



Panel Discussion





SPECIAL OPERATIONS FORCES ACQUISITION, TECHNOLOGY, & LOGISTICS



COL Paul Weizer, Program Executive Officer
SOF DIGITAL APPLICATIONS



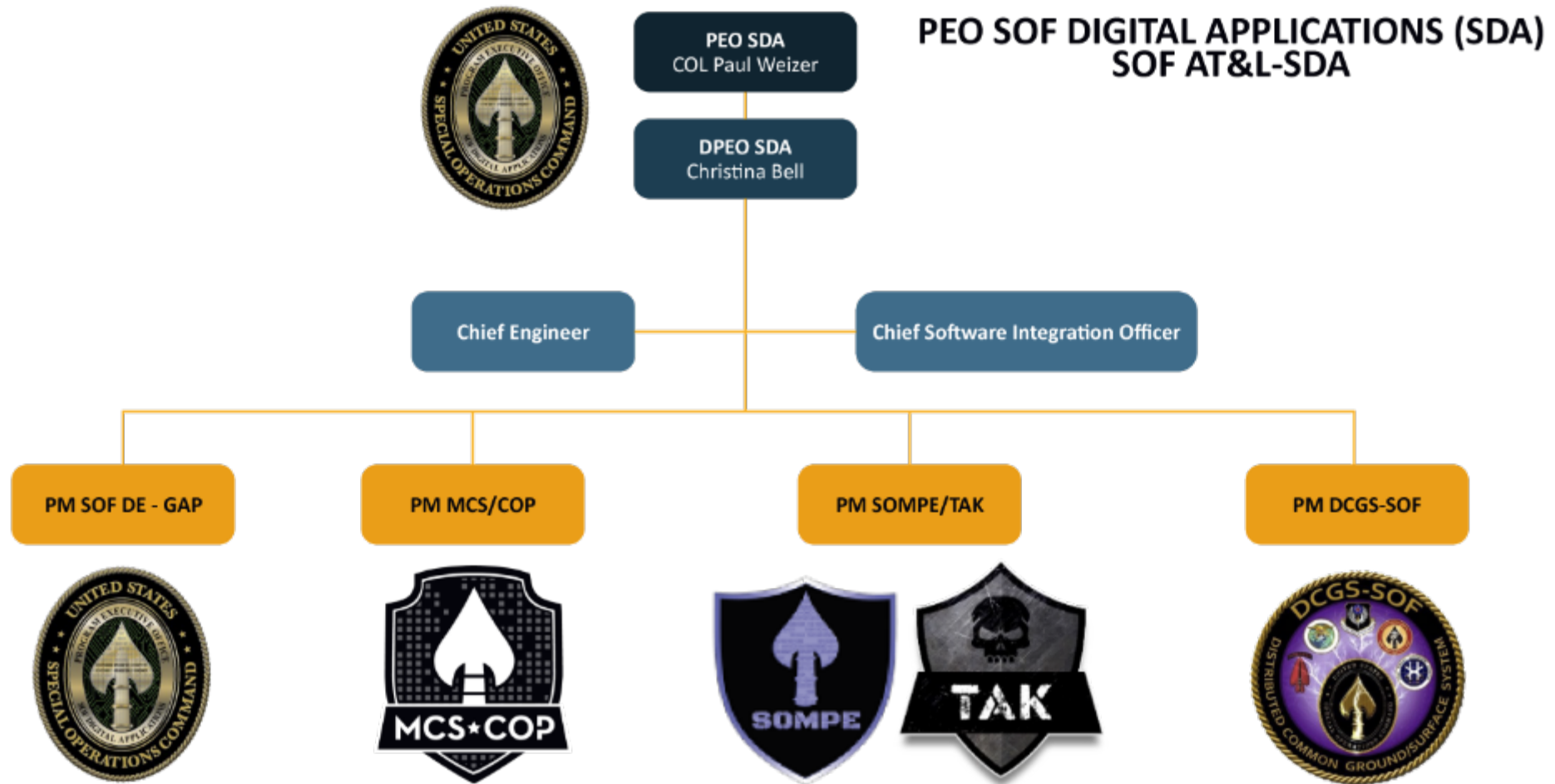


PEO-SOF DIGITAL APPLICATIONS

MISSION:

Rapidly consolidate, integrate, acquire, and divest of SOF unique software solutions through use of the Adaptive Acquisition Framework and commercial best practices while providing cradle-to-grave management for the duration of required capabilities.







