



AFCEA New Horizons 2017



***Major General Dwyer Dennis
AFPEO C3I&N***

Case Number: 66ABG-2017-0025

Providing the Warfighter's Edge



PEO C3I&N



Mission Areas and Portfolio

AFLCMC... Providing the Warfighter's Edge

Mission Areas:

IT Infrastructure and Services
 Offensive and Defensive Cyber
 COMSEC
 Data Links

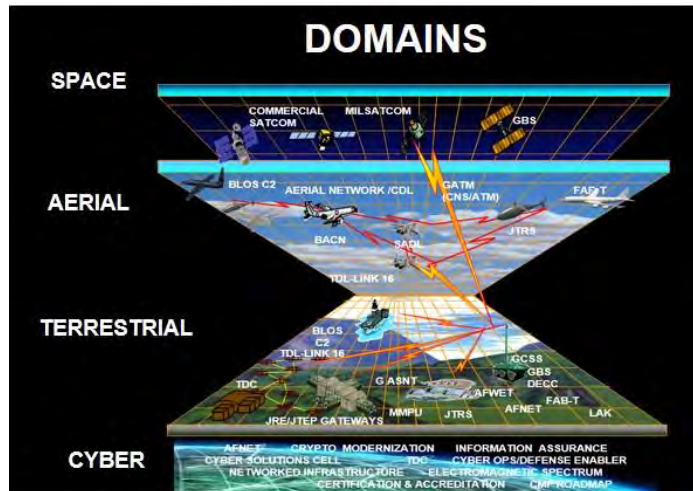
AFNET OPS
 Crypto Systems
 Aerial Networks
 Special Projects

Portfolio:

- 231 Workload Master List Programs
 - 1 ACAT I
 - 10 ACAT III
- 64 Investment Master List Program
- 55+ Services Contracts valued at \$3.3B
- 4 JUON's/QRC's
- 6.9 Billion (FY17-22)
- 13 Direct FMS Cases
 - 170+ lines on ~ 130 additional FMS Cases

Org/People:

- ~2200 Personnel
 - 5 Divisions / 7 Major locations



BATTLEFIELD AIRBORNE COMMUNICATIONS NODE (BACN)



THEATER DEPLOYABLE COMMUNICATIONS (TDC)



CRYPTO MODERNIZATION



MISSION: Connecting Warfighters with Affordable, Secure & War-Winning Cyber, C3I & Network Systems



C3I&N Leadership Team



AFLCMC... Providing the Warfighter's Edge

AFLCMC COMMANDER
LT GEN JOHN THOMPSON

AFPEO/C3I&N
MAJ GEN DWYER DENNIS

SAF/AQ
MS. DARLENE COSTELLO

DEPUTY DIRECTOR
MS. TANYA LAMBERT

AFPEO/NC3
COL AL LAPUMA

AFPEO/SP
LT GEN SAMUEL GREAVES

Mission

C3I INFRASTRUCTURE DIV
HNI
COL JOHN BEDINGFIELD

CRYPTO & CYBER SYSTEMS DIV
HNC
COL GARY SALMANS

SPACE, AERIAL & NUCLEAR NETWORKS DIV
HNA
COL TODD KRUEGER

FAB-T DIV
HNS
COL AMANDA KATO

SPECIAL PRGMS DIV
HNJ
COL STEPHEN BROOKS

EW/AVIONICS DIV
(AFLCMC/WNY)
COL EARL STOLZ

SPACE & C3I DIV
(AFLCMC/HBZ)
COL MICHAEL HOLL

Functional

Engineering
MR. GLEN TOWNSEND

Financial Mgt
MR. SEAN DUFFY

IT/Cyberspace Ops Spt
MR. WILLIAM BESSEMER

Contracting
MR. JOE ZIMMERMAN

Program Mgt
MR. TOM POWIS

Life Cycle Logistics
MR. STEPHEN LAFLEUR

Support

Photo Pending OM
MR DAVE STEINSIEK

Photo Pending PEG
MR ANDY GIACONIA

Photo Pending SAFETY
MR MORGAN D'OLYMPIA

HR
MS. ANNETTE GARTLAND

Photo Pending IP
MR. EDWARD BARDEN

AFPEO/C3I&N

PEO/NC3	PEO/Space
AFLCMC/WN	AFLCMC/HB



PEO/C3I&N

Workload Master List (WML)



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AFLCMC/HNA
Space, Aerial & Nuclear Networks Div
Col Todd Krueger

- | HANSCOM | ROBINS |
|--|---|
| <ul style="list-style-type: none"> • BACN (J) (S) • CID Server (J) (S) • ANGI (J) • 5th/4th G/W (III) • JTRS (TBD) • CDL (AML Exempt) • LINK 16 FMS Exempt) • CoT (AML Exempt) • ADIS (S) • TDNE/AFPTU (AML Exempt) • TDNE/Coalition Interop (AML Exempt) • TDNE/Data Link Test Facility (AML Exempt) • F-15 Crypto (Navy Prgm) | <ul style="list-style-type: none"> • F-16 Crypto (Navy Prgm) • B-1 Crypto (Navy Prgm) • B-2 Crypto (Navy Prgm) • JCTD-JETPACK (AML Exempt) • JINTACCS (AML Exempt) • TDNE/NATEX (AML Exempt) • TDNE/NCCA (AML Exempt) • TDNE/Other gateways (AML Exempt) • TDNE/JALN RA (AML Exempt) • SEATS (S) • TDNE/TENC2 (AML Exempt) • C2ISR TDL (TBD) • Test Asset Reallocation (TBD) |
| <ul style="list-style-type: none"> • G-ASNT Inc 1 (II) • G-ASNT Inc 2 (III) • MMPU (III) • MEECN MSI • CVR Inc 2 • EHDC (S) | <ul style="list-style-type: none"> • MEECN (S) • JTIDS (S) • ROBE (S) • SADL (S) • Pocket-J (S) • JADSI (S) • JRE/JTEP (S) • CLIP (S) • LAK (S) • JTIDS (S) • MIDS (S) |
| | <ul style="list-style-type: none"> • DIRECT/AIT (S) • MRT/MMRT (S) |

AFLCMC/WNY
EW & Avionics Div
Col Earl Stoltz




AFLCMC/HNC
Crypto/Cyber Systems Div
Col Gary Salmans

- LACKLAND**
- KG-3X (S)
 - AVE Inc 1 (III)
 - Mini Crypto (III)
 - SMCC (III)
 - AF KMI Last Mile (III)
 - AG COMSEC (AML Exempt)
 - AG COMSEC (S)
 - Space COMSEC (AML Exempt)
 - Space COMSEC (S)
 - ARC-234 (III)
 - C3MS non-WSS (S)
 - C3MS (TBD)
 - C3MS Procurement (TBD)
 - CDA (AML Exempt)
 - CDA non-WSS (S)
 - CDA WSS (S)
 - CVA/H (AML Exempt)
 - CVA/H non-WSS (S)
 - CVA/H WSS (S)
 - Cyber Tech Projects (AML Exempt)

- BOUNTY HUNTER (S)**
- TD Knowledge Mgt (AML Exempt)
 - TTS LS (S)
 - VACM (III)
 - CDAR (TBD)



AFLCMCHNI
C3I Infrastructure Div
Col John Bedingfield

- HANSCOM**
- Base WIRED Infrastructure (IAC)
 - TDC (AML Exempt)
 - GCSS-AF (AML Exempt)
 - GCSS Data Services (AML Exempt)
 - AF EIS (S)
 - ACD (TBD)
 - AFINC (TBD)
 - CSCS (TBD)
 - CIE (AML Exempt)
 - Voice (AML Exempt)
 - AIRCOM (S)
 - CCE (AML Exempt)
 - Voice (AML Exempt)
 - EMNS (J)

AFLCMC/HBZ
Space and C3I Div
Col Mike Holl



- Cyber Voice (Black) (S)
- Secure Voice (Red) (S)
- Cyber Infra C2 Switch (S)



HNJ
Special Programs Div
Col Steve Brooks

- HANSCOM**
- SAP Center
 - Adv Tech
 - Kill Chain Int
 - EW



HNS
FAB-T Division
Colonel Amanda Kato

- HANSCOM**
- FAB-T Inc 1 (I)
 - PNVC Integrator (III)

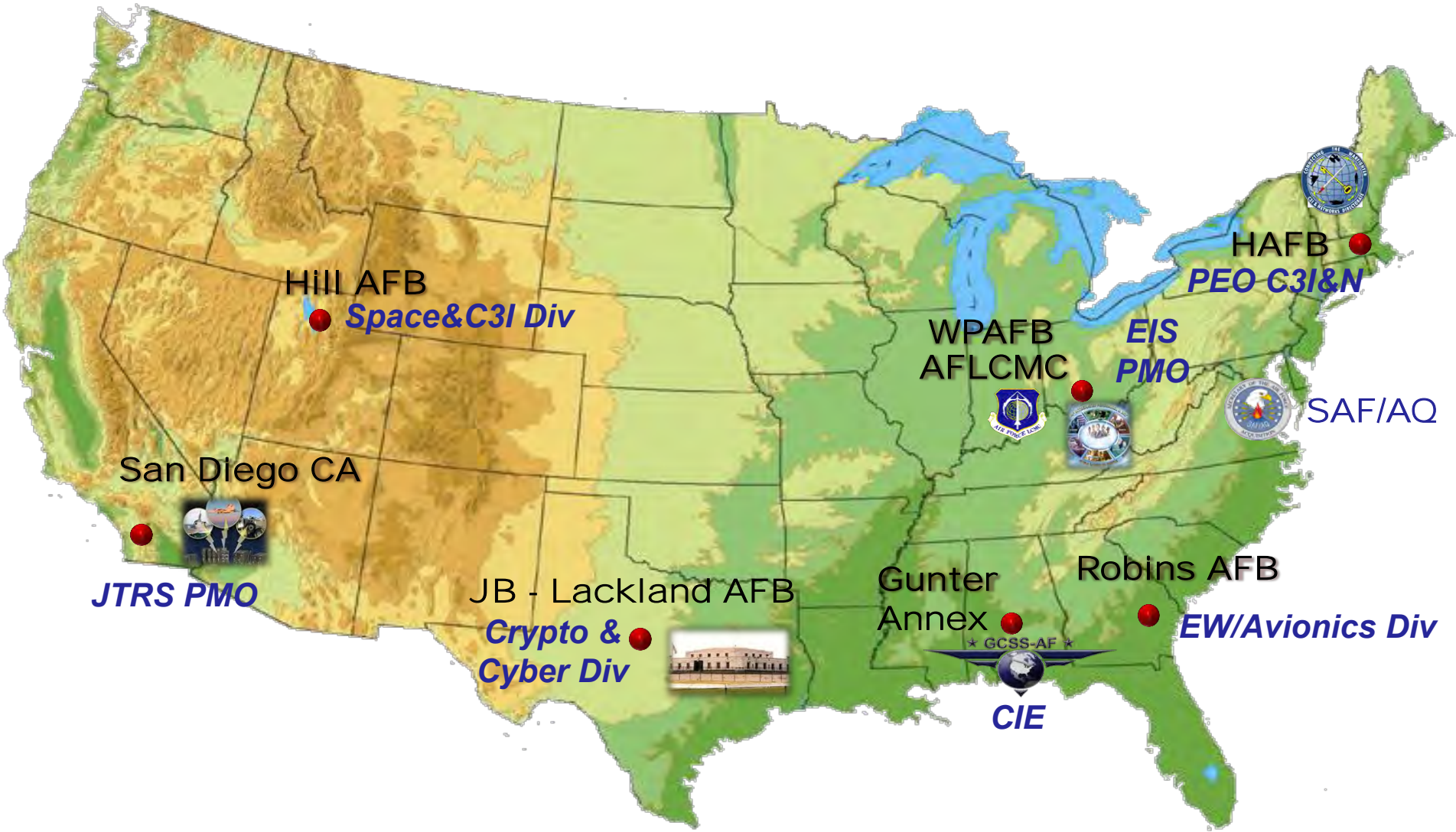
(J) JUON/QRC
(S) Sustainment



PEO C3I&N Locations



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C3I&N



Partnerships and Collaboration

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Massachusetts State Government

“Military Asset and Security Strategy Task Force”

Hanscom Collaboration and Innovation Center (HCIC)

- Tactical Data Networks (TDN LAB)
- Cyber Space Security and Control Systems (CSCS)
- Air Force Intranet Control (AFNIC)
- Theater Deployable Comm (TDC)

Industry Associations

- Armed Forces Communications and Electronic Association
- National Defense Industrial Association
- Smaller Business Association of New England
- Mass Innovation Bridge

DoD Defense Innovation Unit Experimental (DIUX)

- Office in Cambridge MA
- Exploring C3I&N efforts for identification of emerging technologies
- Rapid acquisition contracting vehicles
- Collaborate with Subject Matter Experts on challenges/gaps with mutual interests

Educational Institutions

- University Affiliated Research Center (UARC)
 - Georgia Tech Research Institute
- Education Partnership Agreements (EPAs)
 - UMASS Lowell/Network Security and Project Management
 - Northeastern University Graduate Student Research
- Massachusetts Open Cloud Partnership with BU in support of tactical Combat Cloud efforts

Others

- Cyber Proving Ground
- Cyber Solution Cell



Mission Area Support

Rapid/Agile Acquisition

Modeling Simulation & Analysis

Experimentation



Innovative & Agile Capabilities

Own the Technical Baseline



Risk Reduction

Multi-Domain Enterprise Repository



Academia



AF/DoD Partners



Industry

Enabling rapid and agile capabilities to the warfighter

Accomplishments/Successes 2016



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Space, Aerial and Nuclear Networks Division (HNA)

- Battlefield Airborne Communications Node (BACN) - Continues to fly from 4 FOBs; more than 119K flight hours and 9,700 missions across the fleet; sustained >80% mission capable rate - 24/7 Orbit Coverage 12-month average - 99.6%
- AF JTRS (Joint Tactical Radio System) - \$7M equipment loan to high-vis platforms and vendors; saved the AF \$4M and 4 months of program slip – put platform upgrade schedules back on track

C3I Infrastructure Division (HNI)

