



Government  
of Canada

Gouvernement  
du Canada



# Future Fighter Capability Project (FFCP)

INFORMATION SESSION – JUNE 5, 2023

Canada 



# AGENDA

1. Canada Presentation
2. F-35 Joint Program Office Presentation
3. Lockheed Martin Presentation
4. Pratt & Whitney Presentation
5. Closing Remarks

The top of the slide features a dark blue header with a background image of an F-35 fighter jet in flight. The word "Canada" is visible on the side of the aircraft. To the right of the jet is a large, stylized white maple leaf with a blue outline.

# OUTLINE – CANADA PRESENTATION

## **i. Background**

- i. FFCP Procurement Process

## **ii. Implementing the New Capability**

- i. Project Overview
- ii. Canada's Participation in the F-35 Program
- iii. Fleet Transition
- iv. Infrastructure Update

## **iii. Market Analysis**

- i. Canadian Aerospace and Defence Industry

## **iv. Approach to Economic Benefits**

- i. Implementation
- ii. Industrial Participation

## **v. Future Considerations**

- i. Sustainment
- ii. Role of Regional Development Agencies
- iii. Key Tips and Advice
- iv. Contact Information

# FFCP PROCUREMENT PROCESS REVIEW

- The Government of Canada (GOC) launched a competitive process in December 2017 to acquire 88 advanced fighter aircraft.
- After holding supplier engagement events, the formal RFP was released in July 2019
- On July 31, 2020 the GOC received bids from three suppliers eligible to participate in the competitive procurement process. Those proposals were rigorously assessed and evaluated on elements of capability, cost and economic benefits.
- Following the evaluation of the proposals, in March 2022 the GOC entered the finalization phase with the top-ranked bidder, the United States Government and Lockheed Martin with Pratt and Whitney, for the F-35 fighter jets, associated equipment and weapons, set-up training and sustainment services.





# FFCP PROCUREMENT PROCESS REVIEW

- The Proposal prepared by the United States Government (USG), Lockheed Martin and Pratt & Whitney met these requirements. Furthermore, through the finalization phase, they demonstrated that the proposed resulting arrangements met all of the GOC's requirements and outcomes.
- In January 2023, the GOC completed the finalization phase and reached an agreement with the United States Government, Lockheed Martin and Pratt and Whitney. As such, the GOC has officially commenced the implementation phase of the program.
- The FFCP will be delivered in accordance with the Joint Strike Fighter Production, Sustainment and Follow-on Development Memorandum of Understanding (JSF PSFD MOU), the Economic Benefits Arrangements (EBA) and Foreign Military Sales.
  - The GOC signed two EBAs: one with USG, and Lockheed Martin and the other with USG and Pratt & Whitney
- The GOC will work closely with the USG and commercial providers to implement the EBAs, ensuring the targets contained therein are met.

# PROJECT OVERVIEW

**Objective:** The successful acquisition and transition into service of 88 F-35A advanced fighter aircraft and associated equipment, weapons, infrastructure, information technology, and sustainment, including training and software support. This project will leverage Canadian capabilities and support the growth of Canada's aerospace and defence industries.

**BUDGET**  
(acquisition)

**\$19B**

## KEY MILESTONES:

9 Jan 2023

Announcement of  
selection of F-35A as  
Future Fighter

2026

First Aircraft Delivery

2029 - 2030

Initial Operational  
Capability (IOC)

2032 - 2034

Full Operational  
Capability (FOC)



The top of the slide features a background image of an F-35A fighter jet in flight, with the word 'Canada' visible on its side. To the right of the jet is a stylized Canadian flag. The title 'PROJECT OVERVIEW - SCOPE' is overlaid in large, white, sans-serif capital letters on the left side of this header image.

# PROJECT OVERVIEW - SCOPE

- 88 F-35A Aircraft (Block 4, with drag chute)
- Initial stock of weapons\*, ammunition, decoys and expendables
- Mission Data Reprogramming Capability
- Initial training at Luke AFB (pilots) and Eglin AFB (technicians)
- Training devices (Cold Lake, AB and Bagotville, QC)
- Electronic Publications and Technical Data
- Tools, Support and Test Equipment
- Sustainment and Training Services
- Construction and fit-up of a Fighter Squadron Facility in each Cold Lake and Bagotville

\* Excluding Air-to-Air missiles which are being acquired outside of FFCP, outside of those required for verification testing.

# CANADA'S PARTICIPATION IN THE F-35 PROGRAM

- The F-35 Joint Strike Fighter (JSF) program is a US-led multinational cooperative effort to build an advanced multi-role combat aircraft.
- Canada has been an active participant in the JSF Program since it began in 1997, and in 2006 became a partner in the Production Sustainment and Follow-On Development (PSFD) MOU, which was renewed in 2021.
- With the recent selection of the F-35A as Canada's Future Fighter, Canada will be acquiring the aircraft and associated equipment, mission data reprogramming, training, and sustainment set-up and services through the PSFD MOU.
- The following scope items are being acquired outside of the MoU:
  - Weapons – mostly acquired through US Foreign Military Sales agreements with the possibility of also using a Direct Commercial Sales Contract
  - Infrastructure – being contracted by Defence Construction Canada
  - Non-aircraft specific items such as some life support equipment, tools, support and test equipment, and IT equipment are being pulled from existing stock or being acquired through separate contracts.





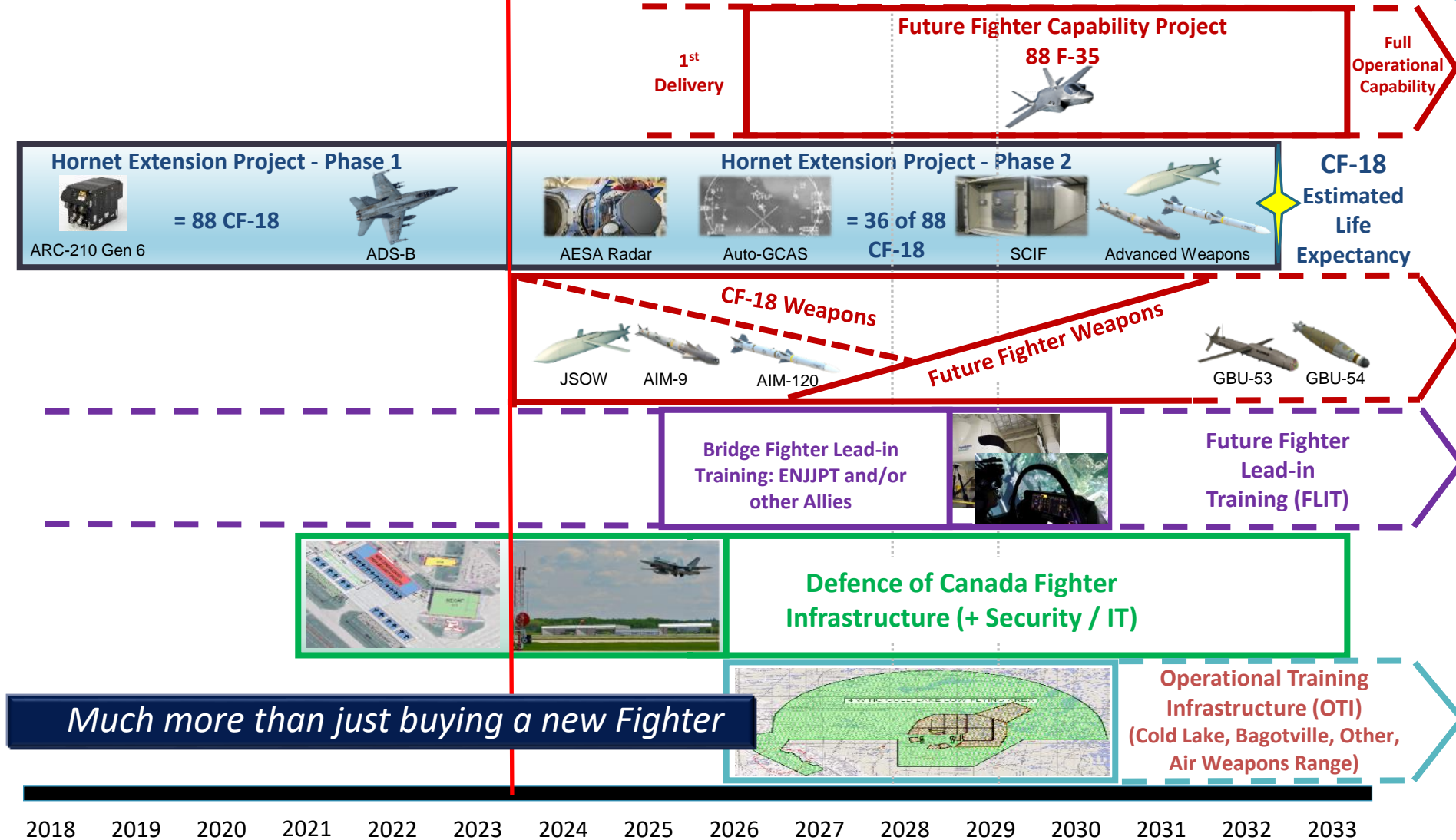
# MORE THAN BUYING A NEW FIGHTER

The Future Fighter Capability Project is well named as it speaks to capability, not only a fighter aircraft.

