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19 February 2016

Senator Alex Gallacher
Committee Chair
Senate Foreign Affairs, Defence and Trade References Committee
Parliament House
PO Box 6100
Canberra ACT 2600
Australia

Dear Senator Gallacher,

LOCKHEED MARTIN SUBMISSION TO F-35 INQUIRY

In response to your letter of 18 December 2015, I am pleased to provide the enclosed submission to the Senate Foreign Affairs, Defence and Trade References Committee Inquiry into Australia's involvement in the F-35 Program.

The enclosed submission has been compiled in consultation with F-35 program executives from Lockheed Martin Aeronautics in the USA and addresses all of the terms of reference for the Inquiry that are within the remit of Lockheed Martin as the F-35 Original Equipment Manufacturer.

In addition to this written submission, Lockheed Martin will provide appropriate program expertise in support of any F-35 Inquiry hearings convened by the Senate Committee, as well as any other resources required to assist in stakeholder understanding of this important defence capability.

Yours sincerely,

Raydon W Gates, AO CSM
Chief Executive

Enclosure:

1. Lockheed Martin submission to the Senate Committee Inquiry into the Planned Acquisition of the F-35 Lightning II (Joint Strike Fighter)



SUBMISSION TO THE SENATE FOREIGN AFFAIRS, DEFENCE AND TRADE REFERENCES COMMITTEE INTO THE PLANNED ACQUISITION OF THE F-35 LIGHTNING II (JOINT STRIKE FIGHTER)

Introduction

Lockheed Martin is pleased to support the Australian Senate's inquiry regarding the Australian procurement of the F-35 Lightning II Joint Strike Fighter (JSF). This aircraft provides an exponential leap in capability for the Australian Defence Force (ADF). As such, it will be integral to promoting sovereign stability and security to Australia.

In this submission, we provide an overview of the ability of the F-35A to fulfil Australia's long-term Defence needs; the capabilities provided by the aircraft and its enabling systems; and the industrial benefits Australia achieves by participating in F-35 development and production. We also provide status updates on the F-35's acquisition timeline and aircraft test performance. In addition to this submission, Lockheed Martin is fully committed to providing the Parliament of Australia and F-35 program stakeholders with additional briefing material to substantiate the capabilities of the F-35 and enhance the level of stakeholder understanding of this vital capability.

As outlined in Australia's 2013 Defence White Paper, the Royal Australian Air Force (RAAF) must be able to control Australia's air approaches and enable and support friendly operations in land, sea, and air environments. The 5th Generation F-35A aircraft will meet that need. The F-35A ensures the continued strength of Australia's air-combat system in projecting decisive air power in the sovereign defence of Australia and its interests in the region and around the world. The aircraft's advanced technologies and integrated 5th Generation capabilities will enable the ADF to operate in future highly complex warfare environments.

Beyond attaining advanced defence capabilities, the acquisition of the F-35 ensures Australian industrial opportunities span the program from production through sustainment and follow-on modernisation. Currently, the F-35 fleet production program of record consists of more than 3,100 aircraft, with production extending through to 2040. As stated in the Department of Defence 2012 Capability Plan: "Industrial Participation Plans that identify major opportunities in the global JSF Program for qualified Australian companies, have been agreed upon with Lockheed Martin Corporation and the JSF engine manufacturer. These industrial participation opportunities for Australian companies will continue over the life of the F-35 program."

Currently, this participation in the program is delivering significant benefits through contracts to 15 companies in the Australian aerospace industry since the respective companies were qualified for JSF work. Among them are BAE Systems Australia,



Ferra Engineering, Levett Engineering, Lovitt Technologies Australia, Marand, and Quickstep. To date, these companies have benefited from their involvement in the F-35 global supply chain to a current total of \$554.5M USD. This is a combination of contracts awarded by Lockheed Martin and our suppliers; contracts awarded by Pratt and Whitney; and investments made by the Australian government. These opportunities will continue to be offered to the Australian industry over the life of the F-35 program contingent on their ability to remain 'best value', by supporting customer demands for continued price reductions in the end item aircraft.



A. Meeting Australia's Future Air-Defence Needs

To counter emerging advanced air-combat and air-defence capabilities within the region, the 2013 Australian Defence White Paper stated that: "To meet this challenge, the Government remains committed to acquiring the fifth-generation F-35A Joint Strike Fighter aircraft, with three operational squadrons planned to enter service beginning around 2020 The Joint Strike Fighter provides the stealth technology, advanced sensors and weapons, networking and data fusion capabilities required to maintain an air combat advantage into the foreseeable future."

