



**Command, Control, Communications,
Intelligence and Networks
(AFPEO/C3I&N)
Directorate Overview**

AFCEA Air Force IT Day 2019



**Enterprise Information Technology & Cyber Infrastructure Division
12 December 2019**

**Colonel Bobby King
Senior Materiel Leader**

Providing the Warfighter's Edge



AFPEO/C3I&N Directorate Leadership Team




AFLCMC COMMANDER
 LT GEN ROBERT
 MCMURRY JR.




SAF/AQ (SAE)
 THE HONORABLE
 DR. WILLIAM ROPER





FAB-T DIV
 (AFLCMC/HNS)
 COL JONATHON SORBET





EW/AVIONICS DIV
 (AFLCMC/WNY)
 COL JAMES WILSON




SPACE & C3I DIV
 (AFLCMC/HBZ)
 COL ERIK QUIGLEY




AERIAL NETWORKS DIV
 (AFLCMC/HNA)
 COL SHANE LOUIS




SPECIAL PRGMS DIV
 (AFLCMC/HNJ)
 COL NATHAN WHITE





**ENTERPRISE IT & CYBERSPACE
INFRASTRUCTURE DIV**
 (AFLCMC/HNI)
 COL ROBERT KING





CRYPTO & CYBER SYSTEMS DIV
 (AFLCMC/HNC)
 COL ALLAN CARREIRO




Engineering
 MR. GLEN
 TOWNSEND




Financial Mgt
 MR. SEAN
 DUFFY




**IT/Cyberspace
Ops Spt**
 MS. ANN
 MARKMAN




Contracting
 MR. JOE
 ZIMMERMAN





**Life Cycle
Logistics**
 MR. STEPHEN
 LAFLEUR





**Program
Execution/ Ops
Mgt**
 MR. ANDY
 GIACONIA




**Human
Resources**
 MS. ANNETTE
 GARTLAND




Security
 MR.
 ANDREW LIBERT




Intelligence
 MR.
 PAUL DENNO




**SENIOR IMA TO
PEO/C3I&N**
 COL MARTHA MONROE




**SENIOR ENLISTED ADVISOR
TO DIRECTOR**
 CMSgt ALDO ADAMS




AFPEO/C3I&N
 MAJ GEN MICHAEL
 SCHMIDT




DEPUTY PEO
 MR. SCOTT OWENS

AFPEO/C3I&N (Execution & Organize/Train/Equip) PEO/C3I&N AND PEO/NC3 for Execution	PEO/NC3 for Execution & AFLCMC/HN for OTE
AFLCMC/HB for OTE & PEO/C3I&N for Execution	PEO/C3I&N for Execution



AFPEO/C3I&N "Swim Lanes"

Crypto & Cyber

Cyber Systems
Cyber C254
Defensive Cyber Ops
Offensive Cyber Ops
Cyber Solutions Cell