In this context, FFCP should be viewed in combination with other initiatives, such as:

- Defence of Canada Fighter Infrastructure (DCFI)
- Operational Training Infrastructure Enterprise Modernization (OTIEM)
- NORAD Modernization (NORAD Mod)
- Future Fighter Lead In Training (FFLIT)

# FIGHTER PATH MORE THAN BUYING A NEW FIGHTER





# INFRASTRUCTURE

Infrastructure across the following capability areas:

- Operations,
- Personnel Support,
- Logistic; and,
- Enabling Infrastructure

Under various initiatives, including FFCP and DCFI, will include:

- Fighter Squadron Facilities
- Operational aircraft hangarages
- Advanced armament storage
- Aircraft maintenance and support facilities
- Quick Reaction Alert (QRA) facilities
- Airfields rehabilitation

Delivered in three phases over the next 12 years, at multiple locations across Canada:

- Main Operating Bases (Cold Lake, Bagotville)
- Deployed Operating Bases (Greenwood, Comox, Trenton, Winnipeg)
- Command and Control (C2) nodes (North Bay, Ottawa)
- Forward Operating Locations (FOLs) (Yellowknife, Inuvik, Iqaluit, Goose Bay)

# MARKET ANALYSIS AEROSPACE INDUSTRY

Canada's aerospace industry is a **global leader** and contributed **over \$24.4 billion to GDP** and **close to 200,000 jobs across Canada** in 2021

- The Canadian aerospace industry maintained its **#1 R&D ranking** among **all Canadian manufacturing industries** in 2021
- **Aerospace Maintenance, Repair, and Overhaul** contributed **\$7.6 billion to Canadian GDP** in 2021
- **More than 90%** of aerospace manufacturing revenues were **export-oriented** in 2021, of which over **50% were supply chain-related**
- A **diverse product portfolio** and **strong participation** in global value chains continue to be **key features** of the Canadian aerospace manufacturing industry

Consumer Spending  
by Associated  
Employees  
51,300 jobs



Aerospace  
Industry  
80,500 jobs

Suppliers to  
Aerospace  
Industry  
67,700 jobs

Consumer Spending  
by Associated  
Employees  
\$5.3B



Aerospace  
Industry  
\$12B

Suppliers to  
Aerospace  
Industry  
\$7.1B

# MARKET ANALYSIS DEFENCE INDUSTRY

Canada's defence industry contributed **close to \$9.2 billion in GDP** and **78,000 jobs across Canada** in 2020

- Canada's defence industry **outperformed** the broader manufacturing sector **across industrial indicators** between 2018-2020
- Firms with **fewer than 250 employees** represented **close to 90% of firms** in the Canadian defence industry in 2020
- **Export activities** were responsible for **close to 75% of the growth revenues** in air & space systems between 2018 and 2020
- **STEM occupations'** share of employment was **almost 3X** the Canadian manufacturing sector **average** in 2020

Consumer Spending  
by Associated  
Employees  
19,600 jobs



Defence Industry  
34,500 jobs

Suppliers to  
Defence Industry  
23,500 jobs

Consumer Spending  
by Associated  
Employees  
\$2.2B



Defence Industry  
\$4.4B

Suppliers to  
Defence Industry  
\$2.6B





# CF-18/F-35 ECONOMIC IMPACT

- The current CF-18 fleet **industry legacy in Canada is substantial.**
- As **the largest Royal Canadian Air Force procurement in a generation**, the Future Fighter Capability Project will support the **continued growth and resiliency** of the Canadian aerospace and defence sector for years to come.
- **Canada F-35 Economic Impact** - Overall the acquisition and initial sustainment of the F-35 project has the potential to contribute **over \$425 million annually** to Canadian GDP and **close to 3,300 jobs annually** for Canadian companies **over a 25-year period.**



# F-35 INDUSTRIAL BACKGROUND

In 2006, ISED signed Industrial Participation (IP) MOUs with the F-35 program prime contractors, Lockheed Martin (LM) and Pratt & Whitney (P&W) in order to put into effect the Industrial Participation (IP) provisions of the PSFD MOU.

**The PSFD and IP MOUs restrict the use of offset programs such as Canada's Industrial and Technological Benefits (ITBs) Policy**

To encourage the highest level of participation in the competitive process and increase flexibility, Canada developed a modified economic benefits approach:

- Bidders had the option of either selecting the standard contractual ITB Terms and Conditions or the non-contractual Economic Benefits Arrangement (EBA).
- Bidders could obtain higher evaluation points if they contractually committed their Value Proposition (VP) proposals through the ITB Terms & Conditions

# FFCP ECONOMIC BENEFITS APPROACH

**Strategic Industrial Objective:** Leverage Canada's significant aerospace and defence capabilities to ensure Canadian industry's involvement in global supply chains and the sustainment of the future fleet, support supplier development, and build export capacity.

**As part of competition, all Bidders, regardless of the selected economic benefits approach, were required to agree to the following elements:**

- 100% contract value target to be achieved within 25 years (acquisition and sustainment)
- 10% of contract value in identified transactions submitted at bid time
- VP sustainment targets:
  - 60% Training
  - 40% Maintenance Support
  - 15% Weapon System Management & Engineering
  - 40% Materiel Management
- Submission of annual reports to Canada outlining progress to achieving targets

# ECONOMIC BENEFITS ARRANGEMENTS

- Following the completion of the finalization phase of the competitive process, Canada signed two separate **non-contractual Economic Benefits Arrangements** with both Lockheed Martin and Pratt & Whitney (US Government are co-signatories to both EBAs).
- The EBAs will **replace** the IP MOUs that ISED currently has with LM and P&W.

## EBA QUICK-FACTS

- The EBA is **not** an ITB Obligation
- **The EBA is non-contractual**, however, prime contractors will pursue reasonable commercial efforts in support of industrial targets
- Canadian industry will have to win contracts on a **best value basis**
- Only accounts for work that is **F-35 related** (no indirect work)
- Work is subject to reporting, tracking and verification

## The two EBAs outline the targets for both LM and P&W:

- **Economic activity in Canada equal to bid value** (acquisition and sustainment) to be completed **within 25 years** in **Canadian Content Value**.
- **Deliver work in Canada as part of sustainment**
- **Submit annual reports to Canada** that will outline the progress towards economic benefit targets, which will be reviewed and validated by ISED.



# INDUSTRIAL PARTICIPATION

- Since the inception of the JSF Program, Lockheed Martin and Pratt & Whitney have placed **>\$2.7 billion USD** of contracts with Canadian industry and there will be more opportunities for this number to grow with over **3000 F-35 aircraft planned to be produced**.
- There are **36 active contractors in Canada**, contributing a wide-range of manufacturing and services to the global F-35 fleet. Among Canadian content on the F-35, some examples include:

Examples of Canadian F-35 Suppliers	Canadian-Made Component
Honeywell Canada	Power Thermal Management System (PTMS) components
Magellan Aerospace	Conventional variant (CTOL) Horizontal Tails
Latécoère (formerly Avcorp Industries)	Carrier Variant (CV) Outboard Wings
Collins Aerospace	Landing Gear Components (STOVL and CV pistons & cylinders)
Héroux-Devtek	Door Uplocks



# GLOBAL SUSTAINMENT OPPORTUNITIES

F-35 Sustainment is operated as **a global enterprise**. Countries that are Partners on the JSF Program share resources, with most parts operating on a pooled basis.

- Canada will own its jets, but the spare parts are a pooled resource.
- Under the **JSF best value approach**, sustainment work is conducted at a regional/global level for most components, and industry from member countries could have an opportunity to conduct maintenance and repairs for the global fleet.
- Future opportunities on the global fleet are determined based on Program requirements, demand and best value.
- Over the coming months and years, ISED will be working closely with DND, PSPC, and JPO to align Canadian capabilities with domestic and global F-35 sustainment opportunities.

The background of the slide features a close-up of an F-35 fighter jet's cockpit and nose section. The word "Canada" is visible on the side of the aircraft. In the top right corner, there is a stylized blue and white Canadian maple leaf logo.

# F-35 CANADIAN SUSTAINMENT

Canadian industry will have sustainment opportunities involving the Canadian fleet.

- Following the completion of the competitive process, Canadian officials are proceeding to implement the F-35 capability in Canada and operationalize activities related to sustainment.
- As a member of the global JSF F-35 Program, some activities will be supported through the Program's global sustainment approach. At the same time, Canada is currently making determinations with regard to activities that can be conducted domestically.
- As such, most sustainment opportunities will be better identified as work proceeds in implementing the F-35 in Canada. Taking into consideration that the RCAF is expected to achieve Full Operational Capability for the new fleet in the 2032-2034 timeframe, it is expected that such opportunities would roll out over several years.
- The RFP included a technical requirement for engine and airframe depots to be located in Canada, thus driving further activities with Canadian industry. Additional opportunities are expected for training, component maintenance and parts warehousing.



# ISED'S ROLE

- Communicate and engage with Canadian industry on possible JSF global supply chain and Canadian/global sustainment and production opportunities
- Collaborate with partners at DND, PSPC and JPO to understand program requirements and position Canadian industry for domestic and global opportunities
- Reporting and verification activities with the Primes as part of their EBA requirements



## ISED's Primary Contacts

**John MacInnis** - Director  
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**Stephane LeBlanc** – Deputy Director  
[Stephane.leblanc@ised-isde.gc.ca](mailto:Stephane.leblanc@ised-isde.gc.ca)

**Karyna Semeshko Valade** – Project Manager  
[Karyna.semeshkovalade@ised-isde.gc.ca](mailto:Karyna.semeshkovalade@ised-isde.gc.ca)

**Alex Bramm** – Project Manager  
[Alex.bramm@ised-isde.gc.ca](mailto:Alex.bramm@ised-isde.gc.ca)

# KEY RESOURCES & ADVICE



**Market your product or service.** Determine your company's competitive advantage, i.e. calculate the Canadian Content Value of your product or service, are you a Small and Medium-sized Business, will your product or service lead to cost savings on the Program.