The F-35 Lightning II is about much more than providing an immediate capability for the RAAF. It represents an investment in a multinational cooperative program for the long-term future of Australia's defence. The F-35A will be a key contributor to the fulfilment of all of the principal tasks outlined in the 2013 Defence White Paper:

1. Deter and defeat attacks on Australia
2. Contribute to stability and security in the South Pacific and Timor-Leste
3. Contribute to military contingencies in the Indo-Pacific
4. Contribute to military contingencies in support of global security.

Advanced sensors, sensor fusion and data links provide multi-spectral situational awareness that is shared in real time with other F-35 aircraft. These advanced features support cooperative operations and increase flight-group effectiveness and survivability. They also ensure that Australia will be able to satisfy its long-term need of dealing with emerging threats.

Equipped with leading edge F-35 capabilities, the RAAF can swiftly and decisively respond to a variety of threat scenarios independently or in cooperation with allied forces. The F-35 fulfils mission requirements, while avoiding the survivability risks associated with legacy platform operations in threat environments. These capabilities provide greater precision in operational employment and will dramatically enhance existing and future standoff weapons employment.

Interoperability and Integration of 5th Generation Capabilities

With its revolutionary network-enabled capability, the F-35 is fundamental to transforming the RAAF into a 5th Generation-enabled force and will be the cornerstone of implementing RAAF Plan Jericho. The F-35's ability to establish and exploit control of the air fulfils the requirements of Plan Jericho as stated in February 2015 by then Chief of Air Force Air Marshal Brown, "to achieve a fully integrated and networked force with the freedom of action in the air, space, electromagnetic and cyber domains required to deliver air power for Australia's interests, in all operating environments."



The ongoing challenge for Australian defence planning will be the need to deploy and operate platforms and systems from different generations. As stated in Lockheed Martin's submission on the impending 2016 Defence White Paper, it is our concerted opinion that the ADF must look beyond individual platforms and systems and seek to integrate them into a networked capability. Future Defence operators will need to deploy and harness the multiplying effect of a contemporary, fully integrated Command, Control, Computers, Communications (C4) Intelligence Surveillance and Reconnaissance (ISR) system. The networked C4ISR system must be capable of delivering outcomes and effects in each of the operating domains, namely: air, land, maritime, cyber and space. Improved C4ISR will provide greater understanding of an evolving operational environment to enable more informed decisions to be made and facilitate efficient and effective directed responses.

With its impressive suite of ISR capabilities, the F-35 will act as a catalyst for achieving that sought-after networked-warfare capability. It permits appropriately protected enabling systems to support the transfer of critical data, from the strategic level through to the tactical edge.

A central benefit of 5th Generation capability for commanders and operators is greatly enhanced situational awareness in the battlespace. This advanced capability was underscored by then Chief of Air Force Air Marshal Geoff Brown when he said, "The F-35 is perhaps the greatest opportunity for evolutionary change the [Royal Australian Air Force] has been presented. We're introducing into service a revolutionary capability, and our evolution as a force must align with the opportunities this offers us."

This situational awareness is achieved by fusing internal sensor information with external sensor information, and sharing that fused information with other platforms and C4ISR systems. The F-35, using its stealth and low probability of intercept communication links, can penetrate heavily defended environments. Following penetration of such environments the F-35 can gather information and/or target enemy forces – undetected – while communicating key information to other platforms.

An enhanced command-and-control structure and connectivity are required to ensure the ADF fully exploits the 5th Generation capabilities offered by the F-35 and also ensures that other ADF platforms and systems are able to realise their full capability potential. Assets from the Air Warfare Destroyer (SEA 4000), Future Frigates (SEA 5000), Future Submarine (SEA 1000) Programs, as well as enhanced Army assets (LAND 400), will need to be able to connect via the C4ISR network. This connectivity, illustrated in Figure 1, will ensure that they can contribute to the common operating picture. It will also enable them to use externally generated information from systems such as the F-35, E-7A Wedgetail, and Unmanned Aerial Vehicles (UAVs).

