

# Knowledge Worker

## The Problem-Solving Bases and the Logic for Covering Them

(February 2013)

The problem-solving process is frequently presented as a linear, by-the-numbers activity. I will readily agree that there is a certain degree of linearity to the process; for example, it's probably unwise to propose or implement a solution until you've got a fix on the problem. But I also believe that there is a lot more jumping around than advocates of the linear approach would have us believe. I also happen to believe that solving problems has a lot in common with detective work, that is, it is a matter of following leads and checking things out. It is, then, a form of intelligence work.

Back in the heyday of the reengineering craze, I published in *Performance Improvement Quarterly* a piece titled "Reengineering the Problem-Solving Process: Finding Better Solutions Faster." In it I called for a number of changes to the way we think about and approach the problems we encounter in the workplace. I suggested that solving a problem was more a matter of "covering the bases" than it was a matter of trotting around them in 1-2-3 fashion. I also provided a flowchart for use in covering those bases. I'll review both of those tools in this piece. First, the bases.

### The Problem-Solving Bases



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Clearly, the bases suggest a linear flow of activity; however, there is also room for a great deal of bouncing around. For example, Base 3, Building Consensus and Support, has to be touched on a regular if not

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ongoing basis. Base 8, Reconciling Restraints and Constraints, is a base that typically has to be covered more than once. Similarly, Base 9, Plans and Schedules, is often visited more than once. And, there is a choice to be made between Bases 4 and 5. If the problem is one where something has gone wrong, troubleshooting might be the best approach. On the other hand, if you're out to achieve a result for the first time, designing a solution is probably the best option. Clearly, this is a choice point so let's introduce the flowchart for use in covering the bases.

The flowchart appears at the end of this column and contains six decision points. We'll review them one at a time. The first four constitute a short path through the process.

1. Got a Problem? You are confronted with a problem when action is required but the required action is not immediately apparent. In other words, you have to figure out what to do. If action isn't required, you are not facing a problem and you can exit this process. Assuming action is required, you continue on to choice point 2.
2. Know What to Do? We are not always stumped or puzzled. Frequently, we encounter situations requiring action and we immediately know what to do. There is no requirement to figure out what to do so the appropriate response is to get on with it so move on to choice point 3.
3. Know How to Do It? The general form of the solution, the proper action, might be perfectly clear but it is sometimes the case that we are not sufficiently well-versed in its intricacies to put it into effect right away. We have to take time to identify the proper methods and the means to be used (Bases 6, 7 and 8). But, once this is out of the way, we can move on to choice point 4.
4. Got a Plan and Support for It? Problems can be large or small, simple or complex and their solutions can be quick and easy or difficult and time-consuming. It is often the case that we will need a plan to guide our actions. Moreover, solutions to problems in the workplace entail changing things and making changes usually requires the support and cooperation of those affected by the changes. As common terminology states it, you need to "line up your ducks" (Bases 3 and 9). Once this is done, you're as ready as you can be and all that remains is to do what you have figured out. And so you Act, Assess and Adjust (Bases 10, 11 and 12).
5. Were Things Okay Before? Now let's back up to choice point 2. Let's assume in this case that you don't know what to do. Action is required but the action to take is not clear. You do indeed have a problem and now you have to figure out what to do. There's a fork in the road here. If things were okay before, then something has gone wrong and it makes sense to find the cause and fix it (Bases 1 and 4). If things weren't okay before, then you need to shift to designing a solution (Bases 2 and 5).
6. Can It be Fixed? If you can find the cause and fix it, fine. Continue on your way. If not, then you'll have to shift to the solution design mode (Bases 2 and 5).

This concludes this little walk-through of the problem-solving bases and the logic to use in covering them. There is a section on my web site that is devoted to problem solving or "Solution Engineering" as I prefer to call it and you will find much more information there.

