



AIR FORCE

LIFE CYCLE MANAGEMENT CENTER



AFLCMC... Providing the Warfighter's Edge

PROPULSION DIRECTORATE



Propulsion Sustainment Source Approval and More

14 August 2018

Ms. Melanie Jonason

AFLCMC/LPS

DSN: 336-2013

Email: melanie.jonason@us.af.mil

Integrity - Service - Excellence



Agenda



AFLCMC... Providing the Warfighter's Edge

- **Qualification Requirements Updates**
 - Resubstantiation Timing Clarifications
 - Significant Industrial Process Certification Expansion
 - Assembly Qualification Structure
 - Repair Development Addition
- **Other Developments**
- **Summary**



Resubstantiation Timing Clarification



AFLCMC... Providing the Warfighter's Edge

- **For sources who remain in production, resubstantiation is unnecessary**
- **For sources who stop production, the resubstantiation clock starts when production stops**
- **Benefit: Eliminate distraction for producing sources while meeting the intent of the FAR**



Significant Industrial Process Certification Expansion



AFLCMC... Providing the Warfighter's Edge

- **Process expertise can be validated through**
 - NADCAP
 - OEM
 - Government audits, to include DCMA, Army, Navy or USAF
 - Self certification
- **Engineering will evaluate potential sources proposal to prove disciplined, rigorous processes are in place**
- **Benefit: More possibilities for process qualification (but may time more time)**



Assembly Qualification Structure



AFLCMC... Providing the Warfighter's Edge

- **New to standardized QRs is a structure to submit SARS for assemblies, family groupings of parts, or modules**
- **Uses some familiar principles, like SAR-lites**
- **Benefit: Less paperwork for all**



Repair Development Addition



AFLCMC... Providing the Warfighter's Edge

- **Added two new types of repair qualification**
 - **Developed repair allows commercially developed repair procedures to be submitted and qualified by the AF**
 - **In addition, if USAF advertises the need for a repair, a new repair may be developed through the SAR process**
- **Benefit: Opportunity to use commercial work for the government**



Other Developments



AFLCMC... Providing the Warfighter's Edge

- **Production Lots Testing versus First Articles Testing**
- **Continued exploration in data applications**