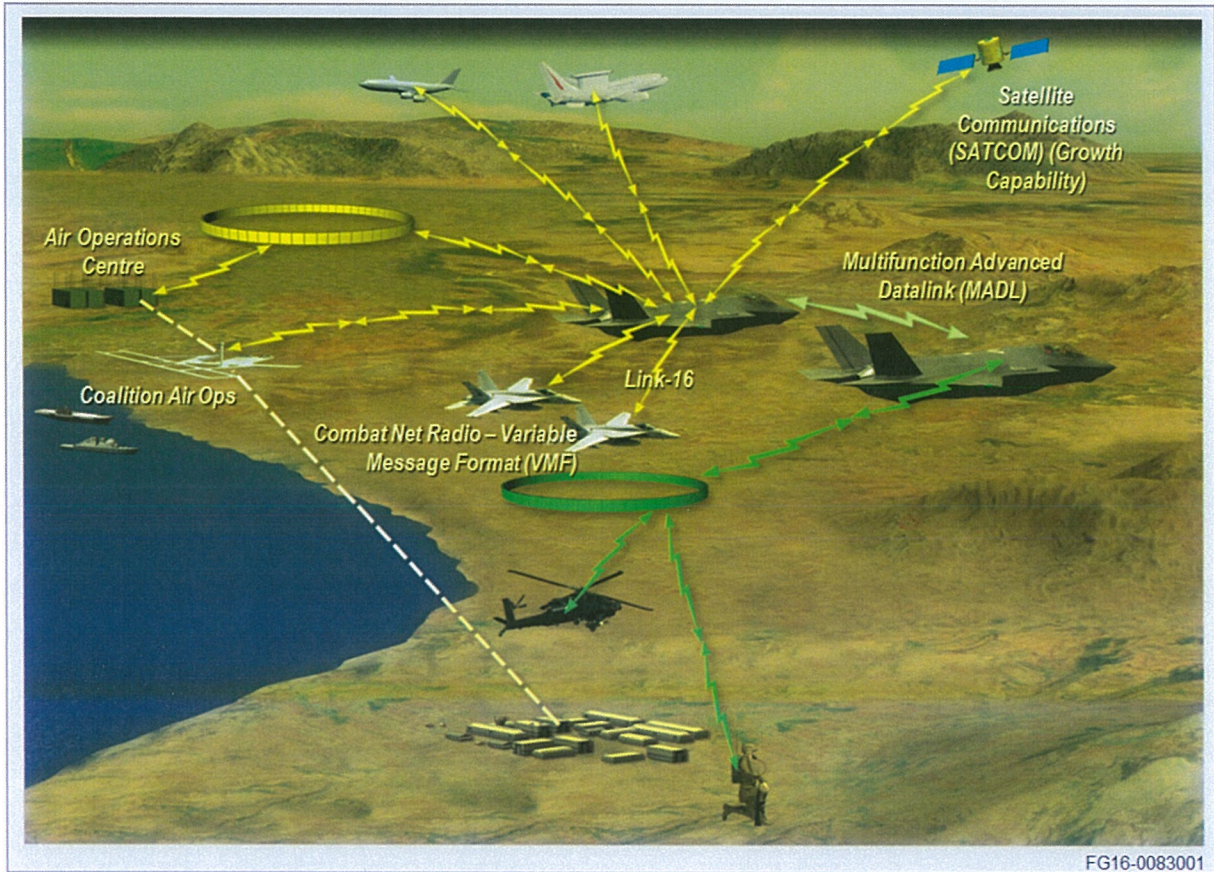


Figure 1. The F-35A fully supports the Australian Defence Force CONOPS.

B. Capability and Program Maturity of the F-35 Lightning II

Whether providing national defence, supporting regional operations, or participating in global coalition operations, the F-35 can perform a wide range of missions with greater effectiveness and survivability than legacy fighters. As depicted in Figure 2, it holds a commanding advantage in primary mission roles, compared to the best 4th Generation aircraft.

Five key elements define 5th Generation fighters: very low observable (VLO) stealth, fighter performance, sensor fusion, net-centric operations, and advanced sustainment. VLO stealth allows the F-35 to operate and survive in advanced air-defence environments. Fighter performance provides the F-35 with aerodynamic qualities superior to those of 4th Generation aircraft in a combat configuration. Closed-loop sensor fusion seamlessly integrates inputs from on-board and off-board sensors to provide unmatched situational awareness. Unlike 4th Generation fighters where pilots remain sensor operators by managing different information sources, the situational awareness provided by the sensor fusion in the F-35 allows pilots to individually and collectively concentrate on tactical and operational execution, vice concentrating on sensor operations to the detriment of combat employment. Net-centric operations allow the F-35 to share threat and target information with Australian and coalition forces across the battlespace. Advanced sustainment capabilities will ensure that the F-35 is mission-ready across the full spectrum of 5th Generation capabilities.



Figure 2. The F-35 provides a quantum leap in Australia's capability to meet the future requirements of its defence strategy.

The F-35 represents a unique blend of capabilities produced by combining stealth, fusion, fighter performance and maintainability, providing significantly greater mission effectiveness than legacy fighters. The F-35 also provides extensive interoperability with



legacy systems and networks with international coalitions and other participant countries. This combined capability gives Australian national leadership and combat commanders the operational freedom and flexibility not possible with legacy aircraft.

