### DEFENSE LOGISTICS AGENCY

Established 1961

### SENIOR EXECUTIVE PARTNERSHIP ROUND TABLE October 29<sup>th</sup>-30<sup>th</sup> 2024

\*\* (1) \*

#### THE NATION'S LOGISTICS COMBAT SUPPORT AGENCY

PEOPLE  $\star$  PRECISION  $\star$  POSTURE  $\star$  PARTNERSHIPS

WARFIGHTER ALWAYS

### DEFENSE LOGISTICS AGENCY

Established 1961



### Senior Executive Partnership Round Table

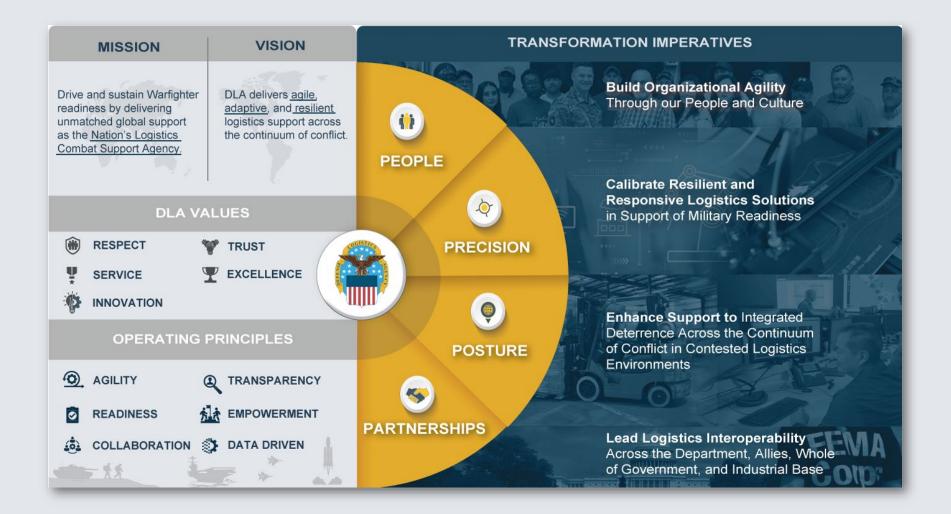
Mr. Brad Bunn, DLA Vice Director October 29, 2024

> "Rapid Solutions: Solving Challenges and Strengthening Supply Chains through Strategic Partnerships"

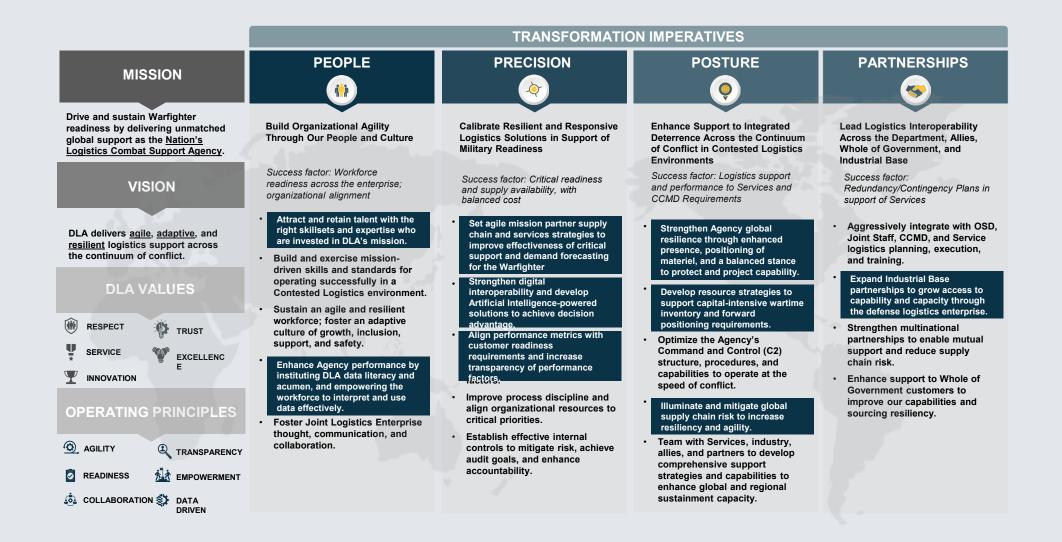
THE NATION'S LOGISTICS COMBAT SUPPORT AGENCY

