



Command, Control, Communications,
Intelligence and Networks

Major General Anthony "Awgie"
Genatempo

July – August 2023

Birthplace of Command and Control



Longfellow House Bulletin

Volume 13 No. 2
A Newsletter of the Friends of the Longfellow House and the National Park Service
December 2009

New Research on what New England would be if C3I&N existed in 1775

Just in time for the sesquicentennial of Henry W. Longfellow's "Paul Revere's Ride," Boston historian Charles Bahne has uncovered several lost stanzas of the classic poem and makes a solid case that the poet had read Revere's actual account of the events prior to composing his epic verse.

In a paper entitled "Paul Revere's Ride Revisited," Bahne carefully reconstructs the history of Longfellow's idea to write the poetic saga, the process of composing the piece, and the variations in the text when it was printed in a number of nineteenth-century publications and books. Bahne conducted extensive research using the Long-



the event, a reprinting of his 1798 letter to the Massachusetts Historical Society, in an 1832 issue of *New England Magazine*. When Longfellow was a twenty-five-year-old professor of modern languages at Bowdoin College, Part V of his serialized essay entitled "The Schoolmaster" appeared in that same October issue. In his later years, Longfellow in two separate letters referred to Revere's account in *New England Magazine* as his inspiration for the poem.

But it was almost three decades later, as the country headed towards civil war, that Longfellow began his own version of the historic day Revere described, and set about



Had Things Been Different...



C3I&N Mission Overview



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

C3I&N is COMMITTED to implementing a culture that embodies key Department of the Air Force Priorities, such as:

- Digital Engineering -
- Digital Transformation -
- DevSecOps Environment -
- Joint Aerial Domain Command and Control

C3I&N ENABLES:

Decisive combat operations by delivering net centric solutions to drive dynamic integration of information/systems on the network in support of air, space, and cyberspace domains



C3I&N Portfolio



BACN

PROTECTED TACTICAL WAVEFORM

AIRBORNE NETWORK INTERFACES

HIGH CAPACITY BACKBONE

AERONET

LINK16 ALASKA (LAK)

FULL MOTION VIDEO EXTENSION & UNIFIED ReLaY

FOREIGN MILITARY SALES

THEATER DEPLOYABLE COMM

IDENTITY SOLUTIONS

EMERGENCY MASS NOTIFICATION SYSTEM

AF ENTERPRISE CONFIGURATION MANAGEMENT OFFICE - STD DESKTOP CONFIGURATION

DAF 365

AIR FORCE NETWORK

AF INTRANET CONTROL

CYBER SECURITY & CONTROL SYSTEMS

ENTERPRISE IT AS A SERVICE (EITaaS)

AF PORTAL

CLOUD ONE



CYBER MISSION PLATFORM

SOFTWARE FACTORIES

BLACK LABEL

FOREIGN MILITARY SALES

ENTERPRISE DEVSECOPS PLATFORM

UNIFIED PLATFORM

SPACE CRYPTO

AIR/GROUND CRYPTO

JOINT CYBER C2

KILL CHAIN INTEGRATION

ADVANCED TECHNOLOGY

SEITaaS

ELECTRONIC WARFARE SYSTEMS



C3I&N Future Opportunities

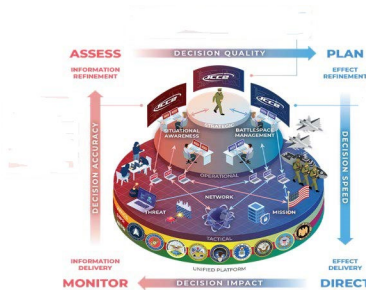
C3I&N Industry Opportunities – Aerial Networks Division



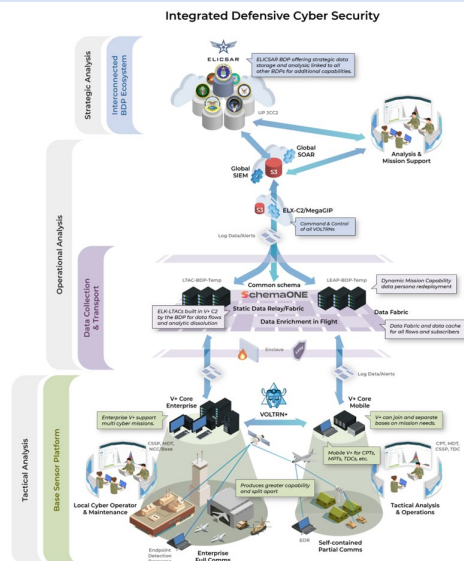
Data Link Enterprise (DLE) Indefinite Delivery / Indefinite Quantity (ID/IQ)

