GEO-ENABLING US AIR FORCE LOGISTICS

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ABSTRACT

A core function of the US Air Force is ‘Rapid Global Mobility’ which is heavily reliant on a robust, enterprise logistics capability. This presentation will describe how the Air Mobility Command Geo Integration Office is securing adoption of geospatial information and services (GI&S) to satisfy worldwide enterprise logistics requirements for both the Air Force and US Transportation Command and the remarkable benefits being realized from the USAF and DOD investments in spatial data standards.
AIR MOBILITY COMMAND MISSION

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AMC...GLOBAL RESPONSIBILITIES

- Theaters With Geographic Combatant Commands
- Global Functional Commands
  - US Transportation Command
    - Air Mobility Command
  - 18th Air Force
  - 618th Air Operations Center

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AMC OPERATIONS TEMPO CHANGES

- Decrease in AMC Missions Over Previous 3 Years
- Increase in Destinations of AMC Missions
- More Sorties into Austere Locations Outside the Enroute Support System
- Increase in Maintenance Repair Team Requests

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AF ENTERPRISE LOGISTICS GI&S

Battlespace GI&S (GEOINT)
National Geospatial-Intelligence Agency

- Integrate
- Operate
- Assess
- Analyze
- Visualize
- Advocate
- Innovate

AF Enterprise Logistics GI&S
Asset Visibility
Geo-Enabled ELIT Systems
OPLAN/Scenario Analyses
En Route Infrastructure

Installation GI&S
USAF/USA/USN/USMC
ASD/EI&E

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AMC AGILE COMBAT SUPPORT

GI&S

- Geospatial Capability for Shared Situational Awareness of Rapid Global Mobility Operational Locations of Interest
- A Process to Support “Open the Air Base” (Analysis)
- AMC ACS GI&S → Open the Airbase → Rapid Global Mobility
PROBLEM STATEMENT

- Logisticians need access to the right imagery and ground features at the right time for the right locations to best assess suitability of airfields for AFFOR operations and optimize human performance (ELTA Vision).

- The lack of a common protocol for AFFOR logisticians to access actionable geospatial imagery and feature data across all theaters encourages redundant investments as well as presents an obstacle to EL processes and IT easily leveraging available geospatial resources for the Top 4 capabilities.

- AFFOR GI&S has no common protocol for exchanging logistics data with AFFOR/CCMDown C2 systems and other key Force Module processes such as airfield surveys (AFI 10-202) and expeditionary site planning (AFI 10-404).
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GEO INTEGRATION: A ‘NON-MATERIEL SYSTEM’

GEO INTEGRATION
Is A

Principle
“Buy Once… Share Many”

Process
Geo-Enabled System of Systems Policy
DODI 8130.01, AFI 32-10112...

GEO INTEGRATION
Yields

Savings
Smart IT Investment

Sharing
Fiscal & Operational Synergies

Success
Win – Win for USAF/DoD

GEO INTEGRATION
Engages

Many Missions
Pervasive Need for Shared SA

Many Systems
Shared SA Across Systems

Many Sponsors
Shared SA = Shared Funding

GEO INTEGRATION
Requires

Creativity
New Paradigms Required

Communication
Awareness Precedes Sharing

Consensus
Interoperability Needs Standards

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Goal: A sustainable GI&S capability aligned with the USAF SMP & ELFP facilitating globally integrated agile logistics and more effective AFFOR planning, operations and C2.
FUTURE USAF LGI&S
‘ABILITY TO’ STATEMENTS

Ability to...

- INTEGRATE - Collaborate with all logistics process and system owners to best fulfill core Air Force functions at least cost by integrating current and emerging GI&S capabilities

- OPERATE - Design, implement and sustain cost-effective COTS-based capabilities through integration of GI&S across DoD to satisfy AFFOR logistics requirements

- ASSESS - Conduct aircraft parking MOG, CR beddown, and assist with global airfield suitability analyses for AFFOR operations and all Force Modules

- ANALYZE - Perform spatial search/analyses across DoD installation built and natural infrastructure assets from source information stewards to support AFFOR decisions

- VISUALIZE - Provide AFFOR operations and logistics planners with rapid access and unprecedented visibility to georeferenced, high-fidelity, trusted airfield asset information

- ADVOCATE - Provide authoritative georeferenced information and customized maps to best advocate for sustaining/enhancing airfield infrastructures vital for AFFOR operations

- INNOVATE - Scan for innovative applications of GI&S as a force multiplier enhancing Agile Combat Support capabilities
LOGISTICS GI&S: AN ENTERPRISE APPROACH TO...

- Total Asset Visibility Via Geospatial Data, Analysis, Services And Capabilities
- Faster Global Mobility Decisions With Less Risk

Asset Visibility/Management Across All Asset Classes

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**Vignettes: AFFOR Operations Support**

- Collected and processed 50+ airfield images for use in planning
  - MAF Enroute OLs and COCOM sites of interest
  - Ebola relief support, Nouakchott, Mauritania
  - 2016 Olympics, Rio de Janeiro

- Parking MOG analysis (x8), and CR / APOD laydown analysis (x3)
  - Data masked OLs and operations

- Parking MOG analysis (x20)
  - USTC/NORTHCOM Cascadia Subduction Zone OPLAN

“I’m a Smarter Planner Because of This.”
Vignettes: Exercise Support

- **TURBO CHALLENGE/ARDENT SENTRY 2016**
  - Theater site selection analysis – 12 OLs selected
  - Conducted parking MOG analysis (x12)

- **GLOMO/ACS 2016**
  - ID lack of geospatial support inhibited realistic MAF planning

- **MOBILITY GUARDIAN 2017**
  - Theater level UDOP
  - OLs, LZs, DZs, and ranges
  - To develop:
    - OL laydown plan(s)
    - Geo-enabled JMSEL
    - Scenario overlays – air routes, A2/AD threats, etc.
QUESTIONS / DISCUSSION

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