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**Talk to ISED's FFCP team and your Regional Development Agency (RDA) representative.** Also engage with **Global Affairs Canada's Trade Commissioner Service.**

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## **Connect with Potential Suppliers**

Determine the contractors in your target market, gather additional intelligence and make contacts through trade associations, industry days, conferences and trade shows, including through CADSI and AIAC. Regularly keep current of upcoming tenders on Canada Buys

<https://www.defenceandsecurity.ca/>

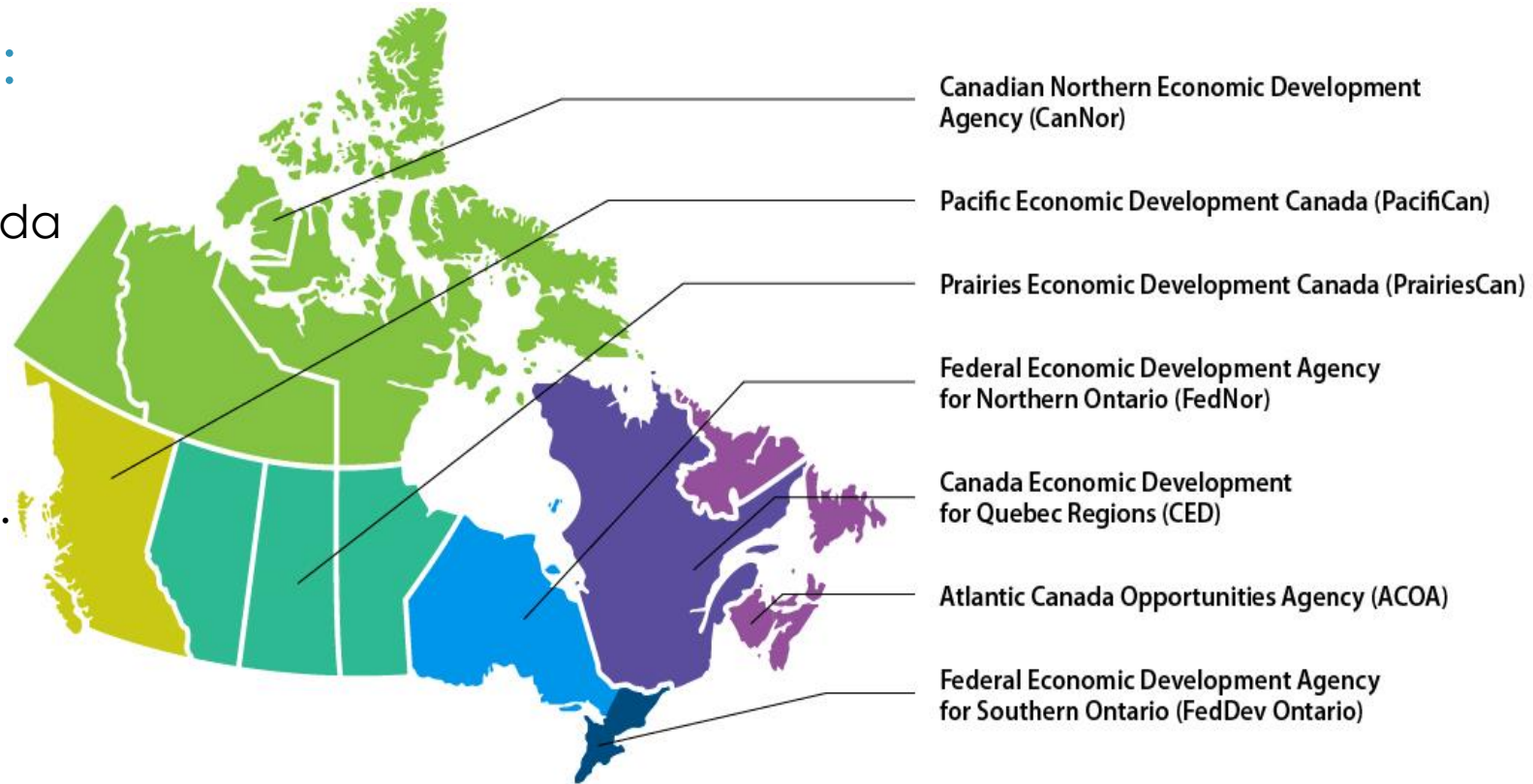
<http://aiac.ca/>

<https://canadabuys.canada.ca/en>

# REGIONAL DEVELOPMENT AGENCIES (RDAs)

RDAs **support** Canadian industry in the following ways:

- **Promote** regional strengths in Canada and abroad.
- **Help SMBs understand** how to do business in the defence sector.
- **Inform** regional industry about opportunities in the defence sector.
- **Promote** regions' respective capabilities.
- **Facilitate** introductions between prime contractors and regional stakeholders.
- **Help finance** the growth of SMBs within the regions, helping them become ready to compete in the defence sector.





# CONTACT INFORMATION



*For more information on economic benefits, contact:*

ISED Fighter Replacement Team  
Innovation, Science and Economic Development  
[ffcp-pcfac@ised-isde.gc.ca](mailto:ffcp-pcfac@ised-isde.gc.ca)

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*For more information on the Regional Development Agencies, visit:*

Atlantic Canada Opportunities Agency (ACOA) - <http://www.acoa-apec.gc.ca>  
Craig Morris - [Craig.Morris@acoa-apec.gc.ca](mailto:Craig.Morris@acoa-apec.gc.ca)

Canada Economic Development for the Quebec Region (CED-Q) - <http://www.dec-ced.gc.ca>  
Mathieu Trudelle - [mathieu.trudelle2@canada.ca](mailto:mathieu.trudelle2@canada.ca)

Federal Economic Development Agency for Southern Ontario (FedDev) - <http://www.feddevontario.gc.ca>  
Craig McClelland - [craig.mcclelland@FedDevOntario.gc.ca](mailto:craig.mcclelland@FedDevOntario.gc.ca)

Federal Economic Development Agency for Northern Ontario (FedNor) - <http://fednor.gc.ca>  
Natalie Brabant - [natalie.brabant@canada.ca](mailto:natalie.brabant@canada.ca)

Prairies Economic Development Canada (PrairiesCan) - <http://prairiescan.gc.ca/>  
Stewart Campbell - [Stewart.Campbell@prairiescan.gc.ca](mailto:Stewart.Campbell@prairiescan.gc.ca)

Pacific Economic Development Canada (PacifiCan) - <http://pacifican.gc.ca/>  
Stewart Campbell - [Stewart.Campbell@prairiescan.gc.ca](mailto:Stewart.Campbell@prairiescan.gc.ca)

A composite image featuring a close-up of an F-35 fighter jet's cockpit and nose section on the left, with the word 'Canada' visible on the fuselage. On the right, a stylized blue and white Canadian maple leaf is superimposed over a blue background.

# KEY POINTS

- Canada's ambition is to position our industry to not only participate on the Canadian fleet but to compete and win **global/regional** F-35 sustainment opportunities.
- Canada will look to economically leverage some other elements of the procurement outside the scope of FFCP including weapons (Foreign Military Sales).
- Engagement and outreach will continue as we proceed through F-35 implementation (virtual sessions, workshops, etc.)
- In the future, Canada is considering a Request for Information (RFI) to better understand Canadian industry's interest and capabilities related to opportunities on the F-35 fleet.

# Questions?

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Questions can be directed to  
[ffcp-pcfac@ised-isde.gc.ca](mailto:ffcp-pcfac@ised-isde.gc.ca)





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**John McGilvrey**  
**Canada Country Manager**  
**5 June 2023**



# F-35 Program

## People



## Organization

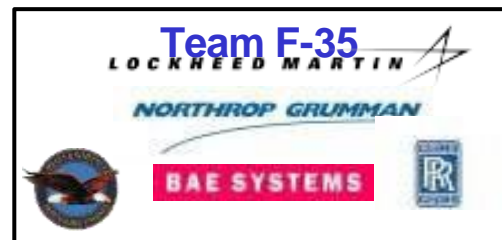
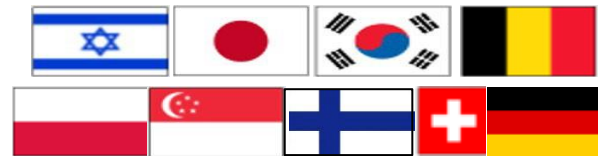
### 3 US Services



### 7 International Partners



### 9 Foreign Military Sales



## Mission



# JSF PSFD MOU

- **Original JSF PSFD MOU Culminated 3 Years of Technical Discussions and Negotiations**

- Signed by Senior Defense Officials
- Entered into Effect - 31 Dec 2006
- Provides Structure and Direction for all Phases of the Program
  - Designed to Last for JSF Program Life ~ 45 Years

- **Major Themes**

- Commonality
- Pay to be different
  - Unique
  - Partially Common
- Shared benefits & costs
- Industrial Participation
- Accommodates sovereignty



- **New JSF PSFD MOU removed Turkey from the Partnership and updated financial cost ceilings**

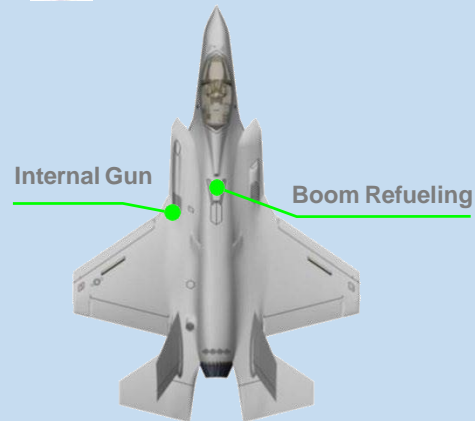
***The New JSF PSFD MOU entered into effect 23 Sept 2021***



# F-35 Multi-Mission Capability



**F-35A**  
Air Force – 1763

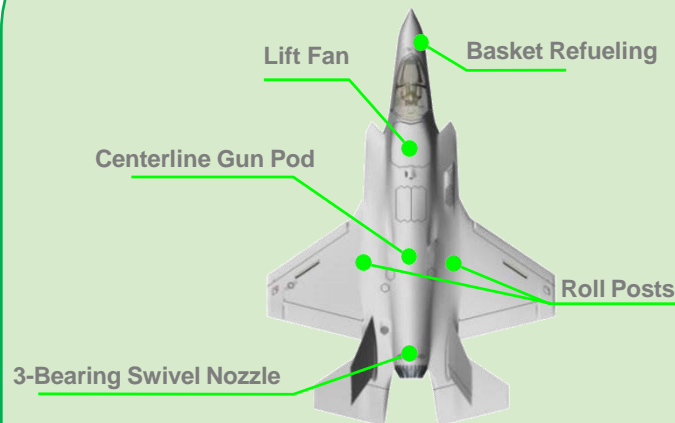


Conventional Take-off & Landing

Italy - 60	Israel - 50
Canada - 88	Japan - 105
Australia - 100	Korea - 40
Denmark - 27	Belgium - 34
Netherlands - 52	Poland - 32
Norway - 52	Finland - 64
Switzerland - 36	Germany - 35



