

Opportunity Management

Be Careful What You Ask For

Edmund H. Conrow ■ Robert N. Charette

Articles have appeared in defense journals such as *Defense AT&L*, *Cross Talk* (the Journal of Defense Software Engineering, Hill Air Force Base, Utah at www.stsc.hill.af.mil/crosstalk/about.html#mission), and others arguing for including a formal opportunity management (OM) process as a method to get more bang for the buck on defense programs.

While OM is a useful approach during program definition, when a wide range of alternative solutions are being investigated, we suggest that once a program enters into development, its value is generally overstated and is more limited than claimed. A deeper examination of OM indicates a number of limitations and concerns that may not only limit its potential effectiveness, but may cause more problems than are solved. For instance, unless tightly controlled, OM may exacerbate the enduring problem of requirements creep that plagues programs today. (Note: throughout this article we use the word “program” for simplicity, although



we recognize that there may be distinctions between a “program” and a “project.”)

In this article, we discuss these limitations and further argue that there is no defined need or major added value to implementing a separate OM discipline when robust program management, risk management (RM), and systems engineering are practiced.

What Is An Opportunity?

The first issue that needs to be address is this: What exactly is an opportunity? While there is no universal or perfect definition (and we view the term “positive risk” as an oxymoron), we define opportunity as the potentially desired better- (greater-) than-expected outcome of an event or situation that requires an additional allocation or reallocation of resources to pursue. In simple terms, it’s a change in direction from the status quo that will leave us—we believe—in a place better than is currently anticipated.

Conrow is a risk management and project management consultant in Redondo Beach, Calif., and author and co-author of books on risk management. **Charette** is president of the ITABHI Corporation, which specializes in enterprise risk management. He is the author of several books on risk management.

That is not to say that opportunity is the mirror image of risk (which is generally defined as the potential for the unwanted negative outcome of an event or situation) even though the definitions appear to be symmetric. For instance, consider a hypothetical situation: a program with absolutely no risk. The program is perfectly planned to accomplish its objectives on time and at projected cost. Now let us hypothesize an approach—an opportunity—that may reduce the cost of the program further. However, the approach, if not implemented correctly, may lead to the program's becoming overbudget and/or late. What would you choose to do—pursue the opportunity or proceed as planned?

In the above case (a program with no risk, etc.), for most decision makers, the value of the possible cost reduction (gain) would have to be much greater than the potential loss to the program's cost and schedule in order for the opportunity to be selected. The maxim of one in the hand is worth much more than two in the bush aptly applies.

As economics Nobel Prize winner Daniel Kahneman and his late colleague Amos Tversky demonstrated through Prospect Theory, people do not evaluate decisions involving gains (e.g., opportunity) and losses (e.g., risk) in a symmetrical manner. (For example, creating opportunity and risk matrices or cubes that mirror one another or are identical copies of each other, as some OM advocates propose, can lead to erroneous decisions.)

Is RM Negative?

One argument that is often raised for the need for OM is that RM is “negatively focused,” or even worse, a practice that managers may sometimes avoid because it is seen as highlighting problem areas. Risk management is sometimes presented as a “can't-do” program process rather than a “can-do” program process like OM, which sounds more upbeat and positive.

However, while we do indeed define risk as “negative,” properly practiced RM is a very positive approach. It identifies and recommends alternatives to alleviate potential negative events or their consequences and, therefore, brings the program back to within expectations. Furthermore, RM routinely identifies and recommends novel alternatives—that is, opportunities that leave the program better off than originally planned.

Risk management has been unfairly framed by OM advocates as being a practice whose sole objective is to keep the expected probability of program success the same or that ignores alternatives that may lead to improved program outcomes. What is even more interesting to us is the implication, based on OM proponents' arguments about RM, that the current practices of program management and systems engineering are also aimed at achieving the same objective (keeping the expected probability

of program success the same). Our several decades of experience do not bear this out—effective program management, RM, and systems engineering are used regularly to examine alternatives to improve program outcomes and increase the probability of program success.

Is OM Really Necessary?

