

# MANUFACTURING BRAIN BOOSTER

## LEARNING ACTIVITY #5

### PROBLEM SOLVING



#### WHY BRAIN BOOSTERS

Whether it's to earn some brownie points at home or make your lives easier Brain Boosters cover some very useful and simple manufacturing improvement principles, which can be adapted to any walk of life.

#### WHAT DO WE MEAN BY PROBLEM SOLVING?

Everyone solves problems, each and every day. In manufacturing, problem solving, when performed correctly focuses on finding lasting solutions to issues, as quickly and efficiently as possible. To help solve problems you first really need to understand what the problem is and that not every problem is the same. To solve any problem you should aim to keep the same structure to your approach to help establish the 'root cause'.

#### HOW TO CARRY OUT ROOT CAUSE ANALYSIS?

It may be tempting to apply a 'quick fix', by 'sticking a plaster' on the most obvious cause, but to stop the problem from reoccurring it is important to carry out root cause analysis. Root cause analysis should always consider these four categories:



**People** - Has someone not followed their WES or QPS (Remember from the standardised working booster?)



**Parts** - Maybe there is an issue with a part used

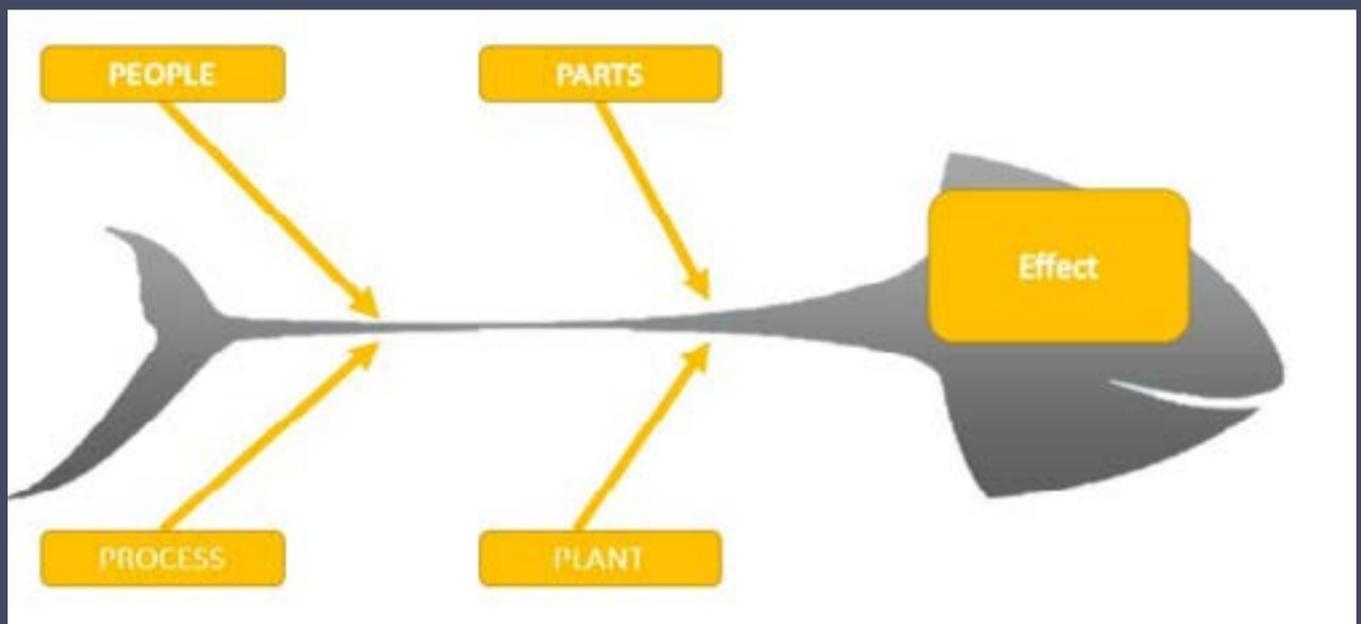


**Processes** - The processes followed may not be fit for purpose



**Plant** - Was the correct tool used?

Top tip - Use an Ishikawa or 'fish bone' diagram like the one below to help you list potential root causes...



Using the above categories, you will be able to relate the symptoms to the true root cause(s). Once the problem is truly understood, the correct permanent fix can be applied. Successful problem solving helps create a lasting solution. To achieve this, we need to make changes to the 'system' to stop it happening again.

#### Examples of Tools available to help you solve/communicate a problem:

Dependant on where you are working and in what function there may be other tools available to help you solve or communicate problems. Some of these are listed below:

**Fishbone/ Ishikawa** – As suggested above. You can use this to identify potential factors causing the issue, categorising them to highlight where to focus efforts

**Concern and Countermeasure Action Report (CCAR)** - Use this to raise a concern, record any actions or containments and detail the countermeasure

**5-Why Analysis** - The 5-Why analysis method is used to move past symptoms and understand the true root cause of a problem. Keep asking why until you reach the route cause. It might take more than 5.

**Trackers and Issue Bar Charts** - Record the detail and extent of the issue and highlighting any trends across all shifts.

**Work Group Brief** - Communicate the problem to the wider team as well as the other shifts. This will help establish if anyone has experienced this issue before and maybe even provide a solution.

**Practical Problem Solving (PPS) form** - A summary document that records the Primary Outcomes of Problem Solving (Emergency Response Action (ERA), Interim Containment Action (ICA), Permanent Corrective Action (PCA) and Prevent Re-Occurrence Action (PRA). It is divided into sections (D0 - D8) to help you to work in a structured way based on a methodology called 8D.

**Problem Solving Pack (PSP)** – might be available in your area to helps guide you through a problem, in a structured manner, following the 'JLR Problem Solving Flow'. It also acts as a folder to store related documents.

#### HANDS ON ACTIVITY

Time for you to do your very own problem solving. Think about a problem you regularly come across at work or maybe it is something which bugs you when you are at home.

1. Start off by defining what the problem is.
2. Describe your problem by stating the What, Where, When, Who, Why and How.
3. Use a fish bone diagram to help you understand the root cause and further define your problem.
4. Finally use the 5-Why analysis to really delve deeper in to what is really causing the problem.

Check out this [video](#) from the NHS if you want to learn more about 5 Why's.

#### CREDITS

Adapted from original content produced by the Solihull based Corporate Affairs team in conjunction with the Solihull Business Excellence team.