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### About the Author

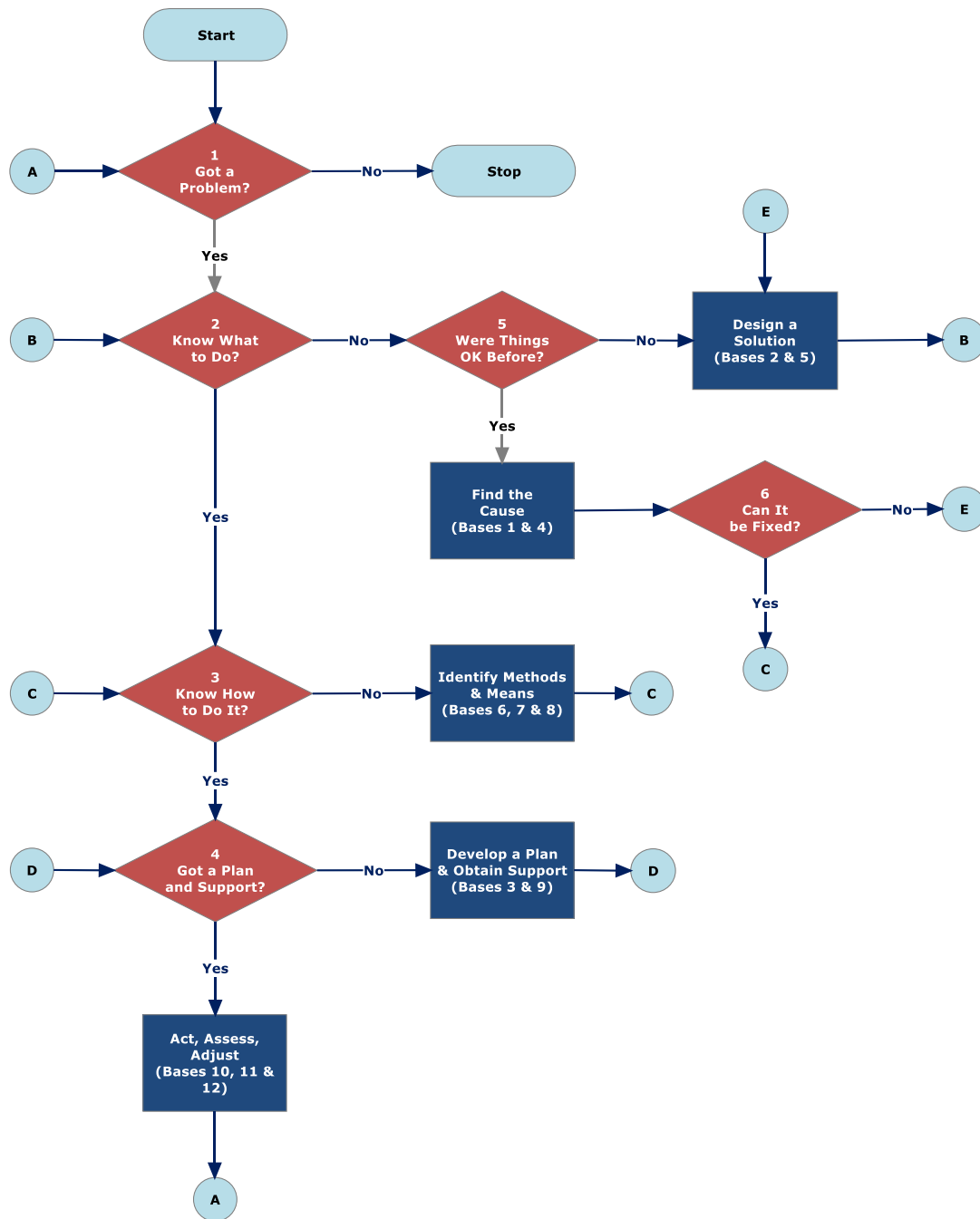
Fred Nickols, CPT, is a knowledge worker, writer, consultant, and former executive who spent 20 years in the U.S. Navy, retiring as a decorated chief petty officer. In the private sector, he worked as a consultant and then held executive positions with two former clients. Currently, Fred is the manager partner of [Distance Consulting LLC](#). His website is home to the award-winning [Knowledge Worker's Tool Room](#) and more than 200 free articles, book chapters, and papers. Fred is a longtime member of ISPI and writes this monthly column for *PerformanceXpress*. A complete listing of all Knowledge Worker columns and access to them is available [here](#).

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### Flowchart for Use in Covering the Problem Solving Bases



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