NG-313
NGV-361
CRYPTO MODERNIZATION

Unified Platform

LevelUP Code Works

UP

Joint Cyber Command & Control

Cyber Mission Platform

Foreign Military Sales

Aerial Networks

BACN
Link-16 Enhancements

Full Motion Video Extension & Unified Relay

Common Data Link

Airborne Network Interface

Foreign Military Sales

Combat Identification Server

AERONet

EIT/Cyber Infrastructure

Air Force Network

BITI
AF Intranet Control
Cyber Security & Control System

Air Force Public Key Infrastructure

Theater Deployable Comm

Cloud Hosted Enterprise Services

Cloud One

Enterprise IT as a Service

Special Projects

Kill Chain-Campaign of Experiments

Advanced Technology Branch

Electronic Warfare Branch

Developmental Planning

FAB-T Systems*

FAB-T & PNVC

* Organize, Train & Equip Only



C3I&N Directorate Portfolio & Mission Areas

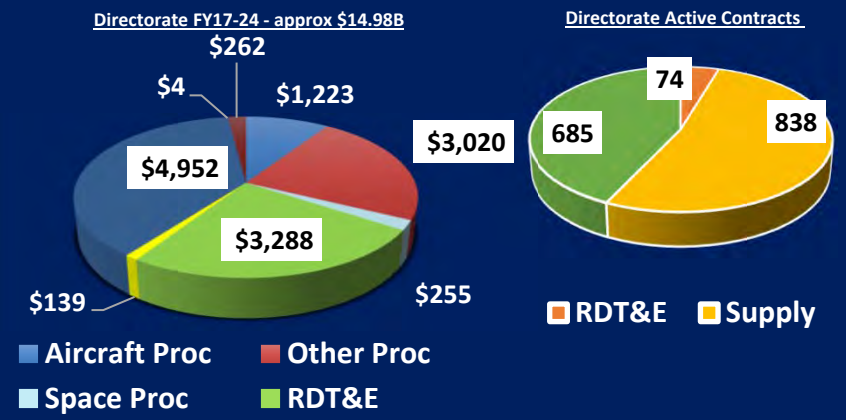
Directorate Portfolio (Workload Master List):

	PEO/C3I&N Program Execution AND O/T/E Responsibility	PEO/C3I&N Execution ONLY (Other Directorates Have O/T/E Responsibility)	PEO/C3I&N O/T/E ONLY (PEO/NC3 Program Execution)
ACAT I	1		1
ACAT II	1 (Pending)		1
ACAT III	12		
AML-Exempt	58		
Sustainment Activities	29	10	
JUON/JEON/QRC	6		
FMS (Direct & Line Cases)	~165		
Section 804	1 (Unified Platform)		1
Section 874 (CMP)	1		
2373 OTA (EITaaS RREs*)	4		
Mission Support	22		

Mission Areas:

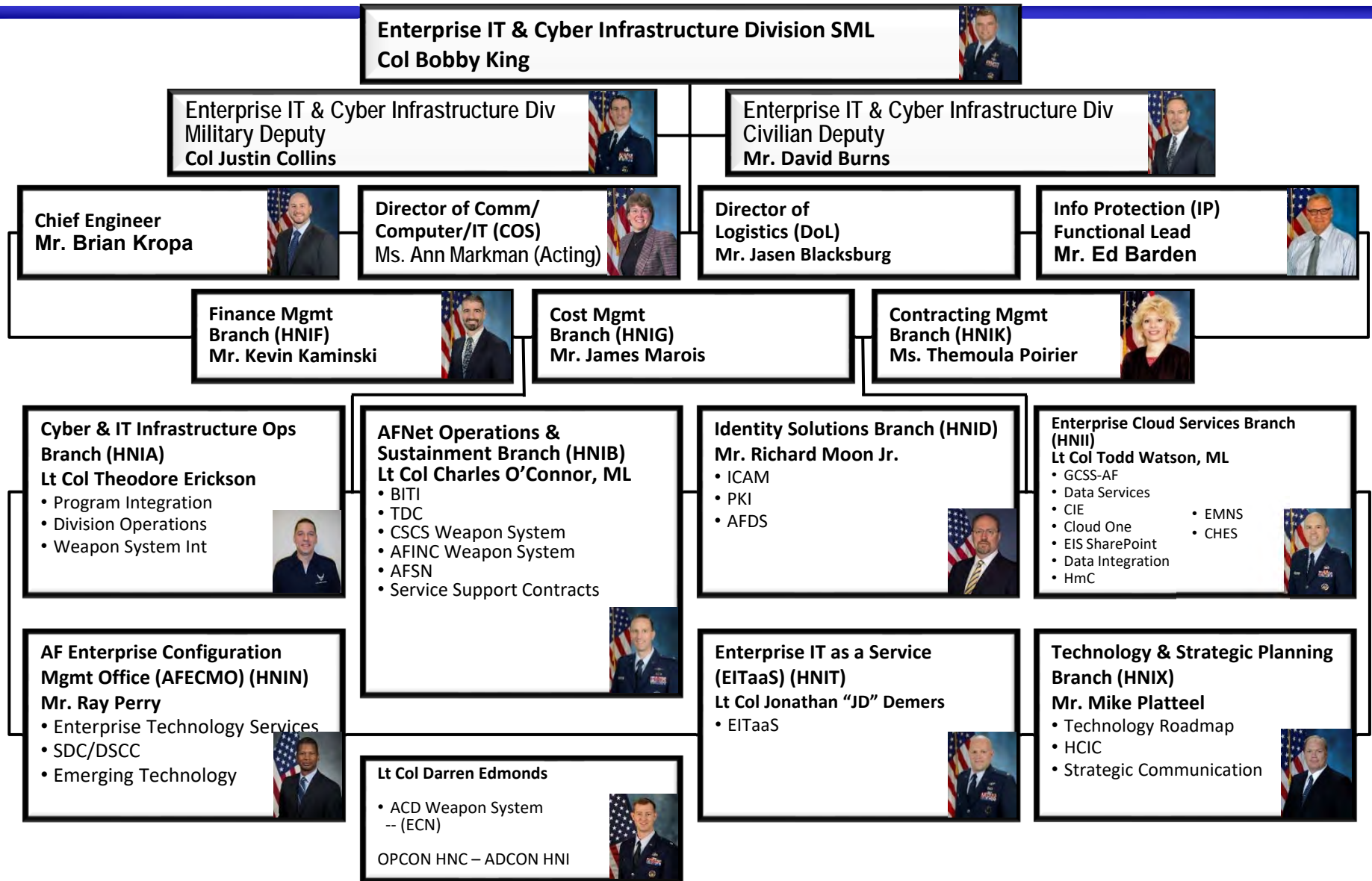
- IT/Commoditized Infrastructure
- Enterprise IT Services
- Offensive/Defensive Cyber Weapon Sys
- COMSEC
- AFNET Ops