- Cyber Security and Control System (CSCS)
 - Automated Remediation and Asset Discovery (ARAD) – IOC declared also won the and Annual DoD CIO Award
 - Contract Awards for: Worldwide Web Proxy replacement/modernization, IPN Pathfinder (Mar), USAFE Active Directory and Exchange (ADX) tech refresh, Scott AFB, Area Processing Center (APC tech refresh)
- Base Information Transport Infrastructure (BITI)
 - Completed 4 Wired Turnkey Base installations. Program has completed 169 of 178 bases or 95%
 - Completed 3 Wired Modernization base installations
 - Completed 2 Wireless expansion projects at Kadena AB, Japan
- Collaboration Pathfinder (CP)
 - Authority to Operate (ATO) for the Microsoft Cloud service for email allowing email migration to the cloud
 - Total Email accounts migrated to cloud at 10,959 (Holloman, Malmstrom, and Goodfellow AFBs)
- Air Force Intranet Control (AFINC) – First Cyber Weapon System to reach FOC 7 Jan 16
- Air Force Cyberspace Defense (ACD)
 - Host Base Security System – Awarded Small Business Set-Aside system integrator contract Jun 16 (total value \$14.7M)

Accomplishments/Successes

2016



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Crypto and Cyber Systems Division (HNC)

- Flexible Information Assurance Acquisition Tool (FIAT): Multiple Award IDIQ contract \$925M ceiling. Provides contract vehicle for early systems engineering, development, production, and product support for the crypto acquisition lifecycle
- Vinson/Advanced Narrowband Digital Voice Terminal Cryptographic (VACM): Full Rate Production Decision Apr 16 – 45,000 devices over 8 years
- Contract Awards: ARC-234, Delivery Order 2 (\$4.3M) 201 crypto modules, Mini-Crypto (MC), Engineering and Manufacturing Development (EMD) (\$4.6M)
- Cyberspace Vulnerability Assessment/Hunter: Delivered weapon system to all six Nation Cyber Protection Team = IOC

Special Projects Division (HNJ)

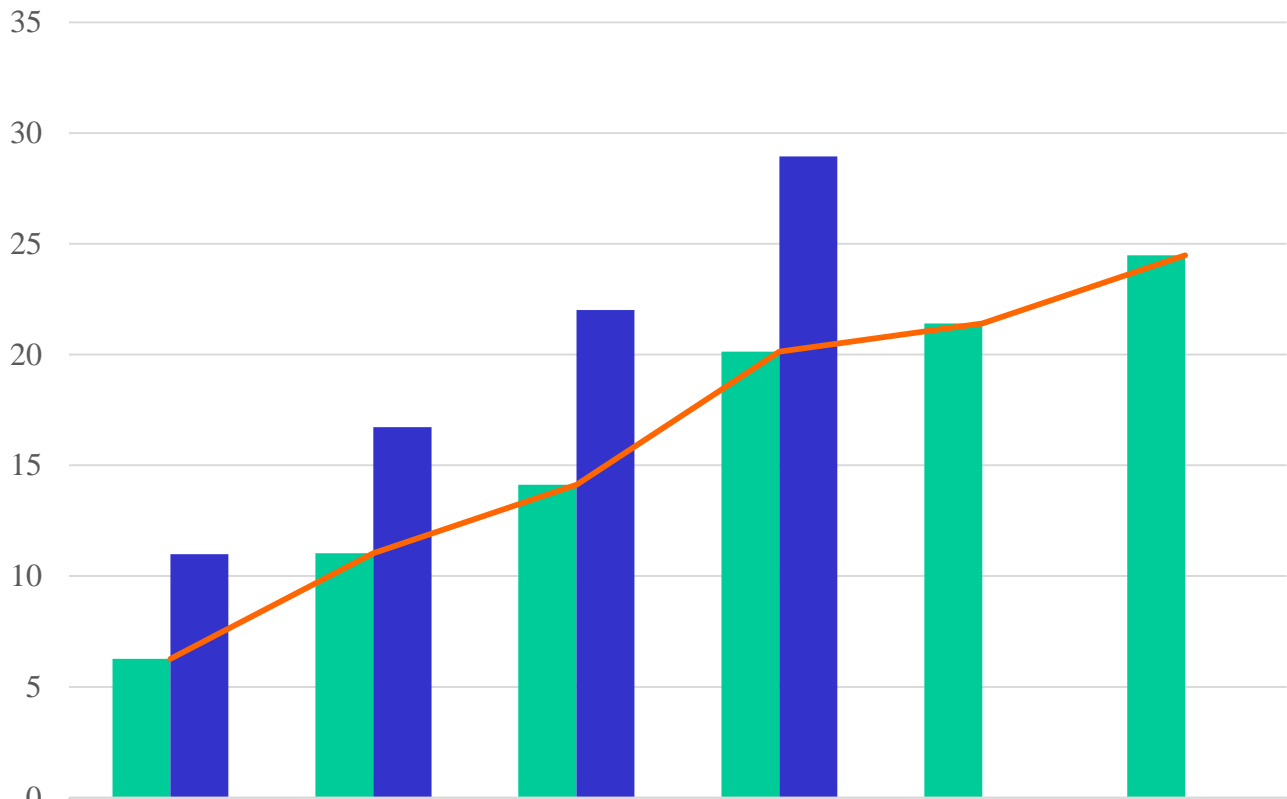
- Tactical Cloud Reference Implementation (TCRI) Flight Test Demonstration:
 - Successfully executed their 2nd experiment that demonstrated in a laboratory setting
 - Ability to function as a platform managing common data between multiple disparate nodes
 - Ability to host analytic capabilities riding on the TCRI architecture
- Tactical Cloud Reference Implementation (TCRI) Scalability:
 - Programmatic/technological feat! Downsized TCRI node (tablet sized vs multiple server racks)
 - Proved the ability to physically scale cloud computing nodes down for diverse tactical platforms
 - This capability (3rd experiment) will be flight demonstrated in the future
- Low Probability of Detect (LPD) Low Probability of Intercept (LPI), Anti-Jam (AJ) Network (LLAN) Node Static Test:
 - Successfully demo'd a concept for tactical datalink capability, including a multi-node static test
 - Successfully acquired Software Defined Radios for future communications experimentation
- Full Motion Video Extension and Unified RelaY (FEURY):
 - Collects near-real-time, quality 24/7 full motion video for users in Mission/Tactical Ops Centers
 - FEURY delivers crucial combat capability to the tactical edge in our nation's fight against ISIS
 - FEURY team delivered this critical JUON in less than 65 days, for under \$9 million
 - The team deployed multiple times over 2 yrs for site surveys sustaining the system down-range



C3I and Networks Small Business



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	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
C3I&N SB Goal (%)	6.27	11.03	14.12	20.13	21.41	24.48
C3I&N SB Actual (%)	10.99	16.72	22.01	28.94		
Trend Line	6.27	11.03	14.12	20.13	21.41	24.48

*Please note that FY 17/18 goals are DRAFT ONLY

FY 15 National Veteran Small Business Coalition Award



Priorities/Big Rocks



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- **HNI – Terrestrial Domain**
 - Common Computing Environment
 - Collaboration Pathfinder
 - Base IT Infrastructure (BITI)
- **HNC – Cyber/Crypto**
 - Cyber Weapons Systems
 - Unified Platform – Joint Cyber C2
 - Cyber Proving Ground
 - Cryptographic Modernization
- **HNA – Aerial Networks**
 - Datalinks
 - Agile Communications



Common Computing Environment



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Spiral Evolution



Warfighter Benefits

- Provide secure/standardized platform for 2,700+ AF mission apps required to migrate to FDCCI compliant environments
- Cost avoidance of functional stove-pipe hosting solutions
- Provides standardization of IT infrastructure capabilities leading to efficient and agile delivery of IT capabilities
- Allows for ease of transportability of mission capabilities across cloud hosting platforms

Description

The Common Computing Environment (CCE) provides standardized platforms and enterprise application support services. It also establishes engagement processes and tools for acquiring and operating cloud environments.

System Capability

Initial CCE activities support the stand-up of platforms and enterprise application support services for the ITGEB approved pathfinder applications. Supporting migration to multiple cloud environments (DISA, Commercial Cloud, and IPN).

- Requirements Basis: Aligning to support FDCCI mandates for app migration and AF Policy
- Major Customers: SAF/CIO, HAF Functionals, AFSPC, mission application owners
- Contractor: Currently using combination of ETASS, PASS, and Lockheed-Martin leveraging existing contract vehicles while the CCE Acq Strategy is being developed
- External AF Interest: Aligning to the DoD Joint Information Environment requirements



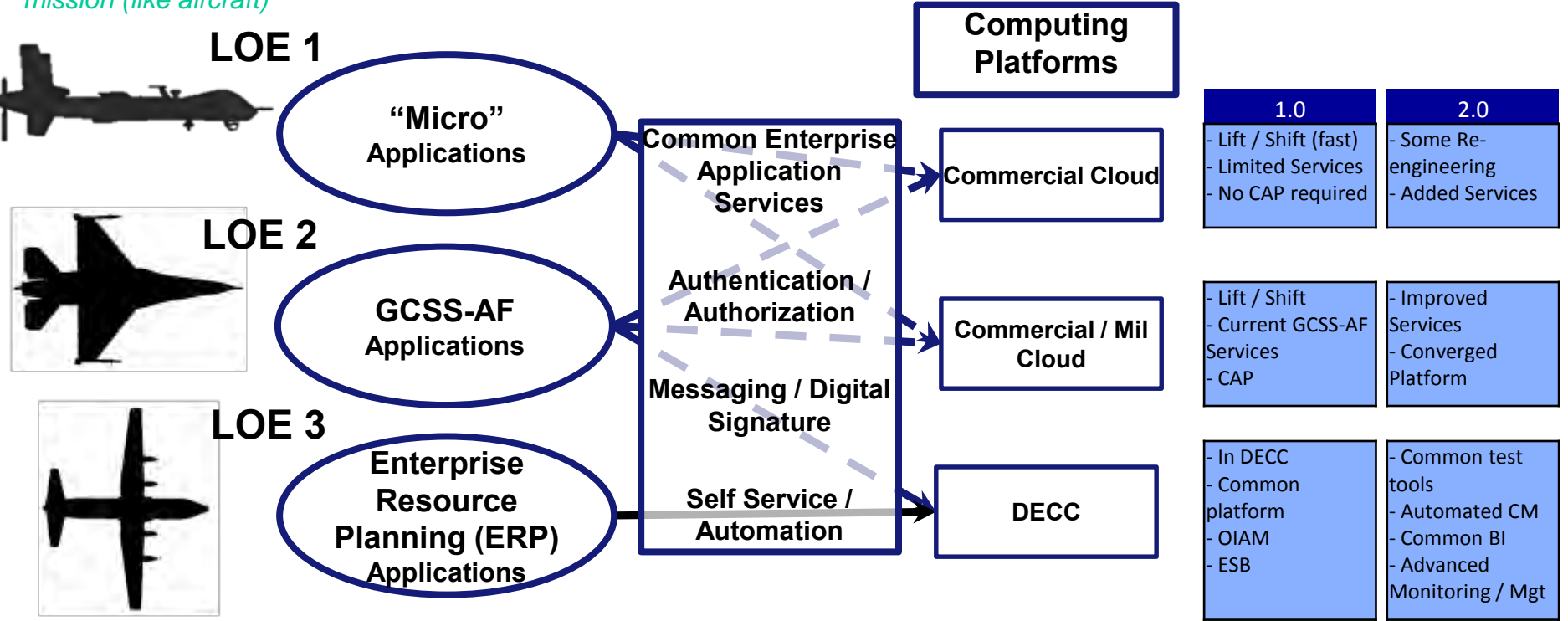
Framework to Future CCE Infrastructure



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We Will Fail To Support Combat Operations Without Defendable, Reliable, Agile Hosting Environments – A4 CIO

Select the right hosting environment for the right mission (like aircraft)



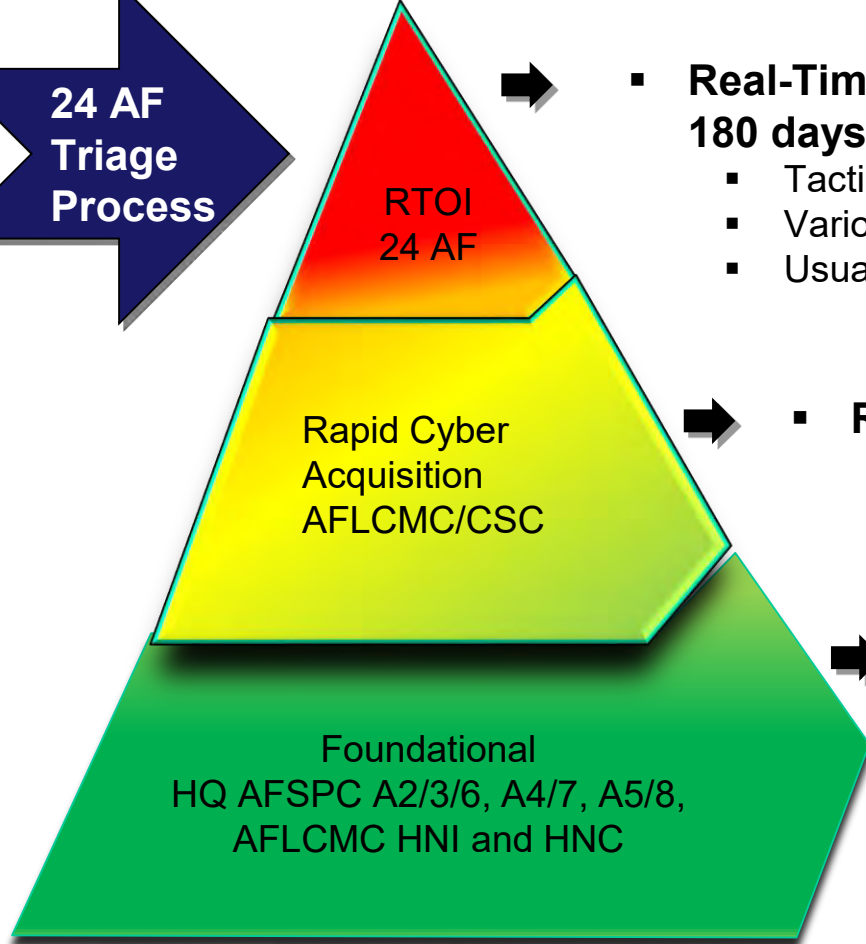
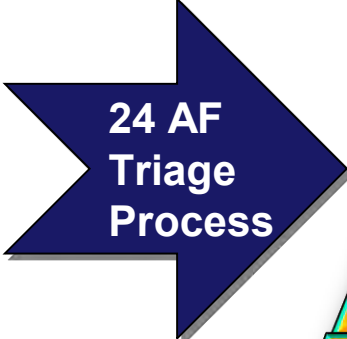
Disciplined and collaborative process to select the right hosting Environment to support mission needs... do no harm