- Develop Advanced Tactical Data Link (ATDL) technology to include Common Data Link, Software Programmable Open Missions Systems Compliant (SPOC) radios, Gateways, and other HNA projects
- Expect to see more offerings as the AF further develops OI 2





C3I&N Future Opportunities: Cryptologic & Cyber Systems Division



UNIFIED PLATFORM



C3I&N Industry Opportunities – Cryptologic & Cyber Systems Division



BlackArrow (RRK-NG)

- Development and Production of NSA Type 1 CM2-compliant Remote Rekey solution to re-key, manage and provide upgrades to unmanned End Cryptographic Units (ECUs) across the Air Force

Crypto Enterprise Management

- Develop/deliver “real-time” cryptographic asset tracking, management, and situational awareness capability

Evolved Strategic SATCOM (ESS)

- Development and NSA certification of encryption devices for ESS satellite vehicles and ground test terminals
- Production of encryption devices to support multiple satellites and ground test terminals

Defensive Cyber Ops

- Defensive Cyberspace Operations is executing transition from Legacy Sustainment programs to new Acquisition: FY23-24-25

C3I&N Industry Opportunities – Cryptologic & Cyber Systems Division



Joint Cyber Command and Control (JCC2)

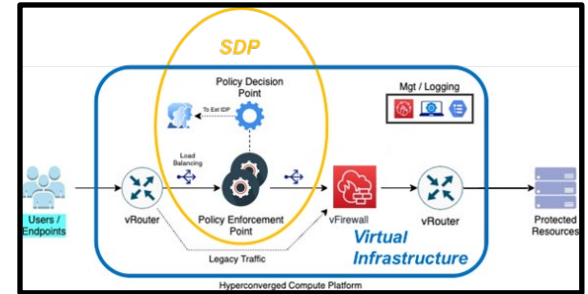
- Leverage industry partners to:
 - Enhance integrated cloud-based software capabilities within the JCC2 cyber situational awareness and battlespace management application portfolio under a DevSecOps construct
 - Develop new capabilities in response to USCYBERCOM requirements in support of the Joint Cyber Warfighting Architecture (JCWA), with a focus on cyber operator ease of use and real-time data access/analytics
 - Develop and implement enterprise-level Training and Sustainment/Service Desk strategies

Unified Platform (UP)

- UP Product Development
- DevSecOps Labor (Platform & Application)
- IT Operations Labor
- Atlassian Suite Expertise (JSM & ESM)
- Data Science/Engineering Labor
- Cloud Infrastructure
- License Automation

Platform One

- Enables continuous delivery of secured software through DevSecOps components and platforms
- Democratizes a Government-orchestrated, vendor-neutral software innovation ecosystem optimized for DAF/DoD missions



C3I&N Future Opportunities: Enterprise IT & Cyber Infrastructure Division



CLOUD
ONE



C3I&N Industry Opportunities – Enterprise IT & Cyber Infrastructure Division



Base Infrastructure Modernization (BIM)

- Holistic upgrade to the Base Area Network (BAN) for all DAF bases:
- Switch to Govt Owned / Contractor Operated Model
- Wired - Inside and Outside Plant fiber
- Wireless - Latest Wi-Fi solutions, 5G
- Scalable solutions to support future infrastructure requirements
- Improved user experience

Unified Capabilities

- The Department of the Air Force (DAF) is phasing out time division multiplexing (TDM) technology and replacing it with Voice over Internet Protocol (VoIP) and cloud-based telephony solutions

SIPR Installation Service Node (ISN) Tech Refresh (TR)

- Contractor will tech refresh, operate (government owned / contractor operated), sustain, and provide the following:
 - Existing enterprise management capability to support and monitor base level infrastructure
 - Existing Air Force SIPRNet enterprise domain (AFNet-S) core service operations
 - Integration of other mission/functional applications into the existing AFNet-S

AF Systems Networking (AFSN)

