
Problems and Decision Making

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There are some events in life that are inevitable, and the emergence of problems in the workplace is one. Problem solving is the domain of the manager. Fortunately, skill in finding optimal solutions to problems can be developed. Such skill stems from understanding the nature of problems and utilizing a basic process to address the problem.

The simplicity and profundity of the last sentence should not be overlooked. First, consider “understanding the nature of the problem.” What does this entail? It can be a greater challenge than it may first appear. For example, problems are subjective. A problem to one individual might be a godsend to another. If your competitors have problems, isn’t that good news for you? Also, problems are deceptive. Often an acknowledged problem is discovered to be a signal of more complex problems lurking below the surface. Finally, even when fixed, the same type of problem might recur.

Second, consider the idea of utilizing a basic process to address the problem. Simply going after a solution willy-nilly may or may not solve the problem. Time, money and patience may be expended unnecessarily. A systematic approach to solving the problem brings about a deliberate and potentially more valid course of action.

Problem solving skill relies on judgment and perceptual acuity—the ability to recognize and evaluate the situation at hand. In the presence of multiple solutions, the selection from a purely egotistical position might solve the problem. At the same time, it may create a stream of new issues of increased consequence. Understanding the nature of the problem at hand and deliberately approaching the problem enhances the manager’s insight and judgment leading to more successful solutions.

This chapter will familiarize you with the nature and types of common problems. It will explain the importance of deciphering the type of pending problem. A decision making model is explained that guides the manager to effective problem solving. The role of stakeholders in the problem scenario and the impact of solutions on them will be examined.

Finally, several factors that can be managed to increase the effectiveness of a problem’s solution will be reviewed. In this, a discussion of the nature of the problem-solver is provided. Lastly, this chapter, because it focuses on defining and understanding problems, forms a natural segue into chapter two on decision making challenges and pitfalls. Problems and decisions are not synonymous. A problem creates an opportunity for or forces a decision. Consequently, these two chapters work in tandem to provide a more complete context for both problem solving and decision making.

Throughout this chapter, inserts will highlight useful tips as guidance to the practical decision-maker. By keeping your problem-solving toolbox handy, you may confidently approach the most complex problems and lead the way to an effective solution.

What is a problem?

As noted by William F. Pounds (1969), a problem can simply be defined as a difference between an actual state and an expected or, often, a desired state. Presented in this way, problems do not have to represent a negative condition. They instead represent the existence of a discrepancy, and the discrepancy requires attention and response, even if that response is no action at all. Here is an example:

Actual State: A private aircraft manufacturer produces small, four seat aircraft which use aluminum fuselages, tails and wings.

Desired State: A lighter weight aircraft is desired which has the same or better flying performance and can be manufactured using as many current production processes and materials as possible.

Notice that the actual state is a very simple, factual statement. There is nothing overt or even implied about the deficiencies of the actual state. That is your starting point. The desired state is a statement that is infused with something better. It is a dream or step above what is actually happening. Notice too, that the desired state is phrased in such a way that there is a cost effective transition to the desired state. In the example, this is stated as, “the same or better flying performance” and “using as many current production processes and materials as possible.” Sometimes, if these conditions for a solution are not stated, they are not met. When business problems are posed this way, they not only clearly depict a future state, they lead to an analysis of the gap between what is and what ought to be.

The definition of the problem is critical. Einstein is said to have observed that if he had one hour to save the world, he would spend fifty-five minutes defining the problem and five minutes finding the solution. Business managers may not be given such Herculean problems as Einstein pondered but the essential point is that problems need to be defined and measured. There is a problem with problems if we do not structure them, fit them into classification systems and divide them into their component parts.

When managers address problems, they engage in problem-solving and make reasoned decisions among alternatives as they progress toward a final resolution. Thus, the series of decision-making steps as a practical matter is considered synonymous with problem solving.

What can I do to get a handle on a problem?

To come up with a solution to a problem, the problem has to be managed down to a reasonable level. The problem cannot have such an immense scope as, “how can we achieve world peace?” This is certainly far too much to ask of any person and of any single organization. The problems we solve have to be manageable in scope. Organizational problems also need to be framed in time. They need to be responsive to the application of organizational resources. The problems organizations face tend to be complex but they also tend to be solvable.