Cyber Capabilities Delivered at the Speed of Need



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- **Real-Time Operations and Innovation (RTOI) – less than 180 days conducted by organic 24 AF resources**
 - Tactics/Capabilities against Operational Threats
 - Various need sources
 - Usually temporary; can transition to permanent/foundational

- **Rapid – less than 18 mos conducted by AFLCMC**
 - Streamlined acquisition process (Can be temporary or permanent)

- **Foundational – over 18 mos conducted by AFLCMC**
 - Alteration of in-service asset or new capability development
 - Capability Based Planning/ Assessment (i.e., JCIDS)
 - Permanent Modification



C3I Infrastructure Division

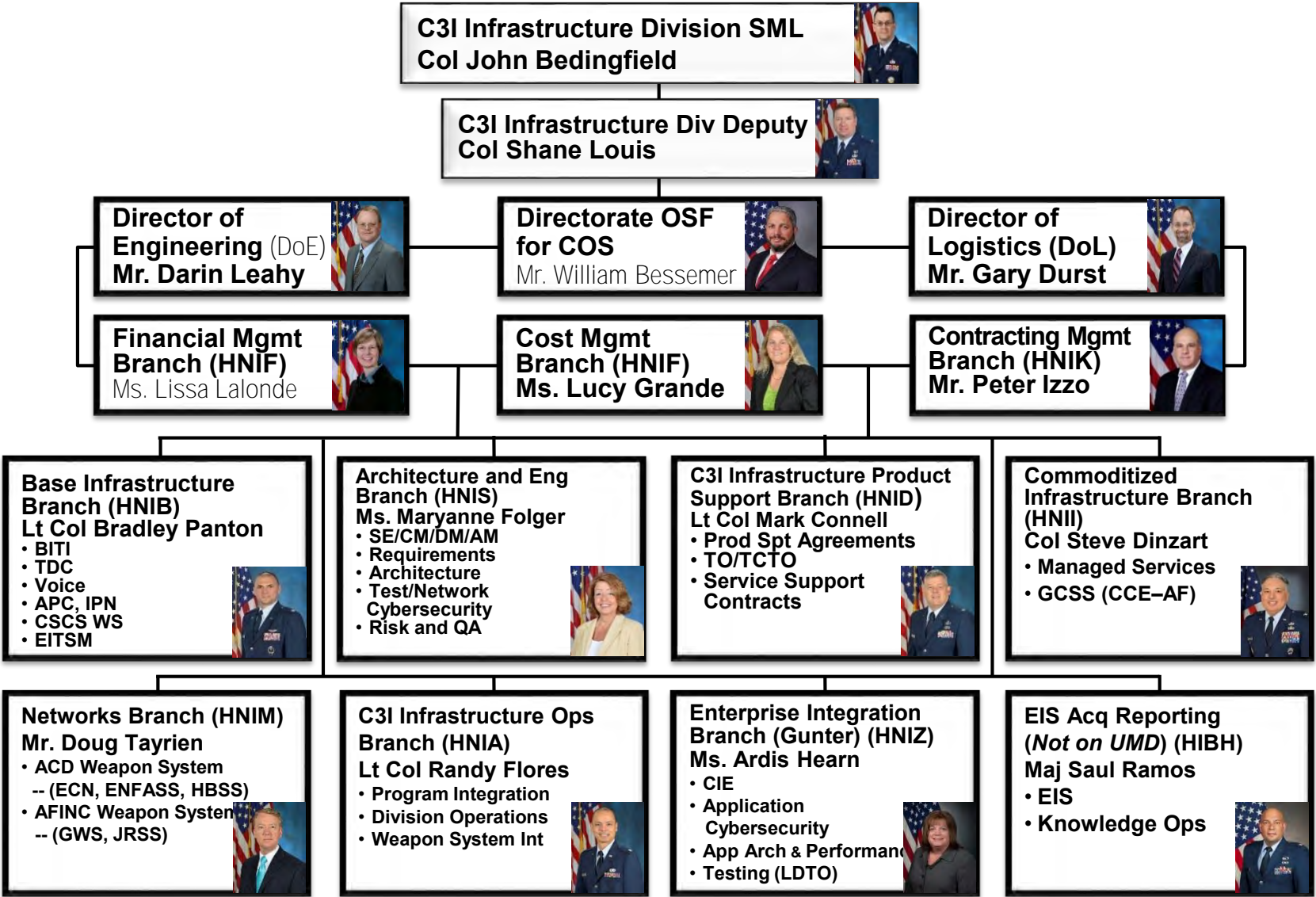
Colonel John Bedingfield
Senior Materiel Leader

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HNI Org Chart

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Base Information Transport

Infrastructure (BITI) FY15/16 Bases

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Warfighter Benefits

- Provides a Security Technical Implementation Guide capable network
- Enables base-level data, voice, video, imagery, sensor, and telemetry requirements
- Ensure Air Force Networks are capable of conducting, supporting and advancing Coalition, Joint, AF and Interagency Operations
- Provides life cycle management support

Description

Delivers the Air Force wired and wireless cyber network infrastructure at each Air Force, Air Force Reserve, and Air National Guard base.

System Capability

Recapitalizes core base cyber infrastructure (Network Core and Backbone equipment), providing redundant, high-speed and reliable wired and wireless cyber network capabilities.

Specifics

- **Major Customers:** AFNetOps, MAJCOMs, all fixed bases
- **Contractors:** Affigent LLC, Centech Group, General Dynamics Information Technology, Lockheed Martin, Three Wire Systems LLC, Red River, Thundercat Technology
- **External AF Interest (Wireless Only):** DOT&E oversight



Potential Industry Opportunity

BITI Enterprise Contracts



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Scope: To provide an Information Transport Infrastructure

Anticipated Schedules:

- Network Management System: RFP 2QFY17, Award 3QFY17
- FY17 Base Recapitalizations: RFP 2QFY17, Award 4QFY17
- FY18 Base Recapitalizations: RFP 3QFY17, Award 1QFY18

Anticipated Vehicles: NETCENTS2 Products, NETCENTS2 NETOPS & Infrastructure Solutions

Anticipated Procurement Approach: Trade-Off, Firm Fixed Price

Customers: AFNetOps, MAJCOMs, all Fixed Bases

POC: Lt Col Bradley Panton, AFLCMC/HNIB, 781-225-2695, bradley.panton@us.af.mil
Peter Izzo, PCO, AFLCMC/HNIK, 781-225-2660, peter.izzo.1@us.af.mil



Potential Industry Opportunity

BITI Enterprise Contracts



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Description : To provide full management of the base network (switches, routers, software, etc.) by Service Contractor

Anticipated Schedules:

Infrastructure as a Service Pilot:

- RFP release for Hanscom 4QFY17, Award 1QFY18

Anticipated Vehicles: NETCENTS2, GSA Networx, or GSA Enterprise Infrastructure Solutions

Anticipated Procurement Approach: TBD

Customers: Hanscom AFB

POC: Lt Col Bradley Panton, AFLCMC/HNIB, 781-225-2695, bradley.panton@us.af.mil


Peter Izzo, PCO, AFLCMC/HNIK, 781-225-2660, peter.izzo.1@us.af.mil



Cyber Security & Control System (CSCS) Weapon System Program



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Program	Warfighter Benefits
	<ul style="list-style-type: none"> • Performs network operations and fault resolution activities designed to maintain operational networks • Monitors, assesses and responds to real-time network events, identifies and characterizes anomalous activities and takes appropriate response actions • Provides AF enterprise services to include messaging support and collaboration services, storage and controlled environments for hosting network-based systems supporting AF missions
Description	Specifics
<ul style="list-style-type: none"> ▪ Provides AFIN management and cyberspace defense to the warfighter for the Air Force-provisioned portion of the DoDIN ▪ Provides AFIN ops and fault resolution activities to maintain cyberspace operational capabilities ▪ Coordinates activities of the base-level Network Control Centers for cyberspace security actions ▪ Monitors AFIN services and manages boundary protection devices and the AFIN infrastructure ▪ Conducts cyberspace situational awareness ▪ Units <ul style="list-style-type: none"> ▪ Active 83 NOS, 561 NOS, 690 NOS ▪ Guard 299 NOS ▪ Reserve 960 NOS, 860 NOS 	<ul style="list-style-type: none"> • <u>Requirements Basis</u>: CPD, 10 Oct 2014 • <u>Major Customers</u>: 24 AF, AFSPC • <u>Contractors</u>: Sword & Shield, World Wide Technology, Three Wire Systems, Booz Allen Hamilton, EMC, Wyle • <u>External AF Interest</u>: DoD CIO



Potential Industry Opportunities

CSCS Contracts



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Description : Consolidate, modernize and sustain CSCS data centers and other infrastructure while migrating to the Joint Information Environment (JIE)

Anticipated Schedules:

- Area Processing Center (APC) Consolidation: RFP 3QFY17, Award 4QFY17
- Active Directory & Exchange (ADX) Tech Refresh: RFP 3QFY17, Award 4QFY17
- Virtual Privacy Network (VPN) Upgrade: FRP 1QFY18, Award 2QFY18
- Installation Service Node (SIPRNet): RFP 3QFY17, Award 4QFY17

Anticipated Vehicles: NETCENTS2 Products, NETCENTS2 NETOPS & Infrastructure Solutions

Anticipated Procurement Approach: Firm Fixed Price

Customers: AFSPC, USAFE, PACAF, ANG, AFRC, AMC, ACC

POC: Lt Col Bradley Panton, AFLCMC/HNIB, 781-225-2695, bradley.panton@us.af.mil
Sara Corsetti (PCO), AFLCMC/HNIK, 781-225-4081, sara.corsetti@us.af.mil

Theater Deployable Communications (TDC)



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Warfighter Benefits

- Provides Extend the Net (ETN) mission (e.g. bare-base build-up) to include HUMRO missions/Natural Disasters, Quick Response for Aircraft Incidents, and Defense Support to Civil Authorities
- Enables base-level data, voice, video, imagery requirements
- Provides life cycle management support

Description

- TDC is the communications infrastructure designed to transmit and receive voice, data and video securely from wired, wireless and satellite sources (intra and inter-theater).

Specifics

- **Major Customers:** AFSPC, USAFE, PACAF, ANG, AFRC, AMC, ACC
- **Contracts:** NETCENTS2 Products, NETCENTS2 NETOPS & Infrastructure Solutions

System Capability

- TDC is the USAF's deployable Comm capability, providing full spectrum infrastructure operations support from bare base, scalable to a 3,000 person Air Expeditionary Wing (AEW)



Potential Industry Opportunity

TDC Contracts



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Description : To provide an Information Transport Infrastructure

Anticipated Schedules:

- TDC annual software support: RFP 1QFY17, Award 2QFY17
- Comm Fly Away Kit: RFP 3QFY17, Award 4QFY17
- NCC-D V4 UPS EOL Replacement: RFP 3QFY17, Award 4QFY17
- Configuration Laptop EOL replacement: RFP 3QFY17, Award 4QFY17

Anticipated Vehicles: NETCENTS2 Products, NETCENTS2 NETOPS & Infrastructure Solutions

Anticipated Procurement Approach: Firm Fixed Price

Customers: AFSPC, USAFE, PACAF, ANG, AFRC, AMC, ACC

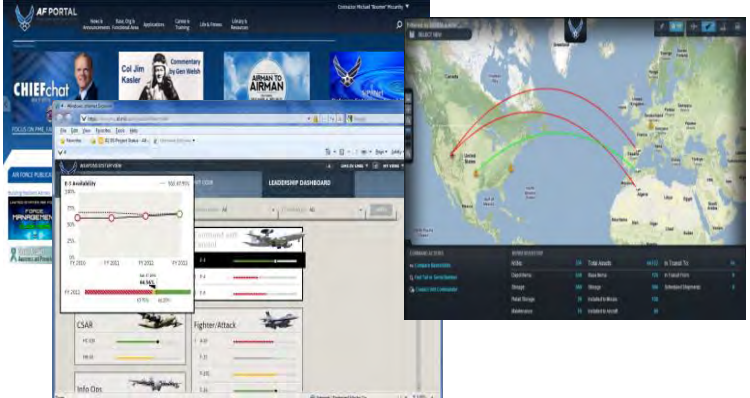
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Sara Corsetti (PCO), AFLCMC/HNIK, 781-225-4081, sara.corsetti@us.af.mil



Common Computing Environment Program Overview



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Program	Warfighter Benefits
	<ul style="list-style-type: none"> • Provide secure/standardized platform for 2,700+ AF mission apps required to migrate to FDCCI compliant environments • Cost avoidance of functional stove-pipe hosting solutions • Allows for ease of transportability of mission capabilities across cloud hosting platforms • Enhances efficiencies, cyber security and application performance through infrastructure commoditization supporting core mission area Defense Business Systems
Description	Specifics
<p>Common Computing Environment (CCE) is the AF evolution to standardized platforms and application support services providing secure cloud environments & cyber security solutions ensuring compliance with Joint Information Environment (JIE) roadmap. Develops and integrates critical application support services such as Application Performance Monitoring, Remote Desktop access, Identity Management and Messaging and Mediation.</p>	<ul style="list-style-type: none"> • Requirements Basis: AF Policy (AFI17-100, AFGM2015 33-03) and support of FDCCI mandated application migrations • Major Customers: SAF CIO A6, HAF Functionals, AFSPC, and mission application owners
System Capability	<ul style="list-style-type: none"> • Contractor: Currently using combination of ETASS, PASS, FFRDC and leveraging existing System Integrator contract vehicles while the CCE Acq Strategy is being developed • External AF Interest: Aligning to the DoD Joint Information Environment requirements
<p>Establishes initial processes and procedures to support provisioning of IB defined platforms and enterprise application support services across multiple cloud environments. These platforms and services support applications prioritized thru AF rationalization process.</p>	



