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Thank you for participating,

A handwritten signature in black ink that reads "G. Hamilton".

Gregory Hamilton
President
Aviation Week Network

Acknowledged, agreed, and submitted by

A handwritten signature in black ink that reads "Mandy Sheehy".

Nominee's Signature

31 May 2023
Date

Nominee's Name (please print): Mandy Sheehy

Title (please print): F-35 Sustainment Program Director

Company (please print): Lockheed Martin Corporation

NOMINATION FORM

Name of Program: F-35 Depot Activation, Training & Logistics

Name of Program Leader: Mandy Sheehy

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Customer Approved

o Date: 18 May 2023

o Customer Contact (name/title/organization/phone): Kyle Matyi/F-35 Depot Lead/F-35 Lightning II Joint Program Office/kle.matyi@jsf.mil

Supplier Approved (if named in this nomination form)

o Date: _____

o Supplier Contact (name/title/organization/phone): _____

**PLEASE REFER TO PROGRAM EXCELLENCE DIRECTIONS
AS YOU COMPLETE THIS FORM.**

EXECUTIVE SUMMARY: Make the Case for Excellence

Value: 10 points

Use 12 pt. Times Roman typeface.

What is the vision for this program/project? What unique characteristics and properties qualify this program for consideration?

The Lockheed Martin F-35 Lightning II aircraft strengthens national security, enhances global partnerships, and powers economic growth. It is the most lethal, survivable, and connected fighter aircraft in the world, giving pilots an advantage against any adversary and enabling them to execute their mission and return home safe.

The F-35 team is delivering integrated sustainment capabilities to ensure the F-35 is mission-ready, anytime, and anywhere. As minutes matter, Lockheed Martin's 24/7 operations centers, supply chain, and sustainment engineers partner closely with our customers to solve complex challenges and meet the needs of the flight line.

The program being nominated for excellence this year is the sustainment team that is responsible for F-35 component repair capability establishment and operations. This team establishes component repair capabilities at United States Government (USG) Depots in support of statutory depot-level maintenance and warfighter requirements. Depot component activations are an integral piece of the repair network that enables the readiness of the F-35 fleet around the world. F-35 has been established as a two-level maintenance platform, emphasizing the requirement for a robust organic Depot level repair capability. Depot component capability development not only adds capability to our national defense, but it also brings jobs into six USG Depots. The highly skilled Depot work force ensures the organic continuity of operations as the F-35 Program approaches 1,000 aircraft deliveries. Our F-35 sustainment team has delivered organic repair capability for >400 F-35 components, bringing a significant impact of >3,000 repairs across USG Depots in 2022.

F-35 components including Electro-Optical Distributed Aperture System (EODAS), Power Thermal Management System (PTMS), and Ejection Seat have provided a critical second source of repair for top degrader systems. Additionally, initiatives in contracting and the activation process have improved capability delivery timelines. Early workload activations could span to eight years, while recent activations have accelerated to complete in as few as three years, leveraging incremental activations to yield a 33% increase in capability per year. These complex, cross-functional efforts have shown a mission focused mentality between the Joint Program Office (JPO), Depots, Suppliers, and Lockheed Martin. Each organizational team member recognizes the importance of their role in this partnership in delivering essential repair capabilities to keep 'em flying.



DIRECTIONS

- Do not exceed 10 pages in responding to the following four descriptions.
 - Allocate these 10 pages as you deem appropriate, but it is important that you respond to all four sections.
- DO NOT REMOVE THE GUIDANCE PROVIDED FOR EACH SECTION.
- Use 12 pt. Times Roman typeface throughout.
- Include graphics and photos if appropriate; do not change margins.