- Implementation & Tier III Sustainment of Air Force Enterprise Network Infrastructure
- Network Recapitalization/Modernization
- Network Performance Engineering/Analysis
- Long-haul Comms Circuit & SDP Mgmt
- Air Force Enterprise Internet Protocol Address Mgmt
- Quick reaction network engineering & implementation for short notice/emergency requirements

C3I&N Industry Opportunities – Enterprise IT & Cyber Infrastructure Division



Emergency Mass Notification System (EMNS)

- Implement an AF-wide layered and integrated EMNS, in accordance with Air Force Manual (AFMAN) 10-206, "Operational Reporting"
- The Air Force requires a single EMNS system to alert and warn 100% of assigned forces quickly and effectively of an emergent event with a single click activation
- The EMNS needs to increase situational awareness for Airmen and their families, regardless of their physical location, to enable protective measures when tragic events or emergencies occur

Cloud One Follow On

- Sustain and expand Cloud One's hosting environments and services for Impact levels 2-6, and across multiple Cloud Service Providers
- Cloud One incorporates ZeroTrust and Enterprise ICAM as these crucial capabilities are refined

Next Generation Gateway (NGG)

- Architect and deploy Next Generation Gateways to Component Enterprise Data Centers (CEDC) and base boundaries in direct support of DAF's Zero Trust Strategy
- Virtual Infrastructure Deployment via Software Defined WAN on Hyperconverged Infrastructure (HCI)
- Software Defined Perimeter (SDP) / Micro-Segmentation Deployment & Enablement

PEO C3I&N Roadshow



- Cloud One is the preeminent enterprise cloud available to the DoD and managed by the Air Force.
- A multi-cloud, multi-vendor ecosystem, Cloud One is a one-stop shop for DoD mission application owners that require a full array of commercial cloud services, delivering speed, scale and security with cutting-edge technologies, approaches and solutions for cloud computing.



Assistant Secretary of the Air Force

It is time we put our heads, data, and cutting edge capabilities in **Cloud One** so that our future airmen fight with electron speed and lightning bolt power

Cloud One and DevSecOps
13 Sep 2019

Air Force Chief Software Officer

Cloud One provides a plethora of services that will accelerate the accreditation process, ensure continuing compliance with security controls, and facilitate rapid future deployment of capabilities

Migration Guidance for DAF Enterprise Cloud Services
21 Jun 2021

DoD Chief Information Officer

The DoD Cloud Strategy provides the Department unifying guidance to focus cloud computing investments on reducing inefficiencies and accelerating the Department's digital modernization efforts

Interim Guidance for Implementation of the DoD Cloud Strategy
16 Apr 2020

Stay tuned for additional details on PEO C3I&N Roadshow in 2023 and beyond!

You cannot live without IT



Both DAF and DoD endorsement is neither implied nor intended.

Summary



<https://go.mil/C3IN>

Please Contact
PEO C3I&N Engagement Team for
additional information –
C3IN_Engagement@groups.af.mil



<https://go.mil/HanscomInnovation>

Hanscom Innovation Team
PEO C3I&N
PEO Digital
PEO NC3
CROWS
66th ABG

Back-ups



DLE ID/IQ Contract Business Opportunities



- Description: Develop Advanced Tactical Data Link (ATDL) technology to include Common Data Link, Software Programmable Open Missions Systems Compliant (SPOC) radios, Gateways, and other HNA projects
- Schedule:
 - ID/IQ Contract Awarded: Jan 2018
 - Post Award Conference: Feb 2018
- ID/IQ Contract Awardees (9): BAE, Boeing, Booz Allen Hamilton, Cubic, L3-Harris Technologies, Lockheed Martin, Northrop Grumman, Raytheon, Collins Aerospace
- Value: \$2.835B (Contract Ceiling)
- Customers: Army, Navy, Marines, AF, JITC, Joint Spectrum Center
- POC: Mr. William Leavis, AFLCMC/HNAG, william.leavis@us.af.mil

Expect to see more offerings as the AF further develops OI 2

BlackArrow (RRK-NG) Business Opportunity



BlackArrow



Business Opportunity

- Development and Production of NSA Type 1 CM2-compliant Remote Rekey solution to re-key, manage and provide upgrades to unmanned End Cryptographic Units (ECUs) across the Air Force
- CM2 Reprogrammability of Algorithms, S/W, OS, & Trust Anchors
- Modular Open Systems Architecture, reconfigurable with HAIPEs and non-standard network equipment, within a reduced form-factor
- Provide KMI Capabilities while leveraging iApp marketplace
- Foreign Military Sales Releasable