Mission Command System
/Common Operating Picture (MCS/COP)

Mission Command System/Common Operating Picture MCS/COP

- SOCOM's integration with JADC2 and related service solutions
- Integration of mission planning, execution, and post-mission processes and artifacts within a collaborative Common Operational Picture
- Rapid exchange of data between network domains and classification
- Fine-grained access controls from tactical to strategic users





WIDE
BLK
OTGA
LAP
120

11/24/03
00:20

51

<-10

Mission Command / Common Operational Picture OV1



Common User Experiences and Shared Situational Awareness Across Echelons

VENDOR, DATA, APPLICATION, COP, CLOUD AGNOSTIC

9 Fundamental Principles

- Common data repository and systems architecture
- Suite of tools
- All levels of war
- All domains
- All SOF joint functions
- Globally collaborative C2
- Advanced fused analytics
- Joint, interagency, intergovernmental, and multinational
- Denied, disrupted, intermittent, and limited bandwidth

Program Status

- Executing under the Software Acquisition Pathway
- Development Managed via the Scaled Agile Framework
- Minimum Viable Capability Release (MVCR) Deployed on USSOCOM SOFNET-S (SIPR)
- Lead program driving the instantiation of the USSOCOM Software Factory
- Forward Momentum for bleeding edge technology insertions

The screenshot displays the WinTAK software interface. The top menu bar includes options like Home, Creation, File Tools, Plugins, and Range & Bearing. Below the menu is a toolbar with icons for various functions such as Look View, Overlay, Layers, Alerts, and Data Sync. The main area is a map of the United States with several colored markers (red, blue, yellow, green) indicating different locations or data points. A scale bar shows 100 km. On the right side, there are panels for 'Fire Reconnaissance' showing an aerial view and 'Videos' showing a grid of video thumbnails. At the bottom, there is a table with columns for Name, Description, Classification, Creator, and Location.

| Name | Description | Classification | Creator | Location |
|-------------------|------------------|-------------------------|---------|--------------------|
| base layer test | | UNCLASSIFIED | | 135 CB 86252 73884 |
| single layer test | | UNCLASSIFIED | | 135 BC 85285 30256 |
| can coop | Confidential COP | CONFIDENTIAL/Other-SUIT | | 105 DG 86722 05950 |
| vbm3 | test | UNCLASSIFIED | | 145 KC 25130 48362 |
| vbm1 | test | UNCLASSIFIED | | 145 KC 25130 48362 |

Code@SOCOM: Continuous Delivery to SOF

Applications



Thinnest Viable Platform



Data Plane

Zero Trust Architecture

Control Plane

SOF Cross-Domain Solution

Infrastructure-as-a-Service

IL2

IL4

IL6

IL6+

Continuous User-Driven App Development, Measured Ourselves by World-Class Software Delivery Metrics

| DORA Metric | Low | Medium | High | Elite | SOCOM TODAY |
|----------------------|-------------|-------------|--------------|---------|-------------|
| Deployment Frequency | 1/mo → 2/yr | 1/wk → 1/mo | 1/day → 1/wk | Ad hoc | Low |
| Deployment Latency | 1/mo → 6/mo | 1/wk → 1/mo | 1/day → 1/wk | < 1 day | Low |
| Time to Restore | 1/wk → 1/mo | < 1 day | < 1 day | < 1 hr | High |
| Change Fail Rate | 46-60% | ← | 0-15% | → | TBD |

Iterative and Deliberate Platform Evolution to JADC2 Reference Architecture

TAK.gov

D2E

PlatformOne
Party Bus + IronBank

Equilibrium

Universal Data Library (UDL) + API Gateway + PAI/CAI + IaaS Services

Future Capability w/ DSO Reference Architecture

IaaS Native Services



Cloud-Native, Open-Source-First Approach
to Multi-Level and Massively-Scalable Infrastructure

SCCA-Compliant Cloud-to-Edge IaaS

<https://github.com/Azure/missionlz>

Code@SOCOM is how SOCOM Pursues a
Testable, Deployable Product Line.