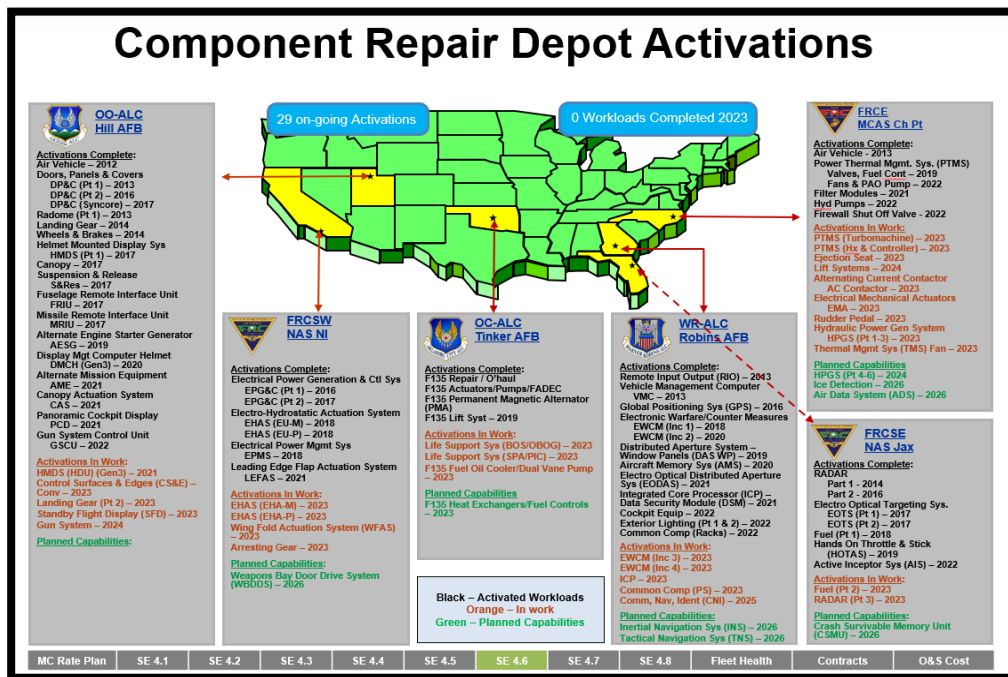
VALUE CREATION

Value: 15 points

Please respond to the following prompt:

Clearly define the value of this program/project for the corporation; quantify appropriately

Through the partnerships established through depot activations and leveraging off production processes and approved acceptance test procedures to reduce nonrecurring engineering costs, Lockheed Martin can deliver a repair capability at a reduced cost to the program. The F-35 Depot program is critical to the long-term sustainment strategy for Lockheed Martin and our JPO customer. This program enables affordable 5th generation sustainment and increased F-35 mission readiness for the warfighter through a partnership of government organic and industry repair solutions. Under a purely organic depot maintenance program the USG would experience exorbitant costs to implement repair processes, create, and maintain technical data.



Clearly define the value of this program/project to your customer

It is critical for our customer to be able to maintain organic and sovereign repair capabilities for this weapon system to ensure continuity of operations if there was a war time scenario. There are two applicable Depot-level maintenance and repair workload statutes contained in Title 10 which regulate any weapon system product support strategy. These two statutes are critical to ensure a ready and controlled source of technical competence and resources necessary to ensure effective and timely response to mobilization, national defense contingency situations, and other emergency requirements. This also ensures at minimum 50 percent of those repairs will be performed by a government owned and government operated source.

Lockheed Martin's Depot program is not limited to training the USG Depots on the required maintenance tasks. Our team must ensure a logistically supportable and validated repair solution. This means the facilities, infrastructure, technical data, technical expertise, supporting hardware and software must all be in place to meet the forecasted demand. This also requires consistent evaluation of repair network capacities to mitigate repair gaps. The F-35 JPO relies on Lockheed Martin to establish, manage, and optimize depot repair capabilities to support the program.

Repair & Depot Forecasting - Shaping F-35 Component Repair Network

The Lockheed Martin has enabled decision makers and acquisition leaders with the forecasting data necessary to prioritize and quantify required funding for the F-35 Component Repair Network.

- Depot Workload Projections Provides:
 - 21 year (current year +20) look at Depot Workload Projections – repair demand requirements
 - Informs demand requirements and resource planning
- Global Capacity Analysis Provides:
 - 5-year look at capacity vs demand; expanded to 10 years
 - Informs capacity and resource planning

The development and delivery of F-35 Depot Capacity Analysis has provided Sustainment Leadership and the Joint Program Office a 10 year look at component repair network capacity. The product is utilized internally and by the customer for future organic depot capability planning. Additionally, the product is used to influence F-35 program leadership on future European and Asia – Pacific regional capacity requirements which support consideration for establishing OCONUS Product Service Providers (PSP). Organic Depot component repair capacity and delivery of the associated contractual deliverable continues to shape the F-35 Component Repair Network. The capacity analysis far exceeds the initial expectation and continues to develop into a valuable tool that supports our commitment to our customer and feeds internal planning tools.

