

Moving From **Risk-Averse** to **Innovative Opportunity-Seekers**

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“ Pearls don’t lie on the seashore. If you want one, you must dive for it. —Chinese proverb

RISK MANAGEMENT IS ONE OF THE FUNDAMENTAL PROCESSES in defense acquisition. Some would argue that managing risk is a good way to describe the role of Department of Defense (DoD) integrated product teams chartered to plan and execute acquisition programs. The DoD *Risk, Issue, and Opportunity (RIO) Management Guide* of January 2017 states that the value of risk management is not adherence to policy. Rather, the value is the program manager’s (PM’s) ability to employ critical thinking and adopt a risk management culture to influence sound decision making.

DoD’s PMs thus are very familiar with risk management because it receives extensive leadership attention. Risk assessments can drive everything from

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investment decisions to acquisition strategies, including risk funding levels and type of contract. The acquisition system will prevent programs from moving forward if risks are assessed as too great or inadequately mitigated. But the landscape around risk is changing dramatically.

With the mandates to go faster and deliver at the speed of relevance, senior leaders are suggesting that our culture is too risk averse and must change. Gen Mark Milley, Chairman of the Joint Chiefs, in 2017 said, "I think we're overly centralized, overly bureaucratic, and overly risk averse, which is the opposite of what we're going to need in any type of warfare, but in particular the warfare that I envision." Even our 2018 National Defense Strategy discusses fostering a culture of experimentation and

calculated risk taking. As in the case of financial investments, taking on greater risks can result in greater rewards.

There are several root causes of this risk averse culture. The most severe risks typically are linked to mission success, force protection, and safety. But other factors such as oversight, funding instability, and statutory/regulatory compliance cannot be overlooked. Defense acquisition is encumbered with countless rules that can severely restrict the available courses of action. And the list of rules grows every year as evidenced by the 3,000 plus page Fiscal Year 2020 National Defense Authorization Act.

Changing the risk culture must involve all aspects and stakeholders of acquisition. It should involve congressional oversight, DoD strategic guidance, policy, organizational strategies, structures, processes, techniques, and training. The recently published Adaptive Acquisition Framework empowers PMs to develop a strategy that leverages the flexibility and responsiveness the pathways can provide. The change from tailor out to "tailor in" is also an opportunity to foster the culture change to a less risk averse organization. But, losing the risk averse mentality must also involve new ideas and tools that help the workforce implement actions that embrace this preferred culture. One enabling tool that PMs can leverage is opportunity management.

The *RIO Management Guide* provides practical guidance for acquisition teams and is a great place to start for guidance on opportunity management. Consistent with a risk averse culture, the guide devotes most of the content to risk management. Opportunity management is addressed in the context of the Better Buying Power initiative of Should Cost, a regulatory requirement to proactively target cost savings goals below the program's will cost estimate. The guide is clear that opportunity management applies across a program's life cycle and that it requires active management effort to be effective.

Risk and opportunity management have several common threads. Both follow a similar process for planning, identification, analysis, and subsequent actions to either manage a risk or exploit an opportunity. Both involve the upfront expenditure of resources to plan and manage the efforts. In my experience with Defense Acquisition University (DAU) mission assistance efforts, I often find that acquisition teams spend a great deal of time managing risks but spend

very little time or emphasis working opportunity management. We can actually use both of these processes to become greater risk takers seeking high payoff rewards.

Teams that succeed at opportunity management typically embrace some of the following characteristics:

- Opportunity management is a priority for the entire organization, including strong support from leadership. The organization has an opportunity seeking culture that becomes ingrained in the environment at all levels.
- It is incorporated into teams' strategic rhythm, similar to risk management. This includes discussions with industry and prime contractors who can offer ideas and participate in opportunity deliberations.
- Finally, teams are good at critical thinking—and train and practice to develop these skills. The teams ensure that members use a common framework to avoid confusion.

In the commercial world, we can observe the behaviors of venture capitalists, start-up companies, and experienced innovators. Industry must take risks in order to succeed. Risks often are viewed in the same context of opportunities, since the investment risk is made based on the potential sales and return on the investment. Investment capital is carefully managed though—usually starting with relatively small investments to gauge market potential, followed by growth and expansion into new products and new markets.

