F-35A ‘Lightning II’

Australia’s Next Generation Air Combat Aircraft

Australian Business Defence Industry Unit Lunch
First Australian F-35As are being produced at this time
AU-1 is on the production line!
F-35 Family of Aircraft

Carrier Variant (CV)

Conventional Take-Off and Landing (CTOL)

Short Take-Off Vertical Landing (STOVL)

- Lift Fan
- Roll Nozzle
- 3-Bearing Swivel Duct
Situational Awareness

New Air Combat Capability

UNCLASSIFIED

Multi-Spectral Sensors

Radar
Ground Moving Target
Electro-Optical
Missile Warning

Day
Night

Fused Tactical Information Managed & Displayed To The Pilot

Situational Awareness

New Air Combat Capability
• **All 8 non-US partners remain with the Program**
  
  – US – still after 2443 aircraft
  – **Italians** – first three aircraft LRIP 6 (2014), FACO by early 2013. Recently reduced to 90 total.
  – **Dutch** – first two aircraft 2012, then rest to start later in decade.
  – **Norwegian** Parliament agreed four aircraft – and brought forward buy
  – **Turkey** has agreed first two aircraft and confirmed 100 reqd.
  – **UK** – has first two and third soon. Back to STOVL
  – **Canadians** – 65 aircraft and . Need to extend CF-18

• **FMS**
  
  – **Israel’s** - 19 JSF (media reports of additional SQN)
  – **Japan’s** - confirmed order for 42 – first two to be delivered in around 2016
  – **South Korea** - FX-III competition (60)
  – **Singapore** – very interested
F-35 to be Predominant Aircraft in USAF Combat Air Forces

Fiscal Year

F-22
F-15C
F-16
F-15E
A-10A
F-35
• We are contractually \textit{committed to two} and they will be delivered in 2014-2015 in the United States for testing and training purposes.

• We have previously announced a commitment to purchase another 12 and that commitment will \textit{occur but it will occur two years} after the previously anticipated timetable.

• We remain committed to the Joint Strike Fighter project

\textit{Stephen Smith MP, Minister for Defence, 3\textsuperscript{rd} May 2012}
• Will develop three options for consideration in the context of the 2013-14 Budget
• In the course of 2013, Government will make decisions with respect to those various options.

Stephen Smith MP, Minister for Defence, 13th December 2012
• **Production** – approx 3-4 months behind (mainly due to recent strike)
• **Flight test** – overall slightly ahead of schedule (approx 35% complete for CTOL) – but CTOL slightly behind
• **Development Phase** – still adequately funded
• **Software development** – better – but some delay, and migration of capability
  – Block 1 delivered
  – Block 2A – four months late
  – Block 3I – through dev flight test April 2015
  – Block 3F – through dev flight test August 2017
  – A developmental program and there is still risk in the software schedule
F-35 Production Outlook

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Currently in build
Industry challenges

- Work is only won on ‘international best value’
- JSF partners all manoeuvring for a good industry outcome
- Reduced early production numbers (slip to right)
- All companies cutting margins due Global Financial Crisis
- Strong AUS dollar
Why Seek JSF Work?

- Only the JSF Partner nations can bid for JSF work on the 3000 planned Partner aircraft
- The work is very much high value added
- L-M and other primes tend to provide access to training and accreditation that allow companies to bid for other high tech work.
- JSF – once at full production – will be a significant source of business for involved industry
- JSF sustainment offers some businesses ongoing opportunities for the period out to 2040+
• Queensland-based company
• Making weapons adapters for F-35
• But diversified into other military and commercial aerospace
• Also renewable energy and medical devices

“...The staff within the Defence Industry Innovation Centre were able to provide us with a detailed understanding...subsequently assisted Ferra Engineering to secure F35 Joint Strike Fighter adaptor contracts ....valued at approximately $340m...will ensure Ferra Engineering remains an active member of the Australian Aerospace industry for many years to come.”
Quickstep recently won the 2011 Manufacturer of the Year (Manufacturer’s Monthly Magazine) as well as the Global Integration Award - “...Quickstep highlighted how Australian manufacturers can successfully compete against the best in the world. As part of the F-35 program, Quickstep has successfully overcome the many entry barriers faced by new participants in the defence manufacturing sector, possibly the highest of any industry in the world....”
• Melbourne based company

• Making engine trailers for F-35, and working with BAES and Quickstep on 722 shipsets of F-35 vertical tails.

• Diversified into rail, automotive, aerospace and general engineering

On 3rd May 2012, Marand was awarded the prestigious Manufacturer of the Year award (Large Business). Marand is the inaugural winner of the award and was selected by industry experts against a criteria including export performance, enabling technologies utilised, innovation in manufacturing, quality management and sustainable practices amongst others.
• Bidding for the manufacture of parts for partner aircraft limited to Partner nation industry
• FMS can make parts for their own aircraft and other FMS customers
• However, FMS can negotiate with US companies to get some of their ‘strategic’ business
• Japan:
  – They will have a FACO for their aircraft, and perhaps other FMS aircraft.
• Israel:
  – In media that Israel will make some wing sets on behalf of L-M
How can NACC Help Industry?

• Director JSF Industry Support Team – John Wilshire – Canberra - (02) 6144 1535
  – Two staff members in the US
    • Establish contacts
    • Get you through the (right) door
• Strong ‘customer’ voice to the US primes (L-M/P&W)
  – Australian JSF Industry Group
• Two types of work:
  – Strategic – for Australian companies to lose
  – Global supply chain competitive
• NACC Industry Support Program
• **Aim** – provide Australian companies/research with seed funding to develop new or improved capabilities to allow Australian industry to be more competitive.
  – Have a total of $8.2m in grants available.
  – Six grants to date

• **What grants are available:**
  – <$1m for improved technologies that offer savings to JSF supply chain.
  – <$250K to enhance a company’s competitiveness to win work.
  – <$300k for Australian research centres to do research that leads to improvements in the JSF supply chain.
• **Operating maintenance:**
  - Canopy – WLM
  - Battery – WLM
  - Wheels and Tyres – WLM
  - Support Equip – probably mainly local industry
  - Propulsion – WLM and TDL – possible regional repair centre in Australia
  - Pilot equip fitting facility – WLM
  - SOAP – WLM
  - Avionics test – probable at WLM
  - Gun - WLM
• **Deeper maintenance:**
  – Scheduled and unscheduled DM - WLM
  – Modification incorporation – WLM
  – Phased inspection – WLM (TBA but could be 300 hrs)
  – LO acceptance test – GOCO – contractor and DSTO
  – LO paintshop – GOCO

• **Supply Chain**
  – Off base regional holdings
  – Potential on base contractor facility for on-delivery to SQNs

• **Training**
  – Turn-key contractor operation – excluding pilot flying instruction and maintenance of training jets.
  – Maintenance instruction contractor provided

• **Contractor support of ALIS hardware and software support**