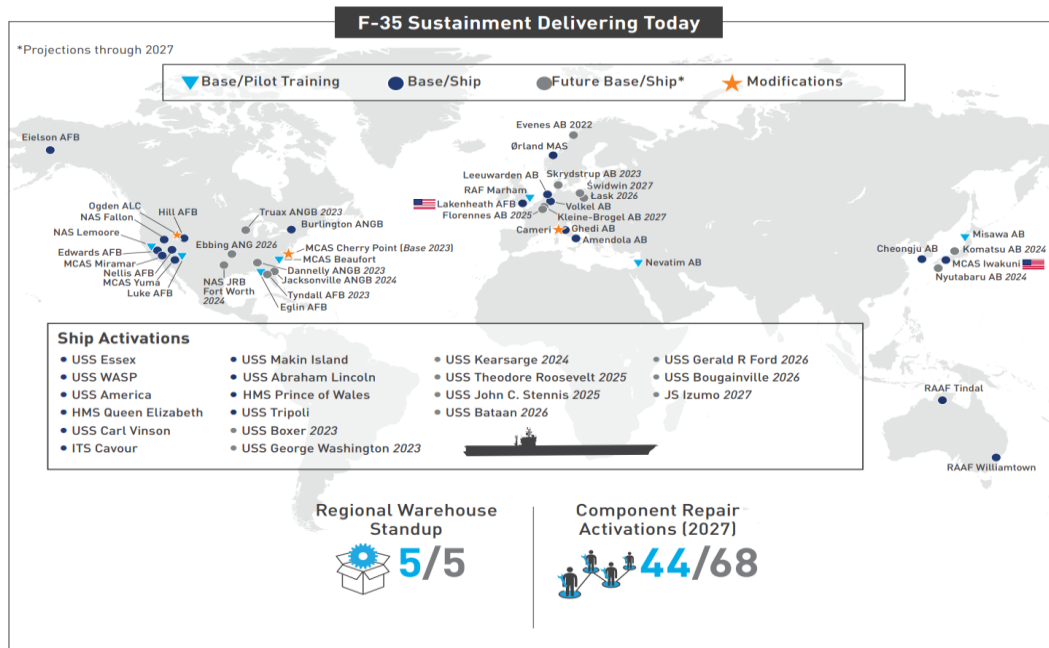
Clearly define the value of this program/project to members of your team; quantify if possible

The team for Depot activations and operations consists of members from Lockheed Martin, JPO, USG Depots, and F-35 Suppliers. Each member of the team can take pride in providing support to the warfighter. They can also embrace the complex challenges experienced daily. F-35 Depot is a high

paced, high reward program that, naturally, gets high levels of attention and pressured to accelerate schedules due to growing fleet demands. In 2022, 11 activations were completed on-time or early. All aspects of project management are required for this program and each member is essential. The completion of each depot activation is a tangible reward to the team, the program, and the F-35 operators.

Clearly define the contribution of this program/project to the greater good (society, security, etc.)
 This program provides thousands of jobs for our local communities across the six USG depot sites as well as all supporting suppliers and customer locations, including our Lockheed Martin locations.

As a cooperative development and production program originally involving nine participating nations, the program enhances international security through common military capabilities. Toward that end, the F-35 Program has sought and attained changes in U.S. technology disclosure policy. The program has driven a paradigm shift emphasizing the need to release certain technologies to key allies, while continuing to maintain effective technology protections that preserve U.S. military advantage. In the area of economic alliance building, the U.S. Government (USG) has embraced the participation of international industry in the program. The incentives and benefits for international industry are achieved by a carefully implemented technology transfer policy that supports both continuity and the growth of a world-class international supply chain.