Lockheed Martin designed the F-35 to be a key net-enabling node in a system of systems, gathering and transmitting data across the defence network. The processing capability of the aircraft, design for open architecture, advanced sensors, information fusion and flexible communications links, make the F-35 an indispensable tool for routine and combat operations.

All systems are integrated internally into the platform, reducing signature and drag. Every F-35 has a full complement of sensors, supporting multiple mission types without reconfiguring the aircraft between sorties. This reduces mission turnaround time, increases availability, provides in-flight flexibility, and reduces the cost of procuring and maintaining pod-based systems.

The 5th Generation characteristics of the F-35 dramatically change the concept of operations for employment against aerial and surface threats. Simultaneously, they greatly enhance the overall capabilities of a combined 4th/5th Generation force. The F-35 offers the unprecedented ability to rapidly deploy and penetrate enemy battlespace, seize the initiative, and deter an opposing force. Its unique blend of 5th Generation capabilities provides numerous military options in the presence of advanced, integrated enemy air-defence environments.

As the only 5th Generation multirole fighter available on the international market, the F-35 transforms the battlespace. It allows for a shift in doctrine that takes advantage of the full capability of the F-35 Lightning II, from stealthy surveillance to the full spectrum of combat operations – in highly integrated contested air-defence environments. Representing a true quantum leap in fighter capability, the F-35 will ensure the RAAF's asymmetric advantage. The transformational capability of the F-35 not only allows for a shift in doctrine in how it is employed, but also makes other ADF assets more effective when they are integrated into combined operational environments in concert with the F-35.

Acquisition Timeline

The F-35 program of record comprises the System Development and Demonstration (SDD) Program and Production Sustainment and Follow-on Development (PSFD). The Commonwealth of Australia is a highly valued partner in both active phases of the F-35 Program.

Lockheed Martin delivered the first two Australian F-35As in 2014 as part of the LRIP 6 Contract. Currently, these aircraft are supporting pilot and maintainer training as planned at the United States' Luke Air Force Base in Arizona. Australia has committed to an additional 70 aircraft as part of low-rate initial production and full-rate production,



with a future determination to be made concerning the purchase of up to 28 more aircraft. Initial Operational Capability (IOC) will be achieved in 2020, with the establishment of the first operating Squadron at RAAF Base Williamtown, and full operational capability (FOC) in 2023 with three RAAF F-35 operational squadrons and one training squadron in service (Figure 3).

