



F-35 Lightning II Program

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The Pentagon's Prize Fighter Is Ready For Its Close-Up

By Jamie McIntyre, Washington Examiner

Washington Examiner Senior Defense and National Security Writer Jamie McIntyre interviews Vice Adm. Mat Winter, program executive officer for the F-35 Lightning II Joint Program Office, the Pentagon's biggest acquisition program. Winter talks about the challenges of developing and acquiring the F-35, the most advanced next-generation strike aircraft weapon system for the Navy, Air Force, Marines, and many allied nations.

Washington Examiner: At \$400 billion, the F-35 is the most expensive weapons program ever. How much does it actually cost, is it over budget, and most importantly, why is it worth the money?

Winter: The development costs are more than the original program team estimated back in 2001. However, that investment has resulted in a mature and effective fifth-generation strike fighter weapon system that the war fighter is using today to maintain an overwhelming tactical advantage on the battlefield. Our current cost per aircraft continues to decrease on average 5 to 6 percent with each production lot. We are currently delivering Lot 10 at a cost of \$89.2 million per F-35A aircraft and are on a path to less than \$80 million by Lot 14 in fiscal year 2020. Of the 3,254 aircraft planned for the total program, more than 350 have been delivered to date, and our war fighter has consistently provided positive feedback on its incredible capabilities. So, my answer is yes; it has been and continues to be worth the investment for our U.S. services and allies.

Washington Examiner: For the United States, it's 2,456, and the balance of 798 are going to our international partners and teammates?

Winter: For the United States, it's 2,456, and then, there's roughly 780 going to our international partners.

Washington Examiner: The F-35 is a fifth-generation fighter jet. What does that mean exactly?

Winter: Fifth-generation normally is defined by the use of stealth technologies to reduce an aircraft's visibility to enemy radar detection. The F-35 has numerous game-changing advanced technologies that enhance and improve its ability to execute its assigned missions. For the F-35, we describe these in three broad categories. First is stealth. It's the next-generation stealth that combines material, shaping, and software algorithms to allow our F-35 to maneuver at will throughout the battlespace. It's not a cloaking device, but what it allows the F-35 to do is to not be tracked so it can do its mission.

Second is a collection of really cool technologies of software and sensors. Radios, transmitters, cameras, things like that, that come together and are controlled by smart software. So, bringing together a very smart set of software that can communicate to all of those elements and be able to bring all that information in faster than any human can think and be able to present it on a television screen — we call it a cockpit display — to our pilot so they have immediate understanding of what's going on, providing the pilot the best options to select. It's the next generation of artificial intelligence, decision-making, and data collection rolled together that's inside our F-35.

Finally, the third is the ability of the F-35 itself to use that stealth, to take all that information and data thinking, and share it with everybody else in the battlespace. The technical term for that is interoperability. What that really means is we can share things with surface ships, other airplanes, tanks, satellites. My tagline is "F-35 can talk to ships, satellites, and everything in between."

Washington Examiner: So, it's not just a plane; it's kind of a network.

Winter: It is, exactly. We call it an air system. I call it an omnipotent presence in the battlespace.

Washington Examiner: So, if we see a Chinese knockoff that looks suspiciously like the F-35, that doesn't mean it has the same capability as an F-35?

Winter: That's correct. A house analogy would be, just because everybody's house looks the same on the outside, there are a lot of things different on the inside.

Washington Examiner: There are three variants of the F-35, the basic Air Force model, a Navy version with a tailhook to land on aircraft carriers and the Marine version with the ability for short-takeoff and vertical landing. I remember being at the Pentagon in the 1990s when the concept was compared to different versions of the same model car, a four-door, a convertible, a station wagon, all using the same parts to save money. How has that worked out in reality?

Winter: In the beginning, there were envisioned three categories, "common," "cousin," and "unique" parts. The original program target was to have a high percentage of common parts from initial design. Though the program did not meet the original targets, the benefits from the current commonality posture are being realized across our supply chain in support of our production and sustainment efforts. The stealth capabilities, advanced sensors, aircraft software and all the mission systems are shared across all three variants. That's 100 percent common. This mission commonality is the true enabler for our war fighters. Any F-35 variant can interoperate with any other F-35 variant through a common communications network, and this applies across the entire partnership, allowing US F-35s to interoperate with International F-35s seamlessly. They can work together, fight together and fly together.

Washington Examiner: Your office announced in December that the F-35 is ready for its close-up, in a sense, with the start of the Initial Operational Test and Evaluation phases, known in Pentagonese as "IOT&E." Why is this such an important milestone?

Winter: Every program is required to have an independent operational evaluation to ensure the weapon system meets the required effectiveness and suitability that the war fighter needs to fight the fight, win, and come home safe. The F-35 is no different. The outcome of IOT&E is an assessment of that effectiveness and suitability, so that we can tell Congress the taxpayer dollars that were invested provided the capability that our war fighters needed. It's a very significant milestone for every program, including the F-35, and we're excited that we formally kicked off Dec. 5, and it will go through September of this year.

Washington Examiner: But hasn't the F-35 already seen combat?

Winter: That's correct. The details are classified, but the public record shows that both our U.S. Marine Corps flying the F-35B and our Israeli Air Force teammates flying the F-35A have reported using their F-35s in combat with positive results. In addition to these two customers, other customers that have declared their Initial Operational Capability include our U.S. Air Force, which has been forward deployed numerous times prepared for combat operations, and our Italian Air Force partner. The U.S. Navy, United Kingdom, Japan, and Norway are on track to declare their IOC in 2019, indicating they will be ready for combat operations if called upon as well.

Washington Examiner: Cost is still a big issue. Even President Trump, when he first took office, was concerned about how much the plane costs. How much is the cost coming down?