ORGANIZATIONAL BEST PRACTICES AND TEAM LEADERSHIP

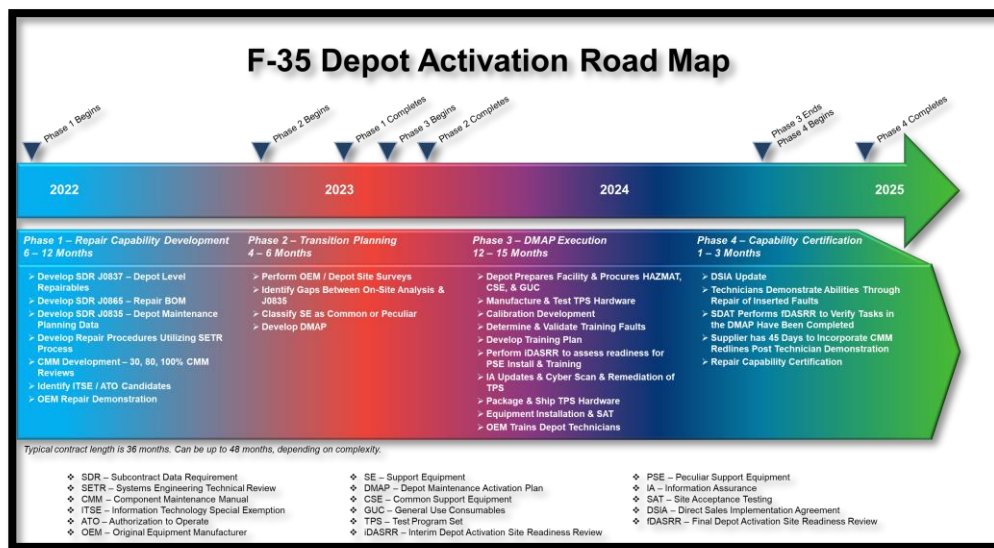
Value: 35 points

Use 12 pt. Times Roman typeface

Please respond to the following prompts:

15 points: Describe the innovative tools and systems used by your team, how they contributed to performance and why

As with any example of project management, schedule is critical. Lockheed Martin implemented and continues to improve a process to manage and maintain multiple schedules at any given time. Each depot activation workload is assigned to a responsible Project Manager who develops and owns their schedule(s) while conforming to a standard set of depot activation milestones, aligned to the figure below. All schedules are kept in a shared area leveraging the cloud-native document management platform Box. Weekly, a macro-enabled data pull extracts all schedule info and various views are created for status reporting, program briefings, and risk / issue resolution. This has been utilized for over 40 concurrent depot activations and has dramatically streamlined the manual schedule management of the past. This use of single source of schedule information has also reduced misalignment of schedule data due to stagnant or outdated briefings. The updated file management process is easy to securely create and collaborate from any device while ensuring its properly secured and governed. This is especially important as the component activation team is regularly traveling globally and efficient status collaboration is necessary for project management.



➤ **Tableau Data Visualization**

Digital transformation has been at the forefront of component activation and sustainment management. Tableau usage has been deployed to transform data into actionable insights. Specifically, this has enabled the team to reduce manual data product creation and aggregation by ~20%, freeing up opportunities to exercise data analytics in support of improved performance and data quality.



10 points: Define the **unique practices and process you used to develop, lead, and manage people?**

➤ **Agile Cell Alignment**

Alignment internally with Cross Functional teams and our customer provided the opportunity to work collaboratively, as a team, obtaining best possible result to address constraints in the F-35 component repair network. As an example, this collaboration resulted in a contract for additional tooling that sustains the designed repair capacity at Warner Robin Air Logistics Complex for the EODAS sensor.

➤ **Repair Network Integrations**

Integration between sustainment supply, Depot repair, component activations, integration of supply repair network, including OCONUS Product Service Providers (PSP) have aligned to manage the enterprise repair network. The collaborative team members perform a ten-year analysis on capacity requirements. These requirements are based on forecasted repair generations from the North American, European, and Asia-Pacific theaters. Lockheed Martin can right size capacity when and where required and provide the customer and OCONUS PSPs planning data to support future depot activations.

The Depot Component Repair Operations team has experienced internal growth by maturing our activation to operations hand off process, ensuring the complexity and repair capability depth is supported with the appropriate level of sustainment services.

➤ **Partnership with Depots**

Lockheed Martin currently has 11 Direct Sales Implementation Agreements (DSIA) in place with the five organic repair centers, out of the 11, five introduce a Third Party that provides significant technical and logistics expertise related to the IA agreement for that specific workload.

10 points: How did you leverage skills and technologies of your suppliers?