Mission Command System/ Common Operating Picture MCS/COP | Lines of Effort

- Requirements refinement/decomposition
- Software development
- DEVSECOPS/Continuous integration and delivery
- Architecture management
- Support/field service engineers





Get Connected

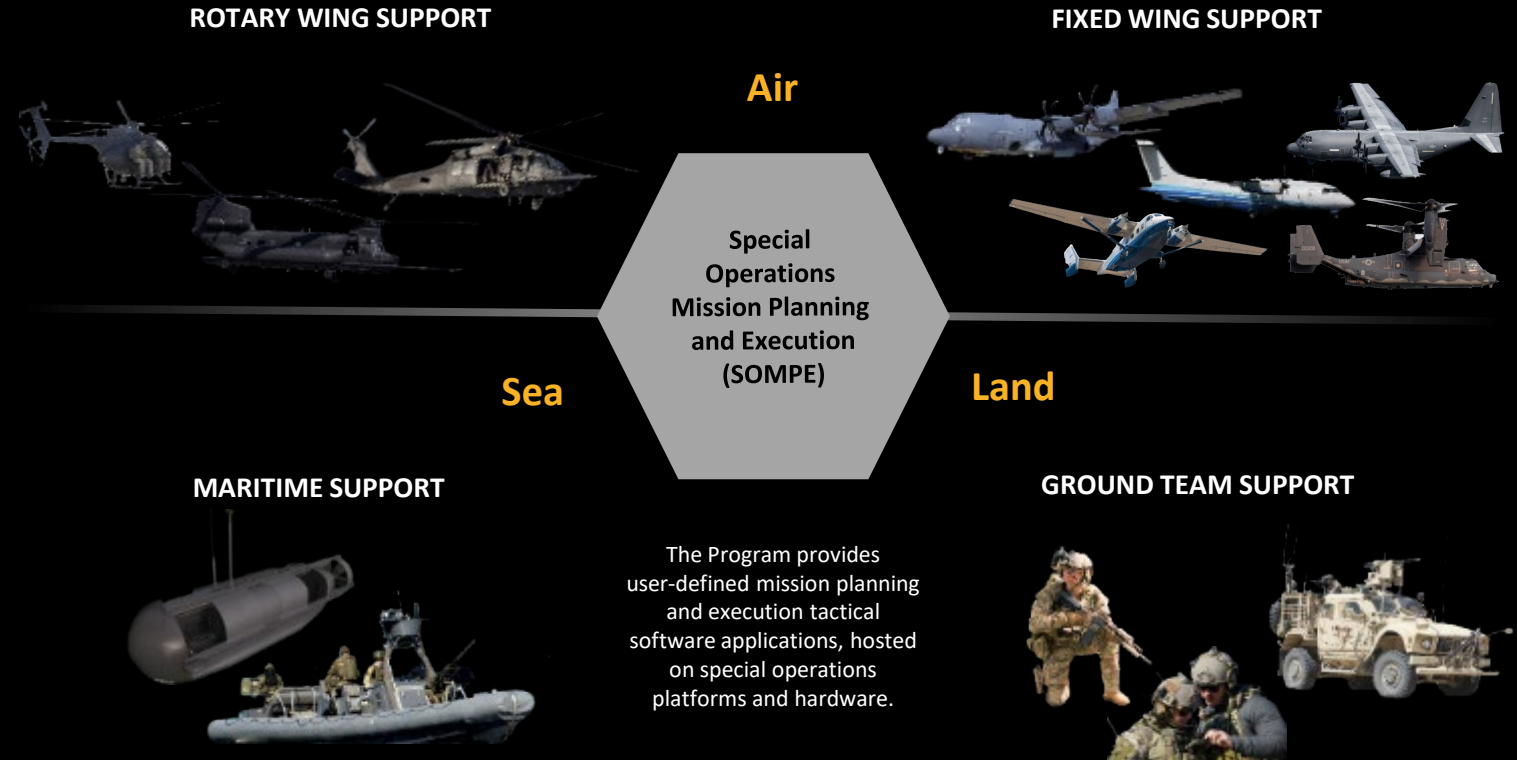
- TAK
- Engage with Current Vendor Ecosystem
- USSOCOM Small Business Office
- MCS/COP Futures Team
- SOFWERX
- eSOF