Winter: I talked earlier about the cost of development and delivery and the continuing reduction in the cost to buy each aircraft. We need to continue to keep the cost-to-buy coming down. However, a more concerning cost is the cost to "own and operate" the F-35. We call it the sustainment cost.

With the number of F-35s being delivered growing to about 150 aircraft deliveries per year, the cost to fly and conduct missions is multiplying rapidly and putting pressure on our customers' financial resources to cover these costs as they prioritize expenses across all other costs in their portfolios. We are working with our department leadership, our industry partners, and other outside operations experts to systematically reduce these costs so our customers can afford to continue to operate the F-35 well into the future. This is one of our biggest challenges facing the F-35 enterprise today.

Washington Examiner: How does that compare if we were buying the planes we used to buy: F-15s, F-16s, and F-18s?

Winter: That's a very, very good question. First, I will not comment on other fighter program costs; I'll let those program teams address their costs. However, in terms of the cost to buy a single aircraft, it's important that we do an apples to apples comparison. The comparison needs to be on cost and capability.

As I stated earlier, I feel strongly that the F-35 is a best-value and worthy investment for the fifth-generation advanced technology capabilities it brings to the war fighter's arsenal. The other current fighter aircraft in your question, we call them "fourth generation," are effective and worthy investments for their assigned mission sets as well. I see the combination of fifth- and fourth-generation fighter aircraft as a logical blend of warfighter capabilities and investments by our U.S. and international militaries to ensure they can fight the fight and win.

Washington Examiner: So, what's the biggest challenge in fielding this plane?

Winter: Just because you can buy a BMW doesn't necessarily mean you can afford the maintenance, and just because you can afford to buy the aircraft doesn't necessarily mean you can afford the maintenance and all the other operational costs.

Right now, I have over 350 aircraft systems delivered to my U.S. services and most of the international partners, with those deliveries accelerating from 91 to 160 a year over the next four years. That is an incredible growth. So, my two main challenges in fielding this plane are, first, the ability to effectively implement the U.S. services' and partners' fielding "bed-down" plans [delivering airplanes to their military bases on time] and, second, the challenge to our industrial supply chain, and all of our vendors, to be able to generate new parts at the volume and the timing that I need so we can assemble, deliver, and maintain this growth in the number of airplanes.

Washington Examiner: The outgoing [now former] Defense Secretary Jim Mattis set a goal of a mission capable rate of 80 percent for front line combat planes like the F-35. He won't be around to hold you to that, but can a new aircraft like the F-35 meet such an ambitious goal?

Winter: The answer is yes, but as my previous response indicates, this is a tough challenge. Our approach is to break down the current 350-plus jets that are delivered into three categories. The first is "combat coded." Those are the ones our U.S. services and our Israeli teammates are fighting with right now. The second category is training aircraft, aircraft that are dedicated to train pilots. The third category is test aircraft.

The "mission capable" definition indicates that the aircraft is available and can execute one or more of its assigned missions when the war fighter needs it. Right now, our combat-coded aircraft are experiencing effective MC rates but are not meeting the SECDEF's mandate yet. We have identified the enablers to increase our MC rates, with the need for available spare parts as the biggest factor.

Again, it's the supply chain, the ability of our industry partners to generate parts so they're within my war fighter's reach when needed, so when a plane does break, they've got the parts on hand to be able to fix it instead of like when you have those Saturday car projects at home and you have to keep going back and forth to the auto parts store, right? Your car is not mission capable while you're at the parts store. We want to make sure all our parts are in the garage or with our war fighter so that the downtime of an aircraft is measured in minutes and hours, not days and weeks.

There are other factors that we are tackling such as increasing the quality and reliability of the aircraft at delivery, giving our war fighter the authority to fix the aircraft at the airbase instead of sending it away to be fixed, and establishing government repair facilities to fix broken parts more affordably and faster.

Washington Examiner: Some criticized the F-35 program as essentially "too big to fail," that is to say no matter how many problems it encounters, we just have to keep spending the money to fix them, because we need the plane and we have no plan B. Is it too big to fail?

Winter: I wouldn't say those words. As the program executive officer for the F-35 enterprise, my focus is on acquisition excellence, acquisition rigor, and acquisition accountability. There is no program too big to fail or be canceled. We are committed to executing our acquisition mission of delivering and sustaining affordable, effective F-35 air systems with a ruthless accountability to ensure our taxpayer's investment provides our war fighter the tools to keep our nation safe.

Washington Examiner: Arizona Rep. Martha McSally has been appointed to serve out the rest of the late Sen. John McCain's term, and you know what that means. McSally, a former A-10 squadron commander, is a fierce advocate of the A-10's ability to support troops on the ground. She's going to want to know if the F-35 can really outperform the A-10 in a close air support mission.

Winter: First of all, I want to congratulate Sen. McSally on her appointment, and we look forward to working with her and her staff as well as the rest of our congressional colleagues in executing our F-35 enterprise mission.

On the A-10/F-35 comparison tasking, the department's Director of Operational Test will assess the data being collected as part of the formal operational test execution and provide that assessment to Congress as well as to the Defense Department as part of the formal evaluation reporting process later in 2019.

Washington Examiner: Is it too early to declare the F-35 a success? Is the jury still out or do we know?

Winter: We know. This year, we delivered the Block 3F capability. That capability currently owns the fight in the battlespace today. We've started our operational testing, which is a big, significant milestone, and we've established the framework to keep F-35 relevant and flexible well into the future. We're producing aircraft at six to 10 percent less, year over year. We're providing the volume of aircraft that our U.S. services and partners need, and we're growing and establishing a global F-35 presence so that we can fight the fight together and keep the peace when we need to. It's a success story.

Washington Examiner: Does anyone else have anything like it?

Winter: No. Period. And I don't need to expand upon that.