Potential Industry Opportunity Common Computing Environment



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Description:

Seeking Industry expertise to deliver all aspects of a Common Computing Environment. Utilize Industry strengths to assist us in building the right team across all aspects of our journey to the cloud. Cloud service providers (public and private), application transformation and migration experts, cloud operators and optimizers, technology and tool developers, and end to end capability providers

Schedule:

- Completed Industry Day 7-8 Dec 2015
- Current incumbent is Leidos, contract valid thru FY16 with options for FY17/18; possible re-compete activities in FY17 or FY18

Anticipated Contract:

- Developing acquisition strategy for all aspects of CCE efforts
- Investigating flexible contracts to leverage small businesses and cloud experts for application migration

Anticipated procurement approach:

- Anticipate use of multiple procurement approaches

Customer:

SAF CIO A6, SAF/MG, HAF Functionals, AFSPC, and mission application owners

POC: Col Steve Dinzart, AFLCMC/HNII, 781-225-5927; Steve.Dinzart@us.af.mil


Mr Alan Tacito, PCO, AFLCMC/HNIK, 781-225-4093, Alan.Tacito@us.af.mil



Integrated Management Suite Program Overview



AFLCMC... Providing the Warfighter's Edge

Program	Warfighter Benefits
	<ul style="list-style-type: none"> • Unifies the management and defense of AF network devices • Consists of ~90 servers supporting the management of 16 Air Force Gateways and 182 Base Boundaries • Operating/maintaining/defending the NIPR & SIPR Gateways • Operating/maintaining/defending NIPR/SIPR Wide Area Network (WAN) links • Provides connectivity and cyberspace defense through the operation of Service Delivery Points • Provides centralized Domain Name Services for AF domains
Description	Specifics
<ul style="list-style-type: none"> • The Integrated Management Suite (IMS) is a dedicated out-of-band management (OOBM) network for the Air Force Network residing at Gunter AFB and Lackland AFB that provides for real-time centralized management of network devices. 	<ul style="list-style-type: none"> • Requirements Basis: STIG ID: NET1622 Rule ID:SV-15442r1_rule Vuln ID: V-14716. This STIG states that the network administrator will manage devices through OOBM. • Major Customers: AFSPC, 24AF, 26 Network Operations Squadron and mission application owners
System Capability	<ul style="list-style-type: none"> • Contractor: Currently using combination of ETASS, PASS, FFRDC and organic sources while the IMS Acq Strategy is being developed • External AF Interest: Aligning to the DoD Joint Information Environment requirements
<ul style="list-style-type: none"> • Provides boundary protection for 178 Active Duty, Reserve and Air National Guard locations through 16 Air Force NIPRNet Gateways and 14 SIPRNet Gateways 	



Potential Industry Opportunity

Integrated Management Suite



AFLCMC... Providing the Warfighter's Edge

Description:

Seeking Industry expertise to deliver all aspects of an Integrated Management Suite. Permanent modification to modernize and extend the IMS Out of Band Management Network to include additional assets at the base boundary providing greater visibility for Network Operations as well as Network Defense. Utilize Industry strengths to assist us in building the right team across all aspects of our journey to the Joint Regional Security Stacks run by the Defense Intelligence Security Agency. Through extension of the IMS OOBM Network, the AF will provide secure network management of all network devices and infrastructure to enable the Air Force transition to the Joint Information Environment.

Schedule:

- Anticipate RFP 3QFY17, Award 4QFY17

Anticipated Contract:

- Developing acquisition strategy for all aspects of IMS efforts
- Investigating flexible contracts to leverage Network as a Service businesses and Prime Partner relationships for application migration

Anticipated procurement approach:

- Anticipate use of multiple procurement approaches

Customer:

Air Force Space Command, 24th Air Force, 26 Network Operations Squadron and mission application owners

POC: Paul Zauner, AFLCMC/HNIM, 781-225-9667, Paul.Zauner@us.af.mil


Mr Alan Tacito, PCO, AFLCMC/HNIK, 781-225-4093, Alan.Tacito@us.af.mil



AF Cyberspace Defense Program



AFLCMC... Providing the Warfighter's Edge

Program	Recent Successes
	<ul style="list-style-type: none"> • Completed ENFAAS Deployments at 82 AD & Res Bases • Coordinating ENFAAS Employment Activities • HBSS System Integrator Contract, critical for next 3 years of HBSS Ops Support, Awarded in June 2016 • HBSS Win 10 TCTOs Complete • IOP vCenter installed at Lackland/Gunter • PMO liens for FOC met – awaiting formal declaration • Working Baseline documentation for RMF C&A Q1 CY17
Description	Specifics
<p>Employs Defensive Counter Cyberspace Operations to achieve cyberspace superiority for assigned missions. Provides 24/7/365 monitoring and defense of US Air Force and US Central Command SIPR/NIPR computer networks against hostile attack.</p>	<ul style="list-style-type: none"> • Requirements Basis: ACD WS CPD <ul style="list-style-type: none"> • JROC approved May 2015 • Major Customers: HQ AFSPC, 24 AF, 624 OC, several mission CSSP partners (e.g.: AOC, F-22, TRANSCOM) • Contractors: GDIT (ENFAAS) <ul style="list-style-type: none"> Dependable Global Solutions Inc (DCO M&E) Agile Defense (Baseline Effort) IndraSoft (HBSS)
System Capability	<ul style="list-style-type: none"> • External AF Interest: USCYBERCOM, National Security Agency/Central Security Service Threat Operations Center (NTOC)
<p>ACD coordinates and executes resources needed to provide intrusion detection, network traffic analysis, network forensics analysis, countermeasure development and execution, and incident response across the AFNet.</p>	



Potential Industry Opportunity

AF Cyberspace Defense (ACD)



AFLCMC... Providing the Warfighter's Edge

Description:

- Seeking non-traditional DoD expertise to demonstrate and develop an Integrated Cyber Aggregation Tool (iCAT) for the 33NWS in its mission of identifying and blocking cyber threats to the AFNet. 33 NWS Operators are faced with the frustration of lost productivity when moving between different Cyberspace management appliances/tools. Each requires a unique User Id and password for authentication, authorization, and accounting (AAA). The desired result of this request is a federated data capability that allows operators to quickly and easily review and copy data from multiple cyber tools/applications which should be PKI-enabled. This should allow for a much faster cyber event evaluation process leading to an enhanced integrated cyber threat data environment.

Schedule:

- Industry Day TBD; but likely March 2017
- Rapid Cyber Acquisition where prospective offerors will demonstrate their ability to offer a solution in a Mil Cloud environment. Winner will be selected and awarded a contract to bring their proposed solution to a TRL Level 8 and deliver a usable capability to the 33NWS.

Anticipated Contract:

- OTA (Other Transaction Authority)
- Seeking non-traditional DoD vendors
- Follow-on sustainment effort will be required and potential exists for export/tailoring to other AF Cyber WS's

Customer:

33NWS, AFSPC, and mission application owners

POC: Brittany Ridings, GS-13, AFLCMC/XZC 781-225-3443, Brittany.Ridings@us.af.mil

Stephen C. Ober, NH-04, ACD PM; 781-225-4036, Stephen.Ober@us.af.mil



HNI S&T Requirements



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- **Cloud Security:** The capability to provide commercial cloud security infrastructure and services that are compatible with current AFNET offerings.
- **Automation of Baseline Discrepancy Incident Reporting:** The capability to automate the analysis, reporting, and resolution of AF NIPRNet Product Baseline discrepancies.
- **Endpoint Protection for Zero Day Prevention :** The capability to provide endpoint/host protection based on automated, signature-less (i.e. artificial intelligence based), malware detection algorithms that run locally on the host.
- **SCADA Management:** The capability to provide secure C3/management of Supervisory Control and Data Acquisition (SCADA) systems from within the AFNet.
- **Adversary Attack Vectors:** The capability to analyze hardware types and configurations; firewalls and firewall rules; known vulnerabilities; and probable targets to determine the most likely avenues of attack by adversaries.
- **Big Data Analytics:** The capability to analyze vast network data to identify and counter adversary actions

***Space, Aerial, and Nuclear Division
HNA***



**Col Todd Krueger
Senior Materiel Leader**

Providing the Warfighter's Edge

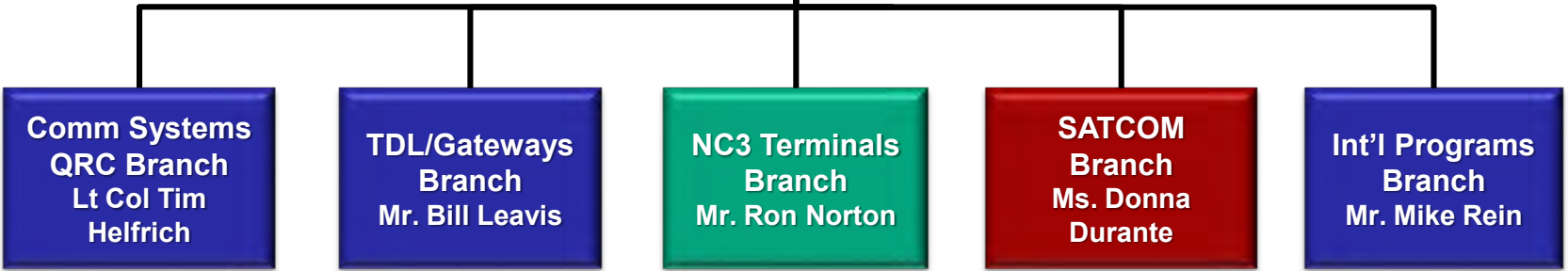


Space, Aerial & Nuclear Networks Division (AFLCMC/HNA)



AFLCMC... Providing the Warfighter's Edge

**Space, Aerial & Nuclear Networks
Division**
Col Todd Krueger
Mr. Mike Kaplan





SANND Mission Statement and Vision



AFLCMC... Providing the Warfighter's Edge

Mission Statement

Expertly acquire and support world-class, innovative over-the-air communication solutions for Air Force, joint and coalition warfighters

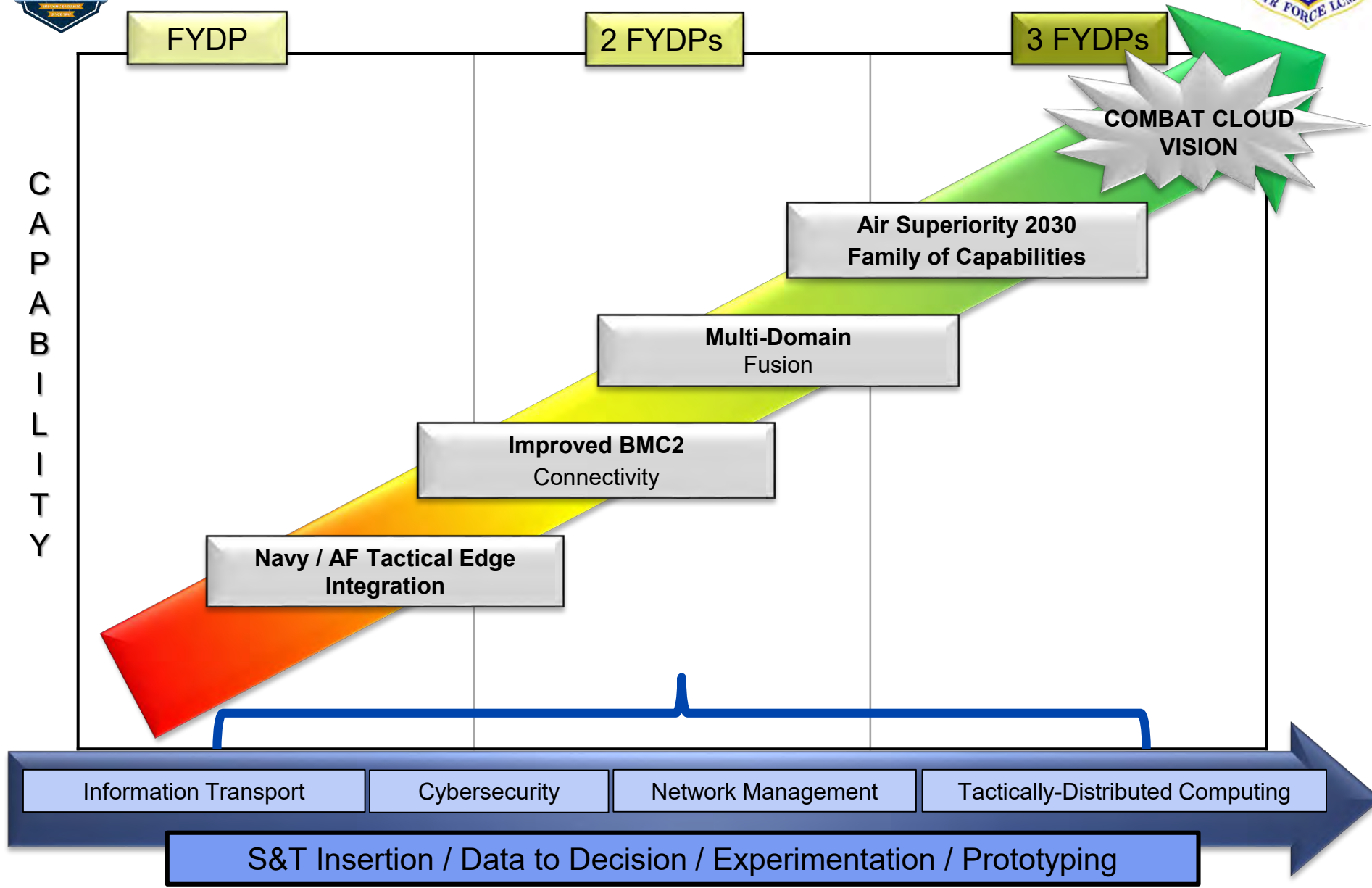
Vision

We will:

- Revolutionize the management of our networks as weapon systems***
- Be the recognized leader for acquiring and sustaining interoperable communication solutions***
- Establish, maintain and enforce the standards for Aerial and SATCOM networks***