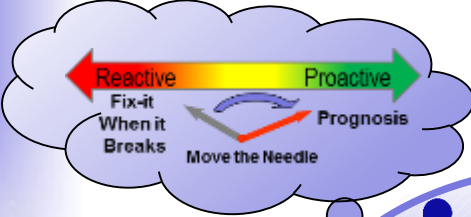
CONOPS



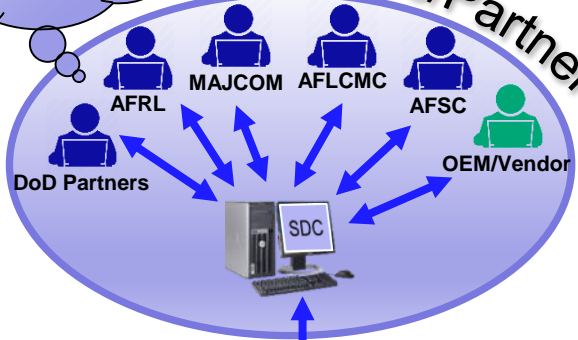
CBM+ Operational View-1

AFLCMC... Providing the Warfighter's Edge

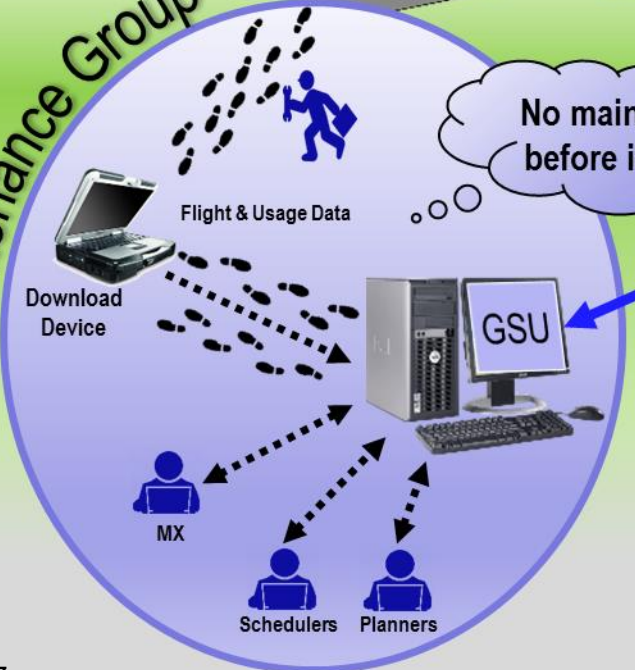
In-flight Recording



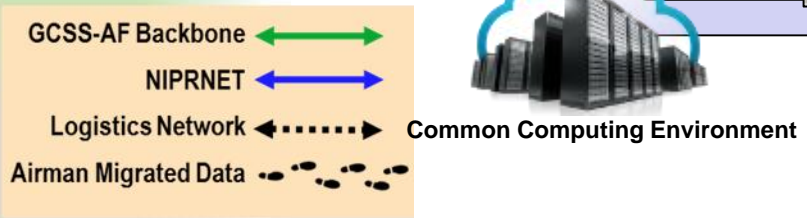
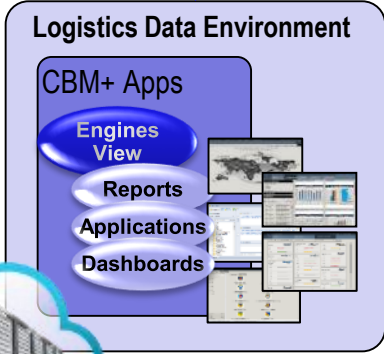
Customers/Partners



Maintenance Group



No maintenance before it's time!





Summary



AFLCMC... Providing the Warfighter's Edge

- **Air Force Propulsion is the Propulsion Center of Excellence for the USAF and international partners**
- **Rapid, agile and innovative solutions ensure our Air Force Propulsion is *Ready, Affordable, Safe and Effective***

PROPULSION DIRECTORATE

AFLCMC... Providing the Warfighter's Edge



U.S. AIR FORCE



USAF Propulsion Directorate Condition Based Maintenance + Vision



AFLCMC... Providing the Warfighter's Edge

Integrated Forecast & Health Management

- Hosted on Air Force Enterprise Architecture
- Near-real time Centralized Data Accessibility
- Analytics applied to live data

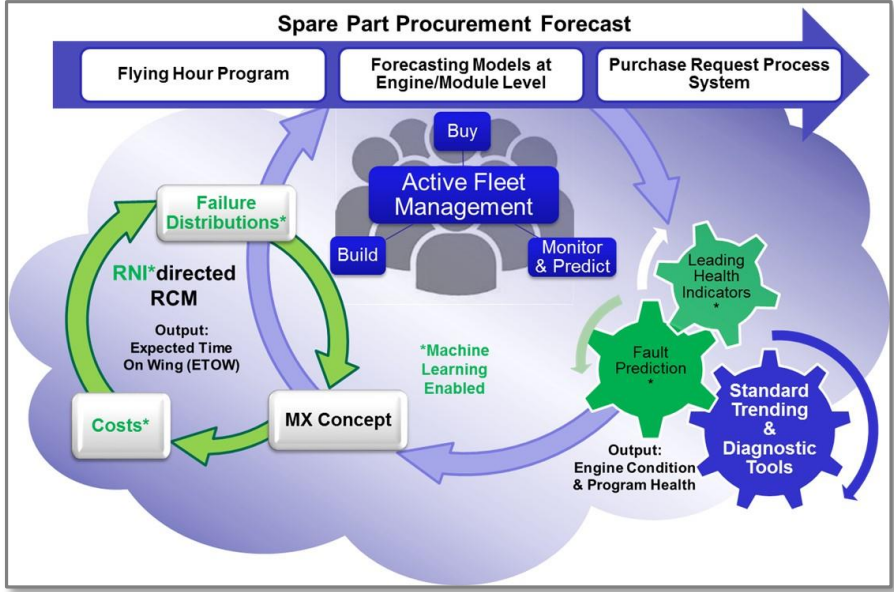
Speed & Agility

- Enterprise deployment of software
- Utilize agile software development paradigm
- Collaboration with industry and DoD service partners
- Leverage guided Artificial Intelligence for insight

Flexibility

- Not limited to in-house development
- Broad applicability across multiple platforms

Future Propulsion Fleet Management



Reliability Centered Maintenance (RCM)

- Machine Learned Failure Distributions for optimum engine workscope

Parts Forecasting

- Spare Part projections for more agile procurement and usage forecasting

Asset and Program Health Reporting

- Machine learned fault prediction
- Automation of Leading Health Indicators for program health monitoring

Active Fleet Management