Special Operations Mission
Planning and Execution (SOMPE)

Special Operations Mission Planning Equipment | Tactical Assault Kit SOMPE | TAK

- Commercial Solutions Opening for Air Mission Planning
- Leveraging the TAK Open Government Owned DEVSECOPS Pipeline
- SOF peculiar Tactical Assault Kit (TAK) plug-in development
- Continuous Integration with Warfighting Platforms
- SOCOM TAK Server Federation



Current Ecosystem



9 Fundamental Principles

- Enable the Military Decision-Making Process
- Synthesize Operational Military Battlespace Information
- Tactical Situational Awareness
- Austere and Dynamic Operating Environments
- Prioritize for Task Saturation and Data Overload
- Cognitive Assistance Through Automation
- Battlespace Communications
- Denied, Disrupted, Intermittent, and Limited Bandwidth
- Machine-to-Machine, Bi-directional, Modular Open Systems Approach

Program Status

- Community of 19,000 SOF Users
- Actively and Rapidly Tailoring Tactical Capability for Conflicts
- Providing Real Time Battlefield Situational Awareness
- Pivoting to Software Acquisition Pathway – Planning Phase with R&D Investments
- Championing the TAK Gov't Open Software Ecosystem (Tactical Assault Kit and Team Awareness Kit)
- Fueling Innovative “Collisions” across the TAK community
- Integrating to Warfighting Platforms to Synthesize Data across Land, Air, Sea

The screenshot displays the 'Air Overlays Map Item Detail' window for ZMKD KHOVD. The map on the left shows the airport location with concentric blue circles representing search radii. The right panel provides detailed information and a search results list.

Air Overlays Map Item Detail
 Overlay Type: Airports
 Coordinate: 46T CU 97494 12100

ZMKD KHOVD

 FAA ID: N
 TYPE: ACTIVE JOINT (CIVIL AND MILITARY) AIRPORT IS JOINTLY CONTROLLED.
 Operating Agency: MILITARY - CIVIL JOINT USE AIRPORT
 Country: Mongolia
 Elevation: 4905 ft.
 Magnetic Variation: 2.275 E
 Longest Runway: 9348ft

Communications Frequencies
 AERODROME FLIGHT INFO SERVICE
 5715.000KHz
 APPROACH CONTROL
 130.000MHz

Runways
 Runway Number: 33R
 Status: CLOSED Size: 6561 x 160
 46T CU 98059 10949
 Surface: GRADED OR ROLLED EARTH, GRASS ON GRADED EARTH.
 Elevation: <unknown>
 Slope: <unknown>
 Magnetic Heading: 336.1
 Runway Number: 15L
 Status: CLOSED Size: 6561ft x 160ft
 46T CU 97357 12821
 Surface: GRADED OR ROLLED EARTH, GRASS ON GRADED EARTH.
 Elevation: <unknown>
 Slope: <unknown>
 Magnetic Heading: 156.1
 Runway Number: 34
 Status: OPENED Size: 9348 x 160

