

SOLVING PROBLEMS.

Checklist 012

» INTRODUCTION

Problem solving is a valuable skill that can really only be learnt, and perfected, through continual practice. A wide range of problem solving models and techniques are available, however, and these provide frameworks to assist in evaluating and solving diverse problems of varying degrees of complexity. This checklist does not recommend a specific model but aims to provide a guide to a generic problem solving process. As a manager you, are encouraged to find the model which best works for you - one that is flexible and can be adapted to suit your own specific circumstances. Over time, your model of choice should become an automatic and integral part of your working practices. However, it is important to understand the limitations of any specific model.

Most problem solving methods follow a common pattern, beginning with a definition of the problem, moving on to the consideration of potential solutions, and culminating with the selection, testing and implementation of a chosen course of action. Divergent thinking techniques can be helpful in generating creative ideas, while convergent thinking can assist in structuring and evaluating potential solutions.

Problems can be classified into one of two categories: the 'fix-it' or the 'do-it' scenario:

- › Fix-it – solving an existing problem, (e.g. a current product range is falling short of its sales targets). An immediate short-term solution could be to increase marketing activity, for example.
- › Do-it – moving you in the right direction for what you want to achieve, (e.g. a new product range needs to be introduced to compete with market rivals). This type of problem will require longer term planning in order to achieve its objectives.

Irrespective of the severity or complexity of the problem, the process should:

- › be systematic and thorough
- › provide evidence to show how the problem was solved
- › avoid a rush to a solution without first understanding the cause of the problem
- › enable possible causes to be assessed.

» DEFINITION

A problem is the distance between how things currently are and the way they should be. Problem solving forms the 'bridge' between these two elements. In order to close the gap, you need to understand the way things are (problem) and the way they ought to be (solution).

Although there is a clear distinction between problem solving and decision making, the two are often confused. Problem solving differs fundamentally from decision making. A problem occurs when something is not behaving as it should, something is deviating from the norm or something goes wrong. Decision making is a case of choosing between different alternatives. Decision making is required in

response to the question: "Which computer shall I buy?" Problem solving is needed in response to the statement: "My computer won't work".



ACTION CHECKLIST

1. Define and understand the problem

Once you have been made aware of, and have identified a problem, investigate exactly what has gone wrong. Try to identify the problem through signals from routine statistical results, progress meetings, suggestion schemes, reports, and feedback. A rising tide of complaints, for example, could stem from faulty machinery, poor packaging, staff absence, poor staff training, product deficiency, or false marketing hype and so on. Defining the problem accurately is crucial. Otherwise you might find that you are solving the wrong problem. It is doubtful that a problem will be satisfactorily solved if the problem is not correctly defined.

2. Assess the scale of the problem

Decide how urgent the problem is and how soon it requires solving. Is it a top priority, or can it wait for a few weeks, months or even years? Consider the implications if the problem were not to be resolved straightaway. What would the consequences be? It might be an urgent problem but not really important in the grand scheme of things. Think strategically and consider whether a quick solution ('fix-it') is required or an optimal solution ('do-it') is necessary. This will determine the scale of the problem and the related solution.

3. Gather relevant information

In order to gain a full picture of the problem, a key step in the process is to gather all the relevant information, involving all the factors which may have an influence on the problem. Go into detail about the people, activities, processes, equipment, systems, time-scales and conditions under which the problem occurs. Tap into other resources at your disposal such as data held by your IT systems. Gather the critical facts by asking the right questions of the right people, namely the what, why, how, where, who, and when?

- › What is the problem? e.g. orders not being processed for product line X
- › What is not a problem? e.g. orders for product lines Y & Z
- › Where is the problem located? e.g. on the shop-floor
- › Where is the problem not located? e.g. administration
- › Why is the problem occurring? e.g. labour shortage
- › When is the problem in evidence? e.g. during the early morning shift
- › When is the problem not in evidence? e.g. during the afternoon and late shift
- › Who is affected by it? e.g. departmental manager, shop floor staff
- › Who is not affected by it? e.g. clerical, administrative staff
- › What is different about those affected? e.g. a continuing rise in absenteeism, job dissatisfaction
- › What things are affected by the problem? e.g. meeting production targets, customer satisfaction
- › What things are not affected? e.g. machine capacity.

Identify and talk to those directly involved. Others may be better placed than you to determine the cause of the problem. Be selective about the information and facts you gather to avoid overload. Too much information may hide crucial details, resulting in key clues being overlooked.

4. Identify the root causes

Armed with the key facts, you need to make sure you understand the root cause of the problem. Causes usually relate to people, systems or equipment. Be careful not to blame the tool when it could be the operator. Asking the right questions will help to identify the cause:

- › When did the problem first occur? e.g. 6-7 weeks ago
- › What changed? e.g. a staff member left
- › What changes might be relevant? e.g. recruit more staff or reposition existing staff.

Distinguish the symptoms from the root cause – where does it occur, when does it occur, who is involved, what is the precise problem? To identify the root cause, keep asking why until a satisfactory answer is found.

5. Test the hypothesis

Once you have identified a likely cause, work out a hypothesis to test exactly what it is you are looking for and how you will know if you are right. The cause of a problem is always a change from the norm that has produced effects in some places but not in others. Go back over the information you have assembled in steps 1-4 to test, on paper, if the cause finds a good match with how, where and when the problem occurs, to what extent it occurs, and who is affected by it.