Consider your own reaction when you were asked to solve a major problem at work. You may have thought, “Can I do this?” That element of self-doubt is a valid reaction

to most problems when the solutions are not obvious. The reaction may have been precipitated from the nature of the problem itself and this section deals with that issue. The problem may be ambiguous such as, “how can our business situation improve?” Or it may be stated as a symptom rather than a cause such as, “our customers are not happy.” It may not even be an actual problem such as, “what kind of landscaping is preferred for our new corporate office?”

The first step to solving problems is to examine the problem statement itself. Here, the tried and true expression of divide and conquer applies. Look at the problem statement and slice and dice it until you come up with a clearly stated problem that lends itself to an actionable solution. Here are some ways of doing that:

1. Clarify the language of the problem. Words are powerful and have a major role in how a problem is understood. You want to state the problem in a neutral way so that it is not directed toward a specific solution before the problem analysis occurs. As an example, the statement “how can we replace our outdated copy machine” is already skewed toward a replacement instead of an upgrade. Using the term outdated indicates a judgment before the problem is analyzed. You should rephrase your problem several times until you are satisfied with the language. The word changes may be subtle but the impact substantial. To increase sales is much more meaningful than to enhance sales. Make sure your chosen words are judgment free.
2. Once you have reworked the language, you should check out the problem statement with those who are not working on its solution. Have them respond to your problem statement and ask if they understand it. The better the problem is understood, the easier it will be to solve it with the understanding and commitment of organizational members.
3. Consider the “who” in the “what” of the problem. Problems are solved if their human impact is considered. Who does it fall on (or who does it elevate) to have the problem solved? Problem statements mostly succeed in defining what the problem is but they can be improved by stating who will be affected, meaning which departments or work units.
4. For most of us, it is more difficult to relate to higher-level organizational goals than goals for our own areas. Commitment to solutions is facilitated when names are named. For instance, if a problem concerning increasing sales is framed as making jobs

Problem Solving:

1. Clarify the language of the problem.
2. Consider the “who” in the “what” of the problem.
3. Check problem assumptions.
4. Expand and contract the problem.
5. Look at the problem from other perspectives.
6. Make it a question.
7. Go to the root of the problem.
8. Research your problem statement.
9. Use multiple authorship of the problem statement.

Tool 1.1 Problem Solving

easier to improve throughput which improves sales, then people are more willing to participate in problem solving. However, it is also important not to make a potential solution part of the problem statement because the problem statement itself should be solution free and not lead problem analysts toward a certain path.

5. Check problem assumptions. Every organization's situation is a result of preceding causes or what are assumed to be causes. We always make assumptions about the circumstances of the problem. Many of these assumptions are based on the notion that what happened in the past will continue in the future. These assumptions may be inaccurate, although they are natural for us to fall back on.
6. Assumptions based on past events can fool us. Organizations do not usually go through abrupt and fundamental changes. Nevertheless, it is important to dispose of incorrect assumptions before formulating the problem statement. To do this, make a list of assumptions. Each assumption should be explicit and should be evaluated. Certain assumptions may be so broadly stated (the sun will produce light tomorrow to run solar batteries) that they need not be named but others (photocell manufacturers will grow in number) should be assessed. Your listed assumptions should be challenged for their appropriateness and the actual working assumptions should then be identified and recorded as part of the problem statement creation process.
7. Expand and contract the problem. The problem you are exploring may have critical links to a larger problem that needs to be addressed at a different organizational level by different people. This possibility needs to be considered. On the other hand, the problem may have a series of smaller but related component problems that need to be sorted out and addressed before problem statement formulation. It may even be the case that one of the component problems needs to be solved before the main problem can be stated.
8. Look at the problem from other perspectives. CEOs have been known to say that customers are not interested in our problems. This is short sighted. Customers have a stake in an organization's success or failure because they have reliance on the organization. Looking at the problem from the customer's perspective does not require their perspective be incorporated into the problem statement. It does mean the customer's perspective as well as the perspectives of other stakeholders such as suppliers, distributors, citizens, investors and government entities should at least be considered in the problem statement formulation stage of problem solving.
9. You may also want to consider how non-stakeholders would look at this problem. For example, what would a competitor say about the problem? If you raise this as a question, it gives you the opportunity to look at the consequences of the solution on someone who is not your friend in the market.
10. Make it a question. Phrasing the problem as a question gets right to the heart of the matter. Ask who, how, when or what can be done. Answering the question demands action not contemplation. It leads to the formation of a team to implement a solution. If you start your problem statement with something like "the issue is..." then the language loses its power. Ask a question and the question format will lead more easily to a solution.
11. Go to the root of the problem. The Total Quality Management movement popularized in the 1980s in an effort to improve product quality and customer satisfaction, led managers to consider root causes. This approach can be adopted in problem

formulation as well. Even after a problem statement has been devised, it is entirely appropriate to ask if this is the fundamental question that cannot be pushed back to another question. A problem of Somali pirates is not a piracy problem but a problem of dysfunctional government in Somalia.

