



Predicting Program Success— Not Child's Play

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Whenever I deal with stakeholders, I am reminded of the game “Rock, Paper, Scissors” that I played as a child. If you're not familiar with the game, two players, on the count of three, put forth a hand in a symbol representing a rock, paper or scissors. The winner of the round is determined by the relationship between the two factors: Paper covers rock, so paper wins; rock breaks scissors, so rock wins; or scissors cut paper, so scissors win. When I was young, the winner got to punch the loser in the arm or give a two-finger wet slap. Both consequences were harmless but somewhat painful.

One could argue that there is a forecasting aspect of the game based on the player's last three to five throws—i.e., past performance. To win continuously, a player has to guess what symbol the other player will throw and then throw the appropriate winning symbol. It is difficult to predict because every throw has a winner or loser based solely on the situation at the time, and the situation is dynamic.

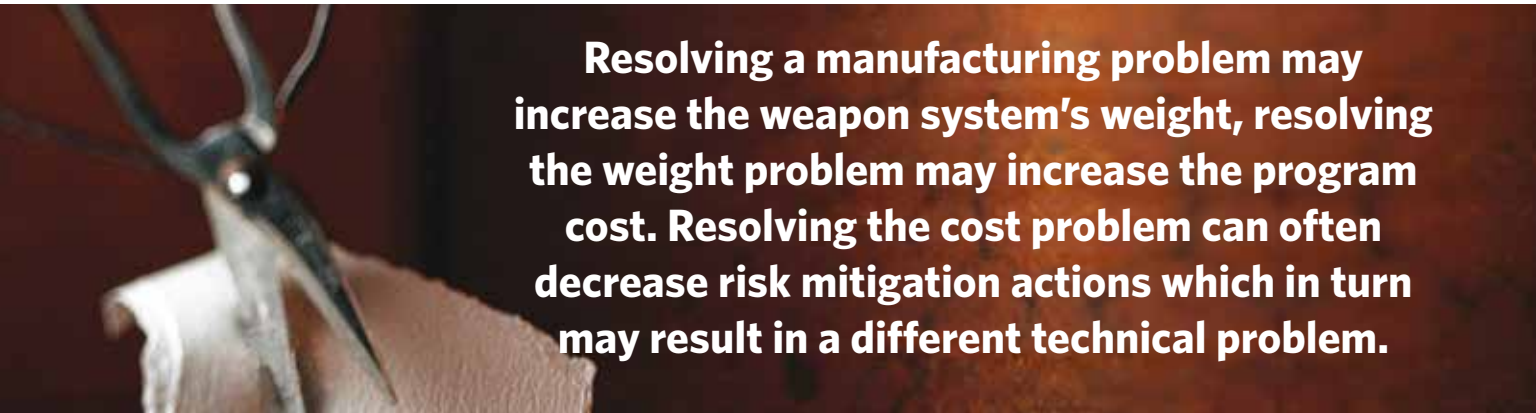
This is very similar to the program management and acquisition environment where predicting the currently acceptable set of decision factors is critical to program success. When developing an acquisition strategy or determining a course

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of action, the hot or driving influence or focus today likely will change in the next 12 to 18 months as political and budgetary considerations change. Another complicating aspect is that each headquarter's directorates (functional areas) have different perspectives with associated desired outcomes. The various multiple perspectives can cloud the context of the issue or decision at hand. The decision process becomes more complicated when you consider the obviously inconsistent objectives of the contractor, user, different Services, the Office of the Secretary of Defense, the whole Executive Branch

because of the dynamic, contradictory, interrelated, piecemeal decision factors within an environment with inconsistent requirements—and within DoD—sometimes unspoken requirements. Obviously, there is no one set of approved properties of wicked problems; each author has his or her own “bookworthy” set.

A quick review of a recognized set of wicked problem factors will demonstrate how the DoD acquisition environment clearly fosters wicked problems.



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and Congress. Trying to find a solution or make a decision that satisfactorily appeases each of these stakeholders with their conflicting objectives can be mind-numbing. Yes, conflicting! The result is that many times the outcome is not the optimal or even the best decision but the decision that placates the majority of the stakeholders. In other words, the most sellable solution/decision is made.

As an instructor who spent more than 11 years teaching critical thinking and decision making using “real” program scenarios/case studies in both government and contractor program management training courses, I’ve witnessed this phenomenon firsthand. Each student’s experiences, functional perspective and current assignment set the boundaries of an acceptable solution. The ensuing emotional discussions center on the assumptions each student has made based on unique backgrounds, viewpoints and biases.

Considering there are myriad stakeholders and decision makers within the Department of Defense (DoD) acquisition process, each with unique boundaries, the result is innumerable, diverse decision factors. Therefore, I can unequivocally state that, regardless of your perspective (government or contractor) determining the appropriate set of decision factors is crucial to determining a sellable solution. Unfortunately, the four- or five-step decision-making process typically taught is not adequate to handle this multifaceted and overly complex environment, as it assumes an agreed upon set of decision factors. Therefore, a more dynamic process is required.