### **DLA Transforms: A Call to Action**

Strategic Plan 2025 - 2030



\*\* (1) \*



\*\* (1) \*:

**Aviation Supply Chain** 

Wholesale Supply Availability and Backorders



WARFIGHTER ALWAYS

### **Aviation Supply Chain Ecosystem**

A Call to Action

DLA Wholesale Supply Availability (WSA)	SSA Wholesale S Availability (W
USMC = 84.9%	USMC = 85%
USA = 84.4%	USA = 77%
USN = 84.0%	USN = 84%
USAF = 86.1%	USAF = 85%
OVERALL = 84.9%	OVERALL = 83%
Overall DLA Backorders:	Overall SSA Backorder
286,180	53,596 (18.7% of tota
286,180 DLA Non-mission Capable Supply (NMCS) Backorders	53,596 (18.7% of tota SSA Non-mission Capa (NMCS) Backor
DLA Non-mission Capable	SSA Non-mission Cap
DLA Non-mission Capable Supply (NMCS) Backorders	SSA Non-mission Capa (NMCS) Backor
DLA Non-mission Capable Supply (NMCS) Backorders	SSA Non-mission Capa (NMCS) Backor USMC = 0
DLA Non-mission Capable Supply (NMCS) Backorders	SSA Non-mission Capa (NMCS) Backor USMC = 0 USA = 2,288 (47%)
DLA Non-mission Capable Supply (NMCS) Backorders USMC = 598 (2%) USA = 14,392 (50%) USN = 9,310 (33%)	SSA Non-mission Capa (NMCS) Backor USMC = 0 USA = 2,288 (47%) USN = 1,795 (37%)

e Supply (WSA)		339s by Servic	ce
	USA = USN =	C = 86 (77.9% on time) = <b>584 (76.4% on time)</b> = <b>1016 (69.3% on time)</b> = 1764 (86.9% on time)	
ders: otal)		oipeline = 3,485 al late = 727 (20%)	
apable Supply corders			
	2π‡†	$\cdot \ge \mathbf{s} \in \mathbf{K}$	ÆÆÐ†ÆĞ
	As	s of Sep 2024 = 6	5.87%
	All t	time high 69.52% in A	lug 2023
Backorders:			

\*\*\*\*\*

### DEFENSE LOGISTICS AGENCY

Established 1961

### Industrial Base Constraints

Floyd A Moore, Jr, Director, Aviation Engineering October 29, 2024

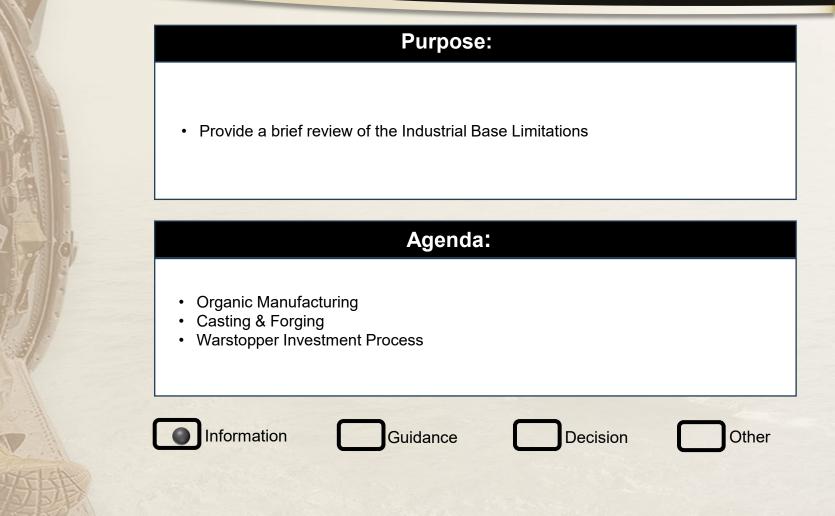
\*\* (1) \*

THE NATION'S LOGISTICS COMBAT SUPPORT AGENCY

PEOPLE  $\star$  PRECISION  $\star$  POSTURE  $\star$  PARTNERSHIPS

WARFIGHTER ALWAYS

### Industrial Base Limitations Overview





# Organic Manufacturing – Strategic Initiatives

### Organic Manufacturing (Strategic Initiatives)



# Strategic Initiatives

#### OSD Study

- Data Systems (MEC-D); Army DEVCOM consolidating AF and Navy capability data to support system build-out; expected to be completed January 2025
- · Current capability is spreadsheet list driven, manual