12. Research your problem statement. Once you have your problem statement composed, you can do an internet search to find out what other organizations have done to solve the problem. Most problems are not unique. A carefully crafted problem statement can get you directly to another organization that encountered and perhaps solved a similar problem.
13. Use multiple authorship of the problem statement. Writing the problem statement is the initial and most critical part of problem solving. To count on a single individual to do it is risky. The problem statement may not lead to a feasible solution. The problem statement might not be realistic or it might not even be true. The solution that emerges may be worse than the problem itself if the problem statement is poorly fashioned. These and other consequences can happen from single authorship. Having a small team to work on the problem statement alleviates the chances of this because of the wider diversity provided by others. The achievement of this diversity is, of course, dependent on open and honest communications by group members and that is your responsibility as the manager.

What are some key questions to ask before moving on to the problem-solving phase?

Before formalizing the problem solving process, it is important to ask some basic screening questions about your problem solving effort. As screening questions, these should be answered in the affirmative to the extent possible before proceeding to the search for a solution. These questions include:

1. Is this our organization's problem? (Having successfully implemented the nine steps in Tool 1.1, the answer should be a resounding "yes.")
2. Has this problem happened before? If so, how was it solved?
3. Do we have the resources (capabilities, funds, skills, etc.) to solve this problem?
4. Are the benefits of solving the problem greater than the costs?
5. Does the problem need to be solved now? Serious problems need urgency.
6. Is it dangerous to ignore the problem?
7. Is there a good chance that the problem will go away on its own?

Not all these questions can be answered at the outset but raising them will at least be a means of discovering any show-stoppers before going ahead. This tool will enable you to think broadly about your apparent problem which in and of itself is important.

PROBLEM SOLVING TIP # 1

Some problems need a short-term fix—a band-aid to bridge conflict, plaster to patch a leak, or a splint to hold together parts—until an appropriate solution can be developed.

However, don't let the short-term fix become the long-term solution or you may see that problem again.

What is important to know about the nature of organizational problems?

Organizational problems that managers deal with are not usually routine and minor. They are more often non-routine and complex. As a result, the problem itself has to be dissected, as Einstein might advise.

The solutions to organizational problems are also not perfect because the business world does not deal with certainty or ultimate truth. It is just not possible, feasible or cost efficient to consider every alternative and every variable. More often, the answers *satisfice* or are good enough. The first available and adequate solution is generally adopted. That is because organizations do not have the resources to come up with the ultimate truth, however scientific that may be.

What is the role of communications in problem solving?

As mentioned in the introduction, problems are subjective. It may be evident that a problem exists. But as stated earlier, problems are in the eye of the beholder. A problem for one person may be a welcome event for someone else. Effective communications (covered in more detail in chapter four) are vital to effective problem solving. A manager must learn to look at a problem from different angles and discuss the problem with other individuals who are involved. Seeking input upfront in the process will minimize conflict and produce a solution from a better informed platform. This point builds on the earlier idea of looking at the problem from different perspectives by communicating what these perspectives might mean for the problem solver. Through communication you are also building early consensus for buy-in to the eventual solution.

PROBLEM SOLVING TIP # 2

Just like movie producers shoot with different cameras and analyze the frames in 2D and 3D, problem-solvers need to view a problem from different dimensions to consider all of the angles and produce the best solution.

Problems make themselves known in different ways. However the problem manifests itself, the situation might not be as plain as it seems. Consider this idea from two vantage points. In the first case, realizing a problem, a manager may begin to respond to the problem—only to find that another or several more problems exist. So, in solving the

first problem, another is uncovered or created by the first, and so on. Problems may be linked in a linear fashion or tangentially. Thus, more time and resources are required to solve the problem, more than what was originally expected.

In the second case, the manager realizes a problem and capably resolves it. Later, the manager discovers that what was thought to be the problem was merely a symptom of, or a signal to, the actual problem. Take the very simple situation of a ceiling light fixture burning out. The manager arranges for the bulb to be replaced. The next day, the lights are on. The following day the fixture is again dark. Once again, the bulb is replaced and, once again, after a brief time, the fixture will not light. The assumed problem of the bulb was not the real problem at all. The real problem uncovered was a loose electrical connection. The initial problem—no light—was a symptom of another problem all together. As stated in the introduction, problems can wear disguises.

