

A Run for Our Money

The Latest on Why Competition in Defense Acquisitions Can Save Tax Dollars

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Introduction

Throughout its five-decade history, National Taxpayers Union (NTU) has had no <u>shortage of critiques</u> for how Congress allocates money on defense (and for how the Department of Defense (DoD) <u>spends the</u> <u>dollars</u> taxpayers give them). Just as we have reminded their predecessors, leaders in the current Congress and the Biden administration can and should trim the Pentagon's budget, and save what could now amount to hundreds of billions of dollars in the coming years.

One unflashy but critically important way DoD can cut costs, now and well into the future, is to be smarter and more effective in how it procures goods and services from federal contractors. According to the nonpartisan Congressional Research Service (CRS), DoD "obligated more money on federal contracts" in fiscal year (FY) 2020 "than all other government agencies combined" — a staggering **\$420 billion**. DoD works with contractors across all the agency's budget functions,¹ but two areas where DoD assumes more significant risk of contractor failure (or waste in taxpayer dollars) are procurement and research, development, testing and evaluation (RD&TE). Together these two budget functions made up **\$247.3 billion** approved for the FY 2021 defense budget, \$136.5 billion and \$110.8 billion respectively.

DoD contract management remains one of the Government Accountability Office's (GAO) "<u>high risk areas</u>" that the agency must work to address in the years ahead, despite reported progress on goals like addressing shortfalls in its acquisition workforce. However, this issue brief concerns none of the three subcategories of risk within GAO's high risk list.² Instead, it concerns another important principle that, if not adhered to in most contracting situations DoD faces, could create unnecessary financial liabilities for DoD and the taxpayers funding the agency: competition in contracting.

Competition remains a concern in the defense contracting space. In FY 2020, just five contractors received <u>more than half (54 percent)</u> of all contract obligations, according to CRS. DoD has a history of moving forward with expensive new programs without sufficient competition between contractors on both quality and cost. And after moving forward with one prime contractor on a costly initiative, DoD has often required "concurrence," which NTU has <u>described</u> as "the Pentagon's foolhardy practice of putting systems into production during, or even before testing."

To be certain, competition *through* the production and deployment stages of DoD's <u>acquisition framework</u> is not always practical or a guaranteed cost-containment strategy.³ But in general, for so-called <u>major capability acquisition</u> at DoD it is advisable for the Department to compete through the engineering and manufacturing development stages (the third of five milestones). A related principle, "fly before you buy," has been pushed by DoD officials before but is <u>far too often</u> shunned in favor of expediency and concurrency – at the ultimate expense of taxpayers and, often, DoD officials who have to scrap a failing project or spend time and money fixing avoidable flaws. Or, as GAO put it <u>in 2016</u>:

"...we found that DOD is not using 'knowledge-based acquisition best practices' for most of its programs. Imagine placing an order for something that doesn't yet exist—and may never. That's what DOD has done in several programs."

In this paper, we examine contractor competition and the "fly before you buy" principle, and apply these concepts to one of the more relevant acquisition efforts today – specifically how it may help the Missile Defense Agency (MDA) avoid recent mistakes that caused the agency to cancel its Redesigned Kill Vehicle (RKV) program within the larger Ground-based Midcourse Defense (GMD) system. GAO has reported on numerous "lessons learned" from the RKV failure that should inform MDA as it competes RKV's replacement – the Next Generation Interceptor (NGI) – and early evidence suggests that MDA may be taking some of

¹ The major functions include military personnel, operation and maintenance (O&M), procurement, research development test and evaluation (RDT&E), and military construction.

² Those three areas are Acquisition Workforce (recently removed from the High Risk List), Service Acquisitions, and Operational Contract Support. For more, <u>see here</u>.

³ Research is not always definitive on exactly when and where contractor competition maximizes the return to taxpayers. See, for example, the varied conclusions in RAND's <u>2009 discussion</u> of the issue.

those lessons to heart. Hopefully, however, the value of this exercise will extend outside the missile defense space.