#### F-108 Engine Mount

- Boeing continues to work to qualify the 76th PMXG (OC-ALC) as an approved plating source
- Cost and payment method TBD, qualification needs to occur first

#### Pratt Engines

• DLA will be part of an IPT to examine how some sole-sourced parts with OEM-owned tech data which are experiencing supportability issues can be manufactured by an OM source...OC-ALC will pilot

#### Safeguarding Tech Data Rights

• DLA J7 is working relative to tech data rights to ensure safeguarding



# Casting & Forging Industry

PEOPLE  $\star$  PRECISION  $\star$  POSTURE  $\star$  PARTNERSHIPS

WARFIGHTER ALWAYS

### **Casting Industry Overview**



# **Casting:**

- Forecasting \$50B for value of industry in 2025
- 1700 foundries in US and Canada
- Insurance of foundries is a concern for businesses

#### **Steel Casting**

- 140 steel foundries remaining with 15 of those being key DoD suppliers
- Commercial parts prioritized as they are typically simpler with better profit margins

### Non-ferrous Casting

- 70% of industry is family owned
- Labor availability is low

### **Die Casting**

- Currently fewer than 300 die casters nationwide
- Industry wide R&D focused on lightweight and Giga casting for electric vehicles

# **DLA Supplier Feedback:**

- Labor availability issue through 2032 (retirements outpace new entrants)
- Public policy hurts the profitability of the industry (bonus depreciation, R&D tax credit running out)
- DoD needs improved demand forecasting and First Article Test process



### **Forging Industry Overview**





# Forging:

- ~152 forges in 38 states, employing >36K employees.
- Metal Stamping and Forging industry revenue has inched downward at a CAGR of 0.5% over the past five years
  - Expected to total \$38.6B in 2024
- Metal forging market is expected to reach \$130.5B by 2028 and grow ~6.34% between 2021 and 2028
  - Increased demand for advanced and high-strength components to be used in many industries.
- For DoD, roughly half of the 41 forging companies surveyed are operating at 52% capacity utilization.
- Automotive is the fastest-growing segment of the market.

# **DLA Supplier Feedback:**

- Volatile metal prices, macroeconomic swings and swelling
   employment costs pressure forging manufacturers
- DoD procurement policies are burdensome and timeconsuming, therefore commercial orders are prioritized





# Approximately 3% of all NSNs contain cast or forged (C/F) content

- C/F NSNs comprise approximately 10% of all unfilled orders
- C/F NSNs comprise approximately 15% of the oldest unfilled orders

# Why?

- No Casting or Forging suppliers
- No tooling
- Obsolete drawings and specifications
- No response to solicitation



- Aviation Forging and Casting Assistance Team (AFCAT) is a resource available to:
  - DLA Personnel
  - Engineering Support Activities (ESAs)
  - Contractors
- Sourcing Inability to Manufacture due to unresponsive C/F supply chain
- **Tooling** Inability to Manufacture due to unavailable tooling
- Technical Field Support to Foundry/Forge
- **Update TDP** with current specifications, processes, etc.
- Assist Engineering Support Activity in expediting required Engineering Analysis/Response



- Avg Reduced ALT of 27 days (23%) and PLT of 47 days (23%) for NSN's with AFCAT info in the solicitation (identifies up front that item contains cast/forged part)
- 16% improvement in price (tooling re-use and competition)
- Helps program offices and ESAs be more aware of suppliers they can use and industry capabilities
- Helps DLA keep up with industry changes and new technology



DLA Aviation Casting and Forging Website

https://www.dla.mil/Aviation/Offers/Engineering/Forging-and-Casting

DLA AFCAT Assistance Request Form

**AFCAT Assistance Request Form** 

DLA Aviation AFCAT Inbox

afcat@dla.mil



# DLA Warstopper Program



\*\* (1)