Thus, as these two cases indicate, managers must note if there is only one problem or a series of problems to address. Likewise, managers must be wary and watchful so that the problem they are solving is indeed the real problem.

How do we discover the most important aspects of the problem?

As noted earlier, a problem can be entwined with other problems. Using a figurative approach, different parts of the problem can be illuminated to find the specific source of the trouble. Tiny gas leaks on the shuttle's fuel tank (which could have doomed an entire mission) were only uncovered in an inch-by-inch inspection of the entire tank surface.

PROBLEM SOLVING TIP # 3

A flashlight aids the use of tools, by shining on the work area and then centering on the key point. Use the flashlight approach to survey the problem and its borders and determine where the key trouble spot really is.

How can we classify problems and how does this help?

Organizational problems can be classified or divided into broad problem-type categories. This can help in dealing with them. Problems can be classified as routine or non-routine. Routine problems are unsurprising and perhaps anticipated. They are easily defined and termed "structured problems." Programmed decisions, something that managers often have on hand, can be used to address structured problems. The solution is known and can be applied again and again. For example, a customer returns to a grocery store and tells the store manager that she forgot to present her coupons to the cashier. The store manager knows to take the coupons and adjust the receipt for the customer. Programmed decisions accelerate the problem solving process.

Rule, procedure, or policy — which one?

Solutions to programmed decisions are often formalized in the business world as rules, procedures, or policies. In this way, the next time the problem occurs, an approved and acceptable solution is readily available. Generally, a rule is an absolute direction of behavior that is to be followed when a prescribed situation arises. Employees accept and follow rules as part of their workplace.

Procedures refer to activities that should be followed in a defined manner to achieve a desired outcome. It is the business' chosen way of going about certain tasks. Policies are governance statements that guide employees and possibly affect internal and/or external stakeholders. All three build consistent and uniform behavior in the workplace and reduce the need for management involvement in problem solving. Employees' commitment to rules, procedures, and policies is increased when they are clearly understood and managers have explained the benefits of adhering to them.

As an example, consider any large retailer. Merchandise returns are common problems that go along with a retail business. A store's policy might be to accept all store returns within ninety days of purchase. A rule might be that no returns are accepted without a receipt. The procedure might be that the cashier needs to complete a form, have the customer sign it and then put the returned merchandise back in a particular queue to be replaced in inventory.

How do I solve more complex problems?

Non-routine or unstructured problems represent new territory for managers. The cause of the problem, the size of the problem, the elements of the problem, and/or the implications of the problem may be unfamiliar, and the solution is not readily at hand. Therefore, it is best to follow a deliberate and systematic approach to solving the problem. The benefit will be a well-researched and rational solution with a good probability for success.

Also, if there is the possibility that the non-structured problem might recur, the solution can be retained for the next time. Translating the solution into a programmed decision and maintaining it by way of a rule, procedure, or policy will save manager and employees time and alleviate the stress of the situation.

PROBLEM SOLVING TIP # 4

Problems come in different sizes and shapes; some require delicacy while others require a hands on approach. Choose the right tool to fit the problem at hand. Otherwise that small leak could end up as a broken pipe.

What accepted problem solving process can I use?

Even simple problems in the workplace can prove challenging to the manager. For non-routine problems, the ability to make sense of the problem can be lost without a model to lend structure to the circumstances. A model or conceptual procedure organizes thoughts,



Figure 1.1 The Problem Solving Model

prioritizes data, leads to hypotheses and points to a logical progression for evaluation. There is a generally accepted process, described below, that many organizations have found to be very useful.

Some managers give little thought to following such a model and dismiss the idea out of hand. Why is this? An immediate objection to following a formal process might be the assumption of time and resources needed for following the steps of a model when faced with the immediacy of an out-of-sync situation. However, as you will see by the following discussion, there is a balance between using the model described below and using spontaneous judgement. Most good decision making has elements of both. The following model, adapted from Robbins and Coulter (2009), illustrates the steps in the general problem-solving process. The following sections will describe each step and within these descriptions, a scenario will be developed and used to illustrate the step.