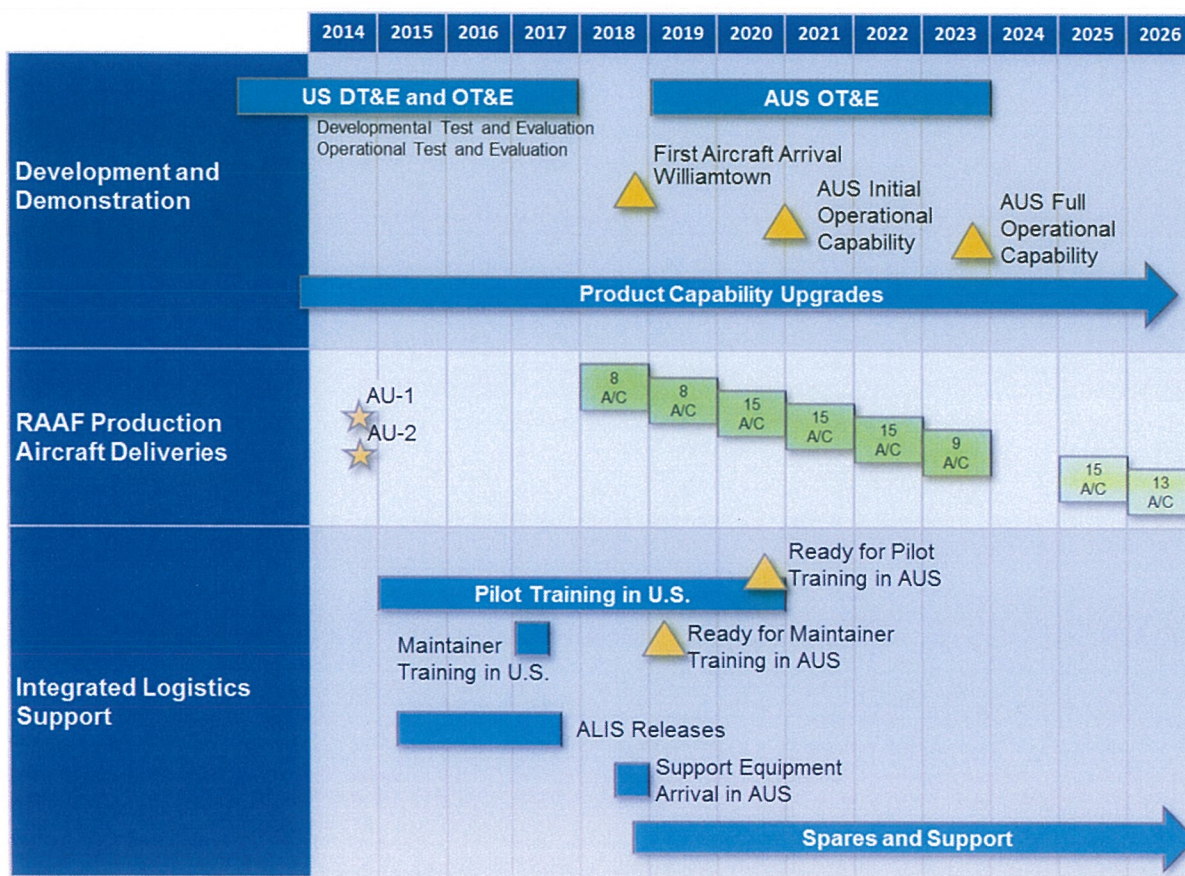


Figure 3. All of the elements of the F-35A stand-up plan combine to meet RAAF capability requirements.

In parallel with aircraft production and deliveries, the period from 2016 onward will see the progressive establishment of F-35 operating and sustainment infrastructure in Australia. Key aspects managed by Lockheed Martin will include the:

- Establishment of an Integrated Training Centre (ITC) in Australia
- Commissioning of the Autonomic Logistics Information System (ALIS) infrastructure
- Lay-in of F-35 spares and support equipment
- Establishment of maintenance workshops and airframe repair and overhaul infrastructure



- Establishment of a Logistics Operations Centre (LOC) to oversee the integration of local fleet management with global F-35 sustainment arrangements.

These activities will underpin Australia's sovereign ability to fully sustain the F-35A fleet onshore. Integral to the long term F-35A sustainment strategy, Australia will also leverage the economies of scale associated with participation by the U.S. Services and international partners in global logistics arrangements and ongoing capability enhancements.

F-35 Developmental Testing Highlights and Qualification Status

A fundamental tenet of the highly complex F-35 SDD Phase is the rigorous test and evaluation program. As is characteristic of all significant aerospace developmental programs, the F-35 developmental test and evaluation (DT&E) activity has been fundamental to the structured identification and correction of performance issues in a controlled environment. The F-35 test and evaluation program is also a solid example of the application of collective partner-nation resources. Operating collectively enables more comprehensive evaluations of leading technology systems than any individual nation could accomplish alone.

Since the F-35 program re-baseline in 2011, the flight-test program has shown consistent execution to plan. As of 31 December 2015, the F-35 JSF SDD test program was 80 percent complete – in line with the plan established in 2011. To date, more than 44,000 test points have been satisfactorily accomplished. During 2015, the flight-test program completed 1,374 flights, exceeding the planned 1,286; and completed 9,582 test points, exceeding the planned 9,427. Unique to the RAAF was the completion of all DT&E flight sciences objectives (more specifically, envelope clearance) which resulted in completion of all certification testing of the RAAF KC-30 aerial refuelling tanker. Full certification approval is expected in mid-2016.

Significant flight test highlights from 2015 include:

- Completed Australian and Italian air-to-air refuelling tanker testing
- Completed Block 2B testing for U.S. Marine Corps (USMC) IOC
- Completed 3i testing for U.S. Air Force (USAF) IOC
- Completed air-to-air and surface-to-air infrared counter measures
- Completed F-35C performance testing
- First airborne gunfire
- F-35C developmental testing on USS Dwight D. Eisenhower
- Completion of Block 2B/3i weapon-delivery accuracy testing
- First AGM-154 Joint Standoff Weapon Carriage
- Completed F-35A high angle of attack
- Completed F-35B Guided Bomb Unit (GBU) GBU-12 and GBU-32 separations
- First Paveway IV bomb safe separation



- Commenced F-35 Gen III Helmet-Mounted Display testing
- Completed aircraft climatic chamber testing.

As is typical for all complex aerospace platforms, the F-35 is applying a structured development program of incremental software 'block' releases. As of the time of this submission, in excess of 140 F-35A/B/C aircraft are in service with the current release Block 2B software. The F-35 aircraft design and mission software was assessed as sufficiently robust for the USMC to declare IOC in July 2015 with Block 2B, which gives them greater capability than their previous Harrier-equipped squadrons. This capability enables the USMC to be combat ready with the F-35 and the ability to be deployed to meet national security needs. As originally planned, the USMC will continue to receive further planned enhancements to its IOC baseline capability with Block 3i software and progression to Block 3F.