## Warstopper Program – One DLA Industrial Readiness Tool

# **Program Background:**

- DLA's <u>industrial readiness</u> program for <u>DLA managed consumable items</u>
- Government investment needed when readiness demand is higher than the commercial industry is able or willing to invest
- The National Defense Authorization Act for 1992 and 1993 emphasized industrial base preservation, as a result the DLA "Warstopper" Program was created

## **Program Characteristics:**

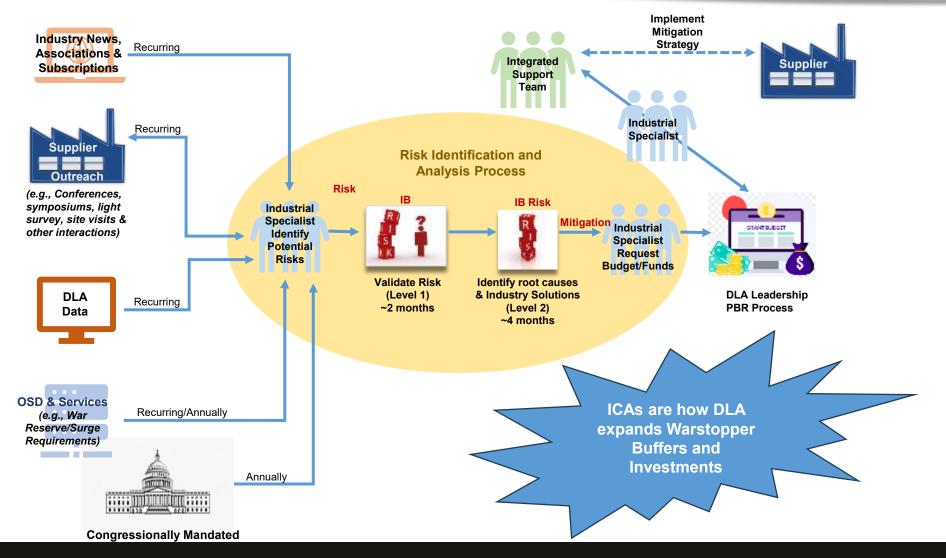
- <u>Mission:</u> Ensure availability of DLA commodities where unavailability would to "stop" a warfighting capability
- **Demand:** Items with a validated War Reserve Requirement or surge demand in wartime
- <u>Production</u>: Lead times that will exceed the industrial capability to meet the wartime requirement

### **Preferred Readiness Solution Hierarchy:**

- Good supply chain management practices
- Acquisition strategies
- Surge clauses
- Warstopper investment

Investment Type	Description
Preservation of Capability/Capacity	<ul><li>Cold Start Preservation</li><li>Minimum Sustaining Rate</li></ul>
Surge Capability	<ul> <li>Material investments</li> <li>Buffer Stocks</li> <li>Equipment</li> <li>Access to Commercial Inventory</li> </ul>

### Supporting Tools for Investments: Risk Analysis Process to identify Investment Opportunities



\*\* (1) \*\*

# **Warstopper Investment Strategies**



# **Preservation of Capability/Capacity**

### Cold Start Preservation

- Mitigates risk for items with infrequent demand signals through Diminishing Manufacturing Sources and Material Shortages (DMSMS) solution for extension of production or support to maintain the availability of products
- Minimum Sustaining Rate
  - Preservation of an industrial capability/ capacity to meet current/future readiness requirements through the purchase of end items

## **Readiness Investments**

### Buffer Stocks

 Raw material buffer stocks to decrease lead-time for items during time of national emergency

### • Equipment

 Use of funds to purchase capital equipment for surge capability and capacity during contingency events

### Access to Commercial Inventory

- $\circ\,$  Purchase Access to Rotating Vendor Managed Inventory
  - Guaranteed quantity
  - Guaranteed delivery times
  - Maximize coverage
  - Minimize investment
  - Fees for inventory management & stocking

## **Summary of Studies**

FY24 In Progress (Class IX)

Study Topic



\*\* (1) \*:

Level	Study Topic	I	B2 Bomber Critical Parts
I	Tire Cord Steel	II	Wire Harness
I	Natural Rubber		
I	Rare Earth Magnets		FY25 Planned (Class IX)
I	Wire Harness	Level	Study Topic
I	Natural Graphite	I	Niobium
I	Gallium	I	Vanadium
I	Carbon Fiber in Airframes	I	Kevlar Alternatives
II	Magnesium	I	Tantalum
11	VIM/VAR Steel Buffer	II	Windshields
II	Rare Earth Magnets	П	Manganese
	C.		