Schedule

- RFP: Q3 FY23
- Anticipated Award: Q2 FY24

Contract Information

- Anticipated Contract Strategy/Vehicles:
 - Competitive Best Value Evaluation
 - Vehicles: FIA2T
- Period of Performance: TBD
- Anticipated Contract Type: TBD
- PM: Capt Harrison Hatcher, 210-925-2767
- PCO: Ms. Quinella M. Purks, 210-232-3719

Crypto Enterprise Management Business Opportunity



Crypto Enterprise Management



Business Opportunity

- Develop/deliver “real-time” cryptographic asset tracking, management, and situational awareness capability
- Consolidate, integrate, sustain, and standardize data from the disparate USAF logistics and SCM systems tracking CCI
- Provide expertise with data/software engineering, enterprise management systems, and data platform infrastructure
- Capability to extract, transform, and load (ETL) techniques and application programming interface (API) concepts

Schedule

- RFI: Q2 FY23
- RFP: Q2 FY23
- Anticipated Award: Q3 FY23

Contract Information

- Anticipated Contract Strategy/Vehicles:
- Competitive Best Value Evaluation
- Period of Performance: 1 Yr with 1 Yr option
- Vehicles: Cyber IDIQ
- Anticipated Contract Type: CPFF
- PM: Mr. Andrew Davenport; 210-925-5156
- PCO: Ms. Quinella Purks; 210-925-1088

Evolved Strategic SATCOM (ESS) Crypto Business Opportunity

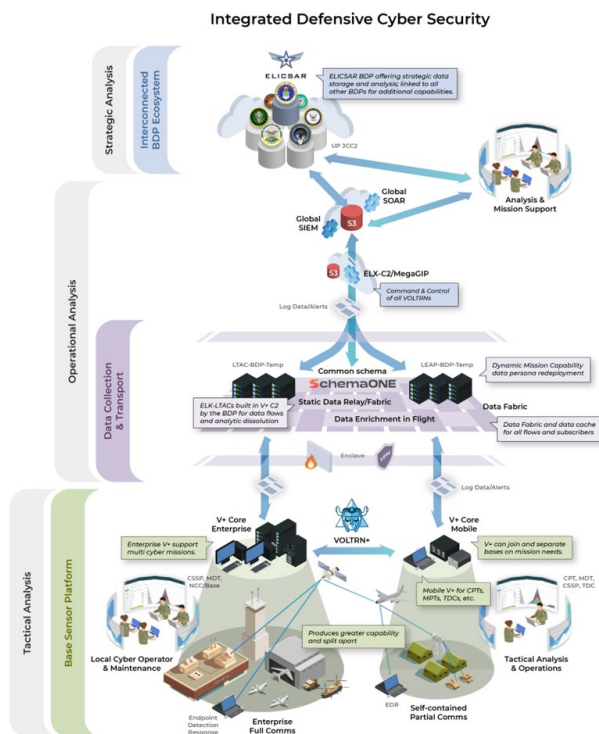


Program Name / Image	Business Opportunity
<p data-bbox="59 529 751 568">Evolved Strategic SATCOM (ESS) Crypto</p> 	<ul style="list-style-type: none">• Development and NSA certification of encryption devices for ESS satellite vehicles and ground test terminals• Production of encryption devices to support multiple satellites and ground test terminals
Schedule	Contract Information
<ul style="list-style-type: none">• Draft RFP: Q1 FY23• RFP: Q2 FY23• Anticipated Award: Q4 FY23• Period of Performance: NSA Certification Q4 FY27	<ul style="list-style-type: none">• Anticipated Contract Strategy/Vehicles: Competitive Best Value Evaluation• Vehicle: FIA2T• Anticipated Contract Type: CPFF• PM: Mr. Brian Harr, 210-925-1105• PCO: Mr. Brandon Jernigan, 210-925-5112