Further enhancements are being incorporated in the forthcoming Block 3i release with improved hardware and processing capability, which will be fielded in advance of the USAF IOC in August 2016. The Block 3i release includes upgrades in sensor performance and improvements to the on-board system status monitoring and post-flight data analysis capabilities.

The final major SDD phase software release, Block 3F, encompasses all the planned capabilities of the F-35. Block 3F flight-test activity is projected to conclude in March 2017, and will be available to support the planned U.S. Navy IOC declaration in August 2018.

Beyond the intended release of Block 3F, further F-35 mission software releases will be scheduled as needed to incorporate further enhancements. This ongoing incremental improvement of aircraft mission software has been standard practice for all Original Equipment Manufacturers (OEMs) and armed services since the introduction of digital avionics and sensors in 4th generation aircraft in the 1970s. RAAF F-35 aircraft will continue to benefit from this ongoing software developmental activity and increasing maturity in support of IOC attainment by the United States and other partner nations.

Autonomic Logistics Information System Maturity (ALIS)

The F-35 Lightning II is the first tactical aircraft system with sustainment tools designed in concert with the air vehicle to optimise operations. Initially fielded in 2009, the Autonomic Logistics Information System (ALIS) is maturing along with aircraft capability. The next generation of ALIS, ALIS 2.0, completed installation at all current F-35 operating locations in March 2015. As a result, it has equipped the F-35 enterprise with improvements across all of its fleet-management reporting tools. A subsequent release, ALIS 2.0.1, completed its roll out to all F-35 locations in September 2015. This upgrade included a deployable hardware suite called the Standard Operating Unit version 2. This



suite supports operations on carriers, amphibious craft and remote locations. ALIS 2.0.1 supported the USMC Initial Operational Capability (IOC) in July 2015.

Development of ALIS 2.0.2 is underway to support the USAF F-35A Initial Operating Capability in 2016. It includes four major enhancements: an electronic deployment planning tool, a networking feature, parts life-tracking and the integration of engine-propulsion management with air vehicle data.

The full ALIS capability — the ALIS 3.0 series — is scheduled for delivery in 2017, in line with the conclusion of the SDD program phase, to support U.S. and partner-nation operations. Currently, a representative simulation of an ALIS squadron kit is located at Lockheed Martin Centennial House in Canberra. This ALIS squadron kit demonstrates the ALIS functions of maintenance, supply, training and preventive maintenance activities that are typically performed at the aircraft squadron.

2015 Director of Operational Test and Evaluation (DOT&E) Report on the F-35 Program

The 2015 annual DOT&E Report on the F-35 was released on 29 January and provided a detailed snapshot on a wide range of factors, all of which are well known and being addressed by the F-35 test community. Although the DOT&E report appears to be factually accurate, it does not address program efforts to resolve known technical challenges and schedule risks, as it is the F-35 Joint Program Office's responsibility to find developmental issues and resolve them within the time and budget provided.

The U.S. government and industry team has a proven track record of overcoming technical challenges discovered during developmental and operational testing and fleet operations, and delivering on program commitments. A few recent examples of issue resolution include the F-35C tailhook, the F135 engine rub, and F-35B STOVL Auxiliary Air Inlet door. The F-35C has now 'caught the wire' more than 200 times at sea, the engine rub fix is incorporated on the production line and delivered engines are being retrofitted, and the F-35B has performed more than 1,000 vertical landings safely.

In response to the release of the DOT&E report, Lt. Gen. Chris Bogdan, F-35 Program Executive Officer reinforced that the F-35 program is still in its developmental phase. He stated, "This is the time when issues are expected to be discovered and solutions are implemented to maximize the F-35's capability for the warfighter. While the development program is 80 percent complete, we recognize there are known deficiencies that must be corrected and there remains the potential for future findings. Our commitment to overcoming challenges is unwavering. The Joint Program Office will continue to work with the F-35 enterprise to make corrections and improvements as quickly as possible. At the completion of the F-35 development program, the objective is to deliver full Block 3F capabilities (Mission Systems, Weapons & Flight Envelope) for the [US] Services and International customers."



C. Benefits of the F-35 Program to Australia

Australia benefits significantly by being a partner in the F-35 SDD program. Pooling of partner funding has allowed the designers to maximise the capability that can be provided by the SDD program and to develop the capability needed to address future threats. Access and opportunity to participate in the F-35 follow-on modernisation program also ensures operational relevancy of the RAAF F-35 fleet for decades to come.