STEP 1: IDENTIFY THE PROBLEM

Managers must be observant and alert. Some problems boldly make themselves known, while others may be present and persist with little fanfare. Once a problem is identified, the manager needs to assess the seed of the problem. Is the appropriate problem the real problem or a signal of another situation? As discussed earlier in the chapter, theorists commonly discuss symptoms of problems being misconstrued as the actual problem. Consider the following scenario:

A marketing manager for a new retail chain is reviewing market information reports. The results are favorable but, at the same time, problematic. The data shows that product demand is increasing rapidly but customer dissatisfaction is rising. A significant number of current and potential customers have commented that the store locations are too far away for their convenience.

In the scenario, the manager might begin by thinking that the obvious problem is that the retail locations are inadequate in number. Further consideration might be that the locations are misplaced. Without jumping to these conclusions, the manager continues to deliberate. More ideas regarding the situation spring forward. Finally, the manager identifies the problem. The marketing strategy is not satisfying the need to place the products where customers want to transact the purchase exchange. The marketing manager states the problem as follows; "How can the business improve accessibility of their products to satisfy demand?"

STEP 2: SELECT DECISION CRITERIA

A good solution must fit with the overall mission of the organization. It must satisfy the priorities and goals of the business. Such goals might be related to employee morale, production, customer service, time, revenues and/or expenses. Many solutions may address the problem but the outcome of the chosen solution must focus on the businesses' preferred goals.

Therefore, the second step in the problem solving process is to identify the key factors that the selected solution will support. Decision criteria drive the problem solving process. It is important to be accurate in the choosing these factors.

Going back to our scenario, the marketing manager considers the overall objectives and organizational strategies of the company and department goals. He knows that certain obvious solutions will not be acceptable to senior management. Therefore, with regard to the problem he is facing, the manager lists four criteria to which the ultimate solution must align:

1. Organizational Objective: Superior customer service as indicated by a 98% satisfaction rate on customer surveys.
2. Company Policy: Absolute freeze on new retail locations.
3. Department Objective: Six-month growth targets for the number of customers and revenue.
4. Organizational strategy: Minimize expense.

STEP 3: DETERMINE PRIORITY OF AND ALLOCATE WEIGHTS TO CRITERIA

Decision criteria may range from one to several factors. More than five is not advisable. The process becomes cumbersome when attempting to evaluate solutions relative to criteria.

Decision criteria do not carry equal significance. While each is important, one factor generally takes precedence over another or several others. Therefore, in this step, the first task is to determine a priority order of the decision criteria and then to rank them.

Once the criteria are prioritized, incorporate them in the problem solving process in a deliberate and systematic manner by assigning weights to each factor. The greater the

assigned weight, the higher the priority level of the decision criterion. Any scale can be designed for weights. A simple approach is to assign a value of five for the most important element down to a one for the least important.

In the evaluation and selection of alternative solutions (steps five & six), criteria and their weights are meant to guide, pinpoint or suggest adherence to solutions according to their value. Criteria will not always be known or certain. Thus in some instances, a weighted score is used merely for insight and guidance versus an indication of the absolute choice of solution.

Returning to the scenario, our marketing manager orders his decision criteria from one to four. He then assigns weights to the identified criteria as follows:

Weighting of Decision Criteria

Criteria	Weight
Absolute freeze on new retail stores	5
Superior customer service as indicated by a 98% satisfaction rate on customer surveys	4
Achievement of six-month growth targets for the number of customers and revenue	3
Expense control	3

Note that the marketing manager has concluded that criteria three and four are of equal importance. This is fine. Find a weighting system that works for you.

STEP 4: DEVELOP ALTERNATIVES

Developing alternatives is the brainstorming part of the process. When feasible, development of alternatives should involve more than one individual. Creativity generally increases when several employees offer input. Also, the number and variety of possible alternatives increases. Often, the interplay of ideas from several individuals leads to refined alternatives of greater efficiency and/or effectiveness.

One tendency for the manager or group to avoid is the desire to leap at the first solution that looks reasonable. Deciding too quickly might limit the generation of possible strategies and preclude the best alternative from coming to light. Business situations are complex and warrant careful consideration.

Our marketing manager brings together key personnel from marketing, production and finance to consider the problem and generate possible courses of action to resolve it in a brainstorming session. The group takes some time to discuss the framing of the problem and the identification of the decision criteria. Different perspectives based on the employees' positions and personalities quickly come to light. While different, these perspectives aid the overall understanding of the problem by the group. The group is able to generate a wide variety of alternatives. Four representative alternatives are shown below:

1. Increase customer use of electronic retailing
2. Open additional locations at three regional malls
3. Do nothing for the next six to twelve months
4. Rent kiosks at major metropolitan malls in the sales regions.