The F-35 Supplier base is the design authority for the components they provide. As such, they are contracted to develop, deliver, and support depot repair capabilities to the USG Depots. This ensures alignment between production and sustainment as well as the greatest utilization of supplier, program, and USG skills and technologies. Furthermore, our supplier base retains support responsibility for technical data, sustaining engineering, repair data, supply chain management, including packaging, handling, storage, and transportation (PHS&T), support equipment technical support, configuration management, and customer/product support in accordance with applicable contracts and partnering agreements. This is conducted through Annualized Sustainment contracts, Performance Based Logistics contracts, and the use of Public Private Partnerships.



DEALING WITH PROGRAM COMPLEXITY (VOLATILITY, UNCERTAINTY, COMPLEXITY, AMBIGUITY, or VUCA)

Value: 25 points

Use 12 pt. Times Roman typeface

Please respond to the following prompts:

10 points: Describe UNIQUE areas of VUCA faced by your program and why. (Please avoid the issues surrounding Covid-19 pandemic, which was faced by all programs.)

Through the course of establishing component repair capability for the F-35 Program, there have been several significant areas of volatility, uncertainty, complexity, and / or (VUCA). Examples include:

- 1) Concurrency of Development, Production, and Sustainment for the F-35 (Configuration Management)
- 2) Contracting / Funding Stability for Depot Activations and Initial Depot Repair Material
- 3) Joint Program of 3 US Services, 8 International Partners, and a growing number of FMS Customers

15 points: Explain how your team responded to these challenges. What changes did you make, what were the results?

1) Concurrency of Development, Production, and Sustainment

According to a 2013 Pentagon report to Congress, *Concurrency is defined as the overlap in the development and production phases of the acquisition program.* When it comes to advanced fighter platforms, there have been several opinions regarding concurrency. F-35 is only different in that the level of concurrency is unprecedented by overlapping development (flight test), production, and sustainment. The same Pentagon report went on to state *Concurrency introduces the risk that aircraft built in early production lots will require modification due to discoveries made during qualification, flight, and ground tests, or because of engineering analysis.* While there is truth to the claim, the risk is minimal in comparison to the schedule savings. Concurrency allowed the program to field fleets about 10 years sooner than a typical acquisition.

For depot activation, concurrency presents an opportunity for change management and requires appropriate attention be paid to early configurations, upgraded configurations, and retrofit plans. With over 3,000 aircraft expected to be sold, depot repair capability is necessary for many different fielded configurations of components. Lockheed Martin continuously evaluates the needs of current configurations as well as future changes. This analysis then informs the joint planning of depot activations, but also mitigates the risk of program investment in depot capabilities that won't be needed. Other options like additional sparing or extended reliance on the OEMs for repair of certain components save depot activation dollars to better serve the program.

2) Contracting and Funding Stability for Depot Activations and Material Lay In

Since the early years of the F-35 Program, depot capability establishment has been a primary objective for the US Services to maintain workforce competencies and better support the Global fleet. However, program funding and contracting for depot activations has presented significant challenges over time. Early depot activation contracts spanned 2-3 years between Request for Proposal (RFP) and Contract Award. These contracts required a high number of supplier proposals to be delivered on time, compliant, and remain valid through Prime contract award. In several cases, the contract award timeline suffered

due to supplier proposal delays and / or funding / scope reductions at the prime. These issues prolonged contract awards and, in turn, delayed depot activations.

To change this trend, Lockheed Martin and the JPO adapted and tested an approach to “alpha-negotiations” with its supplier base. This approach entailed a joint walkthrough and discussion of the depot activation requirements, the supplier’s quick turn (30-90 days) of engineering Basis of Estimates (BOEs), joint evaluation and negotiation to reach agreement, and, finally, supplier pricing of agreement. Initially, five depot activation workloads were used to successfully test this approach; thereafter, it was keenly applied to another 20+ supplier contracts. Ultimately, the approach reduced the contracting span from 24-36 months down to 6-8 months.

A similar approach, using lessons learned, will be applied for the next four depot contracting efforts spanning Material Lay In, additional depot activations, test system spares, and upgrades to existing capabilities.