OM advocates like to point out that valuable opportunities for improving a program's cost, performance, and/or schedule are routinely left on the table, thereby requiring an active OM process to correct the situation. Yet both the quantitative as well as qualitative proof offered by OM advocates appear to us to be razor-thin. One can see this in the four types of opportunities said by OM advocates to be customarily overlooked by programs. (For example, see “Silver Linings in Every Cloud,” by David Hillson, *Project Manager Today*, February 2007, pp. 27-28, as a representative sample of OM literature.)

The first source of opportunity that OM advocates claim is overlooked is an opportunity that occurs because of an absence of risk. The classic and seemingly favorite example given by OM advocates is if it appears that poor industrial relations may lead to a strike, the program might be able to introduce an incentive scheme and turn the situation around from negative to positive. It is interesting to us that the absence of a program risk is defined as an opportunity. By this definition, almost any program risk that does not materialize is an implied opportunity.

Given that the risk posed by industrial action was highly likely and material to program success, is it really plausible that program management or RM would not be actively investigating alternatives to avert a strike, including incentive schemes? Does anyone really believe that program management or RM would be aimed solely at maintaining the status quo, or be focused only on ways to contain the impact of industrial action, as OM advocates contend?

A second source of opportunity that OM advocates claim is often missed are opportunities that are the inverse of some program risks. For instance, OM advocates cite a situation where the productivity rate on a program task is unknown; i.e., it might be lower than expected or it might be higher.

OM advocates claim that “traditional” program management, RM, and systems engineering would automatically label this uncertainty as having only negative outcomes and that program management decisions would henceforth be made from this perspective and assumption. Yet, again, how believable is that contention?

Even if the situation above were labeled as a risk, let us say that risk monitoring showed that, in fact, the productivity rate was better than expected. Do OM advocates actually contend management would not revise the pro-

gram plan accordingly? Do they think the productivity rate would remain, once contrary data was provided, as a program risk?

A third source of opportunities OM advocates claim is habitually overlooked are the opportunities provided by the interaction of managing risks themselves. OM advocates claim that program risks are managed in “silos” so that situations can arise in which the aversion of one risk is not used to offset the risk posed by another.

But again, how credible is it to ignore the killing-two-birds-with-one-stone argument? How often are program risks managed in a manner such that the risk-handling approach to one is not transparent to the risk-handling approach being considered for another? This may occur if the risk consequences are highly localized, meaning that they don’t affect the rest of the program. But for any risk that has program-wide implications, the handling approach and its impact will be thoroughly reviewed by program management and systems engineering. Do OM advocates really believe that if the risk-handling approach for a given risk has beneficial side effects for another risk, it will be deliberately ignored or overlooked?

The final source of opportunity cited by OM advocates that is routinely unnoticed are “pure opportunities,” which unlike the previous three, are unrelated to specific program risks. Examples given are the availability of new processes or technologies that can help improve program performance. It is claimed that these “pure opportunities” are not being actively exploited.

Again, how reliable is that claim? On every program in which we have ever been involved, the search for processes, technology, or skilled personnel to improve program performance is the norm. In fact, a recurring problem for far too many programs is a lust after new program “silver bullets” instead of a focus on implementing current processes and technology that adequately meet the requirements.

We remain unconvinced that the four “opportunity situations” cited by OM advocates as being overlooked or missed by program management, RM, and/or systems engineering, *are* in fact widely missed on actual programs—especially those in the Department of Defense—that use accepted practices. Again, we would like to see data that demonstrate lack of OM causing program under-performance on programs that apply accepted—let alone best—program management, RM, and/or systems engineering practices. The same applies to the converse, where OM has improved program outcomes in which program management, RM, and/or systems engineering practices are poor.

Please, show us the data.



Are Program Risks Currently Well Managed?

We do concede that on too many programs, poor program management, RM, and/or systems engineering practices might miss more subtle situations where better program outcomes might be possible.

Alas, our experience suggests that RM is often poorly performed on many DoD programs. Results from the Tri-Service Assessment Initiative (which looked at 50 major DoD programs), performed a few years ago indicate that while RM is carried out on most programs, it is often ineffective. Risk-management processes are often superficial, risk analyses are not communicated, and identified risks frequently do not influence program decision making (e.g., outputs are not utilized to make decisions or to improve how the program is being run). Similar issues plague both program management and systems engineering practices on many programs.