Ever since offensive missile capabilities were developed during the 20th century, scholars and public officials have debated the <u>implications</u> of whether defensive responses are helpful or harmful to national security and global stability. This issue brief, written solely from a fiscal policy perspective, is not intended to wade into these controversies.

NTU and NTU Foundation have both recommended scrapping the entire GMD system before, as we pursue efforts to right-size the defense budget now and in the years ahead. If lawmakers are to set aside that suggestion though (and both history and the widespread bipartisan support for missile defense spending suggests they will), at minimum it's important that Congress and MDA take steps now to uphold the fiscal program integrity of GMD and NGI. Decision makers will need to exercise caution throughout the acquisition process, to guard against the several deadends for taxpayers that resulted from the \$1.2 billion spent on RKV development. If MDA proceeds carefully, though, and maintains robust competition on quality and cost competitiveness through the development stages of NGI, they may just avoid the mistakes of the past while extending greater respect to taxpayers going forward.

Background on MDA, GMD, RKV, and NGI

The Missile Defense Agency (MDA) has its <u>roots</u> in the Ballistic Missile Defense Organization (BMDO), which before that was the Strategic Defense Initiative Organization (SDIO). SDIO was founded in the 1980s as former President Reagan embarked on a lengthy and expensive missile defense effort,⁴ was renamed to BMDO in 1994, and renamed again to MDA in 2002.

MDA manages the nation's ballistic missile defense system (<u>BMDS</u>), which includes sensors (on land, in air, and at sea) that can detect incoming missiles from foreign adversaries, interceptors that attempt to stop an in-flight missile from reaching its intended target, and a global command-and-control network that links the sensors with the interceptors.

There are several subsystems within the broader BMDS, including the Terminal High Altitude Area

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Key Facts:



On some major acquisition programs, the U.S. military can give taxpayers the fairest shake when it competes through the engineering and manufacturing stages of acquisition.



The Missile Defense Agency (MDA) took several serious stumbles with its Redesigned Kill Vehicle (RKV) missile defense program, which cost taxpayers \$1.2 billion.



One key lesson from the RKV failure was that the MDA – and other military components – should not put all their eggs in one basket for major programs.



With RKV's successor, the Next Generation Interceptor (NGI), MDA and some lawmakers are signaling support for competing two options through critical design review.



Though NGI is not guaranteed to be a success for missile defense and for the nation's taxpayers, the best run for taxpayers' money will be continued robust competition.

⁴ According to CRS, since 1985 Congress "has appropriated well over \$200 billion for a broad range of research and development programs and deployment of BMD systems here and abroad." About \$152 billion was spent on the ballistic missile defense system (BMDS) from FYs 2002-2018, according to GAO.

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Defense (THAAD) system for "shoot[ing] down attacking short- and medium-range missiles during their final or terminal phase," and missile defense systems placed on the Navy's Aegis ships. CRS reports that THAAD, the Aegis system, and Army's Patriot Advanced Capability-3 (PAC-3) system have matured to a level of effective performance in recent years, despite serious initial cost overruns and schedule delays.

One system that continues to face technical challenges is the Ground-based Midcourse Defense system. GMD is designed to sense intercontinental ballistic missiles (ICBMs) and intercept/destroy those missiles in the air before they can reach their intended target. According to GAO, there are generally <u>four components</u> to the <u>GMD system</u> that work together to defend against ICBMs: 1) <u>44 ground-based interceptors (GBIs)</u> placed in the ground at military bases in Alaska and California, with plans to add 20 more interceptors in the years to come; 2) **boosters** on the GBIs that move "towards the predicted location of an incoming enemy missile"; 3) an **Exoatmospheric Kill Vehicle** (EKV) designed to destroy the incoming missile; and 4) ground systems "consisting of redundant fire-control consoles, interceptor launch facilities, and a communications network."