3) Joint Program of 3 US Services, 8 International Partners, and a growing number of FMS Customers

Being a joint program spanning upwards of 20 customers, a governance structure needed to be established to provide oversight and guidance for F-35 Depot Repair activities. The Joint Depot Activation Working Group (JDAWG), co-chaired by JPO and Lockheed Martin, was created to ensure adequate program support to USC Title 10 compliance, depot activations, and depot operations. Initially, the JDAWG defined a joint service Depot Source of Repair (DSOR) selection process to determine which depots (Air Force Air Logistics Complexes (ALC) and Navy / Marine Fleet Readiness Centers (FRC)) were to receive which F-35 components. Other joint solutions have been developed for F-35 which address Service specific policy / process / requirement. The JDAWG meets quarterly to review depot activations and operations performance and remove barriers to timely establishment key depot repair capability and right-sized capacity and is supported by AFMC, COMFRC, each of the Service Depots, and other DoD organizations.

Likewise, the Regional Capabilities Working Group (RCWG) was established to address international depot requirements and aspirations across the F-35 Program. The RCWG also convenes quarterly and includes participants from each of the partner nations as well as recently added FMS countries. Air Vehicle, Propulsion, and Component Depot activations and capabilities are the primary focus of the RCWG. With such a diverse customer base, a governing body needed to be created to align objectives across the program.

METRICS

Value: 15 points

Use 12 pt. Times Roman typeface

Please respond to the following prompts, where predictive metrics indicate items that provide a view of how e actions and today’s actions will affect the future timeline, , or other requirement.

Provide charts/graphs that illustrate performance to these metrics:

➤ **What are your predictive metrics?**

Workload Allocation

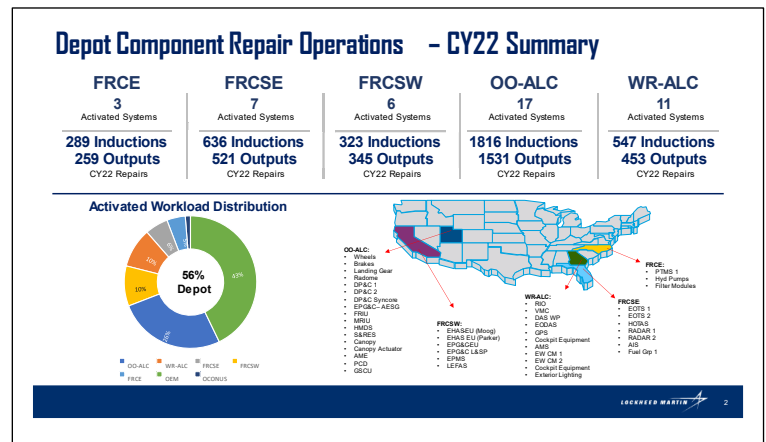
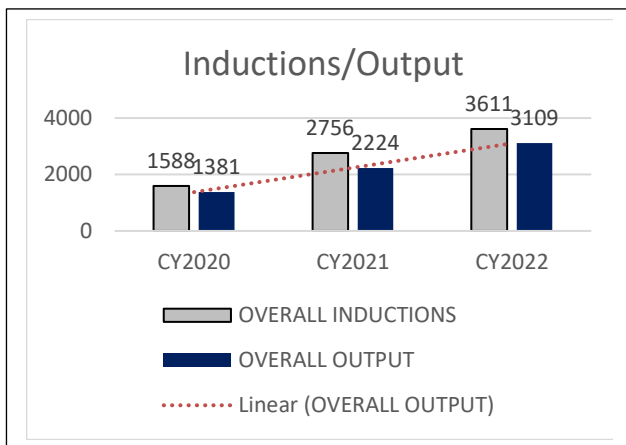
Development of our predictive metrics support relevant statutory requirements for depot level maintenance. Where Title 10 U.S.C §2460 provides a role for depot-level maintenance and repairs performed by industry contractors, Title 10 U.S.C §2466 limitation on the performance of depot-level maintenance of material limits available funds to contract for performance, often referred to as the 50/50 rule. Title 10 U.S.C. §2464 Core Logistics Capabilities ensures we schedule the workload required that allows the Department of Defense to maintain those core capabilities. Our predictive metrics for workload allocation supports both statutory requirements as well as repair performance. Repair performance is measured in throughput or volume of repairs.

Induction / Output Performance

Predictive measurement of induction performance ensures we are feeding the machine to support the desired output performance. The predictive measure of output performance throughput provides a key indication of healthy or constrained repair lines. These predictive measures drill down into each of the 44 active repair lines that span five organic Center of Industrial and Technical Excellence (CITE) sites, identifying known and emerging capacity constraints. Early indication of a constraint allows the team to optimize the constraint by applying available resources.