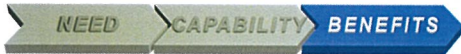
Along with Australia, many other countries have made the F-35 their fighter of choice: the United States (Air Force, Navy, and Marine Corps), the United Kingdom, Norway, Italy, The Netherlands, Turkey, Japan, South Korea and Israel. Canada and Denmark remain full partners in the program and are in the process of finalising their future defence commitments. All countries choosing the F-35 will benefit from economies of scale and the commonality of operating, supporting and sustaining their aircraft.

Although the F-35 program is one of the largest programs in Australia's acquisition history, it is also one of the most transparent and reviewed. This ongoing oversight into the F-35 program brings the benefit of assurance to Australia that all aspects of the program are known as it continues on the path to provide the most capable and cost effective solution for Australia's future air combat requirements. As stated in the 2012 Australia National Audit Office report on the F-35A Joint Strike Fighter Acquisition, "Australia's partnership with the U.S. in the JSF Program, including in terms of Australian Defence staff working within the JSF Program Office, has provided Defence with considerable insight into the status of the program, its risks, and the actions over time that the U.S. Department of Defense is taking to mitigate these risks."

Developing Robust Australian Industrial Participation

In addition to delivering a unique blend of aircraft capabilities, the Australian F-35 Program has a goal to deliver a strong industry base that supports the F-35 capability and provides Australia with long-term economic benefit. One of the significant benefits of the F-35 Lightning II program for Australia is that local industries are afforded the opportunity to compete for business to produce parts on all of the aircraft in the U.S. and partner program of record - presently more than 3,100 aircraft through to 2040. All of these opportunities consist of direct work on a wide range of F-35 components. As a result, Australian industry experiences the benefits of orders from the U.S. and F-35 partners around the world and these orders are not limited to the direct production of RAAF aircraft. Every F-35 produced by the program has parts made in Australia, by both large and small Australian companies. This F-35 Industrial Participation model ensures that Australian industrial opportunities span the program, from production through sustainment and follow-on development.

As summarised in the Introduction, participation in the F-35 industrial participation program is delivering significant benefits to a broad range of Australian aerospace



industries. These include BAE Systems Australia, Ferra Engineering, Levett Engineering, Lovitt Technologies Australia, Marand, and Quickstep. The involvement by these companies in the F-35 global supply chain has yielded a current total of \$554.5M USD. This is a combination of contracts awarded by Lockheed Martin and our suppliers; contracts awarded by Pratt & Whitney; and investments made by the Australian government to advantage Australian industry to win these contracts.

In executing these various contracts, the F-35 program uses the Industrial Participation best-value model, as agreed upon by all program partner countries. This applies to the SDD phase and the Production Sustainment and Follow-on Development phase, through two separate Memoranda of Understanding (MOUs). This model was also confirmed with two F-35 Industrial Participation MOUs between the Government of Australia and prime contractors Lockheed Martin and Pratt & Whitney. The best-value model is a program requirement to ensure the F-35 program delivers an affordable aircraft solution to customers with rigorous quality standards, competitive evaluations and business arrangements.

Beyond the industrial opportunities for the current baseline F-35 design, there are also future opportunities, as detailed in the original Industrial Participation (IP) plan for Australian participation in the F-35 air system follow-on modernisation program. These opportunities include adding new weapons, more efficient systems, lighter structures, newer tools, and enhancements in sustainment capabilities. This modernisation program will be shared by the participating partner nations, reducing overall non-recurring costs while expanding new opportunities for industry. Overall, industrial participation opportunities will evolve throughout the service life of the F-35 global fleet.

The direct benefits provided through the F-35 IP plan are not the only value to industry. A number of Australian companies have been able to win additional work by partnering with other areas of the Lockheed Martin Corporation, to take advantage of the capabilities developed to meet F-35 production standards. For example, the Australian company Quickstep has applied skills acquired through JSF participation to win contracts for exporting composite aircraft parts to Lockheed Martin's international C-130J Super Hercules program.

