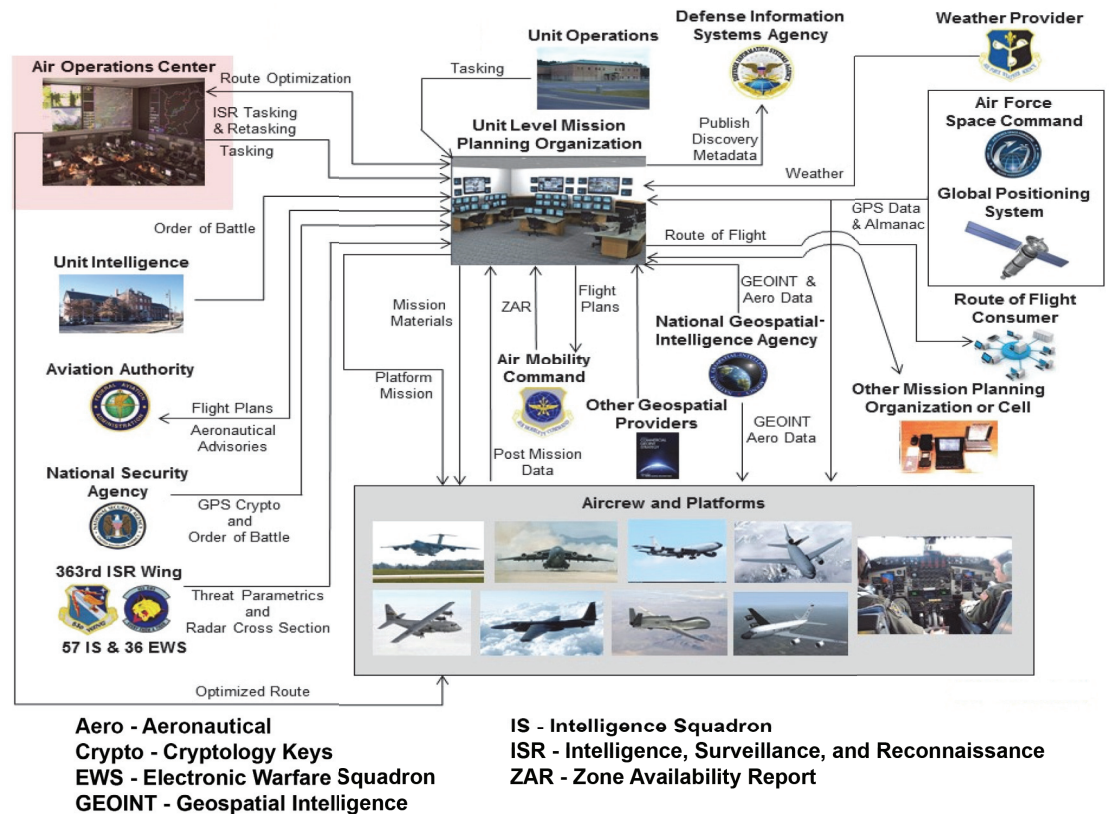# Mission Planning System (MPS) / Joint Mission Planning System – Air Force (JMPS-AF)

Executive Summary

- The Air Force Operational Test and Evaluation Center (AFOTEC) conducted the Mobility Air Forces Automated Flight Planning Service (MAFPS) IOT&E in 1QFY18. The MAFPS IOT&E exposed numerous deficiencies inherited from developmental testing that indicate system immaturity.

- The classified MAFPS functions were ready for test during the IOT&E period; however, its enclave-dependent environment and the interfaces required to implement the SIPRNET concept of operations were not ready. Therefore, additional post-IOT&E operational test and evaluation will be required to assess MAFPS classified capabilities.

Aero - Aeronautical
Crypto - Cryptology Keys
EWS - Electronic Warfare Squadron
GEOINT - Geospatial Intelligence

IS - Intelligence Squadron
ISR - Intelligence, Surveillance, and Reconnaissance
ZAR - Zone Availability Report

System

- The mission planning system (MPS) Increment (Inc) 5 is a software-only acquisition category III program consisting of common mission planning software modules for unit-level aircraft platform mission planning and centralized Air Force Mobility Air Operations Center global mobility planning and dispatching.

- MPS Inc 5 migrates Air Force airlift, tanker, airdrop, and combat search and rescue legacy mission planning platforms to the Joint Mission Planning System (JMPS).
  - JMPS software installs on standard Air Force computers with aircraft-specific Mission Planning Environments which can operate as classified or unclassified systems.

- MAFPS is one of three efforts in the MPS Inc 5 program. It replaces the legacy Advanced Computer Flight Plan (ACFP) software used by the Air Force Air Mobility Command (AMC) 618th Air Operations Center (AOC), also known as Tanker Airlift Control Center (TACC).
  - MAFPS software supports AOC-level global mission planning and route optimization for strategic airlift, aerial refueling, and tactical airlift missions.

  - MAFPS is designed to automate global mobility planning processes by integrating aircraft performance data, weather, global airspace restrictions and aeronautical charts, and geopolitical boundaries into one planning tool. MAFPS is also designed to provide optimized flight paths based on time and fuel requirements.

Mission

- AMC MAFPS force-level global mobility planning occurs worldwide at AMC-specific AOCs. For example, U.S. Transportation Command planners use MAFPS in the AOC environment then pass products to units for execution.

- At the aircraft unit level, individual aircrews or mission planning cells use MAFPS Inc 5 JMPS to optimize flight missions across the full spectrum of air missions ranging from peacetime training missions to complex combat missions.

Major Contractor

BAE Systems – San Diego, California

Activity

- AFOTEC conducted the MAFPS IOT&E from August 2017 through November 2017 in accordance with the DOT&E-approved Test and Evaluation Master Plan and the DOT&E-approved IOT&E plans.
- The classified MAFPS functions were ready for test during the IOT&E period; however, its enclave-dependent environment and the interfaces required to implement the SIPRNET concept of operations were not ready. Post IOT&E testing is required to evaluate these capabilities.
- The Air Force fielded the overall system in March 2018. The Air Force generated and fielded three continuous agile software releases since December 2017.

Assessment

- DOT&E analysis indicated numerous problems hampering effectiveness, suitability, and cybersecurity, many of which were previously documented in numerous unresolved deficiencies carried over from developmental test.
- MAFPS classified capabilities will require additional testing once these systems are ready for operation. The Air Force anticipates these capabilities will be ready for operational use in FY19.

Recommendations

The Air Force should:
1. Plan on conducting formal operational test and evaluation of MAFPS classified capabilities as soon as system readiness allows.
2. Resolve open deficiencies in MAFPS by further system development, followed by regression testing.