- Crypto Modernization Systems
- Tactical Aerial Networks
- Special Projects
- Data Links





HNI Organizational Chart



What They Said

“ IT is crushing our Airmen’s spirit

– Gen Goldfein, Mar 2018

“

I bring a book to work because it takes so long to get the system running. It shouldn't take 30-40 minutes to get my work day started because I can't log into my computer, and when I do, Outlook or the other applications freeze so then I have to restart about 8 times.”

– Acquisition Manager

“

The network is SO BOGGED down by permissions, certificates, software patches, background applications that are running, that the computer does not function. On average, it takes 30 minutes to do about 3 minutes of computer work. 15 of which is the desk top establishing itself each time you go to another workstation despite using that work station last week.”

– Fighter Pilot

“

Wait 1-2 months to get someone to come out. They show up without telling you and then say they'll come back in a month.”

– EFB Manager

“

We have a NIPR computer with the Blue Screen of Death that's been down for 4 months so far.”

– EMCS Work Leader

“

2 of our 5 computer systems are down and have been for months, including our shop's primary tool accountability system. Putting in trouble tickets doesn't seem to accomplish anything. Our comm flight is undermanned and overworked. It's one of the most aggravating parts of my overall Air Force experience.”

– Aircraft Metals

“

Speed of connectivity to the network often slows to a point where work cannot get done.”

– Developmental Engineer

“

Computers go offline due to new software updates; and will be dead for weeks before the out-of-house Computer Support Technicians indulge us with a visit. Actually they demand that we bring tower or laptop to them.”

– Administrator

“

A large part of my day is wasted due to the inability of AF IT systems to allow me to do my work efficiently both in the office and while traveling...Simply put: the AF's lack of investment in IT makes me feel undervalued.”