Air Overlays
 VFR/IFR Load Config Save Config

ILLUMINATION TOOL
 LABEL VISIBILITY DAFIF SEARCH

Search: KH

Airports
 Heliports
 Nav aids
 PJA
 Waypoints
 DZ
 LZ
 Close On Selection

57 Results Found

| | | |
|---|------|--------------------|
| <input type="checkbox"/> EZ52657 | LKIK | HRADEC KRALOVE |
| <input checked="" type="checkbox"/> MG00032 | ZMKD | KHOVD |
| <input checked="" type="checkbox"/> PK73223 | OPPS | BACHU KHAN INTL |
| <input checked="" type="checkbox"/> RS00009 | URWA | ASTRAKHAN |
| <input checked="" type="checkbox"/> RS00051 | UOHH | KHATANGA |
| <input checked="" type="checkbox"/> RS00594 | URML | MARSHCHIKALA |
| <input checked="" type="checkbox"/> RS31740 | URUU | MUKHNO |
| <input checked="" type="checkbox"/> RS96579 | URHH | KHABAROVSK NOVY |
| <input checked="" type="checkbox"/> SA59678 | OERK | KING KHAILED INTL |
| <input checked="" type="checkbox"/> SF11763 | FALM | MARSHADO AFB |
| <input checked="" type="checkbox"/> TH00353 | VTUK | KHON KAEN |
| <input checked="" type="checkbox"/> TH64439 | VTUI | SAKON NAKHON |
| <input checked="" type="checkbox"/> TH66723 | UTDL | KHUMJAND |
| <input checked="" type="checkbox"/> TW20388 | ROKH | KAOHSIUNG INTL |
| <input type="checkbox"/> UF00017 | URKD | SOKOLNYKY |
| <input checked="" type="checkbox"/> US02031 | KHBO | PORTLAND HILLSBORO |
| <input type="checkbox"/> US07114 | KHDE | BREWSTER FLD |
| <input checked="" type="checkbox"/> US08501 | KHRO | BOONE CO |
| <input checked="" type="checkbox"/> US11679 | KHJA | REDSTONE AAF |
| | | MATTESBURG |

INFO METAR/TAF NOTAMS

Areas of Interest

- Commercial Software for Air Flight Planning as an Accelerator
- Rapid Peer-to-Peer Authentication on the Battlefield
- Synthesizing Battlefield Data Based on Roles and Trust
- Mission Planning Rules Based Automation (Decision Trees)
- Operator Safety of Emerging Conditions
- Human-to-Machine Interaction in Tactical Scenarios
- Streamlining Tailored Mission Software Fielding Packages and Data
- Active Tactical Cyber Defense in Semi-Permissive Environments
- Penetration Testing and System Red Teams with Operational Viewpoints





Get Connected

- Commercial Solution Opening for Aviation
- TAK Development
- USSOCOM Small Business Office
- SOFWERX
- eSOF



SOF Digital Ecosystems (DE)

Digital Ecosystem DE

- Provide PEO-SDA with technical talent
- Technical talent in the following areas:
 - Data Scientist
 - Data Engineer
 - Software Developers
 - Data Integrator
 - Database Administrator/Engineer
 - Data Architect
 - System Architect
 - Data Manager
 - Machine Learning Engineer
 - Front End Developer/Software Engineer

Ecosystem of Vendors

STEMBOARD

Future Opportunities

LEVELUP
CODE WORKS



Program Status

- Executing under the Software Acquisition Pathway
- Development Managed via the Scaled Agile Framework
- Contract awarded 3QFY22