How did you perform against these metrics?

Year ending 2022 the workload allocation to organic repair depots is 56% of all F-35 generated repair demands for the 413 activated components.



Induction Performance

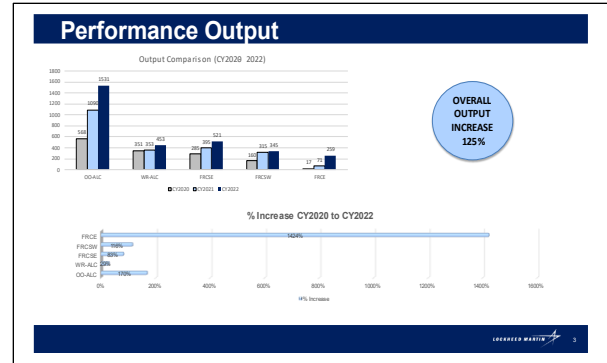
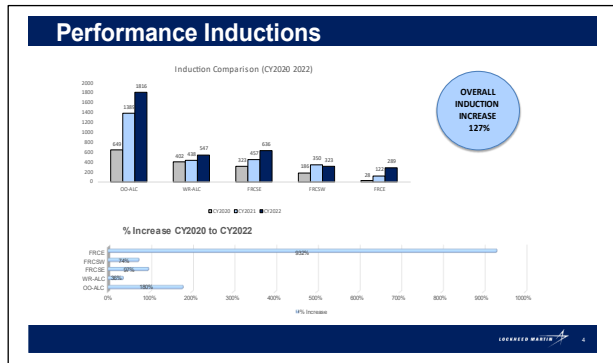
The organic depot induction volume grew 127% in a three-year period. CY2020 repairs totaled 1,588 components compared to 3,611 for CY2022. Fleet Readiness Center East (FRCE) experienced the greatest growth at 932% over the 36-month span.

Challenges overcome related to induction performance were alignment of Direct Sales Implementation agreements, manpower, and stability of support equipment's.

Output Performance

The organic depot output volume grew 125% in a three-year period. CY2020 inductions totaled 1,381 components compared to 3,109 in CY2022. Fleet Readiness Center East (FRCE) experienced the greatest growth at 1,424% over the 36-month span whereas Warner Robins was relatively stable over the span with a 36% growth in induction quantities.

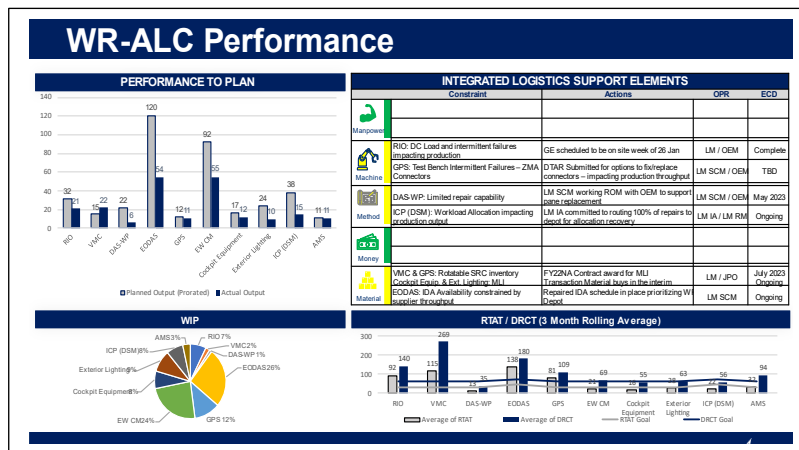
Challenges relating to output performance were availability or repair material, technician proficiency, and sustainment of test equipment.



How do your predictive metrics drive action toward program excellence? Please provide examples.

Tracking the workload allocation metric drives inputs into the Life Cycle Support Plan (LCSP) ensuring activated test solutions maintain concurrency with flight hardware. Changes to the flight hardware due to Diminishing Manufacturing Sources, Reliability & Maintainability Improvements, or Continuous Capability, Development, and Delivery (C2D2) will often require changes to the test equipment and technical data to support the new configurations.

Improvements in digital transformation products that provide data analysis and visualization dashboards leadership can use to make decisions real time. Visual dashboards are used to identify the constraints along with the actions and resources required to remove the constrain impacting organic depot performance.



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