**F-35B**  
Marine Corps - 353

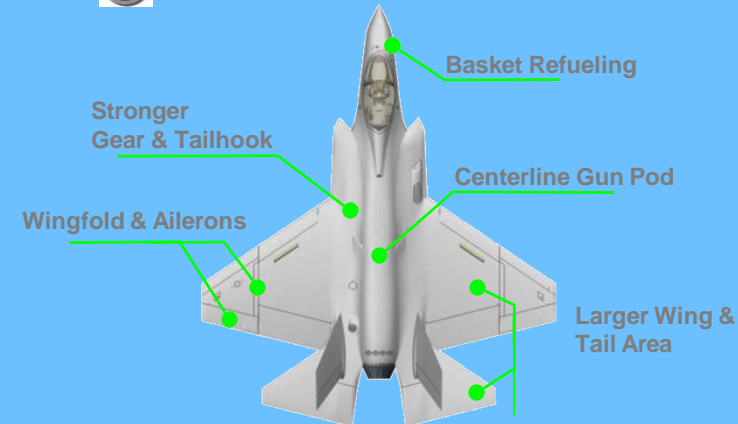


Short Take-off Vertical Landing

United Kingdom - 138
Italy - 30
Japan - 42
Singapore - 12



**F-35C**  
Navy - 273 & Marine Corps - 67



Aircraft Carrier Variant

**F-35 Air System...More than Just the Aircraft**



Air Vehicle



Propulsion



Maintenance



Training



Combat  
Data  
Systems

**1 Program / 3 Variants / 17 Nations / 3,457 Aircraft**



Controlled by: F-35 Lightning II Joint Program Office  
Controlled by: PSM  
CUI Category: DEFENSE  
Distribution/Dissemination Controls: DISTRIBUTION A // APPROVED FOR PUBLIC RELEASE. DISTRIBUTION IS UNLIMITED  
POC: PSM Leadership Group; PSM\_Leadership@jsf.mil



# F-35 Global Support Solution Overview

**Chris Setley**  
**F-35 International Logistics Lead**  
**F-35 Lightning II Program**  
**5 June 2023**



# What we do...

**PSM Mission:** Constructs and executes the Global Support Solution (GSS) across the F-35 Enterprise to provide superior performance, high reliability, and sustainability at an affordable cost.

**Responsibilities:**

- Provide Support Strategy
- Modeling and Analysis
- Product Support Arrangements (PSA)
- Business Case Analysis (BCA)
- Sustainment Requirement Development
- Sustainment Requirement Execution
- Reliability and Maintainability Engineering



“The line between disorder and order lies in logistics” - Sun Tzu





# Organization Overview

**The Product Support Manager (PSM) is accountable for developing and implementing a comprehensive product support strategy for the F-35 weapon system**

## Product Support Manager (PSM)

### Mission

Construct and execute the Global Support Solution across the F-35 Enterprise to provide superior performance, high reliability, and sustainability at an affordable cost

### Responsibilities

- Responsible for GSS product support strategy, enterprise planning, and performance outcomes
- Develop, implement, and review product support arrangements (PSAs) to achieve desired outcomes and achieve efficient procurement, management, and allocation of government owned parts
- Adjust performance requirements and resource allocations across PSIs and PSPs to optimize strategy and execution
- Conduct BCAs every 5 years
- Convey execution authority and warfighter requirements to HPSI through performance-based arrangements

## Lightning Sustainment Center

### Mission

Provide F-35 Enterprise sustainment execution to meet customer readiness requirements through 24/7/365 worldwide integrated sustainment support

### Responsibilities

- Role is assigned within the scope, direction, and oversight of the PSM
- Provides 24/7 global fleet support
- Manages Industry Primes' fielded support





# Global Support Solution (GSS)

The GSS is a single integrated framework that outlines the Program's approach to affordable readiness. GSS is comprised of common, unique, and tailorable elements to support United States Services, International Partners, and Foreign Military Sales Customers

## PRODUCTS

- Maintenance
- Support Equipment
- Supply Chain Management
- Training Systems
- Sustaining Engineering
- Mission Support
- Intellectual Property

## PRODUCT SUPPORT ARRANGEMENTS (PSAs)

- Memorandum of Agreement (MOA)
- Memorandum of Understanding (MOU)
- Service Level Agreement (SLA)
- Commercial Services Agreement (CSA)



## RESOURCES

- Government-Industry Partnerships
- Organizational strategy

## PROCESS AREAS

- Service Strategic Operational Planning
- Enterprise Management
- Maintenance
- Supply Chain
- Engineering
- Training
- Warfighter Operations

## PLANS

- Fleet Plan
- Maintenance Plan
- Modification Plan
- Supply Chain Plan
- Engineering Plan
- Training Plan
- Optimization Plan

***To provide a shared, integrated global system that minimizes user costs***

*Responsive - Market-Based - Scale Driven - Fosters Accountability - Transparent - Lean Principles - Customer Centric*



# GSS

## Legacy vs. F-35



Design, develop, deliver, and sustain a single, integrated, Global Support Solution tailored to meet warfighter-defined and PSM-informed readiness and cost objectives

### LEGACY MODEL

Separate Enterprises



USAF



Country X



Country Y

- SE
- Spares
- Training
- Engineering

- SE
- Spares
- Training
- Engineering

- SE
- Spares
- Training
- Engineering

Contracting for “Things”

#### Buy Things:

Replacement of 12 Rotors  
30 Repair Inductions  
Maintenance Training for Technicians

Traditional Cost Growth

O&S Cost

### F-35 GSS MODEL

Common Tailored Enterprise

3 US Services



7 Int'l Participants



9 FMS Cases



**Common Pool:**  
Support Equipment  
Spares  
Training  
Engineering

**Country-Specific Requirements:**  
Afloat Spares  
Deployable Spares

Contracting for Outcomes

#### Buy required outcomes with incentives:

Strategic Performance Measures; e.g., Safety  
Key Performance Indicators: Mission Capable, Full Mission Capable, Supply Chain Management  
Critical Metrics: Maintenance Man Hours/Flight Hour, Cannibalization, System Health Indicators

Performance Framework

Bend the curve using:  
- Performance-based contracting  
- OEM Investments



# GSS Pillars

You can see GSS through 3 lenses

## ORGANIZATIONAL

Establishes roles and responsibilities of stakeholders in F-35 sustainment enterprise



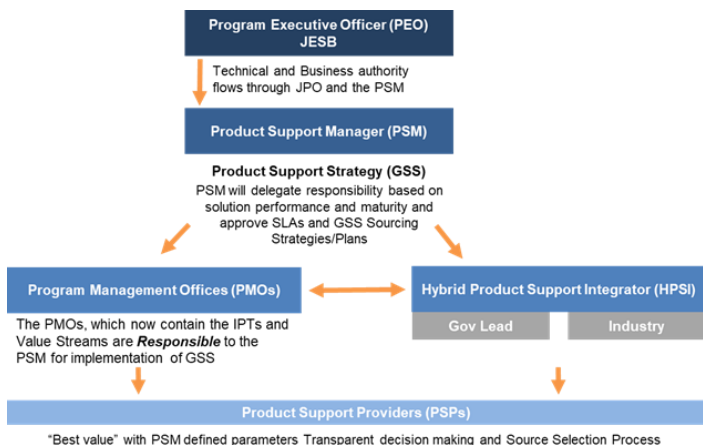
PSM holds responsibility for implementing sustainment requirements via strategy and contracts



PMOs own total lifecycle management of assigned components and are responsible for achieving availability and affordability targets.



LSC customer focused on the execution of long-term affordable and effective solutions



## BUSINESS

Defines the mechanisms to implement collaborative government-industry partnerships



Firm-fixed price Industry contracts incentivized to improve performance and reduced O&S costs



PBAs/PBLs/SLAs incorporates Warfighter metrics as measures of contribution through a mature governance and management process



SLAs issued to competitively select organic PSPs across all geographical regions



## OPERATIONAL

Delivers sustainment capabilities to support Warfighter requirements



Government-led, managed, and integrated GAM to execute a point-to-point global movement of supplies



DLA & USTRANSCOM transportation, distribution and warehousing capabilities facilitates materiel movement



Global MRO&U enterprise with regionalized Rapid Repair Networks and I-level afloat capabilities



Training Systems upgrading near-simultaneously with mission data file and operational flight program updates



ODIN integrated with aircraft and government reporting system and supporting SecDef's NDS requirements



Joint Spares Pool shared among all F-35 users, Globally located, centrally managed