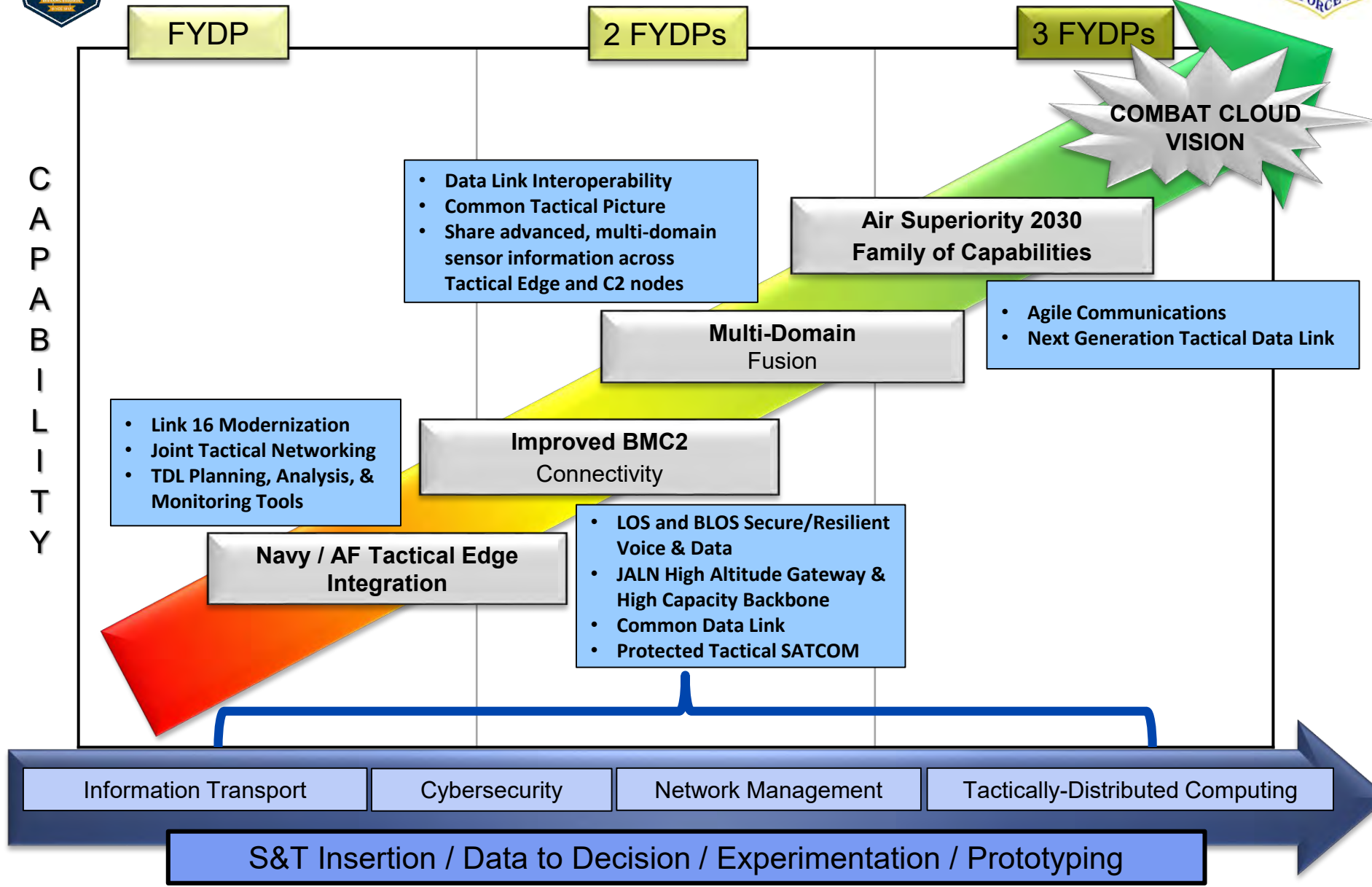


FY17 AF Aerial Network Roadmap Trajectory





FY17 AF Aerial Network Roadmap Trajectory



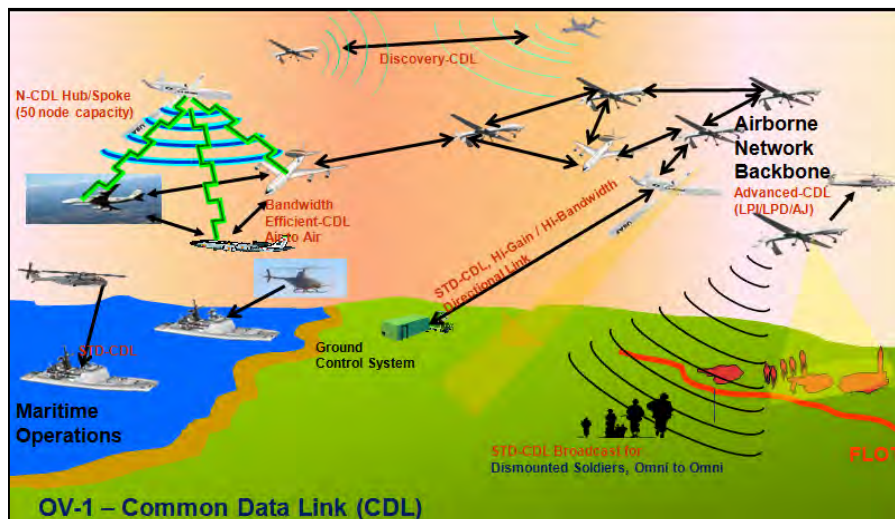


Common Data Link (CDL)

Non-ACAT



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Warfighter Benefits

- Critical component of the nation's ISR infrastructure, delivering data at multiple classification levels to the right place at the right time
- Brings ISR data to the tactical edge (e.g. SIGINT, GEOINT, MASINT, and Full-Motion Video (FMV))
- Ability to quickly transmit enormous amounts of information securely & on multiple frequency bands
 - Data agnostic
- Standardized - encourages interoperability

Description

- DoD standard ISR data link, mandated for ISR platforms by Public Law 112-239; ASD(NII) CDL policy dated 7 Aug 09; JALN high capacity backbone per JROCM 003-13 (JALN AoA)

System Capability

- High capacity, encrypted, interoperable data links for ground/aerial ISR platforms
- Waveform specifications supporting Internet Protocol (IP) enabled data transport via point-to-point and point-to-multi-point links
- "Communications-on-the-move" and dynamically forming MANET-type *air and ground* CDL networks

Specifics

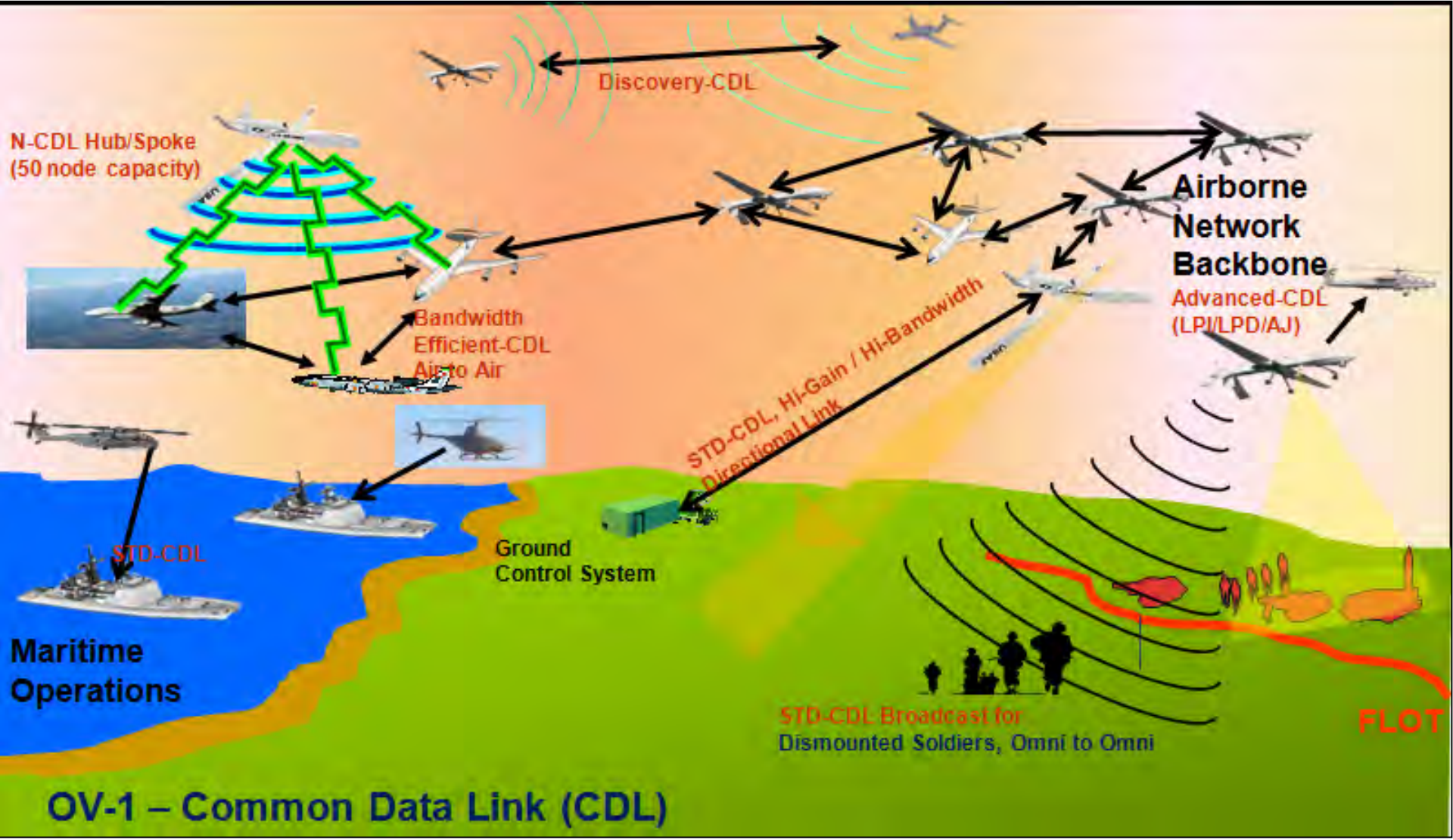
- Requirements Basis: Congressionally Mandated Effort (since 2006); ASD(NII) policy, CDL mandate update (7 Aug 09), DoDI S-4660.04, Encryption of Imagery Transmitted by Airborne Systems and Unmanned Aircraft Control Communications (27 Jul 11); A NATO interoperability standard (STANAG 7085)
- Executive Agent: SAF/AQI
- CDL PMO: AFLCMC/HNAG
- Contractor: TBD
- External AF Interest: OUSD(AT&L), OUSD(I), Joint Staff, DoD CIO, All Services, NATO, COCOMs



Common Data Link (CDL)



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OV-1 – Common Data Link (CDL)



Potential Industry Opportunity Data Link Enterprise (DLE) IDIQ



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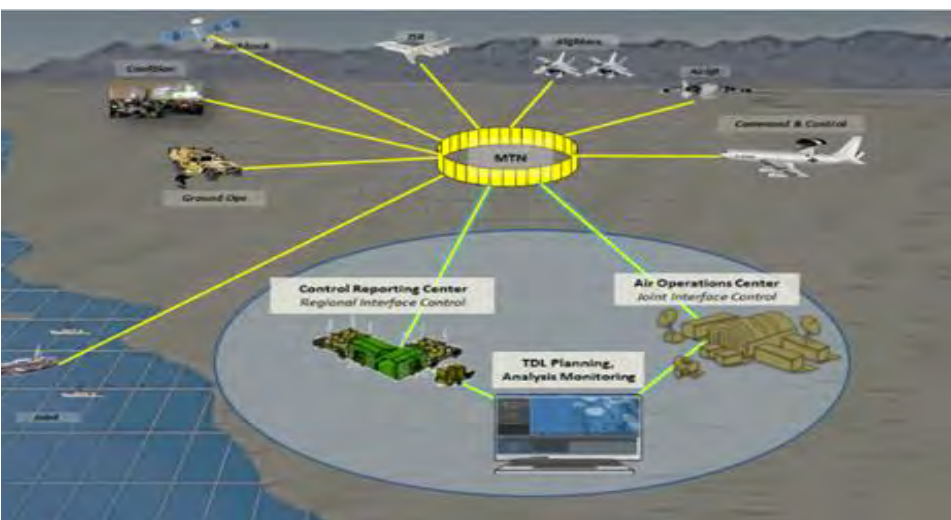
- **Description:** Develop H/W and S/W engineering development models and prototypes, systems engineering products, technical reports, data rights, and PM and financial milestone event and reporting to support CDL, TDL, and other HNA projects
- **Anticipated Schedule:**
 - Issue Final RFP: March 2017
 - Receive Proposals: May 2017
 - Contract Award: April 2018
- **Anticipated Contract:** Multiple Award
- **Estimated Value:** \$496M Contract Ceiling
- **Customer:** Army, Navy, Marines, AF, Principle Staff Assistant, JITC, Joint Spectrum Center
- **POC:**
 - Ms. Cali Rodriguez, AFLCMC/HNAG, (781) 225-4034
 - PCO, Ms. Edna Alonis, AFLCMC/HNAK, (781) 225-4070



Tactical Data Link Planning, Analysis & Monitoring (TDL PAM)



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- ## Warfighter Benefits
- Improved ability to plan, initiate, monitor, and manage critical info exchange reqts (including NEW) via MTN
 - Automates OPTASKLINK message generation
 - Alleviates manual intervention
 - Streamlines the flow of decision-quality information supporting the control of network planning, analysis and performance monitoring
 - Enables affordable capability evolution

Description

An initiative to develop & sustain a modern software-based, stand-alone toolset for Regional and Joint Interface Control Officers (RICO/JICO) to efficiently and effectively plan, analyze & monitor Multi-TDL Network (MTN) architectures *and* support emerging capabilities within the Theater Air Control System.