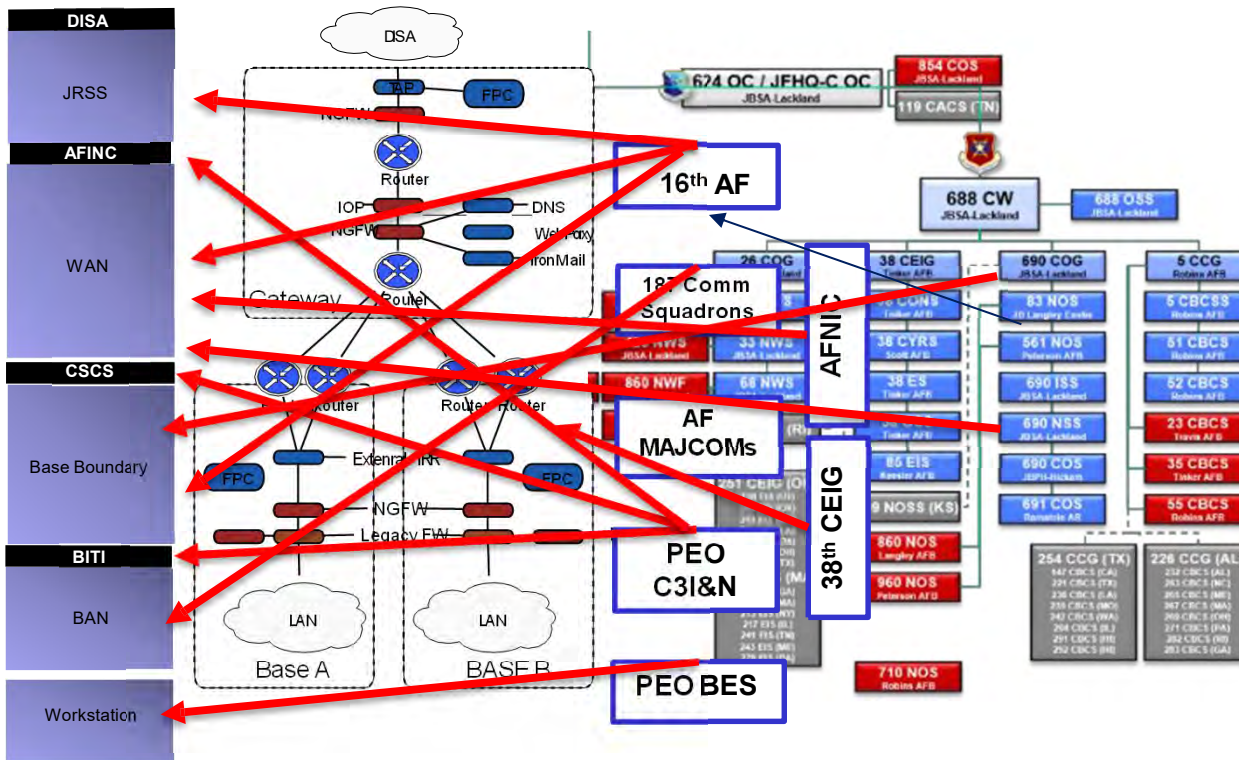
– Special Ops Pilot



Current AFNET Situation



AFLCMC... Providing the Warfighter's Edge



Detractors from End User Experience

- 230+ AF organizations that influence the IT experience
- 41 AF orgs that acquire, integrate and operate AF Enterprise IT
- 80+ ATO Boundaries
- Duplication of effort
- Poor configuration across enterprise
- Years of underinvestment

Tough to build a Digital AF with what we've got!