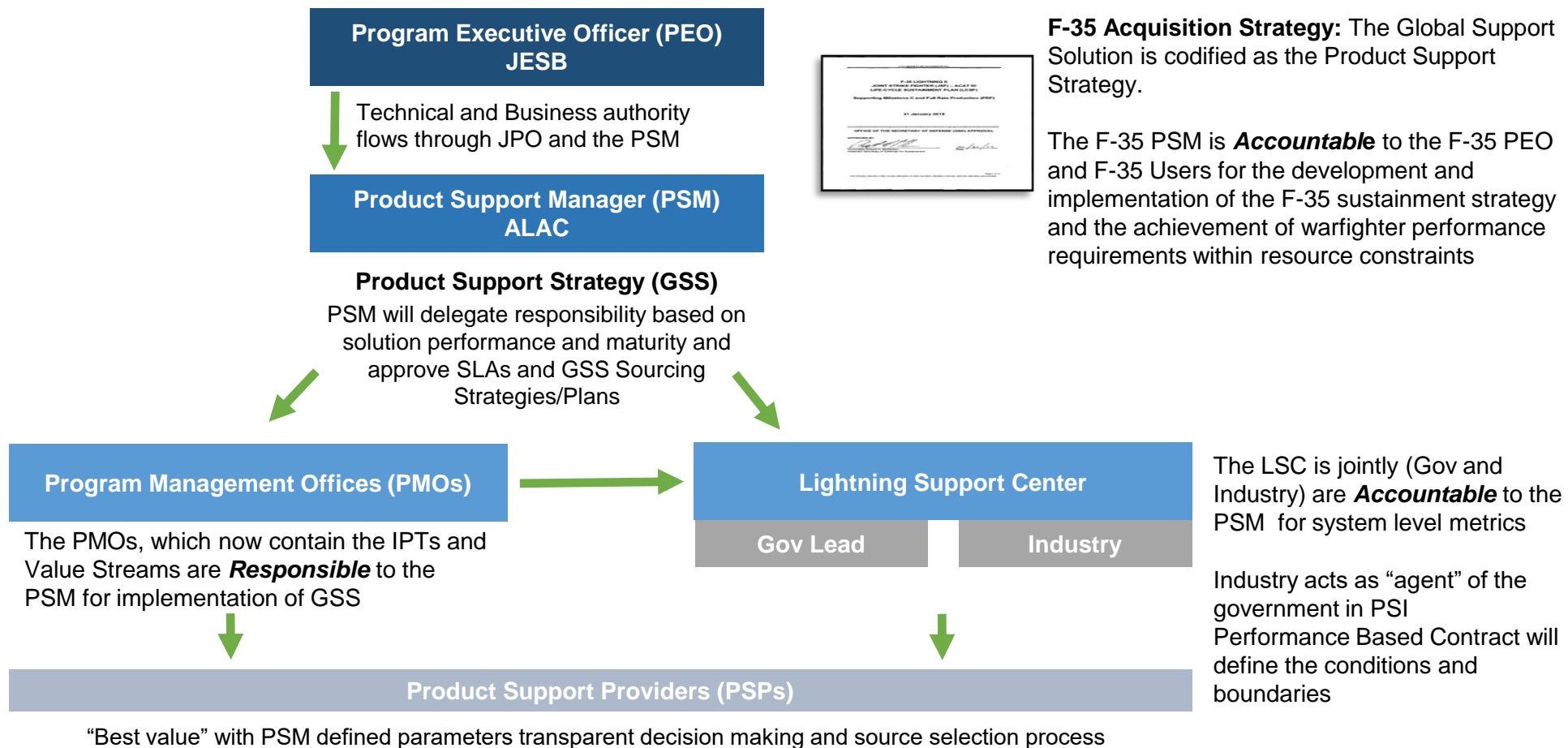


# **GSS – Organizational**

Establishes roles and responsibilities of stakeholders in F-35 sustainment enterprise



# GSS Authority and Accountability Roles



**F-35 Acquisition Strategy:** The Global Support Solution is codified as the Product Support Strategy.

The F-35 PSM is **Accountable** to the F-35 PEO and F-35 Users for the development and implementation of the F-35 sustainment strategy and the achievement of warfighter performance requirements within resource constraints

**Decision Accountability:** The Accountable person is ultimately accountable for the task being done in a satisfactory manner. Essentially, the Accountable person must sign-off the work that the Responsible person produces.

**Decision Responsibility:** Owns the problem/project. The Responsible person or team is responsible for performing the task; that is, the actual person or team doing the work to complete the task.





# **GSS – Business**

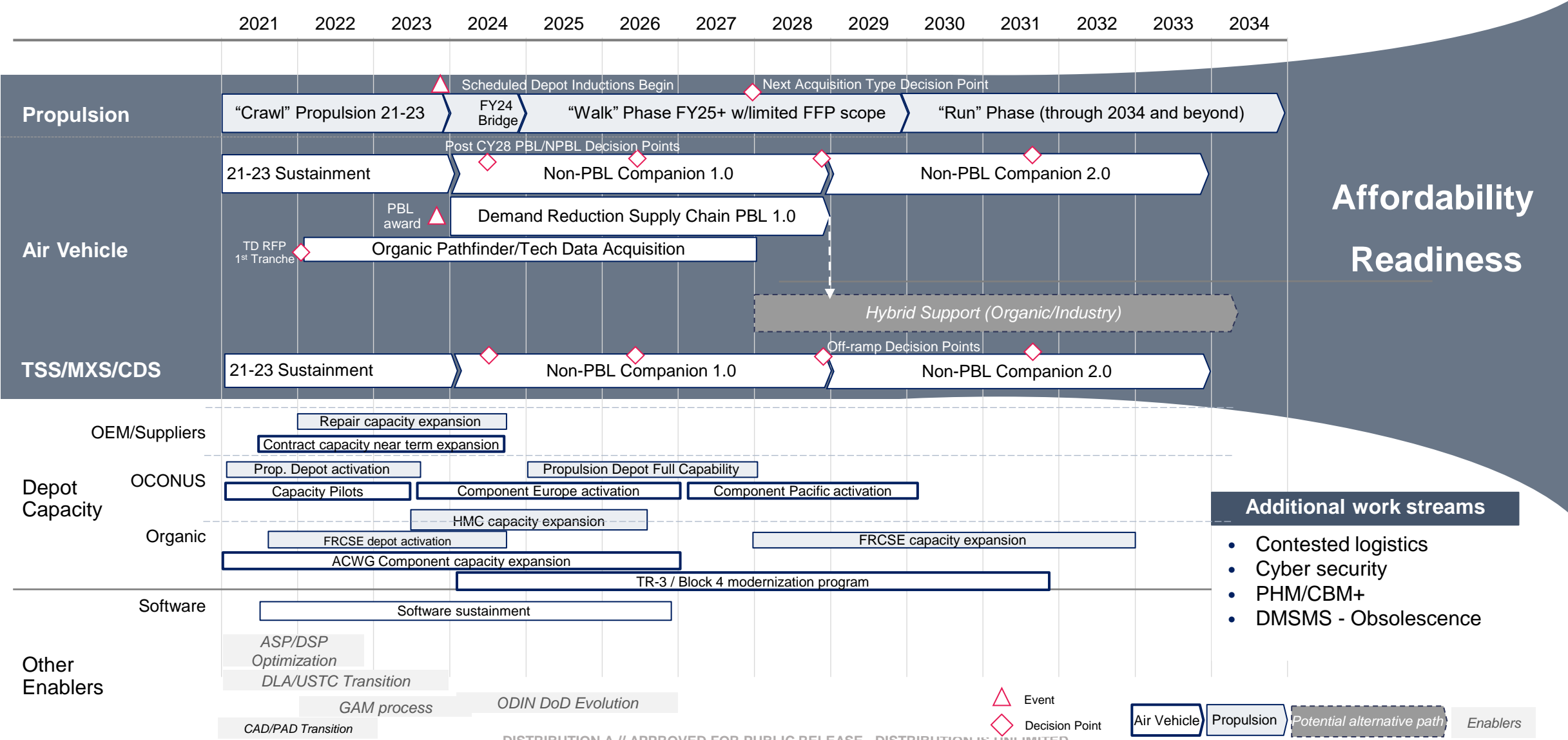
Defines the mechanisms to implement collaborative government-industry partnerships



# F-35 Sustainment Acquisition Strategy

Optimize total system availability while minimizing cost and logistics footprint.

Sustainment strategies includes the best use of public and private capabilities through Government/Industry partnering initiatives across the F-35 enterprise.



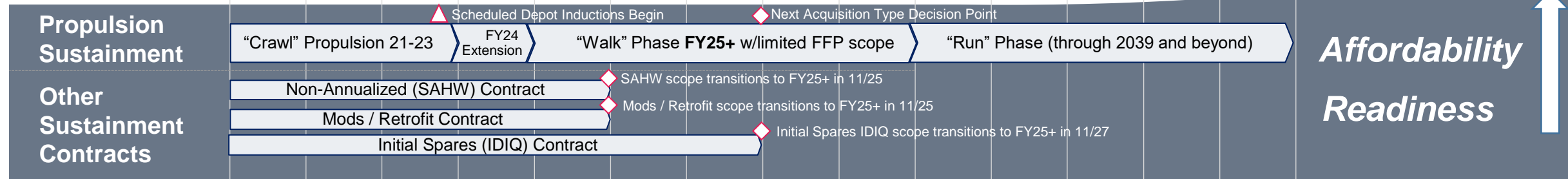


# F-35 Propulsion Sustainment Strategy

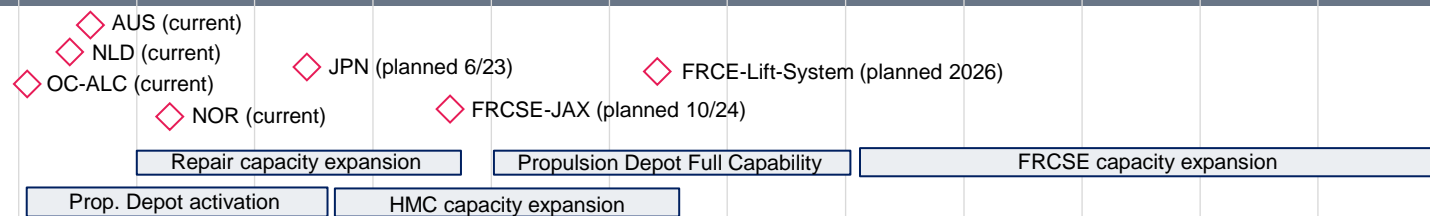
25 Jan 2023

**Propulsion Sustainment Objective:** Provide an innovative outcome-based long-term sustainment strategy that addresses affordability and readiness requirements

