / Who / How?**
- ♦ **Product Quality Planning Timing Chart**
- ♦ **APQP Phase I**
 - PLAN & DEFINE PROGRAMME
 - Inputs & Outputs: (Inputs for section II)
- ♦ **APQP Phase II**
 - PRODUCT DESIGN & DEVELOPMENT
 - Outputs: (Design) FMEA, Design Review
 - Outputs: (APQP Team)
 - Control Plan, Cause & Effect Diagram
- ♦ **APQP Phase III**
 - PROCESS DESIGN & DEVELOPMENT
- ♦ **Outputs: Measurement system analysis**
- ♦ **APQP Phase IV**
 - PRODUCT & PROCESS VALIDATION
- ♦ **Outputs: Variation, Process Capability**
- ♦ **Part Approval: PAP**
- ♦ **PPAP AIAG PPAP Manual**
- ♦ **Reporting Requirements;**
 - Submission, Records
- ♦ **APQP Phase V**
 - FEEDBACK, ASSESSMENT,
 - CORRECTIVE ACTION
- ♦ **Outputs: Improved; QCD & APQP Process.**
- ♦ **Management Support, 'throughout'**

FEEDBACK EXAMPLES

"Good Knowledge of the Trainer.

Lots of Group Participation."

"Very hands on and became specific to our needs as a company."



Failure Mode & Effects Analysis FMEA



Objective; Fully understand & obtain real benefit from this risk analysis tool for product & process Design

1 or 2-day workshops

- ♦ **Course / Delegates' Objectives**
- ♦ **Goal of ISO/TS 16949**
- ♦ **Successful Implementation**
- ♦ **'Plan Do Check Act' Cycle**
- ♦ **Inputs; Measurement Tools; Data, e.g. QOS**
- ♦ **FMEA process; Creation**
- ♦ **When should you create an FMEA?**
- ♦ **Who should be involved?**
- ♦ **Define Scope & Customers**
- ♦ **Preparation; Block Diagram, P Diagram**
- ♦ **DFMEA**
- ♦ **PFMEA**
- ♦ **FMEA Elements (Form, 'options')**
 - Function
 - Failure Mode
 - Effects of Failure
 - Potential Causes
 - Controls
 - Severity, Occurrence, Detection scores
 - Risk Priority Number
 - Actions
- ♦ **Continuous Improvement**
- ♦ **Auditing, Customer Specific Requirements**
- ♦ **Workshop; Creation of actual Documents**

FEEDBACK EXAMPLES

"Hands on dealing with real issues."

"Learning how to do FMEAs."

FMEA' Ref. published article;

ICA 'Quality World'. Request a copy, e.g. tel., e-mail, website.