Specifics

- **Requirements Basis:** Draft CRC & AOC Rqts Docs
Adhere to Modular Open Systems Approach principles: (Employ Modular Design, Designate Key Interfaces, Use Open Standards & Certify Conformance).
- **Lead & Using Commands:** ACC/A5Y (Lead);
ACC/A3C (Using)
- **Milestone Decision Authority:** PEO, C3I&N anticipated
- **Contractor:** TBD
- **Quantities:** 14 Control and Reporting Centers
- **Potential External AF Interest:** JICO Community

Potential System Capability

- Facilitate L-16 TDL planning need to create, import, & export OPTASK LINK in machine readable, parsable format to include Network-Enabled Weapon (NEW) & Combat Net Radio (CNR) planning capabilities
- Monitor system performance and modify existing MNT



Potential Industry Opportunity

TDL PAM Project



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- **Description:** Develop an Open Systems Architecture software based, stand-alone system to run on COTS hardware for use in ground-based Control Reporting Centers (CRC) and Air Operations Centers (AOC) to enable Regional and Joint Interface Control Officers (RICOs/JICOs) to effectively and efficiently plan, analyze and monitor the Multit-TDL Network (MTN) and support emerging capability requirements within the AF Theater Air Control System (TACS).
- **Current Phase:** Pre-Acquisition/Pre-Materiel Development Decision
- **Project Status:** Requirements Definition
- **Notional Schedule:**
 - Request For Information: 4th Qtr FY16
 - Market Research & Early Gov't System Engineering: FY17
 - ICD/CDD Approval: ~4th Qtr FY17
 - Materiel Development Decision: ~1st Qtr FY18
 - Development Request For Proposal Release Decision: ~FY18
 - Contract Award: ~FY19 [MSA or TMRR acquisition phase]
 - Fielded by end of FY23
- **Customer:** CRC RICOs & AOC JICOs
- **POC:**
 - Ms. Raquel Durst, AFLCMC/HNAG, (781) 225-5167
 - PCO: Ms. Indy Toliver, AFLCMC/HNAK, (781) 225-4189

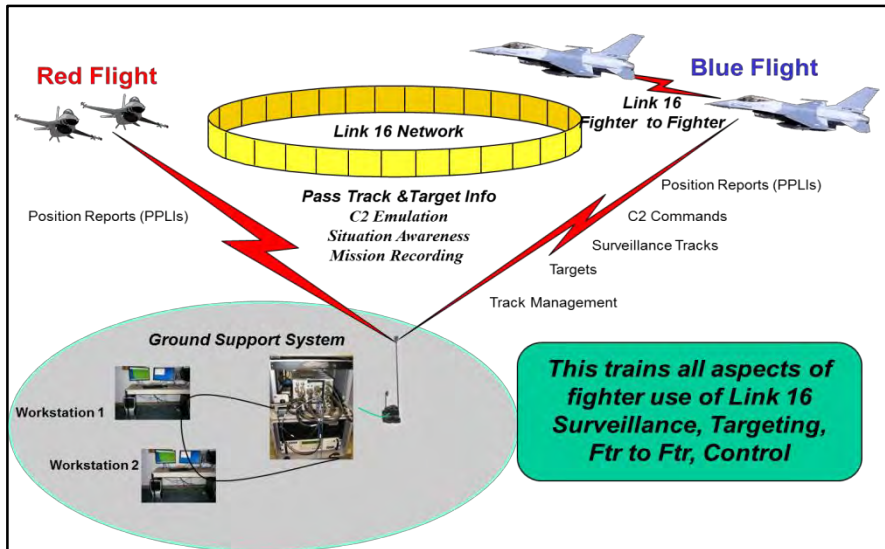


Ground Support System

ID/IQ w/ Jordan Initial Delivery Order



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Warfighter Benefits

- GSS is usually the first Link 16 training capability and often the only connection of the airborne Link 16 picture to the ground for new Coalition partners
- Emulates wartime environment for training purposes
- Provides ground based situational awareness for exercise and airborne sorties
- Can be deployed to support remote exercise or real world events

Description

The Link 16 Ground Support System (GSS) is a tactical exerciser that will provide the Royal Jordanian Air Force's F-16s a training environment that will exercise all of the benefits/features of Link 16 while emulating a wartime atmosphere

System Capability

- Tactical Workstation with a high resolution graphics display
- Implements all of the data link messages and includes scenario generation, surveillance, track management, limited C2, recording and data analysis

Specifics

- Acquisition Strategy TBD, but potentially a new single award ID/IQ with initial FFP task order
- Requirements: Technical Requirements will be provided with release of Sources Sought / NOCA
- Customers: Royal Jordanian Air Force for initial TO
- Contractor: TBD
- Quantities: (2) systems to include spares, commercial support plan and contractor support



Potential Industry Opportunity

ID/IQ for FMS Ground Support Systems (GSS)

Initial Delivery Order: Royal Jordanian Air Force GSS

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- **Description:** 5-yr single award ID/IQ to provide Link 16 Ground Support Systems (GSS); to include spares, commercial support plans and contractor support to US FMS partners
- **Anticipated Schedule:**
 - Sources Sought: February-March 2017
 - RFP: May-June 2017
 - Contract Award: September-October 2017
 - Installation & Site Acceptance Test (I&SAT): March-April 2018
- **Anticipated Procurement Approach:** TBD, but anticipating Best Value
- **Estimated Value:** ~\$25M ceiling
- **Initial Delivery Order:** Procurement of 2 GSS, spares, commercial support plans & contractor support for Royal Jordanian Air Force
- **POC:**
 - PCO, Ms. Edna Alonis, AFLCMC/HNAK, (781) 225-4070
 - Buyer, Mr. Joseph Cooper, AFLCMC/HNAK, (781) 225-5546



***Crypto and Cyber System Division
HNC***

**Col Gary Salmans
Senior Materiel Leader**

Providing the Warfighter's Edge



HNC Mission Areas



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Cryptologic Systems

(Crypto Modernization & Mission Assurance)



Air/Ground COMSEC

Space Crypto

Key Management

Intelligence Systems

Special Support

Tech Apps



National Intel



Force Protection



Cyber Systems



Defensive & C2 Cyber Ops SPO



Offensive Cyber Ops



Cyber Solutions Cell

Functional Offices

Distribution & Accountability



Financial



Maintenance



Contracting



Engineering



Operations



Logistics



Intel Support

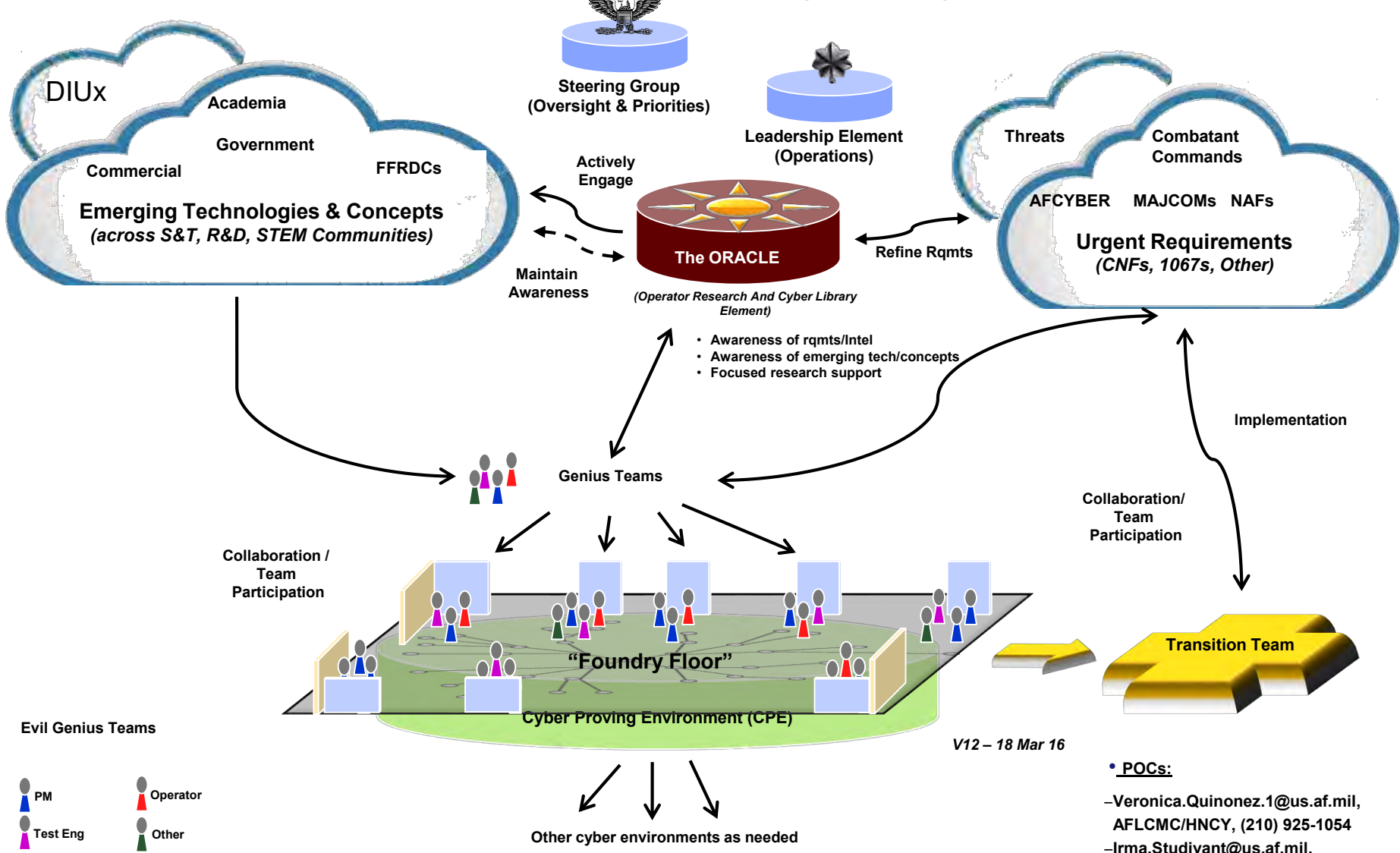




Foulois Cyber Proving Ground OV-1



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V12 - 18 Mar 16

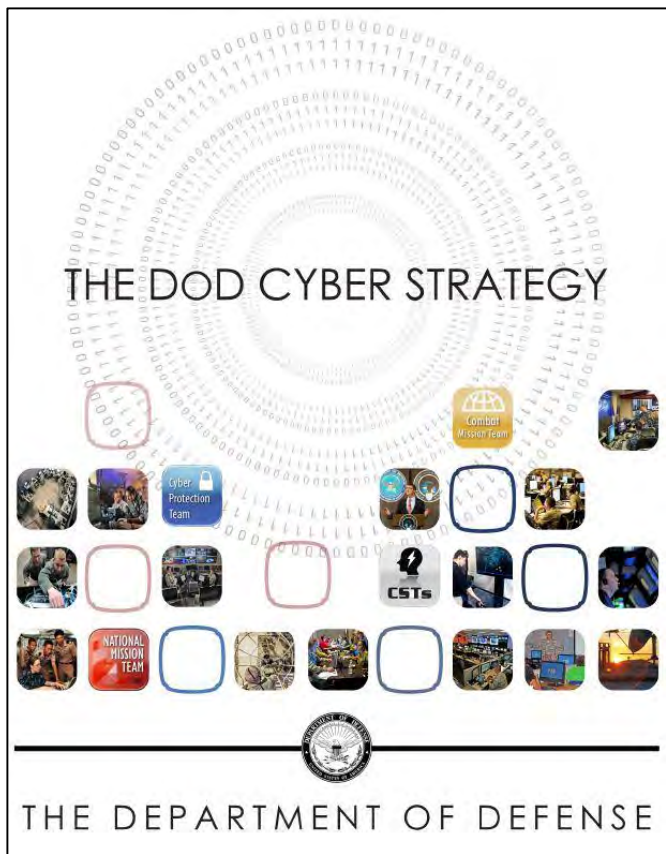
- POCs:
- Veronica.Quinonez.1@us.af.mil, AFLCMC/HNCY, (210) 925-1054
- Irma.Studivant@us.af.mil, AFLCMC/HNCK, (210) 925-1088



SECDEF Direction



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The Department of Defense
Cyber Strategy, April 2015

“Develop the Unified Platform.

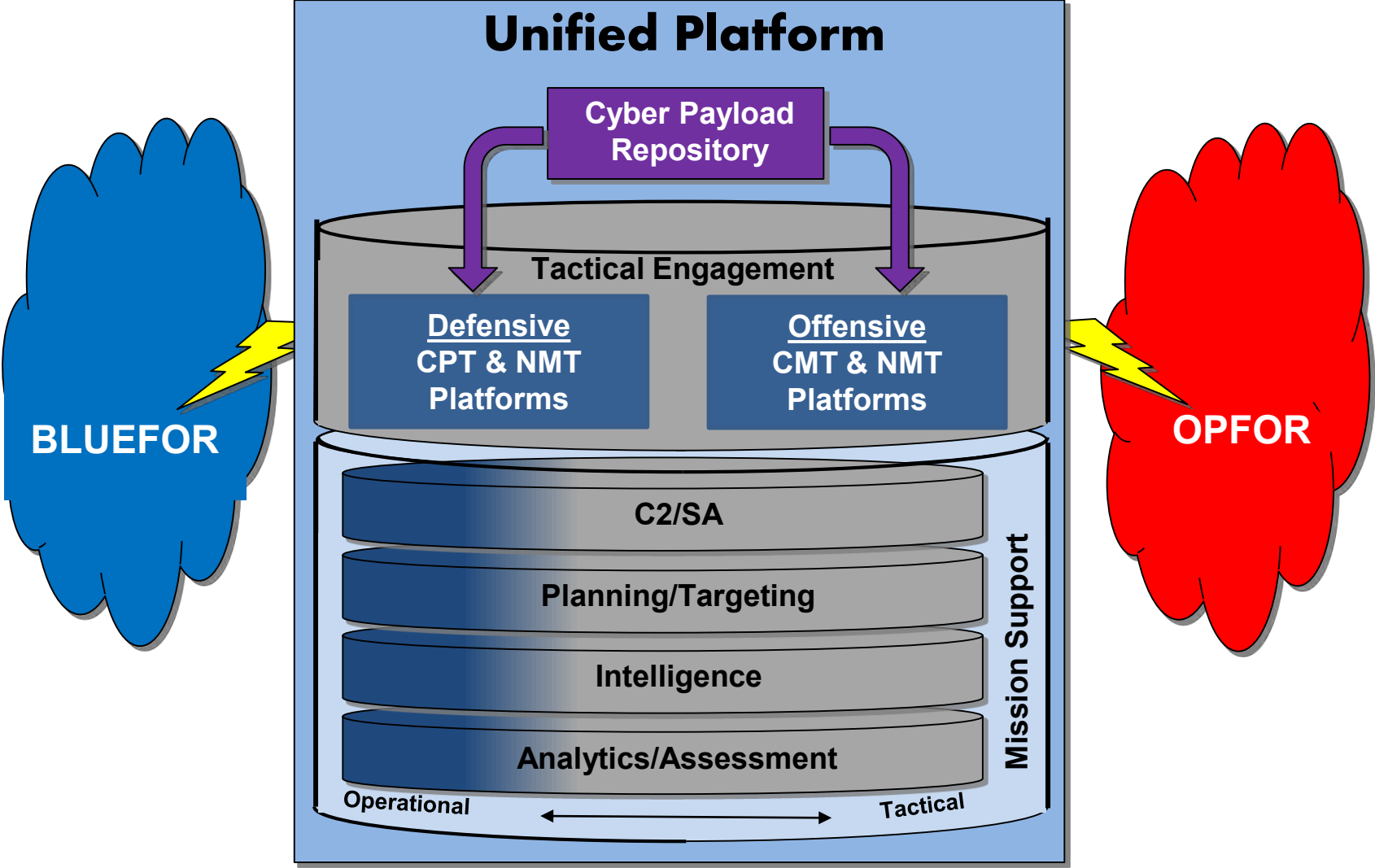
... DoD will develop the detailed requirements for integrating disparate cyber platforms and building an interoperable and extendable network of cyber capabilities. This Unified Platform will **enable the CMF to conduct full-spectrum cyberspace operations in support of national requirements.**”