2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034

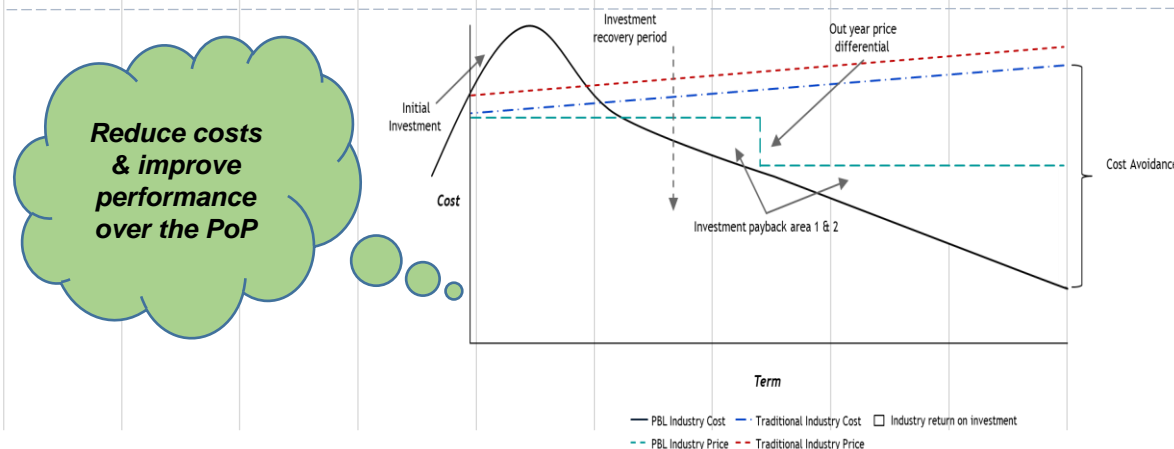


Depot Capacity (7)



Meet minimum Title 10 requirements before using total Depot / MRO&U network to ensure Best Value and increased readiness

Cost Curve, Affordability, and Performance



## Levers used to increase Performance

- Prevent Removals
- Supply Chain Optimization
- Depot Capacity (Organic & Non-Organic)

## Levers used to reduce Cost

- FFP Scope
- Demand Reduction
- Repair vs. Replace Specs

## Additional workstreams

- **Pathfinder Initiative / Lift System Delaying**
  - Optional Scope for FY25+
  - No gap in support is critical
  - Best Value for the Warfighter
- **GAM Delaying / Offramp**
  - Optional scope for FY25+
  - 1–2-year offramp req for customs
  - May require participant unique requirements over the PoP

2021 – 2024  
Current Contract CPII/FFP – Crawl Phase

2025 – 2029  
FY25+ CPII/FFP – Walk Phase

2030 – 2039  
FY29+ FFP – Run to Sprint Phase



# GSS – Operational

Delivers sustainment capabilities to support Warfighter requirements



# GSS Operational Model

## GSS Delivers sustainment capabilities to support Warfighter requirements



Joint Spares Pool shared among all F-35 users, Globally located, centrally managed



Government-led, managed, and integrated GAM to execute a point-to-point global movement of supplies



DLA & US TRANSCOM transportation, distribution and warehousing capabilities facilitates materiel movement



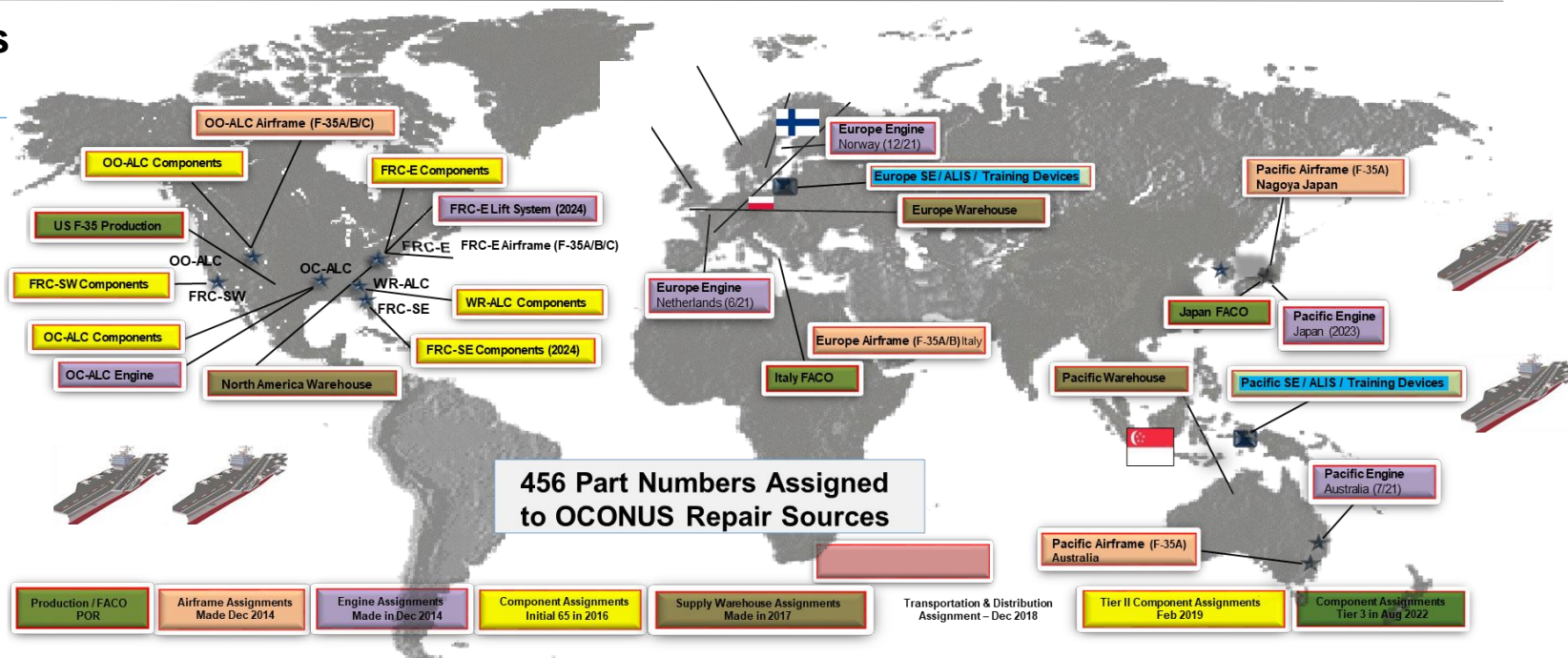
Global MRO&U enterprise with regionalized Rapid Repair Networks and I-level afloat capabilities



Training Systems upgrading near-simultaneously with mission data file and operational flight program updates



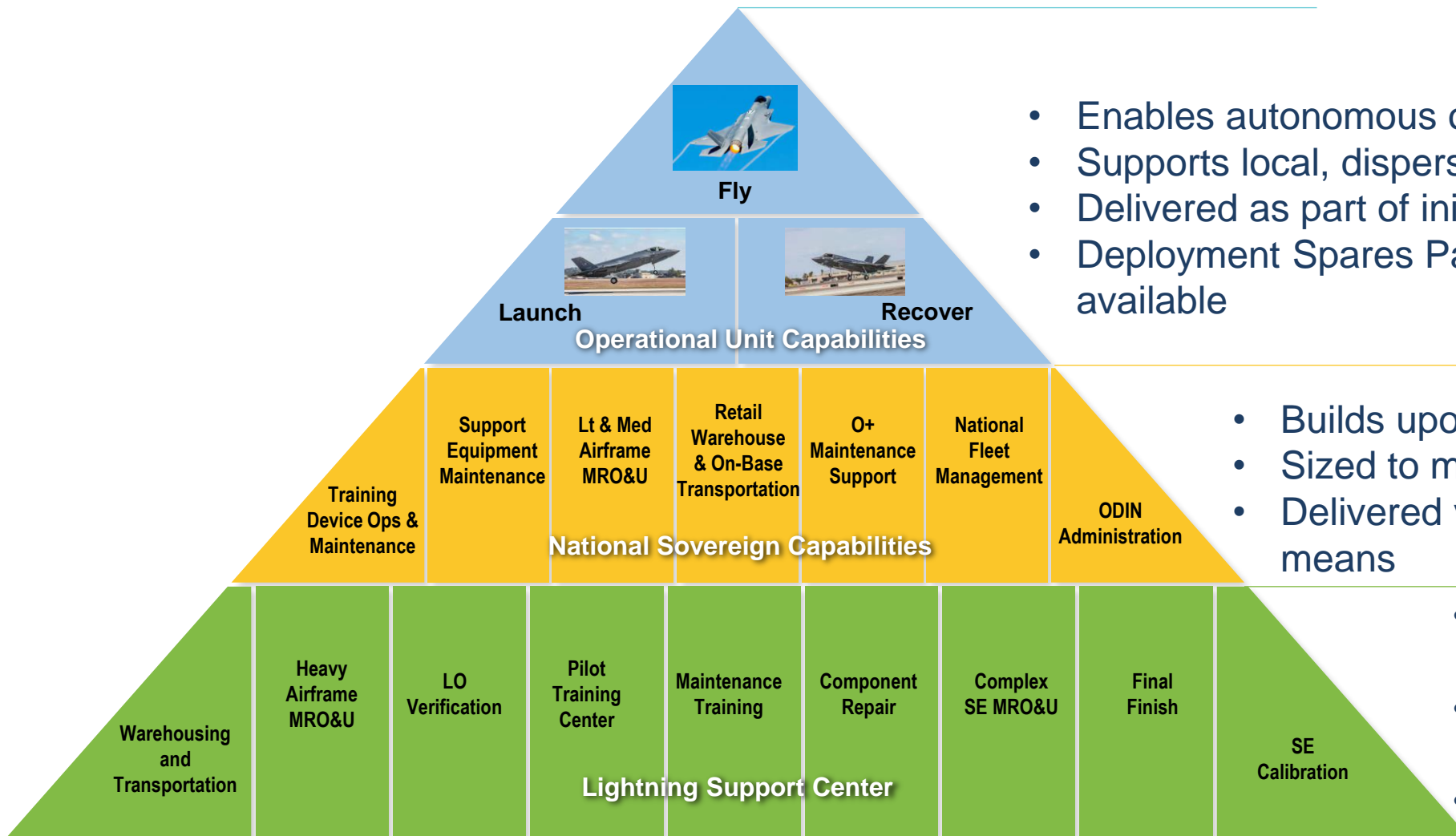
ALIS/ODIN integrated with aircraft and government reporting system and supporting Secretary of Defense's NDS requirements