We believe that more emphasis should be placed on ensuring that accepted program practices are in place and being applied properly—something that the Office of the Secretary of Defense has been actively trying to address. Even with the best of intentions, adding a new program

process, be it OM or something else, to programs that have poorly implemented standard practices would do little to improve program success; more likely it would serve only to undermine it, as well as to add another layer of bureaucracy to the program. It takes a major leap of faith to believe that in a program in which poor program management, RM, and/or systems engineering practices exist that an OM practice would be implemented significantly more effectively.

Where Is OM Potentially Effective?

An area where OM might be very useful indeed is during the program definition stage, in which alternative technical solutions are being actively explored. At this point in a program, innovative thinking and approaches are required to be explored, and program assumptions and constraints challenged. OM has the potential to be an effective remedy for the scourge of overly optimistic program cost and schedule estimates that currently rely on achieving technological breakthroughs on demand in order for them to be met.

A strong dose of a capital venture-based, risk entrepreneurial-based OM might go a long way towards bringing needed realism to program plans before program development begins, but once it begins, the first order of business is to ensure that the promises made to Congress, OSD, the appropriate Service, and to the warfighting community are kept, not that they are exceeded.

OM in conjunction with systems engineering will also likely be useful during program sustainment, when opportunities for investments in new system or platform capabilities often present themselves.

Unintended Potential Consequences of OM

Assuming you are unconvinced of our arguments and still wish to go ahead with OM, at least be aware of the risks with OM before you do so. Many advocating OM seem anxious to highlight the upside but are reticent to discuss the downside of OM.

First, Government Accountability Office data indicate that the development time cycle for major DoD programs has increased over 23 percent in the past year; anything that exacerbates this situation is not needed. Unfortunately, as we pointed out earlier, OM has the potential for encouraging unconstrained requirements creep unless you act quickly and forcefully to stop it.

Why is that? Any bureaucratic organization has to justify itself; an OM integrated project team, which OM advocates claim is vitally needed in programs today, is no different. The job of an OM IPT is to find opportunities (that are supposedly being overlooked), and its success is going to be measured by how many “overlooked” opportunities it “discovers.”

As the previous example illustrated, the OM IPT will be sorely tempted to re-examine every risk-handling strategy to find greater leverage. Another layer of review will be placed over the RM team’s handling strategies, when that is really the purview of the program management team. Every program activity will be fair game for the OM IPT.

In addition, once an opportunity is identified by the OM IPT, expect the team to become vocal promoters for that opportunity, if for no other reason than to show that its judgment was correct. The team has a vested interest in opportunities not only being identified, but pursued.

You, as the PM, risk setting up a competing group for influence in your program or having kibitzers second guessing the decisions you make. One of your jobs will now be to dampen down the desire of program personnel to work on the novel opportunities your OM IPT uncovers, rather than concentrating on the mundane hard work that program success requires.

OM advocates claim that requirements creep can be controlled by ensuring that opportunities that might change project program expectations or scope for the better be presented to higher management. As we noted earlier, be prepared to present proof positive that the opportunity “upside” you are presenting is substantial, and that the downside is minimal. In our experience, senior managers don’t believe they will get something for nothing.

Be careful, too, that your OM process doesn’t end up taking resources from program management, RM, systems engineering, and so on. At the very least, think hard about where the resources will come from to pursue OM. If you manage to get extra resources to implement OM, do a cost/benefit trade-off to see whether OM or some other activity would create more bang for the buck. The same is true if you find extra resources to pursue an identified opportunity.

Remember, too, that opportunities are not risk-free. You will need a very robust RM process to ensure that any opportunities you pursue are captured and do not lead to subsequent risks or problems (as we have seen too often on actual programs).

Finally, if you are using OM as a way to overcome the risks of over-optimistic program estimates, then call it by its true name: Optimism Management. For now OM becomes akin to a technique for picking lottery numbers in hopes of funding your pension plan.

The authors welcome comments and questions and can be contacted at conrow@risk-services.com and charette@itabhi.com.