

Flexible Sustainment Solutions

Flexible sustainment involves identifying the high-cost items in a weapon system, determining the reason why the item is failing by drilling down to the lowest level cause, and then propose solutions to reduce the cost.

Falcon Flex Goals

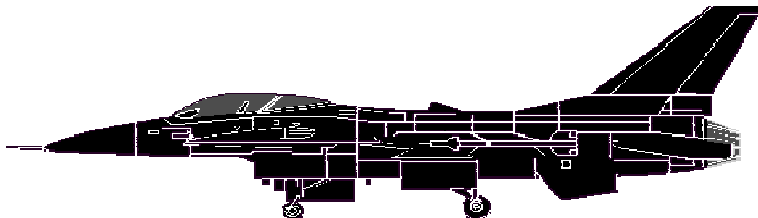
- Reduce Repair Costs
- Improve Reliability
- Increase Availability
- Reduce Diminished Manufacturing Source (DMS) Problems
- Reduce AWP's
- Reduce MICAP's
- Reduce Total Ownership Cost

How The Work Is Done

1. Perform Data Mining of Historical and current repair information
2. Review Data for accuracy and detail
3. Evaluate data using innovative techniques
4. Determine high cost drivers to the lowest possible level
5. Formulate solution(s) to accomplish goals
6. Provide Solutions to Managers
7. Assist in Engineering
8. Assist Managers in Implementation

Potential Solutions

1. Performance Based Acquisition
2. Use of Current Technology
3. Modification of existing technology



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Demonstrated Examples

#1. APG-68 Radar Programmable Signal Processor (PSP) Memory Card

CORRECTIVE ACTION

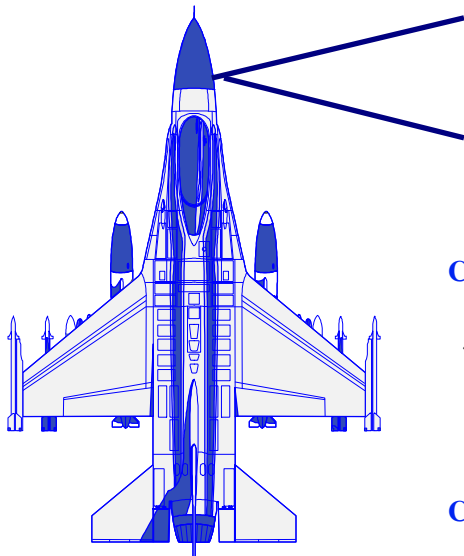
- ◆ Replace high failure rate Memory Card
- ◆ Procure low failure rate Memory Card
 - Performance Based Acquisition
 - Form, fit, function & interface compatible
 - Use current technology parts
 - Eliminate obsolescence problem

COST / SAVINGS IMPACTS

- ◆ \$66,000,000 to repair through 2023
- ◆ \$6,000,000 to retrofit entire F-16 fleet with new card
- ◆ \$60,000,000 saved in memory card repair cost

OLD WAY	NEW WAY
\$14K Purchase	\$ 4K Purchase
\$ 3 Million annually to repair	\$0 Repair (10 yr. Mfg warranty)
500 Hrs - Mean Time Between Failure	40,000 Hrs — Mean Time Between Failure
Severe DMS. Problems	No DMS Problems
Same memory capacity	Doubled memory capacity

#2. AZ/EL Compensation



After extensive TQS analysis, it was discovered that 70% of all failures in the AZ/EL Compensator were due to thermal runaway.

CORRECTIVE ACTION

- ◆ Circuit modification
 - Replace a diode with a jumper wire in four places

COST / SAVINGS IMPACTS

- ◆ \$30,800,000 to repair through 2023
 - ◆ Paperwork and hardware change cost was under \$500K
 - ◆ \$30,000,000 F-16 lifetime net savings
- Increase in Antenna reliability