- GSS is based on utilizing a global network of repair sources that includes:
  - US Service Depots
  - OCONUS Regional Repair Sources
  - OEM's
- OCONUS Regional Repair Sources to be established based on country/company specific business case



# GSS Capabilities



- Enables autonomous operations and maintenance
- Supports local, dispersed, isolated operations
- Delivered as part of initial acquisition program
- Deployment Spares Package (DSP) readily available

- Builds upon existing capabilities
- Sized to meet national fleet demands
- Delivered via organic or industrial means

- Leverages global economies of scale
- Delivered via performance-based contracts
- Global asset pooling





# In Summary...

- Logistics wins wars
- US, Partners, and FMS Customers operate at Various Lifecycle Stages with Growing Fleets
- The JPO works to Develop and Negotiate Value-based, Long-term Logistics and Sustainment Risk/Reward Arrangements with Industry
- Enterprise Goal is to Deploy a Global Support Solution that Leverages All Stakeholder Capabilities, Human Capital and Best Practices
- Everyone in the Enterprise can make daily decisions which Improvement Sustainment Outcomes for the Warfighters on the Flightline
- Cost is Everyone's Enemy – Creativity Required to Enable Cost Reduction and Affordability for the Enterprise



***Results Driven...Transparent Approach to Balance Readiness and Risks***



# F-35 Canada Program Overview

Emily Sohns

**LOCKHEED MARTIN** 



# Lockheed Martin Business Areas

## Space

- Surveillance and Navigation
- Global Communications
- Human and Deep Space Exploration
- Strategic and Defensive Systems

## Aeronautics

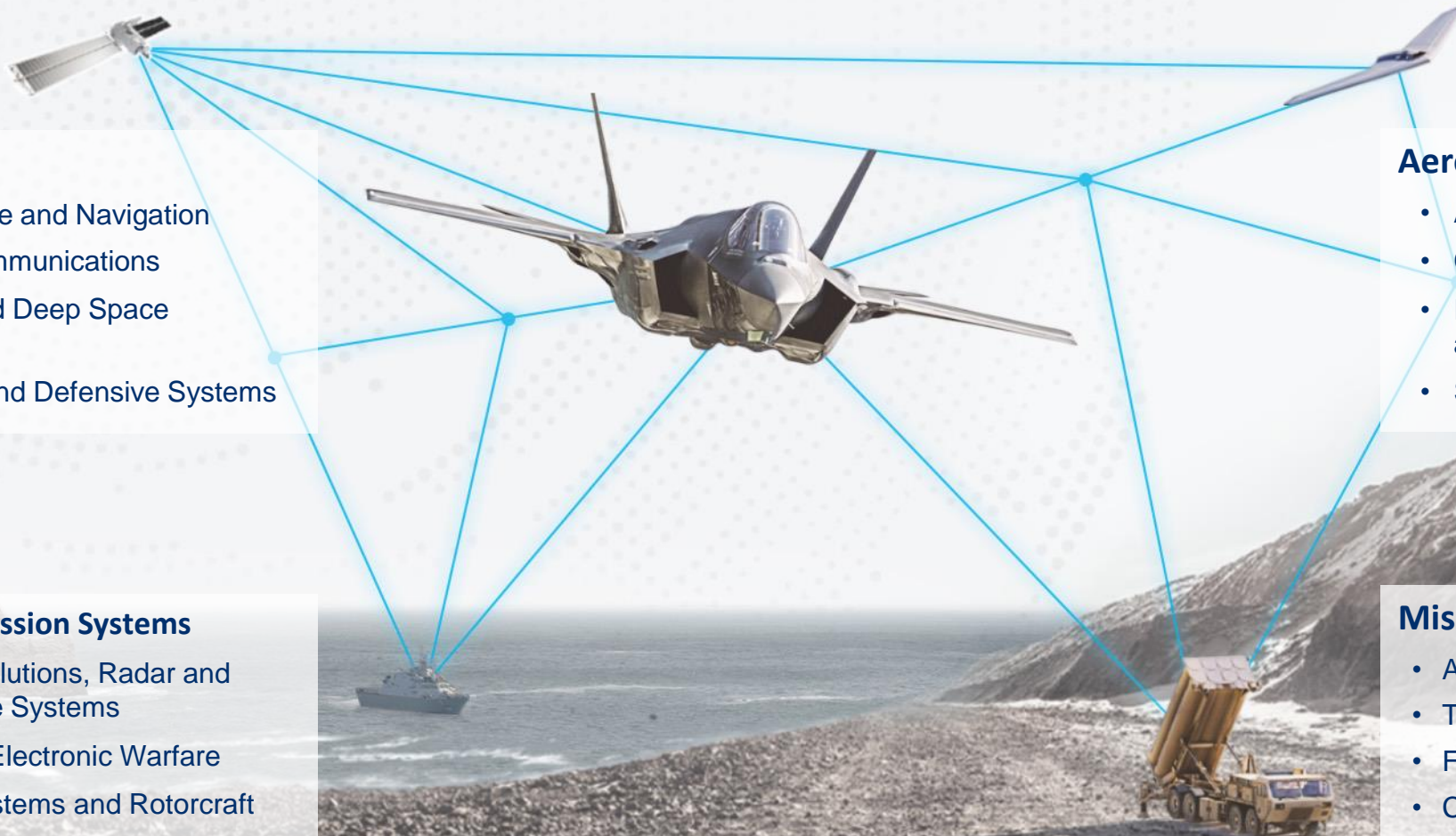
- Air Mobility
- Combat Air
- Intelligence, Surveillance and Reconnaissance (ISR)
- Sustainment

## Rotary and Mission Systems

- Maritime Solutions, Radar and Surveillance Systems
- Cyber and Electronic Warfare
- Aviation Systems and Rotorcraft
- Training and Logistics Solutions

## Missiles and Fire Control


- Air and Missile Defense
- Tactical Missiles
- Fire Control
- Combat Maneuver Systems
- Energy





# Canada F-35 Program Overview



PROGRAM STATS	Economic Impact
Aircraft Variant(s) <b>F-35A</b>	 <ul style="list-style-type: none"><li>• 110+ Canadian companies have contributed to the development and production of the F-35—supporting thousands of jobs in Canada.</li><li>• \$2.7 Billion USD contracted for advanced technology and engineering work in Canada with billions of dollars more in contracts projected.</li><li>• \$2.5 Million USD Canadian components on every F-35.</li></ul>
Program of Record <b>88</b>	
Aircraft Deliveries —	
Flight Hours —	
Training Pilots      Maintainers —              —	

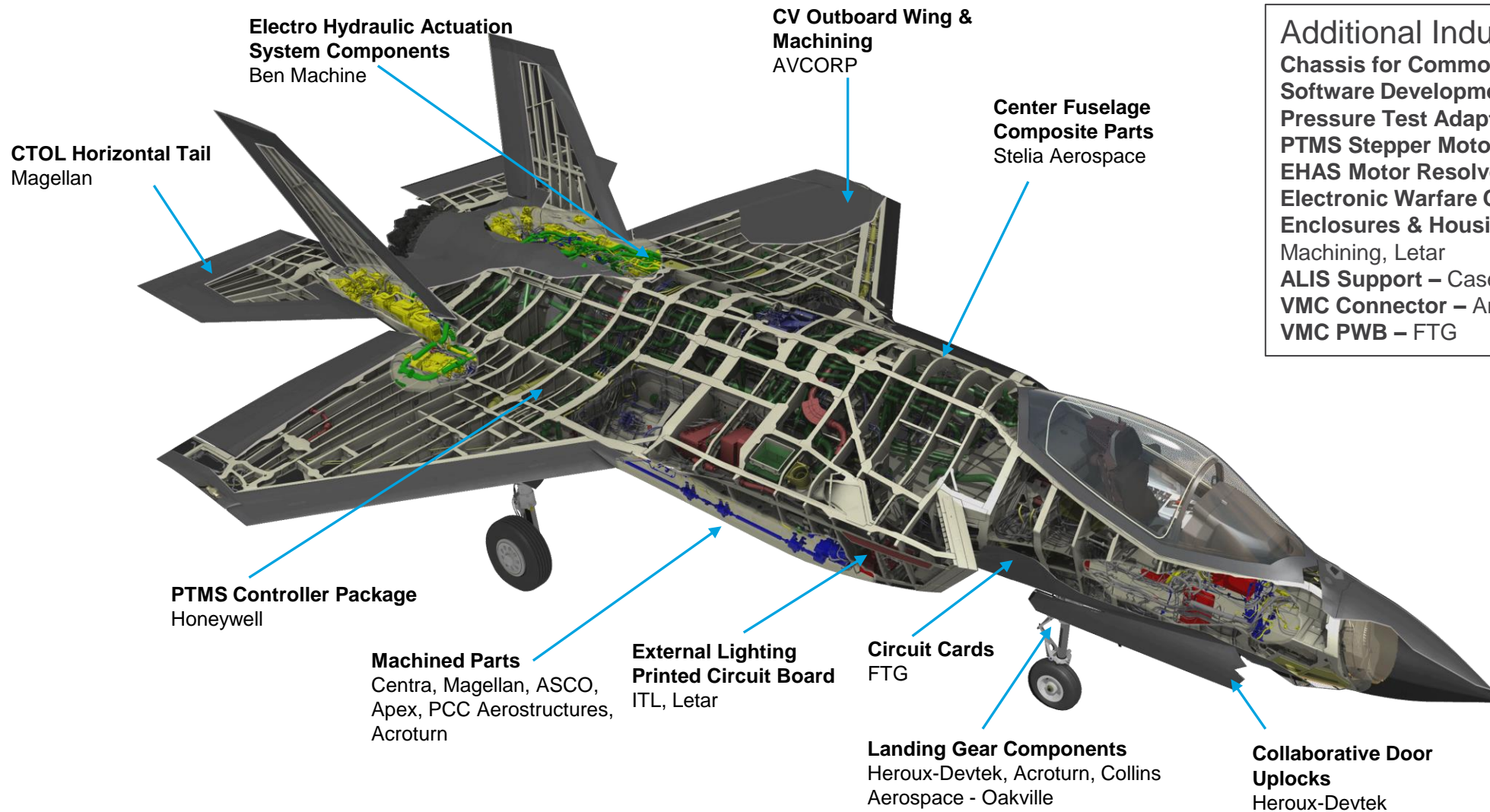
## Program Milestone Timeline







# Canada F35 Industrial Participation



**Additional Industrial Participation**  
**Chassis for Common Hardware** – Heroux-Devtek  
**Software Development** – NGRain  
**Pressure Test Adapters** – Nav-Aids  
**PTMS Stepper Motors** – Curtiss-Wright  
**EHAS Motor Resolvers** – Curtiss-Wright  
**Electronic Warfare Controller** – Curtiss-Wright  
**Enclosures & Housings** – Excel Precision  
Machining, Letar  
**ALIS Support** – Casebank  
**VMC Connector** – Amphenol  
**VMC PWB** – FTG