GAO, which reports on the nation's missile defense system every year as required by law, wrote in their FY 2020 <u>report</u> that MDA "did not deliver the one GBI planned for fiscal year 2020" – based on delays that stretch back to 2018 – and that GMD "did not conduct its one planned flight test" for the year. In the past, NTU and the Project on Government Oversight (POGO) have also called GMD "<u>less-than-effective</u>," and a "<u>program [that] has resulted in an excessive expenditure with no recorded operational capacity</u>," respectively.

GAO, for its part, also <u>wrote</u> recently on the struggles of the RKV program, which as originally envisioned under former President Obama would have improved the ability of GMD to intercept and destroy an ICBM bound for the United States:

"As we found in June 2019, MDA encountered design, systems engineering, quality assurance, and manufacturing issues with RKV. These issues prompted the USD (R&E) [Under Secretary of Defense, Research and Engineering] to direct MDA to stop all work on RKV in May 2019. ... USD (R&E) determined that the technical problems with RKV were so significant as to be either insurmountable or cost-prohibitive to correct and therefore decided to terminate the RKV program in August 2019 with the support of the Deputy Secretary of Defense and in coordination with the USD (A&S)."⁵

By the time RKV was canceled in 2019, MDA had <u>spent</u> \$1.2 billion on development (when their initial 2015 projection for entire development *and* initial production costs was \$870 million), the total estimated cost for the program (had it continued) had more than doubled, and the time to complete development and initial production had increased from 6.5 years to 10.75 years.

Soon after the cancellation of RKV, DoD announced its intentions for RKV's replacement: the Next Generation Interceptor (NGI). MDA envisions a <u>roughly 10-year timeline</u> for developing, testing, and producing NGI. This includes at least five years (FYs 2021-26) of competition between two contractors to design the NGI, two flight tests in FY 2027 with just one contractor, the beginning of NGI production in FY 2027 or FY 2028, and the delivery of NGIs to MDA from FY 2028 through FY 2030.

The Pentagon's Cost Assessment and Program Evaluation (CAPE) office found in April 2021 that the NGI project would cost around \$17.7 billion over this roughly 10-year period, though likely including considerable maintenance and sustainment costs beyond that timeframe.⁶ In March 2021, MDA <u>chose</u> two teams to compete on the NGI design for the next several years – one team includes Northrop Grumman and Raytheon, and another includes Lockheed Martin and Aerojet Rocketdyne. Boeing submitted a bid but was not chosen to compete. Boeing is the <u>prime contractor</u> for the current generation of interceptors, the GBI.

⁵ GAO points to "design, systems engineering, quality assurance, and manufacturing issues with RKV," among other issues. ⁶ This measure is an imperfect proxy for estimating the cost taxpayers bear for the research, development, testing, production, and delivery of NGIs, since a majority of projected spending (\$13.1 billion out of \$17.7 billion) is projected to occur in the development phase. Also, the experience with RKV indicates that cost and timeline estimates are subject to change over time.

Funding History of NGI to Date

The former Trump administration <u>requested</u> \$664.1 million in NGI funding for FY 2021. The House of Representatives (controlled by Democrats at the time) proposed *reducing* NGI funding by 24 percent from the administration's request, while the Senate (controlled by Republicans at the time) proposed *increasing* NGI funding by 30.1 percent relative to the administration's request. Senate appropriators won out in conference, with lawmakers appropriating around \$858.1 million for NGI in FY 2021. The FY 2022 NDAA <u>authorizes</u> \$926.1 million for NGI for the current fiscal year.⁷ This is consistent with the Biden administration's budget request. And though details are still coming in about the new Biden administration FY 2023 budget request, early indicators are that they are <u>requesting</u> \$2.6 billion combined for NGI and GMD (up from \$2.3 billion in FY 2021).

Lessons Learned From RKV and How to Apply to NGI

GAO pointed to several important lessons learned from the failure of RKV, and how these failures can and should apply to the development, testing, and eventual deployment of NGI.