The term generally associated with a problem with dynamic decision factors in a multistakeholder environment is “wicked.” A wicked problem is almost impossible to solve

There are multiple stakeholders with multiple unique requirements and decision factors. In addition, based on their perspective, each stakeholder may envision a different problem or acceptable solution.

Every problem is unique. Similar problem may exist, but in reality each similar problem has a unique situation and impacting factors. For example, both the Joint Strike Fighter and the MQ-4C Triton programs have technical and cost issues, but the factors driving those issues are uniquely different.

The problems are not discrete; rather the solution to one problem tends to cause another problem. Resolving a manufacturing problem may increase the weapon system’s weight, resolving the weight problem may increase the program cost. Resolving the cost problem can often decrease risk mitigation actions, which in turn may result in a different technical problem.

It is difficult to fully comprehend the problem without an in-depth analysis of the choices, and when each option is analyzed the problem evolves or morphs into a different problem. As a team considers the implications or circumstances surrounding various choices, either the team identifies secondary or tertiary impacts that are unacceptable or the review in itself changes the situation. In either case, the original problem or the range of acceptable outcomes is redefined.

There are multiple reasonable solutions to a wicked problem. There is not one right solution. Multiple solutions will provide a wide range of acceptable outcomes. And unfortunately, a good decision does not guarantee a good outcome, because of the dynamic nature of the environment.

There are no “do overs.” The implementation of the decision significantly changes the environment/situation, thereby altering the problem. Because the program environment and resources have been modified, previously considered alternatives no longer are viable and a new wicked problem emerges.

In summary, wicked problems tend to be one-of-a-kind situations without a “right” solution; a number of possible, reasonable solutions exist. Because of the complexity of a wicked problem, its resolution typically creates another problem; which is typically wicked. It is this never-ending cycle of wicked problem after wicked problem that explains why the DoD acquisition process is inconsistent and why years of acquisition reform changes have improved overall individual program performance very little.


As I said earlier, selecting the right decision factors is critical to making the best decision; this is especially true in the “wicked” DoD acquisition process. As a longtime instructor, I’ve studied the brain and how it functions. A human brain cannot simultaneously process more than four or five decision-factors. The human brain cannot assimilate and evaluate more than four or five interrelated factors and consider more than four to five possible consequences. Yet, the DoD program manager (and milestone decision authority) often has 10 to 15 “critical” factors and multiple objectives to consider in making a decision. I contend that it isn’t the acquisition process that needs to be improved, but rather the acquisition environment. Key decision makers must accept the fact that the DoD acquisition environment inherently generates wicked problems. Solving

between past and present situations and cautiously apply lessons learned.

Second, whenever possible, break the problem or decision down into more discrete pieces. In order to solve any problem, the problem definition must be clear and agreed upon by all stakeholders. Because wicked problems are pervasive and extremely difficult to delimit, thus allowing for different perceptions, it is easier to get agreement on smaller aspects of the problem or desired outcomes. The “bite-size” pieces then can be prioritized. There is a risk that defining the problem in “bite-size” pieces makes it easy to fall into the trap of solving the smaller pieces and ignoring the dynamic, interrelated aspects of the problem. Beware of simplistic solutions to complex problems. The slogan should be: Define small and resolve big.

Third, focus on understanding the problem’s interdependencies and multidimensional aspects. This action is extremely difficult to effectively employ, as we often are completely unaware of the interdependencies until we implement our solution—and days, weeks or months later the secondary or tertiary impacts unexpectedly reveal themselves. It is the multidimensional aspect and requirements of the acquisition environment that muddles the process. Multidimensional problems require multidimensional solutions, and most of us are novices in multidimensional thinking.


Finally, I believe the easiest way to tame wicked problems is to simplify the environment by agreeing on four or five prioritized



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wicked problems requires a multifaceted, dynamic decision-making process and the typical DoD 6-month decision-making cycle/process just doesn’t “cut the mustard.” The acquisition environment must be simplified.

So the million-dollar question is: How do you solve a wicked problem? The answer is simple to state and very difficult to implement. First and foremost, accept that this is a unique problem within a distinctive environment with an exclusive set of decision factors. What worked 5 years ago in a similar situation on another program probably won’t work in this situation; it is a different problem in a different environment. Beware of the Lessons Learned trap. I strongly believe we should learn from our mistakes, but be cognizant of the differences

key decision factors. Unfortunately, it isn’t easy because not only must they be “agreed upon” by all stakeholders/decision makers, but they must be adhered to regardless of the stakeholder’s functional area or level within the DoD, Executive Branch or Congress. Alignment of decision factors is critical to improvement of overall program performance. The non-selected decision factors favored by various “rice bowl constituents” must truly be set aside. In an overall context, better decisions can be made only when the acquisition environment becomes less wicked and acquisition decision factors and requirements become less complex and more definitive. Until that happens, program managers will continue to play Rock, Paper, Scissors when making decisions. 

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