Systemsys Ltd

Improve your business with Training & Consultancy on Process based Systems & obtain third party Approval when required, e.g. to ISO 9001 &/or ISO/TS16949.

See 'Contents' & the SYS guide, numerous published articles & the website.

Systemsys: ***"Providing Support to Industry since 2005"***

Note this Brochure can be saved in different formats, e.g. iBooks on Apple.

Introduction to Systemsys Ltd

***Systemsys Ltd* helps companies, particularly in the UK, to improve their business performance using the Process Approach and obtain third party Approval where this is required.**

Training & Consultancy & Contact

We provide Training & Consultancy Support for Internal Auditors, Lead Assessors, Management, and Product & Process Engineers. **See Page 4.**
Support is outlined in the ***Consultancy/Workshop*** sections and includes identifying company's key processes and mapping them out with their Key Performance Indicators. Levels 1 (System Map) & 2 (Process Maps) of a working '*html*' system can be seen in the ***Example*** section of the website.

- Consultancy can extend to full implementation support to achieve accredited approval to a standard.
- Services are delivered by Professional Engineers with extensive experience of Group Management, 3rd party assessment and Training & Qualifying 3rd party assessors.
- Companies that have been supported, have achieved or maintained approval as required to the Quality Management Standards ISO9001 and/or ISO/TS16949 and improved their business performance.

- SYS aims to provide the best service possible and be seen as achieving this, as is shown in representative comments in the ***Customer Feedback*** section of the website.

Introducing the Process Approach. See the website.

Contact

If there is anything that we can do to support you, then do let us know for example via the ***contact us*** page of the website; www.systemsys.co.uk.

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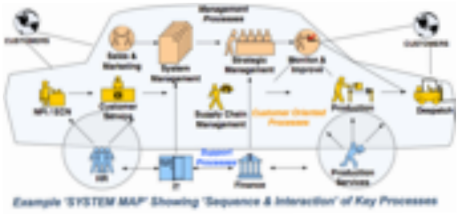

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Management & Audit Training: Overviews

Based on standards, including the current versions of **ISO 9001** & the Automotive version, **ISO/TS16949.**

Awareness / detailed workshops; Management / Team

(In-house) Typically 0.5 day Awareness - 1-day detailed workshops
To give Teams at all levels of the organization the necessary information about the Process Approach & related standards such as ISO9001 & ISO/TS16949, to support successful implementation & aligning the system with their own business / strategy. ***(Similar to 1st part of Auditor course.)***

Internal Auditor Courses & Workshops.

See Page 7

ISO9001 & ISO/TS16949 (Open & In-house) 2 or 3 days
Gives new (3-days) & existing (2 or 3 days) auditors the necessary skills to undertake effective internal system & process audits. **

Assessor Courses & Workshops.

See Page 8

ISO9001 & ISO/TS16949 ASSESSOR (Open & In-house) 5 days,
Gives new & existing Automotive Assessors the necessary skills to undertake effective First & Second Party Assessments, either on their own or eventually leading a team. Performance and written examinations & certification of achievements. **

** Most Audit courses allow you to undertake real audits;
for the in-house course these are against your audit schedule.

Lead Assessor Coaching & Assessment

Post course Coaching / Assessment Follow-up activity to 5-day course, once sufficient audits completed successfully; sign-off as Assessor then eventually Lead Assessor.

AUDITING Ref. article from IET Engineering Management. Request your copy

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Core Tools Training: Overviews

Objectives: (Open or In-house) Typically 1 –2 day workshops. Gives organizations the necessary information to undertake effective audits of their Core Tools & / or implementing an effective system. These include:

Quality Planning & Part Approval APQP/PPAP

New Product Introduction & Part Approval Frameworks. **See Page 9**
Understand the Project Management/sign-off process.

Failure Mode & Effects Analysis (FMEA)*

Understand this key risk analysis tool that supports effective Product & Process Design within APQP. **See Page 9**
This can then lead to support in creation of Control Plans.