# Competitive Best Value Procurements



## What is Best Value?

Procurement process that considers both price and non-price factors to select suppliers with best overall value to the end customer



## Evaluation Process

Weighing technical capability, quality and delivery performance, risk management, and innovation in addition to proposed price



## Advantages

Allows for a more strategic and flexible approach to procurements, promotes competition and innovation in the defense industry



# Supply Sourcing Process



Competitive & Best Value Global Supply Chain

# Supplier Resources

- Doing business with Lockheed Martin – [Website Content](#)
  - Become a Supplier
  - Business Area Procurement
  - Supplier Marketing Portal
  - Cyber Security
  - Terms and Conditions
  - Training



## Doing Business

- Become a Supplier
- Business Area Procurement
- Supplier Marketing Portal



## Topics

- Cybersecurity
- Ethics
- Supplier Diversity
- Sustainability



## References

- Frequently Asked Questions
- Terms and Conditions
- Training

**Opportunity for Preparation to Increase Success**





GO BEYOND

# PRATT & WHITNEY F135 OVERVIEW

JUNE 2023



NO TECHNICAL DATA | CLEARED FOR PUBLIC RELEASE  
| COPYRIGHT PRATT & WHITNEY 2022

The appearance of U.S. Department of Defense visual  
information does not imply or constitute DOD endorsement

Engine Photo: Pratt & Whitney  
Photo Credit: U.S. Air Force

This document has been publicly released  
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# F135 ENGINE / F-35 LIGHTNING II

## THE MOST CAPABLE & MOST DEPENDABLE FIGHTER ENGINE EVER BUILT

- Powering all three F-35 variants (CTOL, STOVL, CV)
- 5th Generation propulsion capability – 40,000+ lbs. of thrust; unmatched low-observable signature; world-class thermal management; precise & responsive integrated control system
- Best in class safety record with 600,000+ flight hours logged
- More than 1,000 production engines delivered
- Committed to affordability across the F135 lifecycle

Photo Credits: U.S. Air Force





# RTX: RAYTHEON TECHNOLOGIES



Photo Credit: Collins Aerospace



Photo Credit: Pratt & Whitney



Photo Credit: Raytheon Intelligence & Space

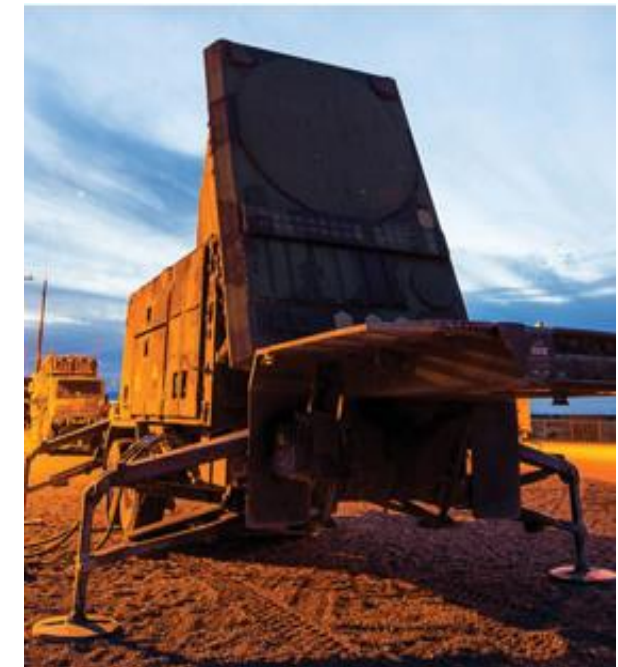


Photo Credit: Raytheon Missiles & Defense

The appearance of U.S. Department of Defense (DoD) visual information does not imply or constitute DoD endorsement.

# PROGRAM AT A GLANCE

**17** nations, **37** bases and ships



 **890+** aircraft in service

**1040+** engines delivered



 **623,000+** engine flight hours

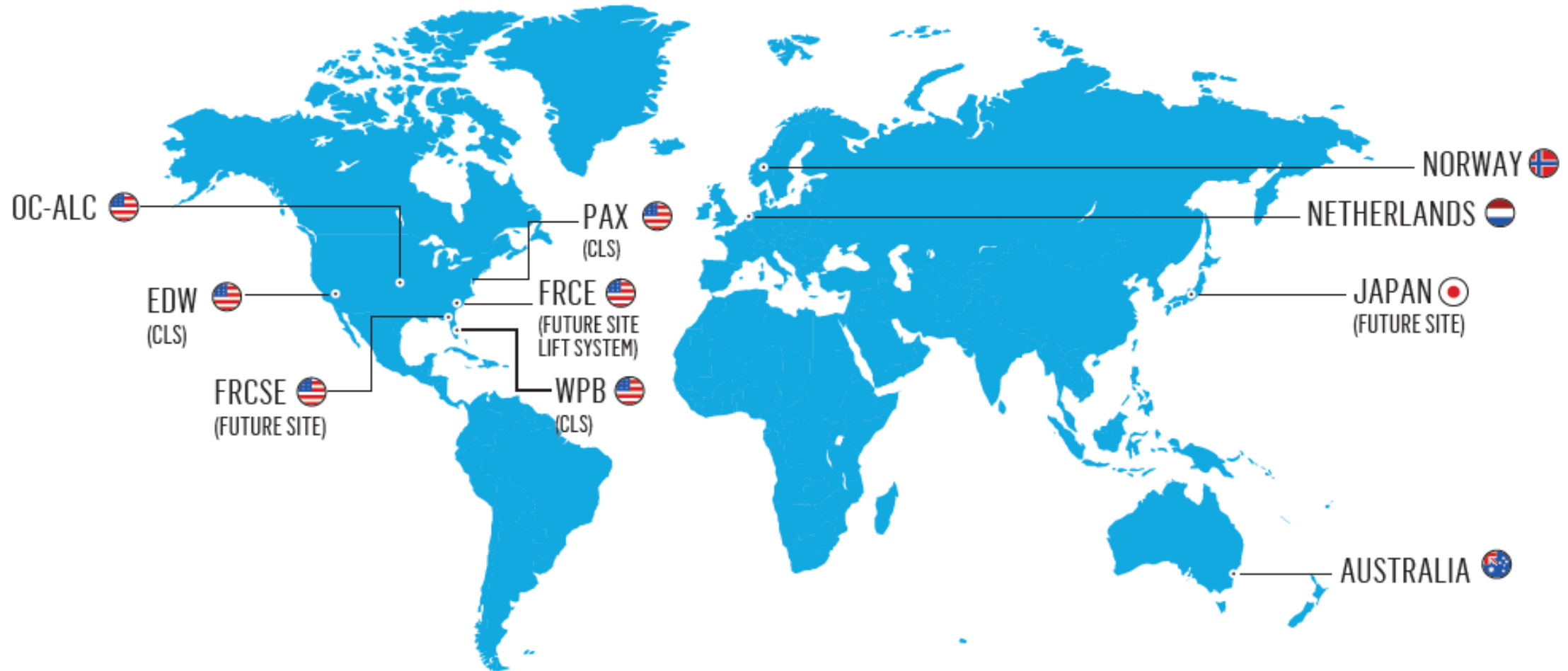
**#1** safest engine ever built by P&W



Photo Credit: U.S. Air Force



# F135 GLOBAL MRO&U NETWORK



MAINTENANCE, REPAIR, OVERHAUL & UPGRADE (MRO&U)  
CONTRACTOR LOGISTICS SUPPORT (CLS)

# PRATT & WHITNEY SUPPLIERS

## SUPPLIER PRE-REQUISITES

Industry Certifications



ITAR Readiness



Aerospace Qualifications



Photo Credit: Wikimedia

Military & Defense Experience



Photo Credit: USMC

Approved Party List

Not of concern (MK Denial, Debarred, etc.)

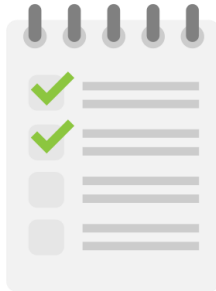


Photo Credit: Wikimedia

Advanced Technology



Photo Credit: Pratt & Whitney

# PRATT & WHITNEY SUPPLIER RESOURCES

## DOING BUSINESS WITH PRATT & WHITNEY

[Raytheon Technologies Potential Supplier Registration](https://rtx.supplierone.co/) : <https://rtx.supplierone.co/>

### Supplier Cybersecurity



### Performance+



### Supplier diversity



# Questions?

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Questions can be directed to  
[ffcp-pcfac@ised-isde.gc.ca](mailto:ffcp-pcfac@ised-isde.gc.ca)