SERVICE SOLUTIONS

DISPLAY AVAILABILITY INCREASE WITH 20% BUDGET DECREASE

In 2014, a 20 percent funding cut in the United States Navy's F/A-18 displays performance-based logistics (PBL) program challenged the program leadership team to maintain operational efficiency without affecting customer requirements.

Navy fighter pilots on F/A-18 aircraft routinely must find ways to perform at the highest level, no matter what the mission environment. Collins Aerospace head-up and head-down cockpit displays enable flight and mission information, giving the pilots better situational awareness throughout each flight.

The Collins Aerospace PBL program started in 2003 and continues to provide full life-cycle sustainment value for the F/A-18 platform. Through obsolescence management and enhanced long-term sustainability best practices, our PBL program has increased displays availability and reliability.

Our products, covered under the program, are warehoused at the Collins Aerospace Service Center and at two depot-level repair Navy Fleet Readiness facilities. Additionally, the program supports multiple intermediate-level repair sites worldwide. Performance is measured through supply response time, which is aligned with warfighter operational availability requirements.

During this time the life of the F/A-18 fleet was extended, leaving the U.S. government and Collins Aerospace leadership team no viable option to reduce performance scope.

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CHALLENGE:

Maintain operational efficiency despite a 20% reduction in the Navy's F/A-18 displays PBL program.

SOLUTION:

Monitor four key metrics: Requisition fill data, no fault found rates, repeat returns and reliability reporting.

Seek opportunities to enhance affordability: Partner with the production line to reduce material costs.

Seek a strategic and proactive method of monitoring obsolescence: Staff a full-time obsolescence team dedicated to the F/A-18 displays PBL program.

RESULTS:

Exceeded performance expectations with a 100 percent supply material availability and achieved operational efficiency with a series of calculated cost reductions.

Collins Aerospace

Collins accepted the challenge and innovated new ways to increase efficiency across the wide range of operational areas within the F/A-18 displays PBL program.

The PBL program began monitoring these four key metrics:

1. Requisition fill data – Every month, the team monitors requisitions and fill rates of the PBL assets. This monitoring allows Collins to effectively coordinate work share with depot partners at the Navy's Fleet Readiness Center – Southwest (FRC-SW) and Fleet Readiness Center – Southeast (FRC-SE).

2. No fault found (NFF) rates – NFF monitoring enables the program to effectively redeploy Collins service engineers to improve operations, working with the Navy maintenance team. These service engineers use the NFF data as a means for identifying training opportunities at the various intermediate-level maintenance sites. Since inception of this metric, NFF rates have declined.

3. Repeat returns – These are products returned from the fleet within six months of the last repair. Repeat return data is reviewed biweekly. Monitoring of repeat returns allows Collins to find any potential recurring issue in the performance or quality of its products and head off concerns at the earliest and lowest levels. Since implementation of this metric, quality trends have consistently improved at all three repair facilities.

4. Reliability reporting – Reliability data is evaluated semi-annually to trend failure modes in the reliability of Collins products. This information is used to evaluate and head off any areas of concern. Additionally, the data helps determine how to allocate funds to infuse product improvements.

SUPPLY CHAIN

The Collins F/A-18 displays PBL team continuously seeks opportunities to enhance affordability. For instance, the program's proactive approach and forward logistics thinking led the team to partner with the production line in order to reduce the material cost of a glass filter element by 50 percent per item.

CYCLE TIME AND EFFICIENCIES

Due to the commercial off-the-shelf (COTS) nature of many components, the leadership team was forced to challenge standard processes and seek a more strategic and proactive method of monitoring obsolescence.

After a thorough analysis, the program leadership decided to staff a dedicated a full-time F/A-18 displays PBL obsolescence team. Collins quickly and successfully modeled the efficiency improvements from the obsolescence team and expedited cost reduction.

Key obsolescence statistics for the F/A-18 PBL program are:

- Over 10,000 parts are analyzed on an annual basis
- Since 2018, Collins Aerospace has identified 624 obsolete or predicted obsolete parts for the F/A-18 program. 575 parts have been resolved. The remaining parts require further research or are in the redesign process and have been prioritized based on the potential impact to fleet readiness.

RESULTS

The F/A-18 displays PBL program team adapted to the needs of the warfighter and exceeded performance expectations while maintaining a commitment to stakeholders through a series of calculated cost reductions. This accomplishment further strengthened our core relationship with government customers.

The U.S. Navy and the Collins F/A-18 displays PBL team fully embody a collaborative culture, leading the way for a successful PBL program; which requires the removal of barriers with complete team engagement and common goals. This effort and initiative was recognized as a Department of Defense PBL award winner in 2006. Collins Aerospace remains vigilant in its quest to deliver the best PBL service in the industry.

PBL IMPROVEMENTS AT A GLANCE

- Increased supply material availability to 100%
- Eliminated backorders (from 583 to 0)
- Decreased NFF
- Improved quality trends in all repair facilities
- Reduced fleet's valid display repeat returns to 1%
- Reduced incidence of damaged combiner glass in head-up displays by 38%
- Reduced cost by 26% from fleet improvement collaboration

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