The first failure of RKV, GAO wrote, was a lack of competition:

"...[for RKV,] MDA pursued a 'best-of breed' approach that merged multiple contractors' kill vehicle concepts into a single design. In doing so, we found that MDA missed some of the potential benefits typically achieved through competition."

MDA is taking the opposite approach for NGI, with competition between two teams of contractors over the next several years. (More on this below.)

The second failure was a lack of early parts testing. GAO said MDA erred in conducting "a series of critical parts testing *after* the preliminary design review," (emphasis added), and that MDA plans to correct this mistake for NGI.

Finally, GAO wrote, MDA previously produced kill vehicles "intended for operational use" before testing them, a serious risk if MDA "[discovered] design flaws *after* [kill vehicle] production was already underway" (emphasis added). For NGI, MDA has committed to at least two successful flight tests before starting production.

Unfortunately, some eager defense hawks in Congress could be on the path to unlearning the first lesson of RKV's failure, a lack of adequate competition through critical phases of NGI's development and testing.

Recent NGI Developments

During the recent debate within and between the two chambers of Congress over the FY 2022 NDAA, the Senate Armed Services Committee <u>expressed support</u> for directing MDA to plan for more than tripling the number of NGIs procured under the program, from the current 21 to 65. Reporting indicates that tripling the production of NGI now could cost taxpayers nearly \$5 billion.

NTU, along with the R Street Institute and Taxpayers Protection Alliance, <u>wrote</u> to the leaders of the Senate and House Armed Services Committees in October 2021, urging them to remove this language from the NDAA. We wrote that:

"...NGI *could* be a better bet for taxpayers than past efforts, but only if MDA learns from its previous failures and boondoggles. One way to *not* learn from these failures would be to triple production of these new interceptors extremely early in the program's development, as proposed in the Senate version of NDAA."

⁷ See page 754, Line 116, Program Element 0604874C.

We also noted that:

"...our organizations nonetheless remain deeply concerned that the Senate language would allow for a plan to significantly expand MDA's vision for NGI — before the contractors competing on NGI have even completed what is called a preliminary design review (PDR). ... It is simply premature to ask MDA to develop a plan to triple NGI production, especially given the technology has yet to go through PDR or the more important and robust critical design review (CDR) phase."

We asked House and Senate leaders to commit instead to House language that asks the Secretary of Defense to maintain competition through several review stages of NGI and to uphold "fly before you buy" principles. While lawmakers included a "fly before you buy" commitment in the final version of the NDAA, the language in the final bill also includes a path to tripling NGI production before review phases are complete.⁸

More recently, and in a positive development for "fly before you buy" principles, DoD signaled support for moving both competitors on NGI "<u>through a critical design review</u>." DoD's financial office <u>wrote</u> in its FY 2023 "Program Acquisition Costs by Weapon System" budget document that their NGI funding request supports "design and development activities for two competitive interceptor development contracts." Though the jury is still out on NGI's long-run performance, it is encouraging that MDA appears committed to learning from its RKV mistakes and competing two options through CDR.

Importance of "Fly Before You Buy"

As noted above, NTU, R Street, and Taxpayers Protection Alliance asked Congressional leaders to commit to "fly before you buy" principles in the NGI program. Such principles have often, but not always, worked to reduce taxpayer risk in defense acquisition programs, limiting the likelihood that taxpayers bear the cost for program failures or delays. "Fly before you buy" is especially important for technologically complex systems like NGI, and NTU strongly believes that such "proof of concept" efforts should occur in the early stages of the acquisition cycle – ideally before production begins.

