Advocate
TRAINING AND CONSULTANCY

The Anatomy of a Problem

We may think that we deal with problems every hour of every day. However, in many cases, these are usually decisions that need to be taken, given a specific set of circumstances. Some apparent problems may be complex but easy to solve. On the other hand, some problems may be characterised by a set of circumstances that go far beyond a complex situation. We can often encounter such factors as:

- Missing or inaccurate information
- Conflicting facts and ideas - several people may be involved and they may have presented apparently conflicting facts and opinions.
- Confusion – you may be up against tight deadlines and overwhelmed by the problem's implications and the choices. This may cause stress and emotions to run high.
- Incomplete communications or missing information.
- Persistence – no matter what you do the problem won't disappear.

The effective problem-solver has to manage a complex set of concerns, difficulties and interactions.

What Is a Problem?

Put simply, a problem is “a deviation from normal expectations.” So if what you’ve got is not what you expected, or what you want, it’s a problem

People often get muddled between problems, symptoms and solutions so it helps to understand the difference:

A **PROBLEM** is a deviation from normal expectations.
A **SYMPTOM** is an effect of a problem.
A **SOLUTION** is a way to correct a deviation from normal expectations.

The Problem Solving Process

The Problem Solving Process is a methodical and effective approach for analysing problems and generating workable solutions. It can be used whenever you recognise that a problem exists and that a work process needs to be improved. It will enable you to define a problem fully, conduct an analysis of the causes of the problem and work through to the point of identifying and implementing improvement solutions. It can be used by individuals, but most powerfully, by teams.

To dive headlong into implementing solutions often generates short-term improvements. However, this can fail to eradicate the problem entirely

because only the symptoms, not the root causes of the problem have been dealt with.

1. Define the problem.

Firstly, we must define the problem. Problem definition questions provide a framework to specify the problem more closely. By asking what, where, when, who, how big?, we can begin to define a problem and understand its impact.

- What exactly is the problem?
- Where is the problem?
- When does the problem occur?
- Who is affected by the problem?
- How big is the problem?

2. Investigate and fix

Collect data about each possible cause and see if it is linked to the problem. Don't rely on peoples' opinions to rule out possible causes; collect data and facts! Implement any temporary fixes carefully and monitor the effect of any changes you make. Make sure that quick fixes are followed up with actions to address the root causes.

3. Analyse data and identify root causes

Use analysis tools to find the cause(s) which, if removed, will ensure a problem is solved and stays solved. Ensure you recognise the differences between "fixes" and root causes.

4. Identify possible solutions

Then we can come up with workable solutions to our problem. Use idea generation techniques and involved those affected by the problem in identifying possible solutions. Aim for as many ideas as possible; don't evaluate at this stage. If you have done a thorough analysis, the solution may be obvious though!

5. Select and test solutions.

Implementation stages if viable. Review/re-start if not viable. Finally, we go into the implementation stages where we put our solutions into effect and see if they have solved our problem. se Ranking and Rating to select the best solution against the criteria agreed by those involved. Assess the impact of the chosen solution and ensure that it doesn't cause more problems than it solves. You may need to review what you've done and re-start if you can't find a viable solution.

What Makes a Good Problem Solver?

The importance of good communication skills and effective thinking styles are just as important as technical and business knowledge. The following are important attributes for a problem-solver:

- Persistence
- Good communicator
- Technical and Business knowledge
- Good listener
- Patient
- Positive attitude
- Calm when under pressure
- Good team-worker
- Good organiser / planner
- Flexible approach: Creative, logical, critical, methodical
- Effective information storage
- Analytical
- Good time management
- Assertive communication

Barriers to Problem-Solving

Often our problem-solving process is inadequate, resulting in slow results and partial solutions, these may fail to satisfy the situation and not to meet needs in the long term.

Often the problem-solver is under considerable pressure from the business or customer to solve the problem quickly. This may lead to decisions and actions being taken before establishing a complete understanding of the problem and its likely causes. The end result may be a set of recommendations and actions that are ill-conceived and that fail to solve the real problem. This can cause wasted effort and frustration for whoever the problem affects.

Common failures and barriers to effective problem-solving include:

- Gleaning incomplete information
- Making assumptions
- Trying to fix too quickly
- Failure to find the underlying cause
- Focus only on one obvious solution
- Focus only on 'technical' fixes
- Know your mind

It is useful to understand how your mind works when it is thinking about a decision or problem. We are not always introspective, but that is no barrier to becoming more aware of the range and depth of your basic mental functions.

Brain Power

When you start analysing the capacity of your brain, it all gets a bit mind boggling. Your brain contains around 10,000,000,000 nerve cells or neurons. The brain loses about 10,000 brain cells a day, however so great is your natural supply that, at 80 years of age, you will only have lost about 3 per cent of your brain capacity. If you sat down and counted each brain cell in your head, at the rate of one a second, you would still be counting in 30,000 year's time.

Each neuron has synapses – places where nerve cells join each other. Each cell is capable of linking up with about 10,000 of its neighbours. That gives you an astronomical figure of possible combinations: 1 followed by 10 million kilometres of standard typewritten noughts. When you tackle a problem, the chemical reactions involve somewhere between 100,000 and about one million cells at any given moment as you tackle the problem.

What brain research suggests is that our minds have almost limitless potential. Your brain is much better than you think it is. Most of the problems we have in thinking are not because of any fundamental shortcomings in this biological super computer but because we do not know how to use it effectively.

Brain Theory

Very few of us have ever been taught how the brain actually works, how to maintain it and how to keep it from getting overheated or breaking down. It is quite natural to ask for a manual when we buy a computer or even a coffee machine; but not many of us have ever been to the library to borrow a user manual on how to use the brain!

All too often our brains let us down just when we need them most. There are times when we need to take into account what factors are affecting our brain.

We need to take care when we are:

- Tired
- Eat too much/eat too little
- Get headaches
- Can't control our feelings
- Start quarrelling
- Drink alcohol
- Can't concentrate
- Take drugs
- Suffer from illness

These and many other problems can be caused by incorrect use of the brain. The brain itself is good enough. We just have to learn the best way of using it!

When we do that we can be more effective in the way we solve our problems. This also enables us to:

- Improve communications
- Be more creative
- Get into better shape
- Improve our memory
- Avoid tiredness and stress
- Make better decisions
- Keep the overview
- Be more relaxed
- Develop willpower and self-discipline
- Learn quicker
- Reach our goals
- Solve problems faster and better
- Enjoy life

By using a combination of your thinking skills and natural problem solving abilities, combined with a process, problems get solved faster and more effectively.