STEP 5: EVALUATE ALTERNATIVES

Once a number of alternatives are identified, each needs to be analyzed for its ability to solve the problem and support the decision criteria. Rigorous consideration should be given to each alternative. However, managers cannot study all the data. Also, the degree of certainty surrounding an alternative varies. How clearly can the risks of each alternative be identified? Thus managers must satisfice as described earlier in the chapter.

In the analysis of alternatives, objective and subjective evaluations are important to predict as accurately as possible how well each alternative will satisfy the decision criteria. Objective evaluation generally relies on metrics, research findings and measurable observations though a certain amount of guesswork does happen.

Subjective assessment is made through evaluative statements based on experience, expertise, analogy and intuition. Often a manager faces strong feelings about the likely success or failure of a possible strategy. The basis for his or her intuition may not be clear but likely comes from past learning and knowledge of current conditions and constituents. Intuition and judgment are acceptable, even necessary means of evaluating alternatives.

The problem solving manager and team should discuss objective and subjective information regarding each alternative. Then, to capture the assessment of alternatives, scoring can be continued by assigning a rating to the ability of each alternative to support each of the decision criteria. A rating scale needs to be chosen for this task. Numeric ratings are generally easier to manipulate and provide clearer understanding.

Our scenario's marketing manager and team now sit down and analyze the alternatives and rate the alternatives versus the criteria. The team sets a rating of ten for fully satisfying with the criteria down to zero for no satisfaction of the criteria. The following table summarizes the team's assessment of alternatives:

Table 1.1 Rating of alternatives

	No new store required	Supports customer service targets	Supports achievement of growth targets	Minimizes operating expenses
Increase electronic retailing	10	6	5	5
Open additional stores	0	9	9	0
Do nothing	10	0	0	10
Rent kiosks	8	9	8	5

STEP 6: SELECT SOLUTION

Once alternatives are identified and evaluated, a solution should be selected. If a scoring system is followed, the numerical weight of the criteria should be multiplied by the alternative's rating. The products for each decision criteria are summed to provide a total score for each alternative. The alternative with the greatest score is the preferred solution based on the identified decision criteria. When addressing problems of significant complexity or impact, a final discussion surrounding the leading solutions and the preferred solution is advisable.

In our example, the problem solving team has discussed and evaluated the alternatives on objective and subjective bases. Now, the alternatives are scored by multiplying the criteria weights by the ratings and summed. The following chart illustrates the calculations of scores and displays the final score for each alternative. Based on the scoring, the fourth alternative, "rent kiosks at major metropolitan malls in the sales regions" should be selected.

Table 1.2 Scoring of alternatives

	No new store required (5)	Support customer service targets (4)	Support achievement of growth targets (3)	Minimize operating expenses (3)	Total score for alternative
Increase electronic retailing	5 x 10 = 50	4 x 6 = 24	5 x 3 = 15	5 x 3 = 15	104
Open additional stores	5 x 0 = 0	4 x 9 = 36	3 x 9 = 27	3 x 0 = 0	63
Do nothing	5 x 10 = 50	4 x 0 = 0	3 x 0 = 0	3 x 10 = 30	80
Rent kiosks	5 x 8 = 40	4 x 9 = 36	3 x 8 = 24	3 x 5 = 15	115

One final time, looking at the problem subjectively, the group reviews their process and confirms that the kiosk rental alternative supports the objectives of the business, fits with other initiatives of the business and can gain the support of the company executives.

The group agrees but inserts a necessary caveat. Given the successful development of an implementation plan, the company will rent kiosks at major metropolitan malls using data available from customer surveys. Only if they can draw up an effective and efficient implementation plan can the strategy be adopted.

STEP 7: PLAN AND IMPLEMENT THE SOLUTION

Once the manager reaches this step, there is no time for complacency. The best decision if not implemented or not implemented well could bring the problem, and many more, full circle. A well-laid plan to implement the solution is needed.

Implementation plans involve policies, procedures, personnel, resources and effective communication. The specific goals of the solution are identified in clear and measurable statements. Most important, one individual should be assigned to coordinate the overall activity with input from a supporting team. In this manner, the plan will be put into action by the appropriate employees and will be coordinated with accountability to an overall project director.

Returning to our scenario, our group's deliberations conclude that the marketing manager should now continue to direct the solution. The team believes that he is in the best position to lead an implementation team and manage the progress and outcome of the solution. The group sets a schedule to develop the implementation plan and its goals.