Level

For copies of completed studies, please email the Warstopper mailbox at: HQ\_J7warstopperprogram@dla.mil

FY24 Completed Studies (Class IX)



### Summary of Study

\*\* (1) \*

#### **Define Study**

- Limited capacity to produce VIM/VAR steel during surge events creates long lead times (70+ weeks).
- Due to excessive backlog, the buffer replenishment is slowing

#### **Research Summary**

- Current buffer held by Carpenter and Universal preserves capacity for DoD.
- VIM/VAR is at max capacity for both suppliers.
- Excessive backlog is slowing replenishment, expanding the buffer would take time.

#### **Key Analysis Findings**

- Buffer range of 332k (3 mos.) to 663k lbs. (6 mos.) will reduce risk.
- Improved buffer reporting would enhance DoD visibility.
- Viable buffer locations: Carpenter, Universal, and/or bearing industry stocking initiative.

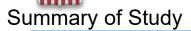
#### Recommendations

- Expand buffer within 3-6 month range.
- Open opportunity to mills/ bearing industry.
- Allow industry to propose alloy type/ form/ target size for task order requests.
- Improve contract reporting.

#### Stakeholder List

Organization	POC
DLA Acquisition	Mr. Matthew R Beebe
DCMA	Eric Hogg
DCMA	Jon Schaeffer
US Army DEVCOM	Rodney Lee
DLA Aviation	Joie Coppedge
DLA Land and Maritime	Eugene Mitchell





\* \* (11) \*

#### **Define Study**

 The U.S. lacks domestic primary magnesium production and DoD relies heavily on an Israeli supplier – Dead Sea Magnesium (DSM)

#### **Research Summary**

- China controls 88% of the market but only accounts for 20-30% of U.S. magnesium imports
- DoD uses magnesium in munitions, energetics, die cast parts, and other critical applications

#### **Key Analysis Findings**

- Risk likelihood at DSM is low
- Chinese export restrictions may cause higher magnesium prices
- Luxfer has multiple locations, risk of failure is low

#### Recommendations

- Consider developing
   DLA/DOD buffer strategy
- Develop interagency working group to maintain supply chain awareness and potential investment opportunities

#### Stakeholder List

Organization	POC
DLA Acquisition	Mr. Matthew R Beebe
DLA Logistics Operations	Mr. Steven W Kinskie
US Army; Director of IB	Jan V Jedrych
COMNAVAIRSYSCOM	Lionel R Hope
DLA SCRM	Peter Battaglia
DLA Strategic Materials	Nathan Cardinell

# Wire Harness (Level I)



### Summary of Study

\*\* (1) \*

#### **Define Study**

 Study was commissioned to investigate DLA wiring harness long lead times and material availability.

#### **Research Summary**

- Wiring harnesses are made-to-order.
- Highly manual and skilled process.
- The majority of DLA purchase orders have low quantities.

#### **Key Analysis Findings**

- Critical components can cause bottlenecks, but not root cause.
- Majority have unforecastable demand.
- TDPs are often missing or outdated and slow DLA PAR response.

#### Recommendations

- Proceed with Level 2
- Expanding and improving the LTC strategy could increase OTD.
- Develop internal DLA Communication Plan of findings.
- Support DLA wiring harness LTC strategy as needed.

#### Stakeholder List

Organization	POC
US Army DEVCOM GVSC	Lisa Graf
US Army PEO GCS	Cary Grindle
DLA Aviation	Joie Coppedge
DLA Land and Maritime	Eugene Mitchell
DLA SCRM	Peter Battaglia



- Discuss commonality among OEM Supply Chain Risk for DLA managed Items
- Identify Federal Supply Classes Needed to Surge and Common raw materials across the FSC
- Identify Constraints in the sub-tier level that we can work together to address risk through various DLA and DoD Programs
- Discuss ways to increase surge coverage by using Surge and Sustainment CLINs expanding strategies beyond vendor or DLA procurement of end items



### J8R/BP– Brian Gray/Joann Hoder Cost



# Finance factors inflation into Customer Prices:

- Gather historical inflation rates on material purchases experienced by the supply chain.
- Sync Aviation's inflation rate into a Weapons inflation rate (Aviation/Land/Maritime) and add as a cost in customer prices. Historical table below:

	Weapons	
	Inflation	
FY21		3.7%
FY22		3.7%
FY23		7.7%
FY24		5.7%
FY25		3.0%

• Inflation spiked in FY23 and FY24; however, projections show some leveling out in FY25 rates.