As a general commercial concept, "fly before you buy" predates aviation by centuries, even millennia. The notion that a product's operability should be demonstrated prior to purchase would, to many, represent common sense. Nonetheless, as any product increases in complexity, and is being designed to one customer's specific instructions, the process becomes more characterized by developmental stages, each one carrying its own costs and expectations. A producer may find in the course of costly, time-consuming research that a product simply cannot be developed in the way the customer envisions. How can a producer be incentivized to conduct such research, which might lead to a dead end? A customer, on the other hand, may decide that their needs have changed in the middle of a product's development. How can this be facilitated in a way to keep the producer working toward a finished model?

In the United States, the "cost plus" contracting process was one answer to these questions. During World War II and thereafter, defense suppliers effectively billed the government for their costs in producing a contracted system, along with a percentage of the expense to provide a profit margin. Another response was to segment contracting into a research and development phase competitively bid among companies, and then require a new bidding process for actual production of the winning design.

These strategies proved uneven in delivering weapons that were on-budget and on-schedule, reaching a point by the late 1960s where taxpayers and Members of Congress began asking hard questions about the value of defense dollars. The result was a <u>sweeping overhaul</u> of the procurement <u>process</u> under the tutelage of Defense Secretary Melvin Laird and Deputy Secretary David Packard. Packard, who was also co-founder of the revolutionary technology company Hewlett-Packard, influenced military contracting for years to come with his "Better Buying Power" principles in 1971 that <u>enshrined</u> "fly before you buy" as the default concept for procurement. Fifteen years later, long after he had left government, a commission

⁸ For more see <u>here</u>, page 566 of the PDF.

headed by Packard reported to then-President Reagan a new set of contracting reform <u>recommendations</u>, which nonetheless <u>continued</u> to articulate "fly before you buy" as an important guidepost for future procurement.

The "fly before you buy" principle is related to, but nonetheless distinct from, the concept of a "fly-off" – whereby two or more prototypes compete with each other in field demonstrations to determine which one enters production.⁹ Though not all fly-offs are successful, nor do they always produce favorable results for the American taxpayer, fly-offs have often yielded more durable and reliable military programs than acquisitions that did not include such rigorous testing standards. A few historical examples are relevant:

• A fly-off between the YC-14 and the YC-15 Air Force transport vehicles in 1976 eventually <u>yielded</u> the "<u>highly successful</u>" Boeing C-17 Globemaster III, with the first C-17 "<u>declared</u> <u>operationally ready</u>" in 1995 and with a present inventory of 222 C-17 aircraft (including 157 for the active duty Air Force); according to GAO, the C-17 fleet is planned to be in service <u>beyond the year 2048</u>, and operating and support (O&S) costs for the C-17 decreased by 37 percent over a period of seven years (FYs 2011-18);

• A fly-off to replace the T-38 trainer aircraft yielded the T-7 Red Hawk, with the Air Force awarding a contract to Boeing for the T-7 that was less than half (\$9.2 billion) what the Air Force "had originally valued the contract at" (\$19.7 billion). The development of the T-7 has experienced some design delays and parts shortages which the Air Force attributes to COVID-19; the Air Force also discovered an issue with the aircraft "much earlier" than usual in the acquisition lifecycle due to the T-7's "early prototyping and digital engineering process."

• A fly-off to build the military's new "close-support aircraft" led to a final, two-prototype competition between Northrop and Fairchild Aircraft. The two-month fly-off led to the A-10 Warthog aircraft which, <u>despite rising maintenance costs and aging concerns</u>, has served as a <u>largely reliable and popular plane</u> in the Air Force for decades.

Time will tell if the T-7 will be a successful aircraft for the Air Force, but competition, "fly before you buy," and "early prototyping" may help to catch current and potential issues with the aircraft before taxpayers sink too many dollars into the T-38 replacement.

Other designs result in a "win-win" situation. The YF-16 and YF-17, originally paired against each other in the Air Force's Lightweight Fighter evaluation, eventually entered production, (as the F-16 and F-18) for three armed services and spawned numerous follow-ons.