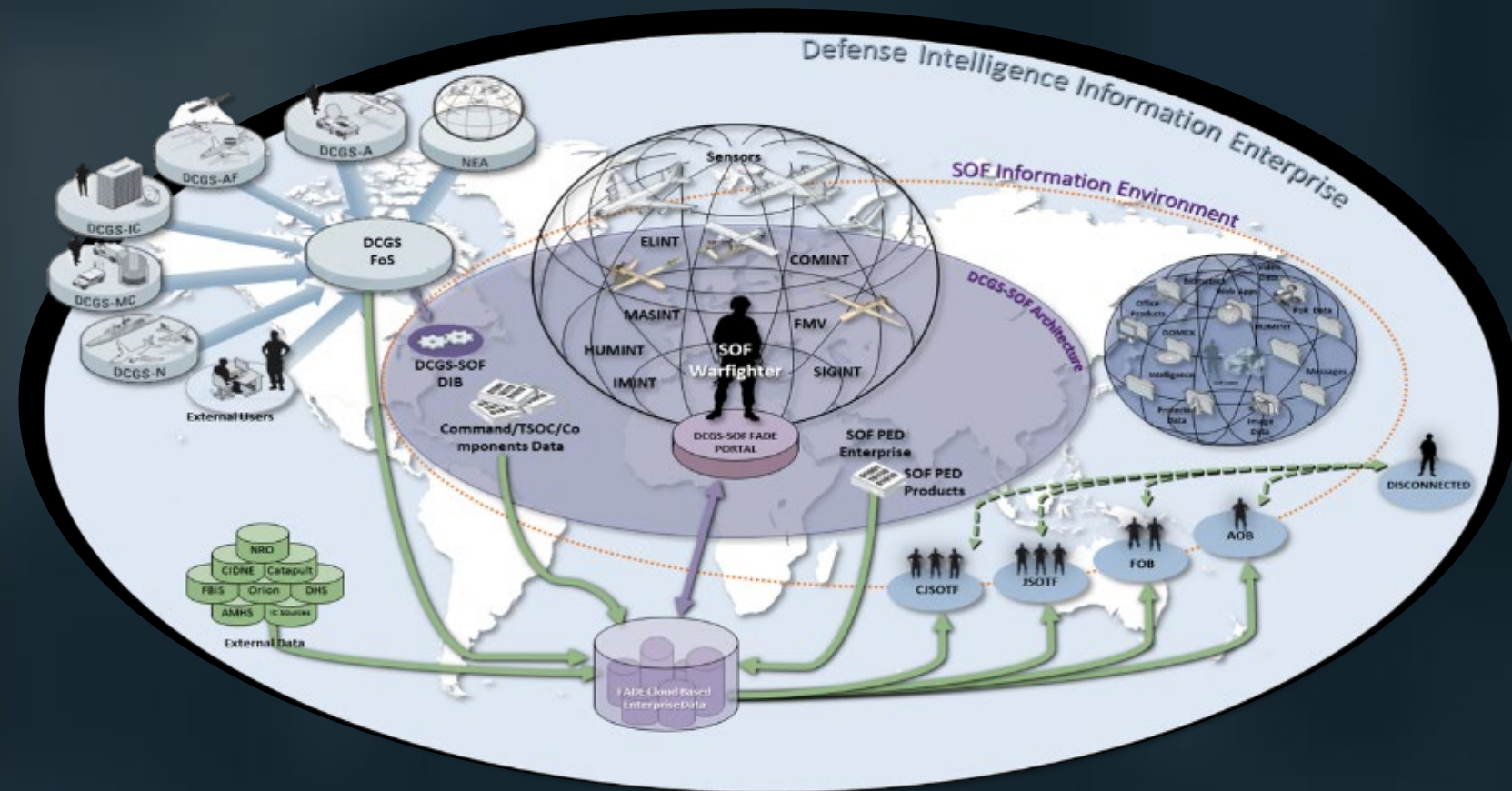




Intelligence

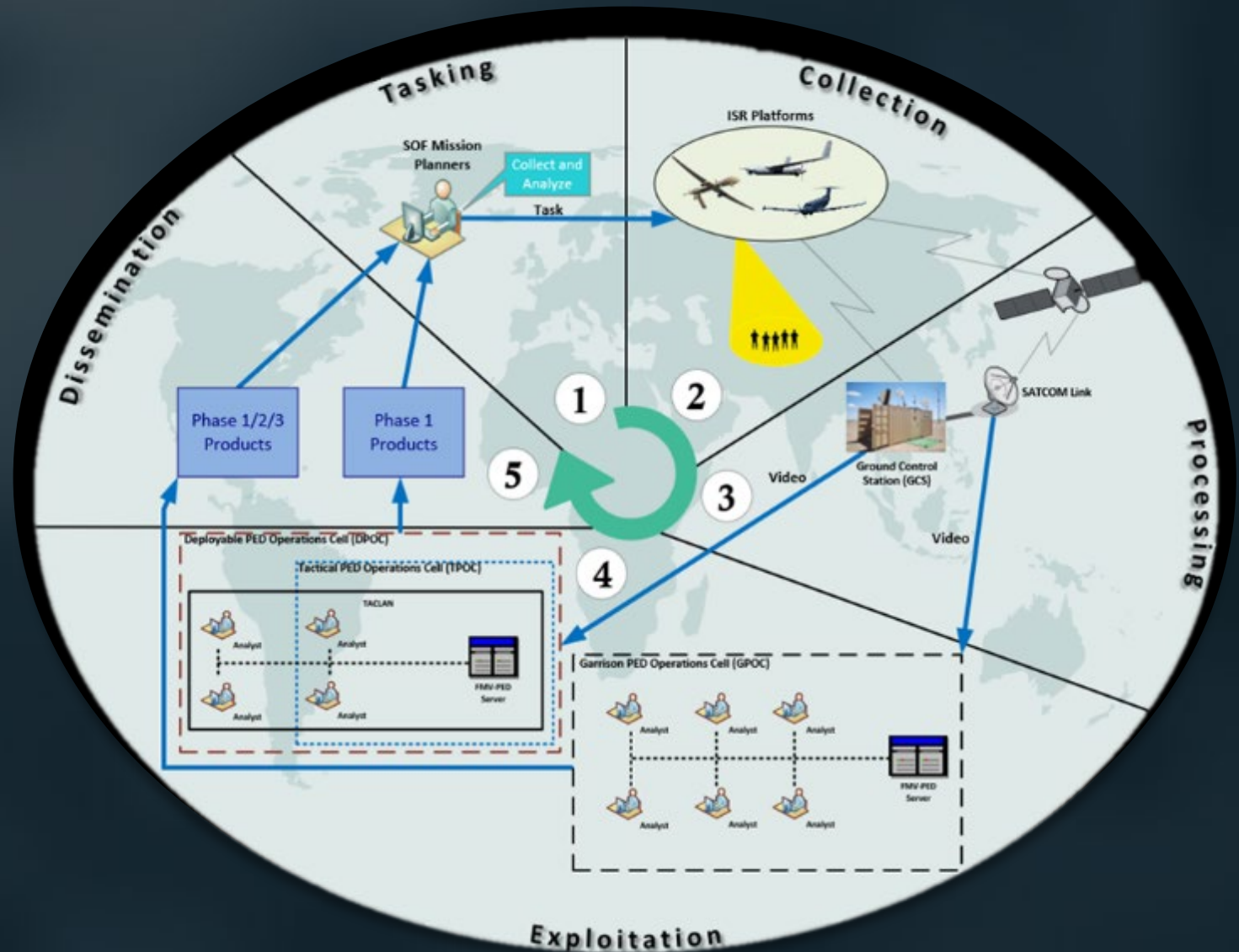
Enterprise/All-Source Information Fusion (ENT/ASIF)

- Interconnect the Warfighter and Sensors
- Provide All-Source Information Fusion via an interoperable construct
- Executing under the Software Acquisition Pathway, implementing Scaled Agile Framework & MOSA
- Continuous User Feedback loop to support insertion of bleeding edge technology



SOF GEOINT ISR PED (SGIP)

- Major acquisition program currently at Milestone C
- Evaluating transition to alternate adaptive acquisition pathway
- Support near-real time actionable reporting and visualization requirements



Distributed Common Ground Surface DCGS-SOF

- Enterprise/ All-Source Information Fusion (ENT/ASIF)
 - Advanced Analytics
 - Capability Integration
 - Denied-Disrupted Intermittent and Limited (D-DIL) Environment
- SOF GEOINT ISR PED (SGIP)
 - Artificial Intelligence/Machine Learning
 - Fusion-as-a-Service
 - 3D Modeling
 - D-DIL Environment

Current Ecosystem of Vendors





Get Connected

- Engage with Current Vendor Ecosystem
- FEDBIZOPS COTS SW & HW
- CRADAs
- SBIRs
- SOFWERX
- eSOF
- Trident Spectre



Panel Discussion Q&A

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