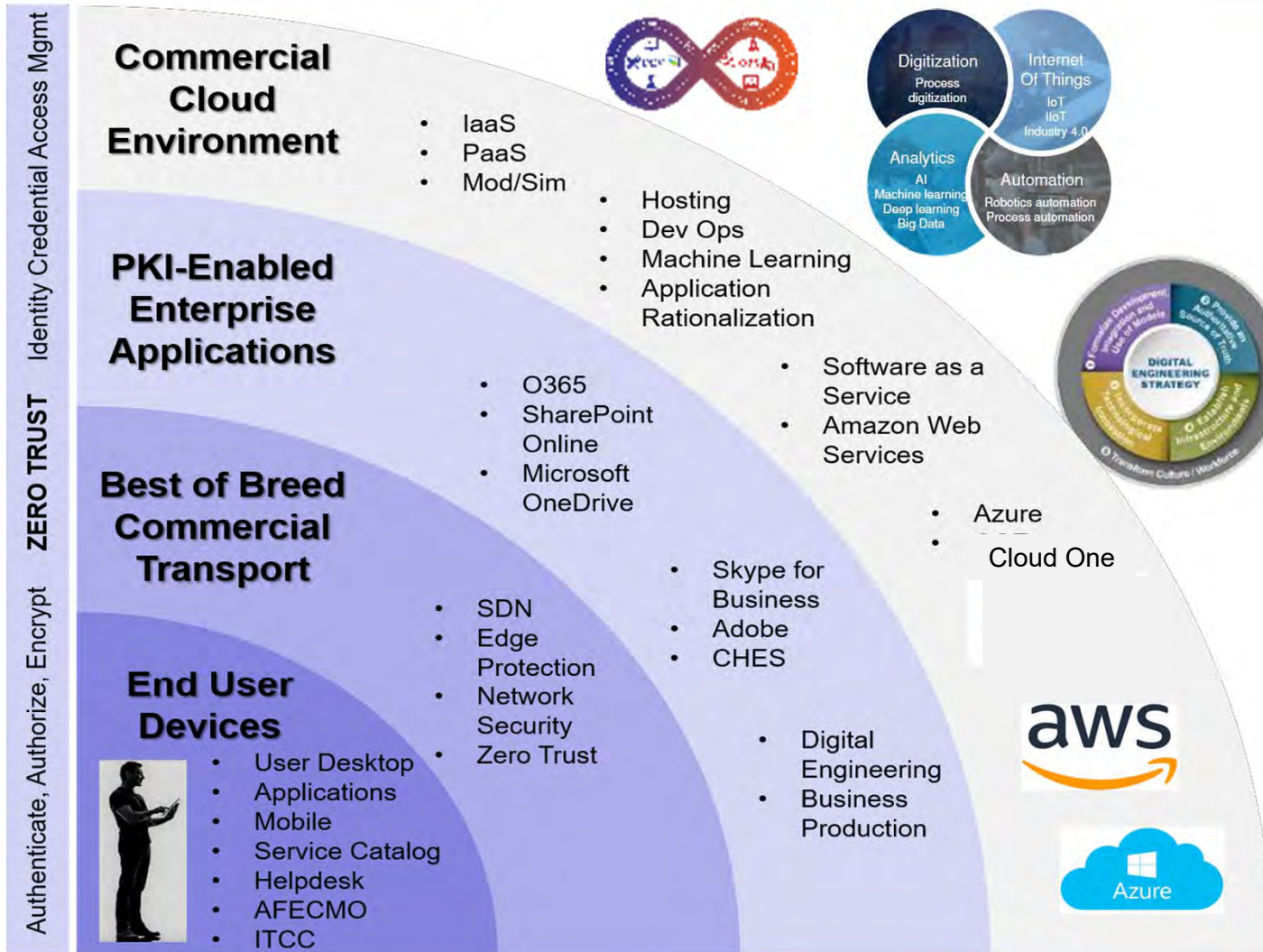




AFLCMC/HNI's Obsession: End User Experience



AFLCMC... Providing the Warfighter's Edge



- Goal: Deliver Transformational IT to the Air Force**
- Create Integrated Program Office (IPO)
 - Pull all aspects of user exp. into IPO
 - Contract directly with leaders in IT Industry
 - Challenge policies that detract from user experience
 - The Digital AF Transformation depends on investing in foundational AF EIT programs!

Authenticate, Authorize, Encrypt ZERO TRUST Identity Credential Access Mgmt



AFLCMC/HNI Capability Delivered - 2019



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Base Information Transport Infrastructure

BASE RECAPITALIZATIONS- replace critical wired backbone infrastructure and network equipment
Continued base recaps initiated in FY16, FY17 and FY18 at 100+ AF Installations (AD, AFR, ANG)

ENTERPRISE RECAPITALIZATIONS - replace EOS/EOL wireless infrastructure and network management systems

Continued Network Management System (NMS) installs initiated in FY18 (Solar Winds)
Continued Enterprise Wireless Recap installs awarded in FY18 at 170+ AF Installations

What's Next:

Manage as a portfolio (i.e UC, IPv6, 2FA, port security, access nodes)

Expand enterprise wireless to connect all users at point of mission need to include emerging user requirements (i.e. EFB, 5G)

Off-ramps to EITaaS



Before BITI



After BITI

Cyber Security and Control System (CSCS)



SIPRNet ISN Modernization – Contract awarded on 29 May 19.