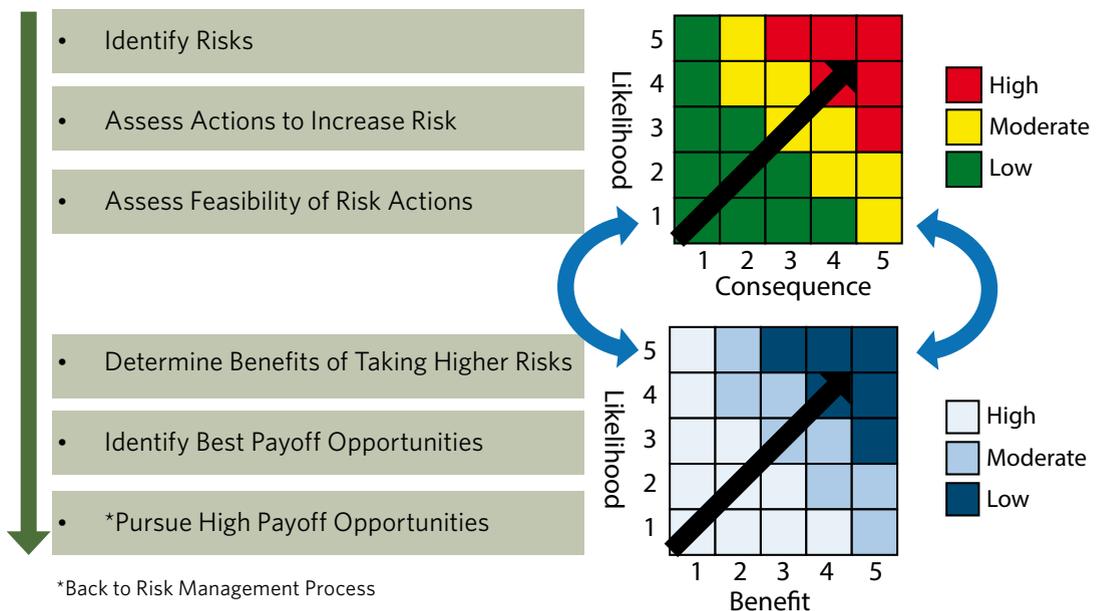
DoD acquisition professionals can learn valuable lessons from industry on the power of opportunity management and its relationship to risk. Industry must be effective at opportunity management that leads to increased sales, new markets, new customers, and other business benefits. When I was an industry manager, I spent most of my time working opportunity management. High payoff opportunities don't just happen by chance. Without significant effort to manage and sometimes create new opportunities, it can be difficult for a company to grow its business. That is why companies

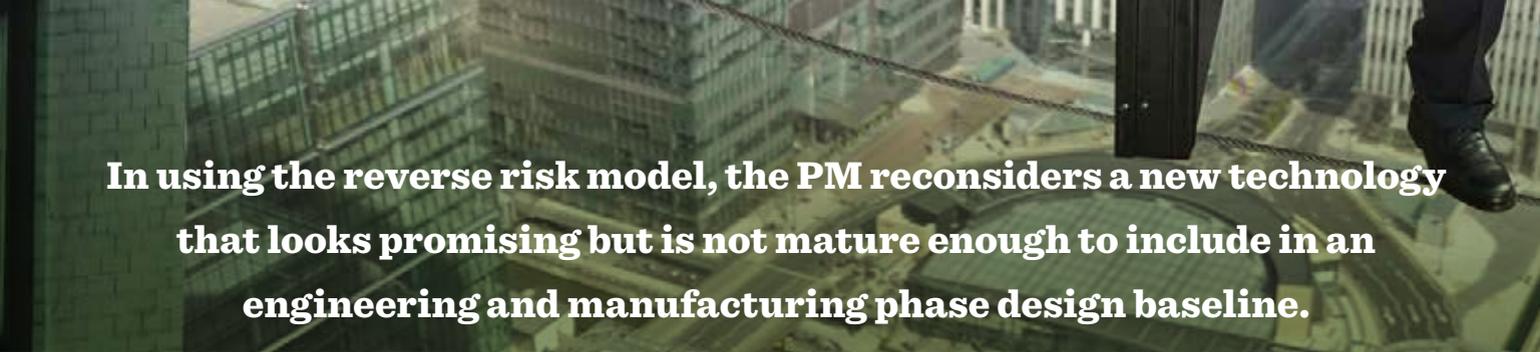
invest their own money in research and development and hire business development, marketing, and sales staffs and implement robust opportunity management processes.