STEP 8: EVALUATE PROGRESS AND ADAPT IF NEEDED

Here again, the process of problem solving cannot be abandoned prematurely. Too many times, the attention of managers is diverted once a solution is underway. As a result, the solution is not monitored and progress goes awry. The final step of the problem solving model requires that the manager monitor the implementation and on-going effectiveness of the solution. If the implementation plan and its goals are not being met, the manager needs to take corrective action.

Going back to the decision criteria, it is advisable to acknowledge that not all solutions satisfy the problem to its fullest. Trade-offs sometimes must be accepted. Thus, the solution must be evaluated with regard to the priority of criteria it was meant to satisfy and the goals stated in the implementation plan. Finally, if a solution is performing well, the manager might consider codifying the solution as a formal rule, procedure or policy in the event the problem occurs in the future.

To conclude our scenario, our marketing manager has followed the establishment of the kiosks along a planned timeframe and has set up a system of financial and marketing reports to provide data on the success of the solution. As data becomes available and customers have had time to learn of the kiosks, the solution will be assessed and further action taken as necessary.

PROBLEM SOLVING TIP # 5

No matter how good a solution looks, if it does not conform to the organization's culture, the going will be tough. Present unwelcomed solutions with the perspective of the audience (employees, customers, suppliers, etc.) in mind; show the audience how they can succeed with the results of the solution in place.

What if my “sixth sense” contradicts the top scoring alternative?

Over the years, managers develop a gut-feel or sixth sense based on their accumulated experiences, education and technical know-how. This is called intuition. Some people are better at it than others. Some personality types require more information, some less. Intuition plays a significant role in decision making no matter how systematic and scientific we'd like to be. Studies show that managers use intuition to solve problems at least 50% of the time.

One of the major benefits of intuition is speed. One of the major objections to a problem solving model is time requirements. Your competitor may have already implemented a new technology while you are still assigning weights to your decision criteria. In today's rapidly changing environment, managers often don't have the luxury of time. And the above process is time consuming.

In Malcolm Gladwell's 2005 book, *Blink*, he explores the concept of rapid cognition. He describes this as the decision making process that occurs in the first seconds of evaluating a situation. Consider the thought process of a driver on a highway. The driver sees brake lights flashing on vehicles ahead of him. In a matter of seconds, the driver takes in the status of the traffic beside him, in front of him and approaching him in the emergency lanes, then considers potential courses of action. He immediately acts on the best and safest choice. The process happens all subconsciously. The driver perceives the problem, evaluates, chooses, and then acts very rapidly.

Another instance when intuition comes into play is when the data surrounding the problem is incomplete, changing rapidly or when the question itself is poorly defined. While it is important to use the techniques described in the early part of this chapter to clearly define the problem, sometimes this just is not possible. At that point, using the model to give direction is a great step but in the end, you might just have to go with your sixth sense. Finally, if your intuition and the model are suggesting different outcomes as the best solution, you may need to revisit the assumptions you used in the model.

If we already have a problem solving process, how can we improve its effectiveness?

As managers learn to make decisions using the problem solving process, they can also increase the effectiveness of their decisions by considering several factors. First, as mentioned earlier in the chapter, all problems have stakeholders—parties who have an interest in the situation and who are potentially affected by the outcome. Stakeholders can be internal to the company such as employees or the board of directors. Stakeholders may be external groups associated with the company such as customers, suppliers and members of the local community, to name a few.

First, in their deliberations, managers should take time to look at the problem and possible solutions from the various perspectives of the stakeholders or involve some of these stakeholders in the solution finding process. Some stakeholders are more important than others. And managers must determine which stakeholders and stakeholder demands should get priority. Consequences to stakeholders can bear significant influence on the choice of problem solving strategy.

Second, the participants in the problem solving process each bring a variety of personal biases to the process. This is explored in detail in the next chapter. Unchecked

biases can lead to inferior decisions. Realistically, biases cannot be totally eliminated but should be recognized and controlled according to the situation. By keeping the focus on the decision criteria, undue influence can be minimized. Finally, the characteristics, personality, and style of the individual affect his approach to problem solving.

PROBLEM SOLVING TIP # 6

Information technology can be the backbone for problem solving success. In all steps of the problem solving process, IT (information technology) can play a vital, supporting role. Develop information systems that gather, manipulate and respond to managers' inquiries. Inflexible data collection methods are seldom worth their ongoing expense.

How does the human element factor into the process?

