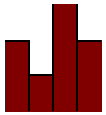
Business Improvement and Standards

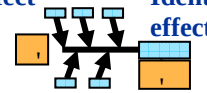
Problem Solving Tools & Techniques

Bar Charts — Display Quantities in a picture, Graphical format.

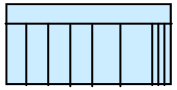


Brainstorming — Obtain as much information as possible about a problem.

Cause & Effect — Identify possible causes of a given effect.

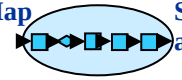


FMEA — Risk Analysis Tool for Product & Process Design..
(Failure Modes and Effects Analysis.)



5 Whys — Structured technique to identify root causes of a problem.

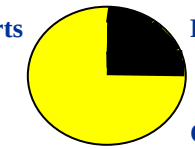
Process Map — Simple summary of a processes activities.



Histograms — Shows a distribution over a range of values.

Pareto — Shows most repetitive issues.

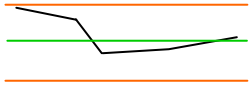
Pie Charts — Picture of relative proportion of items.



PDCA — Continual Process to improve performance.

MSA — Assessment of a measurement Systems Variation.

Run Charts — Monitor features that might affect the process performance.



Business Improvement and Standards

"Time to make that business decision"

TM

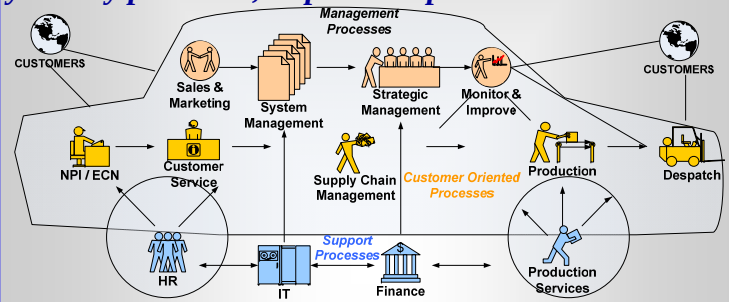
sys

yes

Systems Yield Success

Disciplined Problem Solving

sys *wants to help you improve your business using the Process Approach & obtain third party Approval. This is done by providing Training, including on DPS, Key Steps, see page 2 & 3, & Tools, see page 4 & Consultancy Support, see brochure, e.g. identifying your key processes, as per example below.*



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 in industry &*
- *ISO/TS16949:2002 third party assessors .*

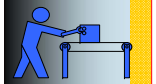
We cover standards such as:

- *ISO9001:2000 & ISO/TS 16949:2002*
- *Integrated management frameworks.*

I look forward to hearing from you, Alan Keffler. 07947 676705

Contact SYS on; sales@systemsys.co.uk , or the website.

Disciplined Problem Solving



'Understand this key Corrective Action Process.'

Objective;
'To assist Teams in being able to:
Use a Structured Approach to understand, Identify and Eliminate the Root Cause of a Complex Problems with Permanent Corrective Action.'

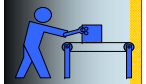
1 Use a Team Approach
Establish a small group of people with the process / product knowledge, allocated time, authority and skill in the required technical disciplines to solve the problem and implement corrective actions. They must have a designated champion.

2 Describe the problem
Specify the internal / external customer problem by identifying in quantifiable terms who, what, when, where, why, how, how many.
Process Flow, Cause & Effect, Pareto, FMEA

3 Containment Action
Define, implement & verify containment actions to isolate the problem from any internal / external customer until permanent corrective action is available.
Brainstorming

4 Root Causes(s)
Identify all potential causes which could explain why the problem occurred. Isolate and verify the root cause(s) by testing each potential cause against the problem description and test data.
Brainstorming, Cause & Effect Diagram

Disciplined Problem Solving



5 Corrective Actions
Identify and verify alternative corrective actions to eliminate Root Cause.
Through pre-production test programmes, quantitatively confirm that the selected corrective actions will resolve the problem for the customer and will not cause undesirable side-effects.
Cause & Effect Diagram

6 Permanent Corrective Action
Define and implement the best permanent corrective actions.
Corrective Actions. Choose on-going controls to ensure the root cause is eliminated. Once in production, monitor the long-term effects.
Pareto, FMEA

7 Prevent Recurrence
Modify the management systems, operating system, practices and procedures to prevent recurrence of this and similar problems.

8 Congratulate the team
Recognise the collective efforts of the team.

FEEDBACK EXAMPLES

"These sessions have been invaluable to our company, and have helped us to address a number of weaknesses as a business."

"Course strengths — Team activities / Problem Solving."