

HEW Associates Ltd
Inspired Business Improvement

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Domestics

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Aim

To provide knowledge of DMAIC

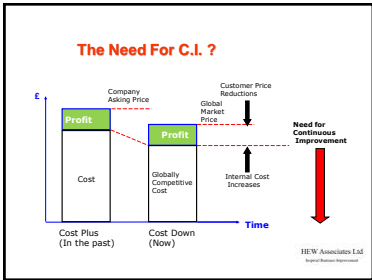
Objectives

By the end of the session you will be able to:

- Use the steps of DMAIC as a problem solving methodology

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Lack of effective problem solving caused by a number of factors:

Incorrectly describing the problem, a clear thorough description is needed.

Hurrying up the process, steps are skipped to obtain a quick solution.

No logical process, the team lacks a disciplined system to prioritise, analyse and review problems.

Poor Team participation, Not all team members get involved, may not consider all the causes of the problem.

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Lack of technical skills, team members are not trained in statistics and problem solving.

Management's impatient, pressure causes an inadequate analysis.

Not implementing permanent corrective action, root cause not identified also financial justification is required.

Misidentifying a possible cause as a root cause, problem reoccurs because the root cause is not eliminated.

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When to use a Team Approach

- When the skills of others would benefit the analysis of the problem
- When the knowledge of others would benefit the analysis of the problem
- When the input from a group will enable you to make the right decision
- When the problem affects a wider group

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Establish the Team

- Team Roles
 - Facilitator
 - Champion
 - Scribe
 - Timekeeper
 - Team Member
- Identify who has the authority to give you any support you may need

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Interpersonal skills required:

Commitment, full commitment from the team toward the end goal.

Communication, the ability to convey and appreciate information and ideas, feeling free to express their observations and ideas.

Meeting effectiveness, the ability to conduct and/or participate in meetings that share information, provide feedback, plan, solve problems and make decisions.

Leadership, inspire and support the team.

Recognition and feedback, non-judgemental self and others.

Consensus decision making, as a team.

Conflict resolution, manage differences, conflict is a normal healthy part of teamwork.

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DMAIC

Define - What is the problem ?

Measure - How big is the problem ?

Analyse - What causes the problem ?

Improve - Eliminate the causes

Control - Make the solutions stick

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DEFINE the problem or desired improvement

Create a problem profile by asking the questions;

- What is wrong with what
- What similar process could be wrong but is not.
- Where locally or geographically is the problem – and where could it be but isn't
- When did it first occur and how often does it come back
- How big is the problem

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5 Whys and Open Questions

What is the problem ?

Why is it a problem?

Where is it a problem ?

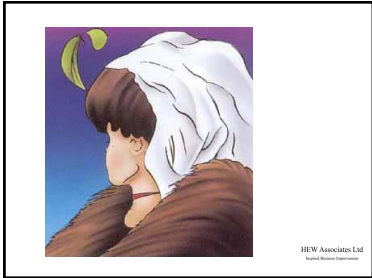
How is it a problem ? (Quality, Cost, Delivery, Safety, Morale and Management)

When is it a problem

Who is a problem for ?

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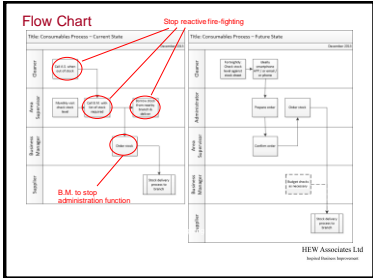


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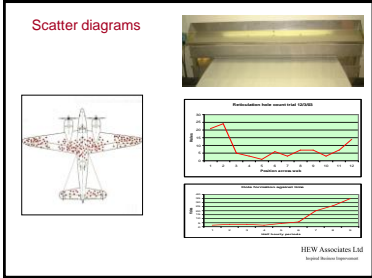
Measure: 7 Quality Tools

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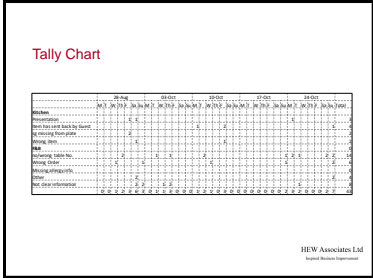
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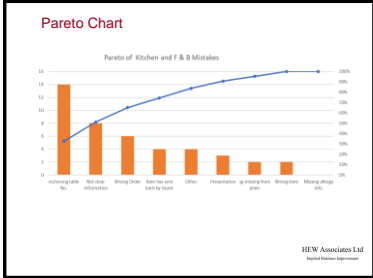
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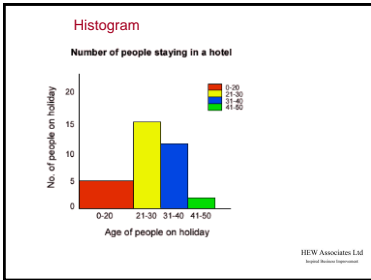
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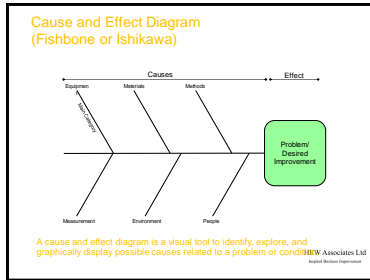
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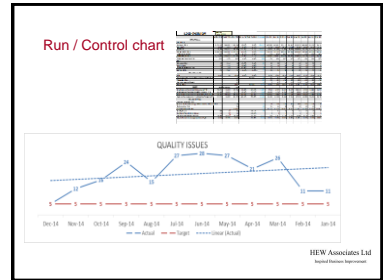
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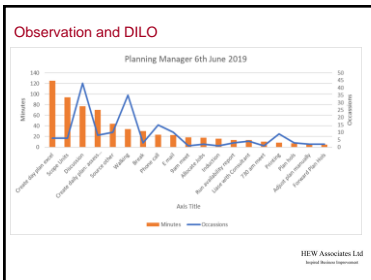
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- ### Other sources of Data
- historical records (e.g. maintenance or shift logs)
 - quality audits
 - external sources
 - Standard Operating procedures
 - health and safety & environmental information
 - designed and controlled trials
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- ### Analyse: Root cause
- Do you jump in and start treating the symptoms? Or do you stop to consider whether there's actually a deeper problem that needs your attention?
 - If you only fix the symptoms – what you see on the surface – the problem will almost certainly happen again... which will lead you to fix it, again, and again, and again.
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- ### 5 Why's
- 'A relentless barrage of 'why's' is the best way to prepare your mind to pierce the clouded veil of thinking caused by the status quo – use it often' - Shigeo Shingo
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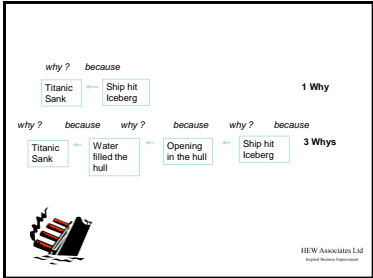
Ask your partner Why are you here ?