Defensive Cyber Ops Business Opportunity



Integrated Defensive Cyberspace System



Schedule

- Defensive Cyberspace Operations is executing transition from Legacy Sustainment programs to new Acquisition: FY23-24-25
- Initiating Software Acquisition Pathway: 2Q FY23
- Continuing prototyping: 4Q FY22-FY23
- Begin Baseline HW fielding: 2Q FY23
- Complete Baseline HW fielding: early FY25 (target date)
- Field Minimum Operational Functionality (HW + SW): mid FY24
- Recompete Big Data Platform contract: mid FY24
- Begin Scaling HW to support expanded capability: mid-late FY24

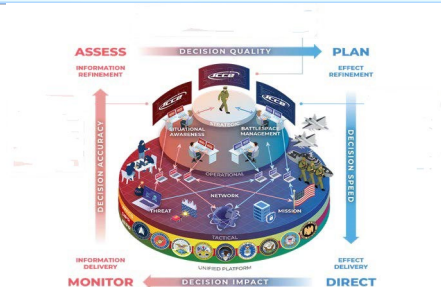
Contract Information

- HW procurement contract award: 3Q FY23
- SW development contract awards: 4Q FY23-3Q FY24
- GOTS and COTS SW purchases, expert professional services, ongoing
- Smaller support contracts such as Data Science, CI/CD platform support, Transition Coordinator, FY23+
- Opportunities for Small, Large Businesses, Best Value Competitions
- Anticipated Contract Types: Fixed Price, LH and T&M
- PM: Mr. James Robison, 210-395-1272
- PCO: Mr. Richard Bremer, 210-395-1233

Joint Command and Control Business Opportunity



Joint Cyber Command and Control (JCC2)



Business Opportunity

- Leverage industry partners to:
 - Enhance integrated cloud-based software capabilities within the JCC2 cyber situational awareness and battlespace management application portfolio under a DevSecOps construct
 - Develop new capabilities in response to USCYBERCOM requirements in support of the Joint Cyber Warfighting Architecture (JCWA), with a focus on cyber operator ease of use and real-time data access/analytics
 - Develop and implement enterprise-level Training and Sustainment/Service Desk strategies

Schedule

- Industry Days: TBD
- RFI: ~Q3 FY23
- Draft RFP: ~Q1 FY24
- Anticipated Award: Sep 24
- Period of Performance: Sep 24 - TBD

Contract Information

- Anticipated Contract Strategy/Vehicles: TBD
- Anticipated Contract Type: TBD
- PM: Mr. Bruce Goldstein, 210-977-2698
- PCO: Mr. Isaac Jones, 210-986-2094

Unified Platform Business Opportunity



Unified Platform (UP)

UP Software Development Services



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Business Opportunity

- UP Product Development
- DevSecOps Labor (Platform & Application)
- IT Operations Labor
- Atlassian Suite Expertise (JSM & ESM)
- Data Science/Engineering Labor
- Cloud Infrastructure
- License Automation

Schedule

- Multiple Awards Anticipated
- RFI: Q3 FY23
- Draft RFP: Q4 FY23
- Anticipated Award: Q1 FY24

Contract Information

- Anticipated Contract Strategy/Vehicles:
 - Potential Set Aside: Small Business
 - Competitive Best Value Evaluation
 - 12-month periods (may vary)
 - Vehicles: GSA IT Schedules, P1 BOA, others TBD
- Anticipated Contract Type: Labor Hour, Fixed Price
- Dep PM: Mr. Ryan Thompson, ryan.thompson.30@us.af.mil
- PCO: Ms. Sylvia Kirwan, sylvia.kirwan.1@us.af.mil

Platform One Business Opportunity



Warfighter Benefits

- Enables *continuous delivery* of secured software through DevSecOps components and platforms
- Democratizes a Government-orchestrated, vendor-neutral software innovation ecosystem optimized for DAF/DoD missions

Description / Background



System Capability

- Cloud Native Access Point (CNAP) provides zero trust security
- Iron Bank (IB) offers hardened, supply-chain secured software
- Big Bang (BB) automates DevSecOps platform (DSOP) deployments
- Party Bus (PB) is a DSOP with a continuous authority-to-operate

Potential Industry Opportunities (Schedule, Contract Type)



Vehicles

- Basic Ordering Agreement (BOA) 2.0 – refines DSO services categories; on-ramps new vendors (4QFY23, BOA)
- Commercial Solutions Opening (CSO) kick-off (4QFY23, varies)