Packard himself attempted to distinguish between "fly before you buy" and the "fly-off" by noting:

"Perhaps the best way to explain some variations of a practical fly-before-you buy policy is to take several examples. The AX program is one which is truly fly-before-you-buy, for in this program we have two competing firms. Each will produce development models of the AX, and these development models will be flown and compared before a production contractor is selected...

A second approach, using the fly-before-you-buy principle, is the B-1 program. In this case it was too expensive to develop two new bombers, and test them against each other. The contractor will build three prototypes and we will thoroughly test those before a production decision is made.

⁹ For a postwar history of this phenomenon in the U.S., see <u>https://www.airuniversity.af.edu/ASPJ/Book-Reviews/Arti-cle/1669781/a-complete-history-of-us-combat-aircraft-fly-off-competitions-winners-losers-an/</u>

... the B-1 project manager has done an excellent job in cutting out unnecessary paperwork. This is a case where the project manager has adequate authority, good communication with the top decision-making people in the Air Force, and the right kind of a contract. His management of this program has reduced the cost of this development by several hundred million dollars."

On the other hand, fly-offs are no guarantee of a sound buying decision for taxpayers. The Joint Strike Fighter program was conceived from multiple designs, and was narrowed to two teams which produced separate prototypes, only to morph into the <u>perpetually troubled F-35 program</u>. In this case, "fly before you buy" might have been a more effective strategy, in the sense that multiple components outside of the basic airframe but necessary to a fully functioning fighter were put into "concurrent" procurement as the final development and production stages of the F-35 overlapped with each other. Some defense experts have criticized concurrence for its risk and cost, while others have pushed back, <u>sparking a debate</u> over this particular system's suitability for "fly before you buy."

While there seems to be agreement that "fly before you buy" is not applicable to or desirable for every acquisition effort, this fails to answer the question of where exactly it might be most useful. At least one historical example, linked to the founding of National Taxpayers Union itself, provides some useful context.

The C-5A Galaxy transport aircraft, which first flew in 1968, has been heavily studied for its acquisition process shortcomings owing to what was then a relatively new concept developed by Defense Secretary Robert McNamara's team: Total Package Procurement (TPP). Envisioned as an alternative to contracting methods that were yielding increasingly over-budget and behind-schedule results (see above) TPP's features, as <u>described</u> in the Code of Federal Regulations, had appeal to taxpayers:

"TPP is a method of procuring at the outset of the acquisition phase under a single contract containing price, performance and schedule commitments, the maximum practical amount of design, development, production and support needed to introduce and sustain a system or component in the inventory. ...

The purpose of TPP is to procure under the influence of competition as much of the total design, development, production and support requirements for a system or component as may be practicable..."

Defense procurement expert William Hartung, author of the work (*Prophets of War: Lockheed Martin and the Making of the Military Industrial Complex*), described in a <u>recent interview</u> how this framework collapsed for the C-5A:

"[Prior to TPP], you get an R&D contract, you finish that, then you project what you think the aircraft or other weapon is going to cost. Part of the problem with that is that the company will get the R&D contract to develop the technology — they'd be part way in — then they feel like they have more leverage to charge whatever they chose for the procurement part because the government was already invested in them in a significant way.

So, one of McNamara's "whiz kids" ... decided we need a different approach. He came up with the TPP which basically was, right from the start we want an estimate of the full package. What's the R&D going to cost? What's the production going to cost? What are your milestones? What are the performance characteristics?"

But whether it was to blame for C-5A's failures, or was just a part of the plane's troubles, TPP created perverse incentives. Hartung <u>noted</u>:

"When you've got these huge industrial conglomerates that are so dependent on government contracts, it becomes a bit of a two-way street. The government also depends on them, and they sometimes view their interests being in the same direction, as opposed to what we would like to see, which is the government regulating and monitoring these firms in order to get the best deal for the taxpayers and the best weapons for the armed forces."