.....

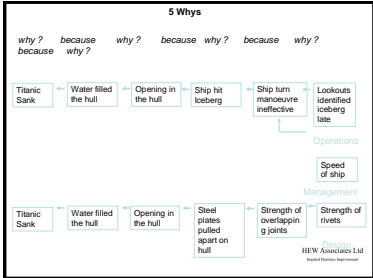
Until you find something new about them

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Brainstorming Method

1. State the problem
2. Each person to present ideas
3. Record the ideas without judgement
4. Check for clarification if needed
5. Examine each idea in turn
6. Group the ideas, move forward

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Brainstorming

- This is a process that involves everybody
- Each person will throw up an idea for what could be causing or contributing to the problem.
- Keep going till ideas are exhausted.
- There are no bad ideas.
- What seems like a daft idea could provide the spark that makes someone think of what could be the root cause

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Rules for Brainstorming

During Idea Collection

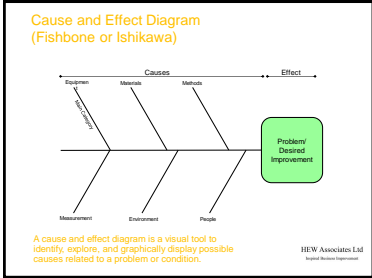
- No Criticism
- 'Free Wheeling' welcome
- Quantity is needed
- Don't fear repetition
- No questions during session
- State ideas quickly
- No enlargement needed
- Don't mind stating the obvious
- Combine and improve on others
- Don't fear repetition

During the Assessment phase

- Only criticise the idea, not the person

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Solutions

- The cause & effect matrix prioritises the possible causes of the problem/ defect
- The possible causes should be investigated and verified
- From this potential solutions can be generated
- The potential solutions must be evaluated

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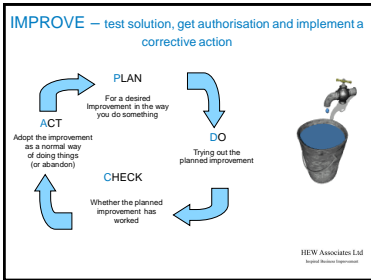
Prioritisation

Evaluate all the potential solutions considering the following:

- Operational Effectiveness
- Ease of implementation
- Timescale for implementation
- Financial Impact
- Functionality of the system
- Environmental Impact
- Staffing Implications
- Quality Implications
- Conformity with Company Policies
- Health and Safety Implications
- Customer delivery implications

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Team Charter / DMAIC Checklist

Team Name: _____ Date: _____

Team Leader: _____

Team Members: _____

Project Description: _____

Problem Statement: _____

Current State: _____

Target State: _____

Key Milestones: _____

Team Charter / DMAIC Checklist

Item	Completed	Not Completed
1. Define the Problem	Yes	No
2. Measure the Problem	Yes	No
3. Analyse the Problem	Yes	No
4. Improve the Problem	Yes	No
5. Control the Problem	Yes	No

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Action Plan

Order	Action	Start	End	Status
1				
2				
3				
4				
5				
6				
7				
8				
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10				
11				
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CONTROL and communicate new procedures

Prevent recurrence and sustain the improvement/solution, Implement controls and procedures like

- Regular audits,
- SPC (Statistical Process Control)
- Modify Standard Operating Procedures (SOP' s)
- Improve Visual Management
- Training
- Fool Proofing
- Lesson Learnt

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DMAIC

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	PDCA	DMAIC	A3	8D/PSP
Plan		Define	Clarify the Problem	1. Create Team & collect information
		Measure	Break down the Problem	2. Describe the Problem
		Analyse	Set a Target	3. Define Containment Actions
Do		Improve	Analyze the Root Cause	4. Analyze the Root Cause
Check		Control	Develop Countermeasures	5. Define possible corrective Actions
Act			Evaluate Results & Processes	6. Implement corrective Actions
			Standardize Success	7. Define Actions to avoid Recurrence
				8. Congratulate your Team

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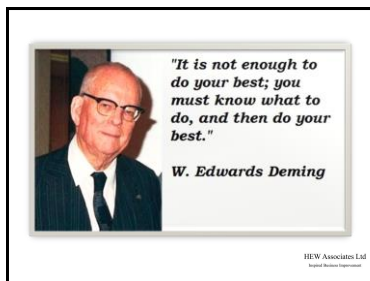
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