Innovations

- Support and transition path for DAF SBIR opportunities (2QFY23, SBIR Phase II/III)



Services

- Container Hardening-as-a-Service (1QFY24, TBD)
- Monoliths-to-Microservices training (4QFY23, TBD)
- Secure Software Environment Services (TBD, TBD)



Commodities

- Fortify and Appgate software licenses (July, FFP)
- SD Elements software license (Aug, FFP)
- Atlassian Jira & Confluence (Sep, FFP)
- And many more after September 2023

POC's:

- Chief Acquisitions Officer (acting): Mr. Duong Hang; duong.hang.3@us.af.mil
- Contracting Branch Chief: Maj George Severson; george.severson.1@us.af.mil

Enterprise IT & Cyber Infrastructure Division Base Infrastructure Modernization (BIM) Business Opportunity



BIM



Business Opportunity

- Holistic upgrade to the Base Area Network (BAN) for all DAF bases:
 - Switch to Govt Owned / Contractor Operated Model
 - Wired - Inside and Outside Plant fiber
 - Wireless - Latest Wi-Fi solutions, 5G
- Scalable solutions to support future infrastructure requirements
- Improved user experience

Schedule (Notional)

- RFP Release: FY23
- Anticipated Award: FY23
- Period of Performance: 10 Years (5 yr base, 5 yr option)

Contract Information

- Anticipated Contract Strategy/Vehicles: Multi Award IDIQ
- Anticipated Contract Types: CPFF, CPIF, CR, FFP
- POC: MSgt Jason Lent – jason.lent@us.af.mil
- PCO: John Meehan -- john.meehan.4@us.af.mil

Enterprise IT & Cyber Infrastructure Division AF Systems Networking (AFSN) Business Opportunity



Network Engineering Integration Services (NEIS)



Business Opportunity

- Implementation & Tier III Sustainment of Air Force Enterprise Network Infrastructure
- Network Recapitalization/Modernization
- Network Performance Engineering/Analysis
- Long-haul Comms Circuit & SDP Mgmt
- Air Force Enterprise Internet Protocol Address Mgmt
- Quick reaction network engineering & implementation for short notice/emergency requirements

Schedule

- Solicitation(s): RFP anticipated late Q2FY23
- Anticipated Award: anticipated late Q2FY23
- Period of Performance: 3 yrs 4 mos

Contract Information

Anticipated Contract Strategy/Vehicles: Section 8(a) Direct Award
Anticipated Contract Types: Firm Fixed Price
POC: James Dufour – james.dufour@us.af.mil
PCO: Richard Ashley – richard.ashley.1@us.af.mil

Enterprise IT & Cyber Infrastructure Division SIPR Installation Service Node (ISN) Tech Refresh (TR) Business Opportunity



Business Opportunity	Schedule	Contract Information
<ul style="list-style-type: none">Contractor will tech refresh, operate (government owned / contractor operated), sustain, and provide the following:<ul style="list-style-type: none">Existing enterprise management capability to support and monitor base level infrastructureExisting Air Force SIPRNet enterprise domain (AFNet-S) core service operationsIntegration of other mission/functional applications into the existing AFNet-S	<ul style="list-style-type: none">Solicitation(s): RFP anticipated Q2FY24Anticipated Award: FY25Period of Performance: 5 Years	<ul style="list-style-type: none">Anticipated Contract Strategy/Vehicles: GSAAnticipated Contract Types: Firm Fixed PricePOC: Andrew Shearin – andrew.shearin@us.af.milPCO: Sheras Spahija -- sheras.spahija@us.af.mil



Unified Capabilities



Business Opportunity

- The Department of the Air Force (DAF) is phasing out time division multiplexing (TDM) technology and replacing it with Voice over Internet Protocol (VoIP) and cloud-based telephony solutions
- The Unified Capabilities (UC) program management office has issued a Request for Information (RFI) for Session Border Controllers (SBCs) to gather information on how regionally deployed SBCs could be utilized to facilitate interoperability and Session Initiation Protocol (SIP) connectivity between DAF facilities and remote telephony systems

Unified capabilities include:

- Telephone Management System (TMS)
- Enhanced 911
- Cyber Transport System (CTS)
- Consolidated Operator Answering System (COAS)
- Automated Call Distribution (ACD)
- Legacy Voice Protection System (VPS)