Statistical Process Control (SPC)*

Using Statistics to understand & reduce the variation **in** your manufacturing processes & resultant products. **See Page 10**

Measurement Systems Analysis (MSA)

Using statistics to understand your measurement system errors & reduce the variation present in them. **See Page 10**

Disciplined Problem Solving (DPS)*

Understand & use this defined Corrective Action framework using a team to solve complex problems. **See Page 11**

*** Reference articles from *'quality world'* magazine.** **Request your copy**

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Consultancy Support: Outline

Related Business System Consultancy Support

In-house Support as required, e.g. as per the following; *

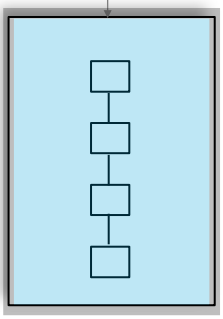
1. System Map —>

In 1 day the key processes, can be determined & their sequence & interaction shown in a visual System Map. Some of these Processes can then be mapped, with their Key Performance Indicators ('KPI's) being identified.

2. Process Maps —>

In about 2 days, the remainder of the processes can be mapped, completing the Level 1 System Map & Level 2 Process Maps, and identifying KPIs.

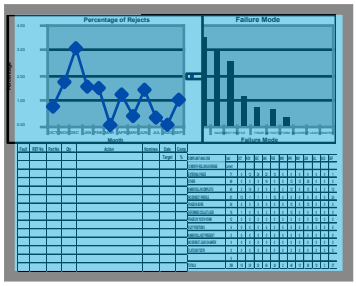
3. Documented Information —>



Provide support with your System, including Level 3 Instructions & Level 4 Forms: Supporting the publishing your system in a standard format that can be accessed by everyone, e.g. for intranet in '://html'.

4. Gap / Pre-Assessments / Guidance;

Identify any gaps in system against relevant standards. Assisting in implementing the system and achieving/maintaining Improvement & 3rd Party Approval Interim / on-going Parts of the system can be operated for you.



Example KPI

*** SYSTEM: Ref. article from IET Engineering Management. Request your copy .**

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Auditor Course Details

Course Outlines: ISO 9001 & ISO/TS16949.

Ref. outline on Page 4

- **3-day**: Typically for new auditors, see all below.
- **2-day**: For existing auditors, can be 2 days, without middle 'day' on the standard.

DAY 1 —'Classroom Training'

- Course / Delegates' Objectives
- Background to Standards
- The Process approach
- Integrated Frameworks, e.g. ISO14001
- Goal of Standard
- Support Documents, Guidance & Rules
- Scope & Application
- Management Systems / Documentation requirements
- Strategy / Policy Deployment
- Process Analysis / Key Performance Indicators
- Customer Satisfaction / Specific Requirements.
- Audit Planning& Qualification
- Start on the Standard

DAY 2 —'Classroom Training'

- The detail of the standard;
- Audit Process, Reports & Corrective Actions
- Undertaking Case Study Audits.

DAY 3 —Audit 'Workshop'

- Preparing to undertake an audit
- Undertaking Audit of Business Process
- Writing-up the audit
- Feeding back on the audit results

Certification against the above.

AUDITING Ref. article from IET Engineering Management. Request your copy

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Assessor Course Details

5-day Course Outline: ISO9001 & TS16949.

Overview: each 'Part' / Phase **Note: ref. outline on Page 4**

- **Part 0:**. Pre-Evaluation. Questions on topics to be covered.
- **Part I:** Class room Training and Exercises in:
  - **Mon.** Background, Process Approach, Awareness,
  - **Tue.** Standard, Customer specific requirements, Case studies
  - **Wed.** Core tools including, 'SPC', 'FMEA', 'MSA'; Auditing
- **Part II: Audit & Evaluation**
  - **Thu. On-site audits to schedule, Performance evaluation 'a'**
  - **Fri. Examination, Write-up Audit, present findings, evaluation 'b'**
- **Part III. Marking exams & issuing Certificates stating both results.**

Detail: day by day:

- **Mon.** Course / Delegates' Objectives
  Background to Standards
  The Process approach
  Integrated Frameworks, Goal of Standard
  Support Documents, Guidance & Rules, Scope & Application
  Management Systems / Documentation requirements
  Strategy / Policy Deployment M Process Analysis
  Key Performance Indicators M Customer Satisfaction
- **Tue.** ISO/TS 16949's requirements in detail
  Customer Specific Requirements
- **Wed**. Assessing Core Tools:
  Failure Modes & effects Analysis (FMEA)
  Statistical Process Control
  Measurement System Analysis (MSA)
  Audit Process; Planning, Auditing
  Auditor Qualification Criteria
- **Thu**. **Undertaking 'live' Audits against schedule**
  Performance Evaluation
- **Fri.** **Written exam**
  Audit Write-Up & feedback

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New Product Introduction & FMEA

Quality Planning / Part Approval.

- **Introduction:** **Note: ref. outline on Page 5**
- **APQP Phase I: PLAN & DEFINE PROGRAMME**
  Inputs & Outputs: e.g. Design Goals (Inputs for section II)
- **APQP Phase II: PRODUCT DESIGN & DEVELOPMENT**
  Outputs: (Design) FMEA, Design Review Outputs: (Team). New Equipment & Testing requirements
- **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'

Failure Mode & Effects Analysis (FMEA)

- **Introduction:** Objectives, **Note: ref. outline on Page 5**
  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**; e.g. Block Diagram, Process Flow
- **FMEA Elements**; (Form, 'options')
  DFMEA (Product Design) & PFMEA (Process Design)
  Function, Failure Mode, Effects, Potential Causes
  Controls; Prevention/Detection
  Severity, Occurrence, Detection, scores Risk Assessment, 'RPN',
- **Actions** & Follow-up & Continuous Improvement. Link to Control Plan.
- **Workshop**; Creation of actual Documents:
  DFMEAs, PFMEAs & Control Plans.

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Statistical Techniques

Statistical Process Control (SPC)

Note: ref. outlines on Page 5

- 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; Cpk & Performance. Ppk
  - 'Calculating & reviewing.'
- Auditing SPC: Where is the company today?
- Workshop(s); 'Implementing SPC'.

Measurement System Analysis (MSA)

- Course / Delegates' Objectives
- Measurement System Variability
- ISO/TS 16949's 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' Techniques
- Auditing MSA; Where is the company today?
- Workshop(s); 'Implementing MSA'.

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Disciplined Problem Solving

- **D0 Determine the Problem.** Note: ref. outline on Page 5
  Establish what problem(s) need to be addressed. *Data*
- **D1 Use a Team Approach**
  Establish a small group of people with the process / product knowledge, allocated time, authority and skill in the required technical disciplines to solve the problem & implement corrective actions. They must have a designated champion. *PDCA, Team*
- **D2 Describe the problem**
  Specify the internal / external customer problem by identifying in quantifiable terms; who, what, when, where, why, how / many. *Process Flow, Cause & Effect, Pareto, FMEA*
- **D3 Containment Action**
  Define, implement & verify containment actions to isolate the problem from any internal / external customer until permanent corrective action is available. *Brainstorming, Bar Charts*
- **D4 Root Causes(s)**
  Identify all potential causes which could explain why the problem occurred. Isolate & verify the root cause(s) by testing each potential cause against problem description. *Brainstorming, C&E*
- **D5 Corrective Actions**
  Identify &verify alternative actions to eliminate Root Cause. Through pre-production test programmes, quantitatively confirm that the selected corrective actions will resolve the problem for the customer & will not cause undesirable side-effects. *Cause & Effect.*
- **D6 Permanent Corrective Action**
  Define & implement the best permanent corrective actions. Choose on-going controls to ensure the root cause is eliminated. Once in production, monitor long-term effects. *Pareto, FMEA*
- **D7 Prevent Recurrence**
  Modify the management systems, practices & procedures to prevent recurrence of this & similar problems. *BMS, FMEA*
- **D8 Congratulate the team**
  Recognise the collective efforts of the team. *Multi-Disciplinary Approach*

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