TPP was not conceived solely for the C-5A, and indeed the method failed to meet taxpayers' expectations for several large-ticket aircraft and shipbuilding programs. Yet, the C-5A's early troubles became intertwined with TPP, and those close to the program soon discovered something was wrong with the process. Among them was Air Force systems analyst and pioneer whistleblower A. Ernest Fitzgerald, who became an <u>early leader</u> of National Taxpayers Union a few years after our organization's founding in 1969.

Although first ridiculed and professionally blacklisted by the Air Force, Fitzgerald was vindicated in his findings, which helped to inform massive reforms in contracting under Deputy Defense Secretary Packard (see above).

TPP's failure with C-5A did provide a useful insight into "fly before you buy," which many at the time viewed as an impractical consideration for such a huge system. Testifying before Congress after the release of a 1970 commission report on military contracting flaws, commission chair Gilbert Fitzhugh <u>explained</u>:

"In the first place, just to start with the obvious, you can't have three different companies get all the way into the point of flying off two C-5As and see which one does the better job. It is just too expensive. So that the fly-before-you-buy concept must be applied again to manageable units and it must be early enough in the game so that the result of the test can be fed into the decision-making process. If the decision has already been made, you are just wasting the taxpayers' money in flying before you buy."

Although Fitzhugh would be surprised to discover that both fly-offs and "fly before you buy" could sometimes be applied to large transport aircraft (later proven to some degree with C-17 development), subsequent analysts have taken away a nuanced view. Eric Lofgren of the highly readable and instructive blog Acquisition Talk put Fitzhugh's statement <u>into context</u> this way:

"What I hear Fitzhugh saying is that you should do prototyping and testing of more 'manageable units' that are 'early enough in the game'. If the technology of various components are highly matured — in effect partitioning the weapon system task — then you gain from fly-beforeyou-buy even if you can't afford to competitively prototype at the total major system level, such as a C-5A. If this system of intermediate developments is not pursued, then it might appear that prototyping a major clean-sheet system doesn't provide much insurance because it has in effect become locked into military and financial plans."

Employing this construct, the NGI program may be an ideal candidate for "fly before you buy," for two reasons. First, the acquisition process envisions funding two options through stages of the design review, allowing for more concrete data on the "prototyping". Second, a few elements of the old RKV program that did function well could be integrated into the new NGI prototype. Among these are seeker optics and previously radiation-tested hardware components. These could be described as the "matured" components that are adaptable to a new design whose efficacy can and should be demonstrated before the MDA makes a decision on the production phase.

Indeed, it seems like "fly before you buy" is a thrust behind the two-contractor approach to NGI, as noted by *Defense News* in <u>May of last year</u>:

"[MDA Director Vice Admiral Jon] Hill was confident with how the NGI's flight test regime is coming together. MDA is running a separate targeting program in parallel and is preparing for a flight test that will happen before the agency makes a low-rate production decision. One of the problems with the GBI program is that the MDA was experiencing repeated test failures with the interceptors while simultaneously burying them in the ground in silos at Fort Greely, Alaska, and Vandenberg Air Force Base, California.

Hill has advocated for conducting an intercept flight test before going into production to drive down risk. He previously said that will happen in the 2025 or 2026 time frame."

Of course, hasty procurement decisions like the one contemplated by the Senate Armed Services Committee (planning for a tripling of NGI production before MDA has conducted flight tests) could upend MDA's steady and encouraging approach on NGI thus far.

Conclusion

While NTU is a noted skeptic of some prior missile defense efforts that have turned into boondoggles, NGI could eventually prove to be a safer bet for taxpayers than either the failed RKV initiative or an aging GBI system *if* Congress and MDA proceed with prudence and caution. That said, lawmakers and military officials should remain steadfastly committed to competition in the NGI acquisition and in "fly before you buy" principles that have protected taxpayers before. Already, some policymakers appear eager to rush NGI development or even put all of MDA's eggs in one contractor's basket. Robust competition through at least the critical design review phase will not guarantee NGI's success, but it could substantially reduce the risk that taxpayers end up on the hook for a major program failure like RKV.

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