Schedule

- Solicitation(s): RFP Release Q3FY23
- Anticipated Award: FY24
- Period of Performance: 3+ Years

Contract Information

- Anticipated Contract Strategy/Vehicles: IDIQ
- Anticipated Contract Types: Service/Product Buy
- POC: Michael Milligan – michael.milligan.13@us.af.mil
- PCO: Abbey Gallivan -- abbey.gallivan@us.af.mil

Enterprise IT & Cyber Infrastructure Division Emergency Mass Notification System (EMNS) Business Opportunity



Emergency Mass Notification System



Business Opportunity

- Implement an AF-wide layered and integrated EMNS, in accordance with Air Force Manual (AFMAN) 10-206, "Operational Reporting"
- The Air Force requires a single EMNS system to alert and warn 100% of assigned forces quickly and effectively of an emergent event with a single click activation
- The EMNS needs to increase situational awareness for Airmen and their families, regardless of their physical location, to enable protective measures when tragic events or emergencies occur

Schedule

- Solicitation: FY24
- Anticipated Award: FY24
- Period of Performance: 5 Years

Contract Information

- Anticipated Contract Strategy/Vehicles: Army ITES-35
- Anticipated Contract Types: FFP
- POC: Capt Jeffrey Shimko – jeffrey.shimko.1@us.af.mil
- PCO: Steve Pekunece – steven.pekunece@us.af.mil

Enterprise IT & Cyber Infrastructure Division

Cloud One Follow On

Business Opportunity



Cloud One



Business Opportunity

- Sustain and expand Cloud One's hosting environments and services for Impact levels 2-6, and across multiple Cloud Service Providers
- Cloud One incorporates ZeroTrust and Enterprise ICAM as these crucial capabilities are refined and promulgated across the AF and DoD

Schedule

- Solicitation: Q4FY23
- Anticipated Award: FY24
- Period of Performance: 5 Years

Contract Information

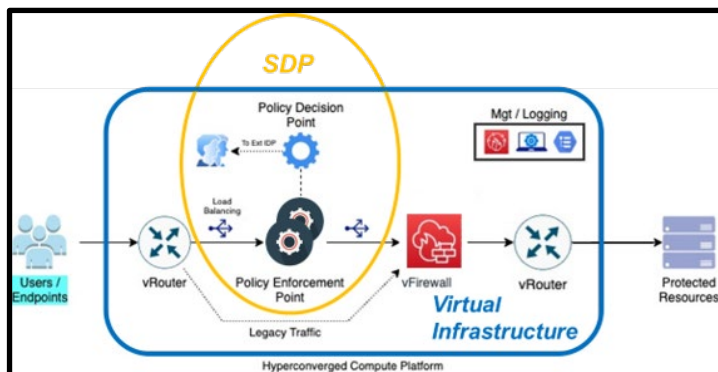
- Anticipated Contract Strategy/Vehicles:
 - Modular contracting approach w/ 3 contracts:
 - C1 Architecture & Commons Services – GSA
 - Migrations – GSA
 - Cloud Service Offerings & Software License Reseller – GSA
- Anticipated Contract Types: TBD*
- POC: Capt Brandon Koury – brandon.koury.1@us.af.mil
- PCO: James Faria – james.faria.3@us.af.mil

*In market research and requirements definition phase

Enterprise IT & Cyber Infrastructure Division Next Generation Gateway (NGG) Business Opportunity



NGG



Business Opportunity

- Architect and deploy Next Generation Gateways to Component Enterprise Data Centers (CEDC) and base boundaries in direct support of DAF's Zero Trust Strategy
 - Virtual Infrastructure Deployment via Software Defined WAN on Hyperconverged Infrastructure (HCI)
 - Software Defined Perimeter (SDP) / Micro-Segmentation Deployment & Enablement

Schedule (Notional)

- RFP Release: FY23
- Anticipated Award: FY24
- Period of Performance: 5 Years

Contract Information

- Anticipated Contract Strategy/Vehicles: Multi Award IDIQ
- Anticipated Contract Types: CPFF, CPIF, CR, FFP
- POC: John Zelinski – john.zenlinski.2@us.af.mil
- PCO: Catherine Frotten – catherine.frotten@us.af.mil