Operational Concept



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Potential Industry Opportunity



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- **Description:**
 - Tech maturation and risk reduction – multiple prototyping efforts
 - UP development
- **Anticipated Schedule:**
 - Prototyping efforts: FY17/18/19
 - Development: Late FY19 and beyond
- **Anticipated Contract: TBD**
- **Anticipated Procurement Approach: TBD**
- **Customer: USCYBERCOM, Military Services, DoD Agencies**
- **POC:**
 - PM: Ms Diane Tschoepe-Lichte, AFLCMC/HNC, (210) 925-4055
 - PCO: Mr Patrick Jackson, AFLCMC/HNCK, (210) 925-3198

Programmatic and Acquisition Planning in Early Stages



Flexible Information Assurance Acquisition Tool (FIA2T) Indefinite Delivery/Indefinite Quantity (ID/IQ)



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Operational View
CCTD 31 Jul 12



Crypto on Demand

Warfighter Benefits

- Creates an efficient contract vehicle that supports all phases of the crypto acquisition lifecycle
 - No fee
 - HNC-tailored terms and conditions
- Streamlined source selection process
- Establishes the only IDIQ contract capable of supporting full-rate production for crypto end-items
- Enhances competition and small business participation

Description

- FIA2T: Multiple Award ID/IQ contracts that support the full range of requirements to develop and sustain cryptographic and Information Assurance (IA) products
- FIA2T's scope is divided into five lifecycle phases:
 1. Materiel Solution Analysis (MSA), (partial Small Business (SB) set-aside)
 2. Technology Maturation and Risk Reduction
 3. Engineering and Manufacturing Development
 4. Production
 5. Product Support

Specifics

- Acquisition Approach:
- Full and Open Competition for UNRESTRICTED pool with partial SB set-aside for the MSA phase
- Contract Ceilings:
- FIA2T- UNRESTRICTED pool \$875M
 - FIA2T- Partial SB set-aside pool \$50M
- Period of Performance:
- FIA2T: 5-yr basic/5-yr option for ordering (11yr Period of Performance)



Flexible Information Assurance Acquisition Tool (FIA2T) Indefinite Delivery/Indefinite Quantity (ID/IQ) Contract



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- **Scope:**
 - FIA2T focuses on the full range of AFLCMC/HNC crypto requirements
 - Develop and support cryptographic and IA products
 - FIA2T's flexible Delivery/Task Order process reduces time to meet customer requirements
 - Improves operations efficiency and reduces reliance on external contracts
 - Delivery/Task Orders available: FFP, FPIF, CPFF, CPIF, CR
- **Anticipated Award Date:** 2QFY17
- **Anticipated Contracts:**
 - 10-15 small and large businesses
 - Contracts have on-ramp procedures to add additional contractors in FY19
- **Anticipated Procurement Approach:** IDIQ contracts: FAR Part 15 / Orders: FAR Part 16
- **Customers:** AFLCMC/HNC & other AF units with crypto needs



CPG Assessment for Cyber Vulnerability Assessment /Hunter WS



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Warfighter Cyber Need

- CTE Squadron mission to accurately replicate cyberspace threats [post exploitation].
- Replicate threats and customize different aspects of its footprint.
- Provide ability to automate Operator actions and maintain situational awareness

Description

- CVA/HUNTER WS provides vulnerability assessment and the Hunter mission capabilities.
- The Hunter mission provides the 24th AF commanders with a deployable, precision capability to identify, pursue within network boundaries, and mitigate cyberspace threats in support of theater operations.

Specifics

CPG Board:

- Approved assessment of 3 products for post exploitation on CPG Foundry Floor

Step 1: CPG planned activities:

- Set up in CPE/346TS environment
- Replicate adversarial threats using assessment criteria and create a report

Step 2: CSC planned activity:

- Execution COA following CPG project



CPG Assessment for Cyber Vulnerability Assessment /Hunter WS



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Scope:

- Perform capability assessment on three candidate products
 - KeyW
 - Immunity
 - Root9B
- Potential small business award to Immunity Products LLC's
 - Immunity Products LLC develops mature and modular post exploitation framework called INNUENDO.
 - RFI contract FA8307-16-RFI06, Post Exploitation Framework for Responsive Cyber Division/Cyber Solution Cell.
- **Potential Award Date:** 2QFY17
- **Anticipated Contracts:** 1 small to large businesses
- **Anticipated Procurement Approach:** Sole-Source or RFQ
- **Customers:** AFLCMC/HNCYD
- **POCs:**
 - Veronica.Quinonez.1@us.af.mil, AFLCMC/HNCY, (210) 925-1054
 - Irma.Studivant@us.af.mil, AFLCMC/HNCK, (210) 925-1088



AFLCMC/HNJ

Overview to New Horizons

**Col Steve Brooks
Chief, Special Programs Division
Mar 17**

Providing the Warfighter's Edge



HNJ Mission & Vision



AFLCMC... Providing the Warfighter's Edge

Mission

“Champions this Nation's most sensitive Command, Control, Communications & Networks (C3I&N) and Battle Management (BM) technologies, capabilities, information, and operations for the warfighter”

Vision

“Where classified innovation becomes reality”

- **Make the vision of the “Combat Cloud” a reality**
- **Provide state-of-the-art Information Technology to the DoD SAP* community**
- **Be the Air Force's experts in Electronic Warfare**

*** SAP - Special Access Program**

HNJ Mission Areas

AFLCMC... Providing the Warfighter's Edge

Advanced Technology Branch (HNJT)



Enable collaboration across the SAP* community

- Secure networks and VTC capabilities
- Cloud services/databases (i.e., CORE)

Kill Chain Integration Branch (HNJJ)



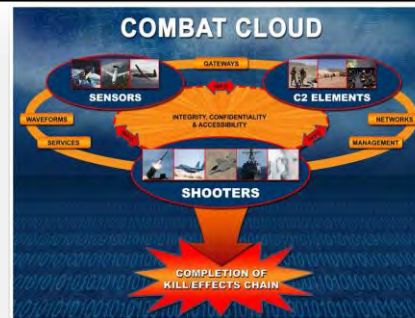
Find, mature & transition multi-domain Decision Superiority capabilities

Electronic Warfare Systems Branch (HNJW)



Design, test and field electronic warfare systems

C3I&N Architecture Team (HNJ)



Working with other USAF organizations, realize the "Combat Cloud" vision

* SAP - Special Access Program



Data to Decisions (D2D) Campaign of Experiments



AFLCMC... Providing the Warfighter's Edge



Warfighter Benefits

- Multi-domain Air, Space & Cyber integrated battlespace information environment
- Enable Air Superiority in the 2030 timeframe
- Rapid development & fielding of technology supporting the "Combat Cloud" vision
- Leverage & integrate various 5th gen C2, ISR & other sensor advancements

Description

Iterative series of experiments to explore innovative combinations of technologies, doctrines, organization, etc. to achieve decision superiority.

Specifics

- **Requirements Basis:**
 - CSAF directed 2030 Air Superiority eCCT
 - D2D Campaign of Experiments Charter, May 16
 - Combat Cloud Operating Concept, Mar 16
- **Major Customers:** CSAF, ACC, SDPE, AF/A2
- **Key Partnerships:** AFLCMC, AFRCO, AFTENCAP, MIT/LL, MITRE, SCO

Potential Capability

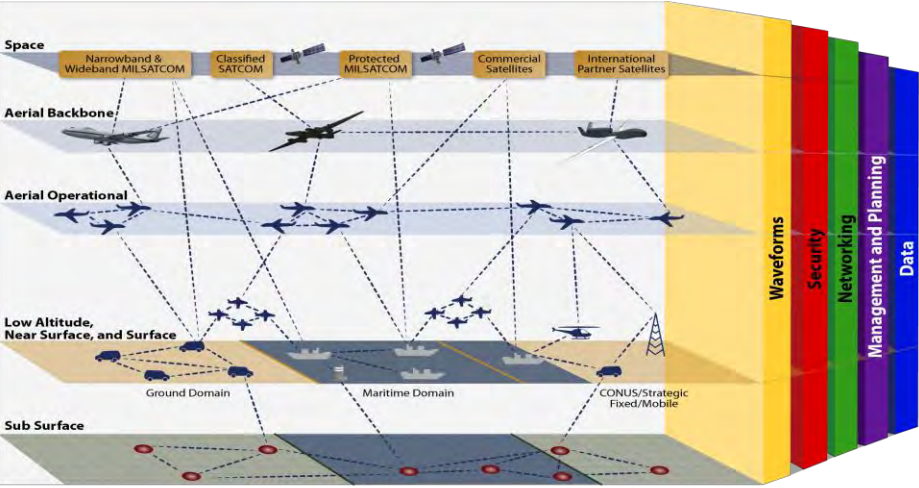
- Secure, agile, survivable comms to meet future interoperable needs across the strategic, operational & tactical forces in a highly contested environment.
- Relevant data that is discoverable and accessible regardless of source, policy, security level, distance or location in the battlespace and is reliable, and trustworthy to warfighter and agencies at all levels.



Combat Cloud Architecture



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Warfighter Benefits

- 5th-to-4th and 5th-to-5th generation fighter, bomber, C2 & ISR data sharing
- Eliminates risky and costly human transfers of data
- Increases efficiency of multi-domain data sharing
- Enables Decision Superiority and BMC2
- Consolidates disparate networks and infrastructure between services and platforms
- Allows for information storage, transfer and retrieval

Description

An overarching meshed network for data distribution and information sharing within a battlespace, where each authorized user, platform, or node transparently contributes and receives essential information and is able to utilize it across the full range of military operations.

Potential Capabilities

- Survivable Comms—LPI/LPD/AJ ATDL Network
- Commonality—Open Radio Comm Architecture
- Information/Data protection—Sustained Multi-Level Security (MLS)
- Threat mitigation—Disruption/Denial of enemy effects

Specifics

- **Requirements Basis:**
 - CSAF directed 2030 Air Superiority eCCT
 - D2D Campaign of Experiments Charter, May 16
 - Combat Cloud Operating Concept, Mar 16
- **Major Customer(s):** AF/A2, ACC A5/8/9
- **Key Partnerships:** AFLCMC, AFRCO, SDPE, AFTENCAP, MIT/LL, MITRE, SCO, MDC2 eCCT



Tactical Cloud Reference Implementation (TCRI)



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Warfighter Benefits

- Decreased processing, exploitation, and dissemination (PED) timelines for tactical data
- Automated machine-to-machine data analysis
- Quicker decision making via operator on the loop vs. operator in the loop
- Heightened situational awareness via automated data fusion/correlation
- Quicker kill chain closure

Description

Specifics

Combat Cloud enabling technology. Tactical data architecture that provides common framework for automated analysis and data fusion at the tactical edge

- **Requirements Basis:** Derived from
 - CSAF directed 2030 Air Superiority eCCT
 - D2D Campaign of Experiments Charter, May 16
 - Combat Cloud Operating Concept, Mar 16

Potential System Capability

- **Major Customers:** ACC/A2, SDPE, HAF/A2, ACC/A5/8/9
- **External AF Interest:** Navy ACS, Office of Naval Research, Army I2WD, OSD SCO, IC

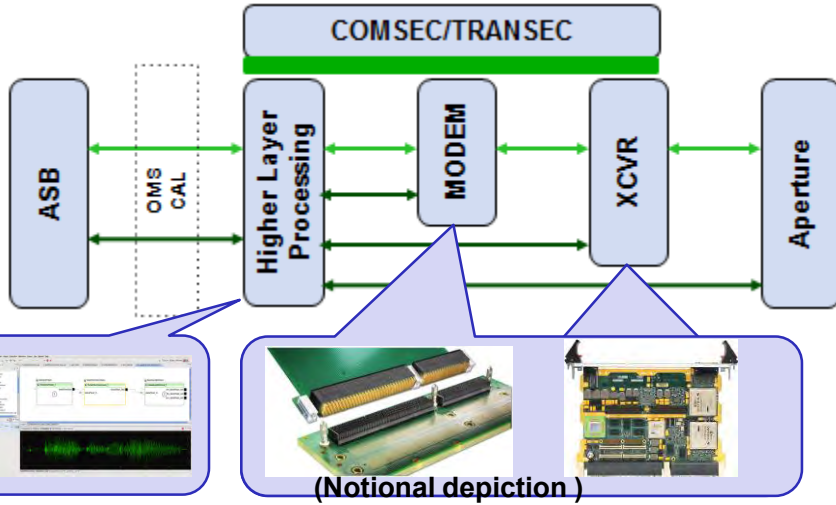
- Automated, machine-to-machine (M2M) data analysis at the tactical edge
- Distributed data storage, processing, fusion
- Data platform for analytic/application hosting
- Data translation/conversion (e.g. Link-16, UCI, XML)
- Tactical data reachback to enterprise nodes (e.g. AOC, DCGS)
- HW agnostic software solution
- Multi-domain, Joint service connectivity



Open Radio Communication Architecture (ORCA)