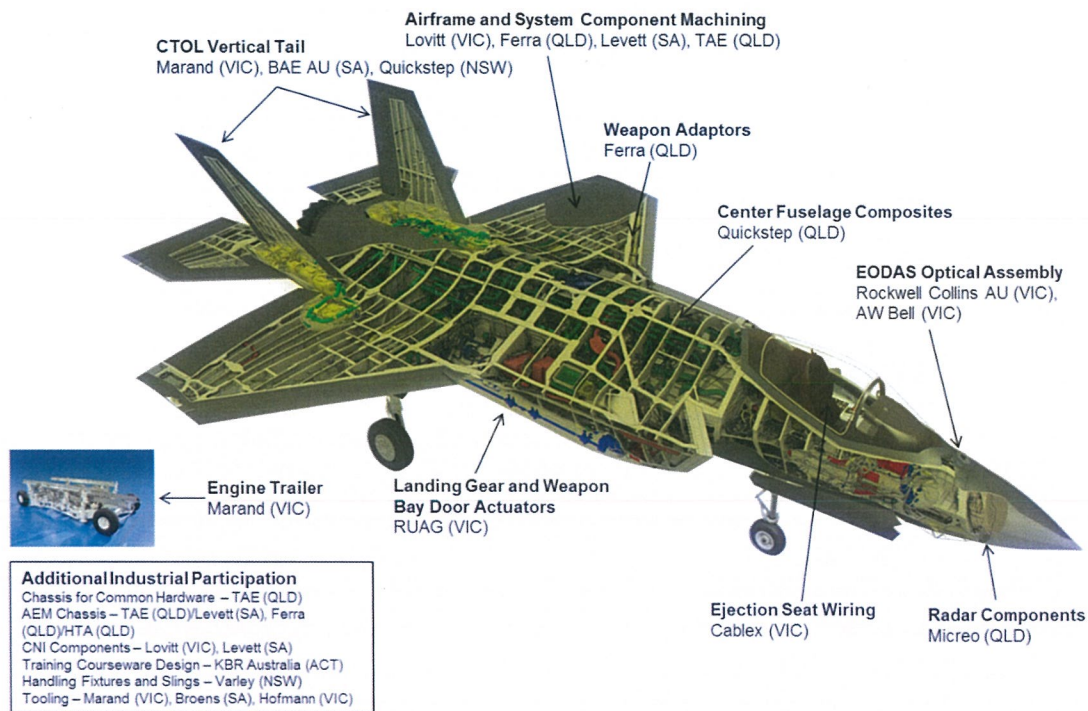


Figure 4. Australian industry participates in the advanced-technology, high-quality work required by the F-35 program.

Beyond the direct value provided by the F-35 program, Lockheed Martin Australia is committed to collaborating with and providing continued support to local industry in other important areas. We are active in fostering participation by Australian educational institutions in global science, technology, engineering and mathematics programs. We currently collaborate with a number of Australian universities on niche technological advancements. Our current industry support activities include the award of \$44 million AUD in contracts to Australian small-to-medium enterprises and research and development organisations as of January 31, 2016. These opportunities have been provided under the auspices of the Global Supply Chain (GSC) Program Deed established between Lockheed Martin and the Australian Department of Defence in 2011.

As of December 2014, LM has contributed to the Australian economy through the direct employment of 990 workers and an expenditure of \$270 million AUD on goods and services in Australia. This includes more than \$100 million AUD in Australian exports facilitated by Lockheed Martin Australia under the F-35 program. Further, direct expenditure by the international Lockheed Martin Corporation to Australian businesses for goods and services exceeded \$400 million AUD in 2015.



Conclusion

Emerging advanced air-combat and air-defence capabilities within the region, together with the proliferation of modern electronic warfare systems, will make the tasks of controlling the air, conducting strikes, and supporting land and naval forces increasingly challenging. The F-35A meets current and future needs by providing the ADF with a transformational 5th Generation fighter capability. It has the stealth technology, advanced sensors and weapons, networking, and data fusion capabilities required to maintain an air-combat advantage into the foreseeable future.

Whether providing national defence, supporting regional operations, or participating in global coalition operations, the F-35 can perform a wide range of missions with greater effectiveness and a higher degree of survivability than legacy fighters. It holds a commanding advantage in primary mission roles, as compared to the best 4th Generation aircraft.

The F-35 provides significant, enduring benefits to Australian defence and Australian industry. Australians are already making a significant contribution to the production of all three variants of the F-35. Looking to the future, Australians will be fully integrated into the sustainment of the F-35 and development of system improvements, including new weapons, structural improvements and enhancements in sustainment capabilities.

In a November 2015 report undertaken by KPMG Australia, they summarised future benefits: "the most important element of Lockheed Martin's contribution to Australia is in what's to come. Major future programs such as Joint Strike Fighter (JSF), submarines, combat systems integration and pilot training programs indicate that Lockheed Martin's contribution to the Australian economy will rise. It should also be noted that the JSF payments to Australian Industry are expected to increase significantly over the next few years."

Lockheed Martin formally thanks the Senate Foreign Affairs, Defence and Trade References Committee for this opportunity to contribute. We would be pleased to elaborate further at a Senate Committee hearing when scheduled.

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