In addition to the biases discussed above, people are people and this impacts decision making. All problem solvers bring strengths and weaknesses to the process. For example, some managers find creativity flows easily while others struggle to formulate an innovative alternative. Some are able to analyze detail quickly while others must put extensive, diligent effort into making sense of complicated data. Some managers approach problems from a primarily financial standpoint while others look to the behavioral outcomes and effects.

Managers are best served by recognizing their weaknesses and taking steps to counteract them. This can be achieved through training, inviting an individual with complementary strengths to assist with problem solving, incorporating technology as an aid, or simply learning from past mistakes and avoiding them. The point is not to be complacent about areas that can be improved.

There are many cases where managers claim not knowing the problem existed to excuse their inaction. As stated by Bolman and Deal (2008), "Cluelessness is not a defense of inadequate response or avoidance of solving a problem." Managers must practice perceptual skills. They need to view, evaluate and react appropriately. Asking questions and soliciting input from employees helps in developing this ability.

All managers have personality traits that influence their problem solving style. The optimist and the pessimist will often arrive at different conclusions given the same information. Overconfident or self-righteous managers might insist that they are right, even when off-track, and bully their way to an ultimately poor decision. Solving problems is difficult. There is no doubt that often the needed information to make a decision is not available. Even when information is accessible, interpreting that data can be difficult. Still, personality traits should be harnessed by the manager through self-discipline or structure to enhance and not detract from the problem-solving process.

The turn of events at Home Depot, as described by Bohlman and Deal, illustrates the vulnerability of business results when personality is left unchecked. After a successful career at General Electric, Bob Nardelli was tapped by Home Depot in 2000 to take the reins as CEO. Nardelli's structured and measured approach to business management was at first hailed as far superior to the less formal structure that had been in operation at

Home Depot. Soon however, customers rebelled against the new, all-business stance, and employee morale dropped. Nardelli stuck with his militaristic approach and refused to listen to critics. Critics included the Home Depot's Board of Directors and the stockholders who voiced concern at the 2006 annual shareowners' meeting. Amid criticism and plummeting company results, Nardelli continued to lead through the use of metrics and rigid policy—until, in 2007, he made a sudden and forced departure from Home Depot. In all, over eight years, Nardelli stubbornly stuck to his own single counsel and his own distorted picture of reality, regardless of the chaos that emerged from it.

In their research, Feinberg and Tarrant (1995) observe that, in some cases, very smart people act stupid; they label this as “self-destructive intelligence syndrome.” As a result of personality traits, including pride, arrogance and defensiveness and perhaps a lack of self-discipline, managers may miss the actual problem and adhere to courses of fruitless activity. Knowing your tendencies in advance of approaching a problem can help a manager to avoid perilous mistakes.

Some managers just go for it, but I’m pretty cautious. How can this impact my decision making?

Finally, individuals bring to the process a personal profile toward risk. There are extreme risk-takers and extreme risk-avoiders, and many other types in-between. As there is no absolute certainty to the outcome of a problem-solving strategy, a manager's tolerance for risk may interfere with the best choice of problem solving solution. Rather than the individual's risk tolerance, the degree of risk acceptable by the business should bear on the choice of problem solving strategy. The organizational culture of the business, past behavior, and senior management leadership should be the guide for assuming an appropriate level of risk in adopting solutions.

PROBLEM SOLVING TIP # 7

Auto mechanics run diagnostic tests of the electronic software center of cars to ensure that all sensors and synapses are in sync. Similarly, managers should run a self-test to be sure that emotions, biases and personality traits are working together to support a reasoned, rational solution.

Additional Resources

Problem solving by managers is a continual need in all facets of business. Thus, development in organizational knowledge, interpersonal skills and leadership styles is supportive of effective approaches to problems. Consider reviewing literature associated with emotional intelligence, risk management, and stakeholder relationships to broaden your knowledge and better understand and manage problem situations. Webb's “Why Emotional Intelligence Should Matter to Management” (2009—SAM: *Advanced Management Journal*, Spring) is a helpful survey.

Two recommended books are:

Bolman, L. and Deal, T. (2008). *Reframing Organizations*. San Francisco: John Wiley & Sons Inc.

Brad, G. (2008). *Five Steps to Build a Winning Corporate Culture*. Supervision, March, 2008.

These can be perused by subject or in-depth to gain insight. Finally, Saxe's poem, "The Blind Men and The Elephant" is perhaps a whimsical but nonetheless clever illustration of inaccurate results due to narrow perspectives.

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