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Warfighter Benefits

- Enables and fosters broader competition & non-proprietary solutions through industry consortium
- Develops agile enterprise capabilities instead of point solutions, rapidly responding to changing threats
- Reduced sustainment, modernization and life-cycle costs through modular/open architecture
- Enables computing hardware refresh without major software rewrite (e.g., new operational flight prgm)

Description

An effort to develop & sustain an industry consensus, non-proprietary architectural standard for airborne platform radio communications

Specifics

- Requirements Basis: Derived from
 - CSAF directed 2030 Air Superiority eCCT
 - D2D Campaign of Experiments Charter, May 16
 - Combat Cloud Operating Concept, Mar 16
- D2D & Combat Cloud driven – Necessary architecture to maintain pace w/technology evolution and create enabling cloud infrastructure on multiple USAF platforms in an agile and cost effective way

Potential Capability

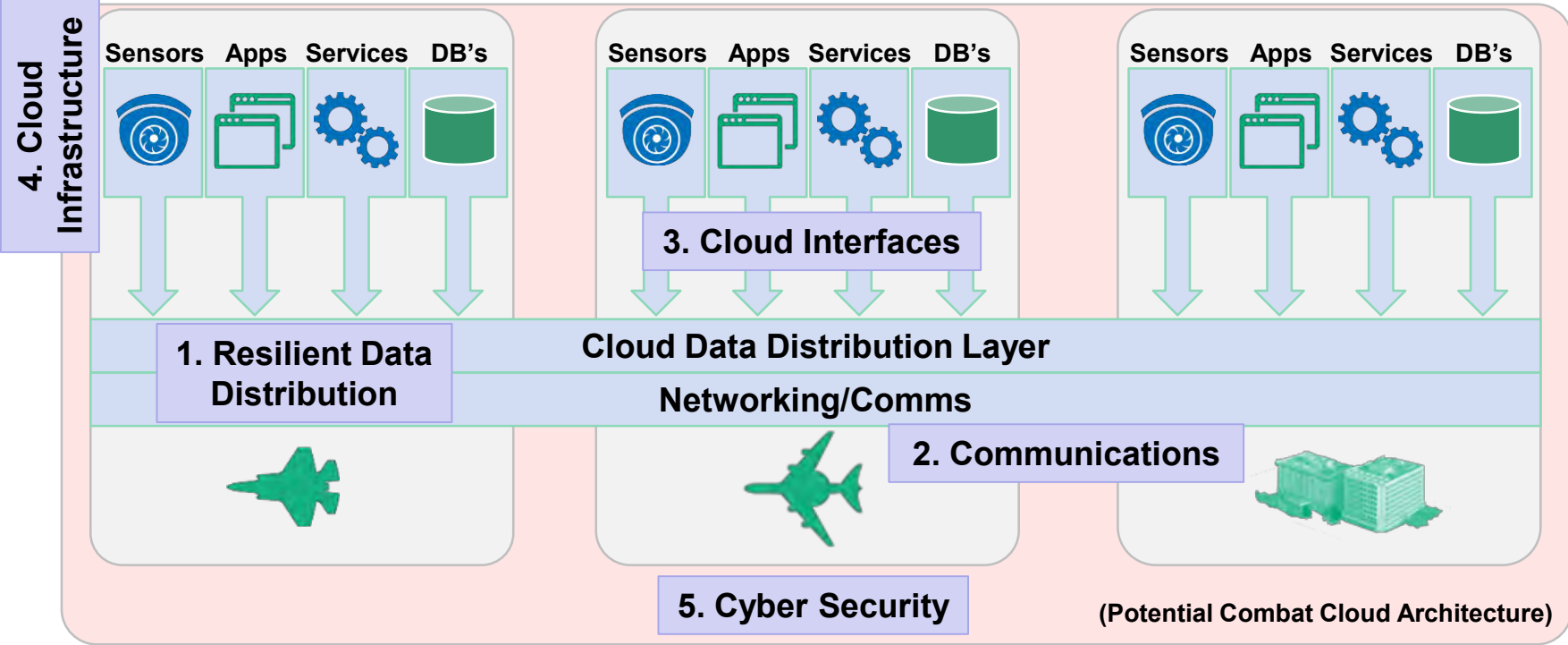
- An architectural standard that:
 - Enables affordable technical refresh & insertion of hardware and software
 - Supports a wide variety of apertures and cybersecurity approaches
 - Enables procurement of RF and digital components from different sources



Where Can Industry Focus?



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Enabling Technologies

1. Distributed message oriented bus architecture (e.g., OMS/ORCA)
2. Reliable communications in a contested environment (e.g., Link 16, ATDL, Protected SATCOM)
3. Common data standards enable rapid service integration across platforms (e.g., UCI, TCRI)
4. Composable services, analytics, data bases (leverage CMCC, DCGS, TENCAP efforts)
5. Multi-Level Security and cyber hardening



For More Information



AFLCMC... Providing the Warfighter's Edge

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PEO C3I&N



Projected Business Opportunities

Division	Opportunity	FY2017				FY2018				FY2019			
		1st QTR OCT - DEC	2nd QTR JAN - MAR	3rd QTR APR - JUN	4th QTR JUL - SEP	1st QTR OCT - DEC	2nd QTR JAN - MAR	3rd QTR APR - JUN	4th QTR JUL - SEP	1st QTR OCT - DEC	2nd QTR JAN - MAR	3rd QTR APR - JUN	4th QTR JUL - SEP
C3 Infrastructure	<u>BITI Wired Network Mgt Sys</u> -FY17 Base Recap -FY18 Base Recap -Infrastructure as a Service Pilot (Hanscom)			◆ RFP	◆ Award								
			◆ RFP		◆ Award								
				◆ RFP		◆ Award							
	<u>Cyber Security and Control</u> -Area Processing Center (APC) -Active Directory & Exchange (ADX) -Virtual Privacy Network (VPN) -SIPRNet			◆ RFP	◆ Award								
				◆ RFP	◆ Award								
				◆ RFP		◆ RFP	◆ Award						
	<u>Theater Deployable Communication (TDC)</u> -TDC Ann SW Sup Comm Fly Away Kit -NCC-D V4 UPS EOL -Config Laptop EOL	◆ RFP		◆ Award									
					◆ RFP	◆ Award							
					◆ RFP	◆ Award							
					◆ RFP	◆ Award							



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Projected Business Opportunities

Division	Opportunity	FY2017				FY2018				FY2019			
		1st QTR OCT-DEC	2nd QTR JAN-MAR	3rd QTR APR-JUN	4th QTR JUL-SEP	1st QTR OCT-DEC	2nd QTR JAN-MAR	3rd QTR APR-JUN	4th QTR JUL-SEP	1st QTR OCT-DEC	2nd QTR JAN-MAR	3rd QTR APR-JUN	4th QTR JUL-SEP
C3 Infrastructure	Common Computing Environ (CCE)												
	Integrated Management Suite (IMS)			◆ RFP	◆ Award								
Space/Aerial	Common Data Link (CDL)		◆ RFP	◆ Award									
	Tactical Data Links					◆ RFP				◆ Award			
	Ground Support System Jordan			◆ RFP	◆ Award								
Crypto/Cyber	FIA2T		◆ Award										
	Cyber Vulnerability Assessment Hunter		◆ Award										

Business Opportunities may mature over the next 12 to 24 months in Collaboration Pathfinder, Unified Platform, Cyber Proving Ground, Crypto Modernizations and Agile Communications
Keep checking Federal Business Opportunities (www.fbo.gov)



Follow-Up



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Questions?

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Back up--Acronym List by Division

AFLCMC... Providing the Warfighter's Edge

Space, Aerial and Nuclear Networks Division (HNA):

Battlefield Airborne Communication Node (BACN) - Urgent Operational Need (UON)	
Combat Identification (CID) Server Joint Urgent Operation Need (JUON)	B-2 Link 16 Cryptographic
	Tactical Data Networks Enterprise (TDNE) - TDL System Integration/Gateway Integration/JCTD - JETPACK
Airborne Network GIG Interface (ANGI)	Tactical Data Networks Enterprise (TDNE) - TDL System Integration/TDN Integration/JINTACCS
5th to 4th Tactical Gateway	Tactical Data Networks Enterprise (TDNE) - TDL System Integration/TDN Integration/NATEX
Joint tactical Radio System (JTRS)	Tactical Data Networks Enterprise (TDNE) - TDL System Integration/TDN Integration/Net Centric Capability Assessment
Common Data Link (CDL)	Tactical Data Networks Enterprise (TDNE) - Other Gateways
	Tactical Data Networks Enterprise (TDNE) - TDL System Integration/TDN Integration/Requirements Analysis (JALN RA)
Link 16 Foreign Military Sales (FMS) - All Curser on Target (CoT) - Tactical Data Networks Enterprise (TDNE)	Strategic Emergency Alert Telephone System (Seats)
Airborne Digital Information System (ADIS)	Tactical Data Networks Enterprise (TDNE) - TDL System Integration/TDN Integration/Joint Airborne Network Tactical Edge (TENC2)
Tactical Data Networks Enterprise (TDNE) - Air Force Participating Unit (AFPU)	Command & Control Intelligence Surveillance & Reconnaissance Tactical Data Link (C2ISR TDL)
Tactical Data Networks Enterprise (TDNE) - Coalition Interoperability	Test Asset Reallocation (TAR)
F-15 Link 16 Cryptographic	Global Broadcast Service (GBS)
F-16 Link 16 Cryptographic	Global Broadcast Service Defense Enterprise Computing Center (GBS DECC)
B-1 Link 16 Cryptographic	MILSATCOM Space/Secure Mobile Anti-Jam Reliable Tactical Terminal (SMART)
	Air Force Wideband Enterprise Terminals (AFWET)
	MILSATCOM Terminals/Advanced Development (Adv Dev)

C3I Infrastructure Division (HNI):

Base Information Transport Infrastructure (BITI) Wired
Theatre Deployable Communications (TDC)
Global Combat Support System - Air Force (GCSS - AF)
Global Combat Support System - Air Force (GCSS - AF) Data Services (DS)
Air Force Enterprise Information Services (AF EIS)
Air Force Cyberspace Defense (ACD)
Air Force Intranet Control (AFINC)
Cyberspace Security and Control System (CSCS)
Capabilities Integration Environment (CIE)
Voice Systems
AIRCOM Product Support
Cloud Computing Environment (CCE)
Joint Expeditionary Forces Experiment (JEFX)

Special Programs Division (HNI):

Special Access Programs (SAP)

FAB-T Division (HNS):

Family of Advanced Beyond Line-of-Sight Terminals Increment 1 (FAB-T Inc 1)
 Presidential and National Voice Conferencing (PNVC) Integrator

Back up--Acronym List by Division

AFLCMC... Providing the Warfighter's Edge

Crypto & Cyber Systems Division (HNC):

KG-3X Cryptographic Modernization	Intel and Force Protect (I&FP) Product Lifecycle Support
Aerospace Vehicle Equipment (AVE) Increment 1	Algorithm (IA) Transition, Compliance and Support
KIV-XX Mini Cryptographic	Identification Friend or Foe (IFF)
KG-XX Space Modular Common Cryptographic (SMCC)	HNCY Cyber Situational Awareness (SA)
AF Key Management Infrastructure Last Mile (AF KMI LM)	KL-90 Missile Electronic Encryption Device (MEED) Modification
Air & Ground (A&G) Communications Security (COMSEC)	AF Key Management Infrastructure (KMI) Commodities
Air & Ground (A&G) FMS - All	AF Key Management Infrastructure (KMI) Lifecycle Support (LS)
Tactical Terminal Systems (TTS) Lifecycle Support (LS)	AF Key Management Infrastructure (KMI) Transition
ARC-234 Baseband Input/Output (BBIO) Cryptographic Modification (CM)	Network Attack System (NAS) WSS
Cyber Command and Control (C3MS)	National Defense and Education Program (NDEP) Offensive Cyber Ops (OSO) non-WSS
Cyber Defense Analysis (CDA)	Public Key Infrastructure (PKI)
Cyber Vulnerability Assessment - Hunter (CVA-H) Cyber Technical Projects	Public Key Infrastructure (PKI) Lifecycle Support
Electronic Key Management System (EKMS) Lifecycle Support	Rapid Cyber Acquisition (RCA)
Electronic Key Management System (EKMS) Commodities	Remote ReKey (RRK)
	Remote ReKey (RRK) Lifecycle Support
	Technical Development (TD) Commodities
	Technical Development (TD) Knowledge Management
	Space Communications Security (COMSEC)
	Space Communications Security (COMSEC) Lifecycle Support (LS)
	VINSON/Advanced Narrowband Digital Voice Terminal (VACM)
	Classified Data At Rest (CDAR)
	Bounty Hunter (BH)

EW & Avionics Division (WNY):

Minimum Essential Emergency Communications Network (MEECN)
Joint Tactical Information Distribution System (JTIDS)
Roll-On Beyond Line-of-Sight Enhancement (ROBE)
Situation Awareness Data Link (SADL)
Pocket-J
Joint Air Defense System Integrator (JADSI)
Joint Range Extension/JRE TMPG Equipment Package (JRE/JTEP)
Common Link Integration Processor (CLIP)
Link 16 Alaska (LAK)
Joint Tactical Information Distribution System (JTIDS) FMS
Multifunctional Information Distribution System (MIDS)
Multifunctional Information Distribution System (MIDS) FMS
Miniature Receiver Terminal (MRT)
Modified Miniature Receiver Terminal (MMRT)
Defense Injection Reception Emergency Action Message Command and Control Terminal (DIRECT)

C3I&N programs transferred to NC3 Directorate:

Global - Aircrew Strategic Network Terminal (G-ASNT) Increment 1
Global - Aircrew Strategic Network Terminal (G-ASNT) Increment 2
Minuteman Minimum Essential Emergency Communications Network (MEECN) Program (MMP) Upgrade
Minuteman Minimum Essential Emergency Communications Network (MEECN)
Common VLF Receiver - Increment 2 (CVR-Inc 2)
Electromagnetic Pulse Hardened Dispersal Communications (EHDC)
Defense Injection Reception Emergency Action Message Command and Control Terminal / Alternate Injection Terminal (DIRECT/AIT)
Miniature Receive Terminal / Modified Miniature Receive Terminal (MRT/MMRT)



AIR FORCE LCMC