#### **DLA Supplier Costs:**

- Material costs are out pacing inflation
- Competitive items show increases up to three times of PPI
- Out of production weapon systems

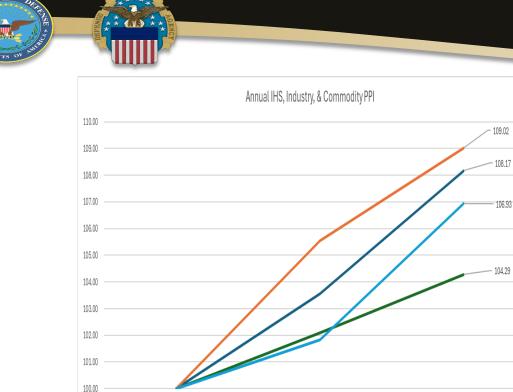
#### Influences:

- Dealers, surplus buys, quantity sensitivity, raw material costs, cold starts, and changing manufacturers all influence volatility
- Suppliers are unwilling to hold prices due to uncertainty in the market

#### Way Forward:

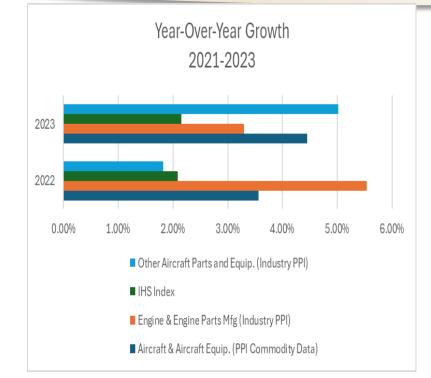
- Adding items to LTC stabilizes cost
- Negotiate shorter pricing periods to share risk
- Incorporate economic price adjustment provisions
- Quantity price breaks

### Annual PPI Comparison 2021-2023



2021

Aircraft & Aircraft Equip. (PPI Commodity Data) Engine & Engine Parts Mfg (Industry PPI)



- Each index outpaced the IHS prediction in 2023
- Engine & Engine Parts growth > 2X IHS index growth

HIS Index
 Other Aircraft Parts and Equip. (Industry PPI)

• Largest growth seen in 2022

2022

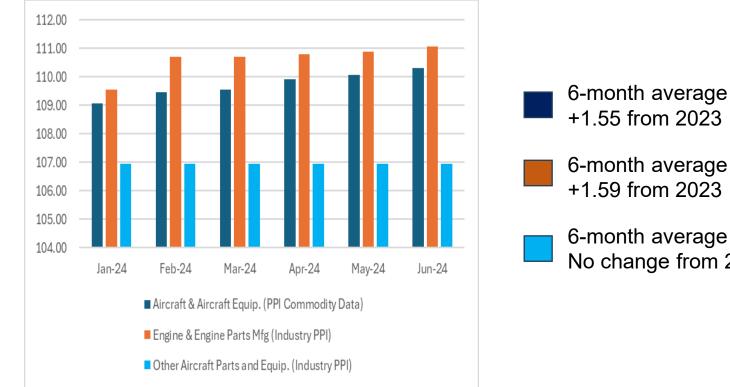
• 72%+ growth in Other Aircraft Parts & Equip seen in 2023

2023

Growth in Aircraft & Aircraft Equip more evenly spread over 2022 and 2023
 than other groups

**Monthly PPI** Jan – Jun 2024





6-month average = 109.72

6-month average = 110.62

6-month average = 106.93No change from 2023

### DEFENSE LOGISTICS AGENCY

Established 1961

### SENIOR EXECUTIVE PARTNERSHIP ROUND TABLE October 29<sup>th</sup>-30<sup>th</sup> 2024

\*\* (1) \*

#### THE NATION'S LOGISTICS COMBAT SUPPORT AGENCY

PEOPLE  $\star$  PRECISION  $\star$  POSTURE  $\star$  PARTNERSHIPS

WARFIGHTER ALWAYS