6 Involve others

Don't assume that it is up to you to solve every problem. Ascertain whose responsibility it is and delegate to others as appropriate. This may include hiring external experts or seeking outside assistance. Involve key players and talk through possible solutions and decisions with other people. Hold a brainstorming meeting to examine all the available solutions. A solution is a course of action which will lead to the outcome you want to achieve. Consider all suggestions put forward by the group, giving each idea due consideration. Avoid pitfalls such as failing to consider all the options; focusing exclusively upon one solution; or sticking with the 'tried and tested' of yesteryear.

7. Consider the proposed solution(s)

Don't be swayed by people with ready-made solutions. There may be a number of possible solutions, some of which might be more appropriate than others. This is the time to move from problem analysis to a method of decision-making. Think about the consequences and outcomes of your problem solving decisions. Will the proposed solution just push the problem further down the line? Assess the risks by contemplating what could go wrong. What impact, if any, will the proposed solution have on other areas? And how serious would the consequences be? Consider as many possible scenarios as you can in order to eliminate any solutions that simply won't work or will have serious side-effects. Also, consider all potential constraints on effective implementation, including finance, resources, time, and operational limitations.

Resist the temptation to be impetuous and take action without first allowing time for reflection. Acting too quickly without due consideration of the options might lead to additional problems further down the line. Do bear in mind that there may not be an ideal solution, but there should be a 'best' one (even if 'best' just means 'better than the rest').

8 Test the proposed solution

Once a consensus has been reached, the idea needs to be tested. This can be done mentally or physically depending upon feasibility. Mentally assess the idea by running through different scenarios and seeing how the proposed solution performs. Or, if possible, pilot the solution to test its merits in a practical setting. When

you are satisfied that the solution has been adequately tested and holds up to the assessment criteria, produce a plan showing a schedule of actions and by whom and when they are to be carried out.

9 Champion your decision

Your proposed solution will undoubtedly require an element of resources in order to implement it within the organisation, such as financial or human resources. If additional resources are required, it may be necessary to present your case to senior management for approval. Choose a method of presenting the facts which others can understand, a SWOT (strengths, weaknesses, opportunities, threats) analysis, for example. Champion your idea with confidence to make things happen. In tough economic times, you will be competing for scarce resources, so maximise your chances of success by focusing on the benefits of your idea to the business, be they short- or long-term. Consider the timing of your communication carefully in order to maximise the prospects of a positive response, e.g. before the year's budget has been allocated, or before the cost of fixing the problem is too great to be resourced.

10. Monitor the results

Once a solution has been found and implemented, don't rest on your laurels. Instead, monitor the impact of the changes made. A problem is only truly solved when the solution has been translated into successful action. Keep monitoring the results and re-assessing the situation to prevent and/or anticipate any future problems. Decisions should be open-ended and be subject to constant review in the ever-changing marketplace. The solution to a problem need not necessarily become routine practice. Continue to test and review its effectiveness to make sure it is still the best available option. If the problem still isn't resolved, begin the whole process again but avoid repeating the same mistakes and be sure to steer a course around any pitfalls.



POTENTIAL PITFALLS

Managers should avoid:

- › neglecting to test possible causes against the data gathered
- › taking on sole responsibility for the problem and the solution
- › jumping to an apparently obvious solution without due consideration or evidence that it will work
- › failing to monitor and check that the problem has been solved.



ADDITIONAL RESOURCES

BOOKS

Solutions: business problem solving, Eric Bolland and Frank Fletcher
Farnham: Gower, 2012

This title is also available as an [ebook](#)

Smart thinking: how to think big, innovate and outperform your rivals, Art Markman
London: Piatkus, 2012

John Adair's 100 greatest ideas for smart decision making, John Adair
Chichester: Capstone, 2011

This title is also available as an [ebook](#)

Decision making and problem solving strategies, John Adair
London: Kogan Page, 2010

These books are available for loan to members from the CMI Library. [Click here](#) for more information.

JOURNAL ARTICLES

Are you solving the right problem?, Dwayne Spradlin
Harvard Business Review, Sep 2012, vol 90 no 9, pp 85-93

Nine paradoxes of problem solving, Alex Lowy
Strategy and Leadership, vol 39 no 3, 2011, pp 25-31

This is a selection of journal articles available for members to download from CMI's library. More information at www.managers.org.uk/library.

RELATED CHECKLISTS

- 014** Brainstorming
- 015** Making rational decisions

» NATIONAL OCCUPATIONAL STANDARDS FOR MANAGEMENT & LEADERSHIP

This checklist has relevance for the following standards:

- › Unit BA2 Provide leadership in your area of responsibility

» MORE INFORMATION

e enquiries@managers.org.uk

t +44 (01536) 204222

w <http://www.managers.org.uk>

p Chartered Management Institute
Management House, Cottingham Rd, Corby, Northants, NN17 1TT

This publication is for general guidance only. The publisher and expert contributors disclaim all liability for any errors or omissions. You should make appropriate enquiries and seek appropriate advice before making any business, legal or other decisions.

Revised March 2014