Students in DAU classes and workshops often ask how to do something and provide an example. Let's address both, starting with how we might become more aggressive risk takers, seeking high payoff opportunities. The how-to that follows is an example of many that one could use to identify high payoff opportunities that involve taking more risks. The use of good critical thinking skills is necessary for complex tasks such as this. One of the basic tenets often used in critical thinking is to break away from normal thought patterns. Relying solely on these routine thought patterns can inhibit good thinking because we tend to restrict thinking to easy and well understood paradigms. A tool to help break this pattern involves what we will call thinking in reverse.

An example of a method we can use is taking a "reverse-risk" approach. As seen in the model (Figure 1), we start with our typical risk management process. After a planning effort, we identify risks (Step 1) associated with the program. Risks are categorized based on a future root cause and mapped to a risk cube based on the probability (or likelihood) of occurrence and the consequence if it occurs. Rather than mitigate lower (the normal pattern), we then identify how we can increase the risk (Step 2). For example, assuming we have a high risk prototyping effort, what else could we do to increase the risk of this prototype? This could involve reducing the timeline, adding unproven technology to the design, using advanced materials, adding

Figure 1. Risk Taker—Opportunity Process Model





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new features, or other risky experimentation ideas. In Step 3, we assess the feasibility of actually pursuing the idea and then analyze (Step 4) the potential benefits.

The benefits could spark opportunity identification so we use the existing opportunity model to assess the likelihood and benefit of opportunities (Step 5). Finally, we pursue the best value opportunities (Step 6) or iterate back again to explore other options. Once we decide to pursue the opportunity, we can use the risk model to help manage the new risks that are now associated as a result of pursuing the opportunity.

Using the Section 804 Middle Tier of Acquisition authority pathway for Rapid Prototyping, we can envision an example of taking on higher risks to pursue high payoff opportunities. In a notional example, a PM initially pursues an acquisition strategy using the traditional DoD Instruction 5000 series process. The strategy thus includes development of mature technologies to meet a desired capability.

In using the reverse risk model, the PM reconsiders a new technology that looks promising but is not mature enough to include in an engineering and manufacturing phase design baseline. The PM proposes rapid prototyping of this new technology to assess performance in a relevant environment. The technology is not proven and, therefore, the risks are very high that it will not perform as expected. The PM still decides to pursue building and testing this prototype because the potential payoff is significant. Rather than delay the traditional program, the use of virtual prototyping is conducted, followed by some hardware in the loop tests. This could lead to rapid incorporation of the technology feature, and could inform other possible opportunities. It could also lead to transition to a fielded project or a revised prototyping effort.

My organization did something similar several years ago on an international cooperative development program. The risk taking involved prototyping a new sensor on a “borrowed” operational aircraft that was made available by the operational command. The test effort was invaluable in providing operational feedback, technical data, feasibility, and confidence in structuring a follow-on full up design and deployment program.

Risk aversion is not necessarily a bad thing. We have many good reasons to avoid severe risks, especially those that

threaten mission success, safety, and large investments. We can learn from the recent Coronavirus outbreak. While the likelihood of infection initially is assessed as low, the consequences could be life threatening for us, our families, and co-workers. Thus, it is prudent to make a significant effort to avoid the risk of infection. Meanwhile, if we look at investment portfolios, a strategy of higher-risk, high payoff stocks was generally working great with significant returns over the last 10 years. How quickly that changed when fear and uncertainty mounted. A diversified investment strategy would help mitigate the unexpected events that can turn a nice return into big losses.

In using the Risk Taker—Opportunity Process Model discussed above, we can also identify opportunities, even in the current volatile environment. Stocks of some of the most valuable companies worldwide now are available at prices that look like bargains when compared to previous highs. Many investors will take advantage of this opportunity, even though risks could still be high in the short term. Taking a longer-term view though, like investors who bought the sell-off in the 2008 financial meltdown, could be attractive and result in big payoffs! They took the deep dive for the pearls and found some exquisite ones that were worth the risk.

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MDAP/MAIS Program Manager Changes

With the assistance of the Office of the Secretary of Defense, *Defense Acquisition* magazine publishes the names of incoming and outgoing program managers for major defense acquisition programs (MDAPs) and major automated information system (MAIS) programs. This announcement lists two such changes of leadership for both civilian and military program managers for March 2020.

Navy/Marine Corps

CAPT Holly B. Shoger relieved **CAPT Todd D. St. Laurent** as Program Manager for Naval Undergraduate Flight Training Systems (PMA-273) on March 26.

CAPT Eric M. Gardner relieved **CAPT Anthony E. Rossi** as Program Manager for Maritime Patrol and Reconnaissance (PMA-290) on March 30.