What's Next:

Enterprise IT Service Management (EITSM) 2.5 for ticketing, config & asset management moving to AFPEDC, planning RFP release 2nd QTR FY20 .



AFLCMC/HNI Capability Delivered - 2019



AFLCMC... Providing the Warfighter's Edge

Air Force Intranet Control (AFINC)

- ANG Domain Name Server (DNS) deployment contract award, initiating deployment in FY19
- Completed Dual Path Resiliency (formerly Bottleneck) 10G deployments at Scott AFB & WP AFB
- What's next:
 - Award contract & deliver 10G throughput and enterprise network performance management to ~ 10-15 bases



Cloud One (Formally Common Computing Environment (CCE))

Migrated 36 Applications to CloudOne
 Moved AF Data Services along w/ 145 TB of data to Azure
 72 applications in the migration pipeline
 48% reduction in GCSS-AF footprint

What's next:

- Re-compete cloud system integrator contract
- IL6 will be available in FY20
- Increased Support for Data Integration
- Continue maturing new development environment
- DevSecOps CI/CD Pipelines instantiated in CloudOne
- Complete sunset of CGSS-AF Heritage Environment
- Data VAULT transition to PEO C3I&N





AFLCMC/HNI

Capability Delivered - 2019



AFLCMC... Providing the Warfighter's Edge

Enterprise IT as a Service (EITaaS)

Awarded four Other Transaction Agreements (OTA's) in support of EITaaS - Microsoft & AT&T (Network as a Service), Unisys (End User Services), Accenture (Compute & Store)

PEO & EIT Governance Board approved eight bases for EITaaS viability/scalability plan for prime contractors; Acquisition strategy plan completion by End of FY20

Compute and Store - IATT Approval received 4 Dec 19

What's next:

Network as a Service (NaaS):

Established ATO with AF AO and ATC with DoD AO

First EITaaS ORR successfully completed in Nov 2019 for Buckley AFB

Initially three bases per Service Provider: Buckley, Offutt, JBER for AT&T and Cannon, Maxwell/Gunter, Hurlburt for MSFT

End User Services (EUS):

Improved security stack that will migrate a vast majority of IT resource needs from EUDs to application servers

Streamlining of GPOs on endpoint systems to mission specific needs through centrally located management, freeing up local base management



Emergency Mass Notification System (EMNS)

DISA Cloud Access Point (CAP) Connection 8 Oct 18

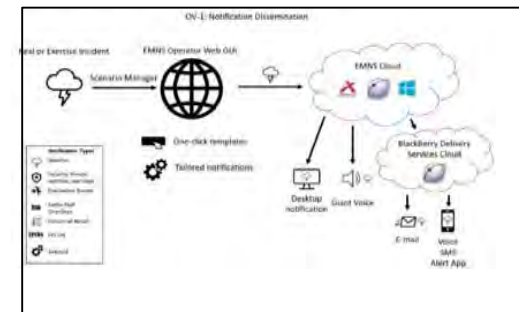
MAJCOM with Training completed 8 Feb 19

Integrated the Giant Voice at 80 different bases

What's Next:

Continue integrations at remaining 84 bases & improving user experience

EMNS Statement Of Records Notice (SORN), & Paperwork Reduction Act (PRA), coordinated through DoD privacy and Office of Management & Budget (OMB) privacy





AFLCMC/HNI Capability Delivered - 2019



AFLCMC... Providing the Warfighter



Cloud Hosted Enterprise Services (CHES)

Deployed email & skype to all AF CONUS users except NCR and medical, OCONUS migrations underway (630K+ email accounts)
All 700K+ CONUS users activated for OneDrive
AETC, AFSPC, AFOSI Sharepoint Migrations complete
Rolled out Microsoft Teams to all CHES CONUS users

What's Next:

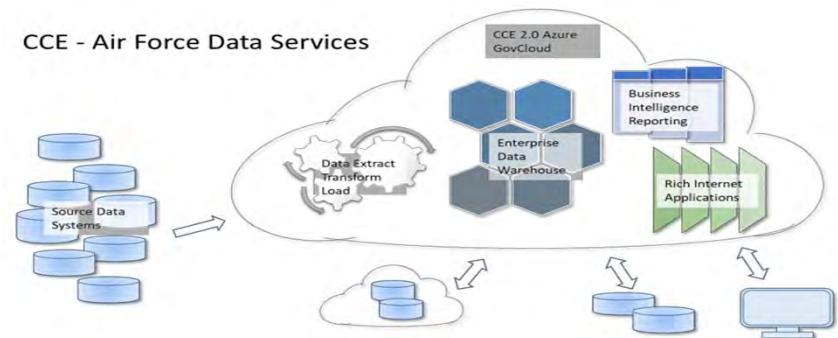
Zero Stack implementation
External access to non-DoDIN users for SPO and Teams
Expanding Teams capabilities to mobile devices
E3 O365 license cutover (addition of new services like PowerBI)
Continued SharePoint Online site migrations (AMC, ACC, AFMC)

Air Force Data Services (DS)

Migrated to Cloud One Azure GovCloud Apr 2019
20 TB data from 49 source data systems
39 Mission applications and 30K users to include:
Logistics, Installations, and Mission Support
Enterprise View (LIMS-EV)
Positive Inventory Control (PIC) Fusion
F-35 User IT Data Exchange Service (UIDES)
Contracting Business Intelligence Service (CBIS)

What's Next:

Recomplete Data Services Sys Integrator contract Sep 2020



C3I&N...In Synch w/ Digital AF Vision



C3I&N Delivering Capability

EITaaS Risk Reduction

IT Infrastructure

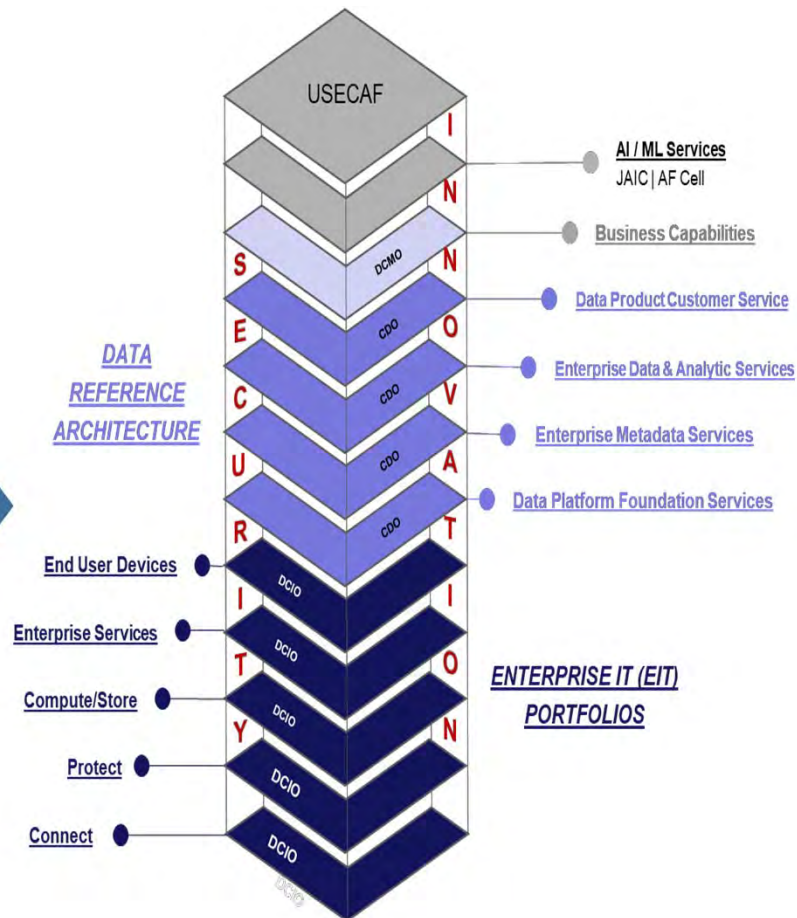
Cloud Migration

Cyber Systems

DevSecOps

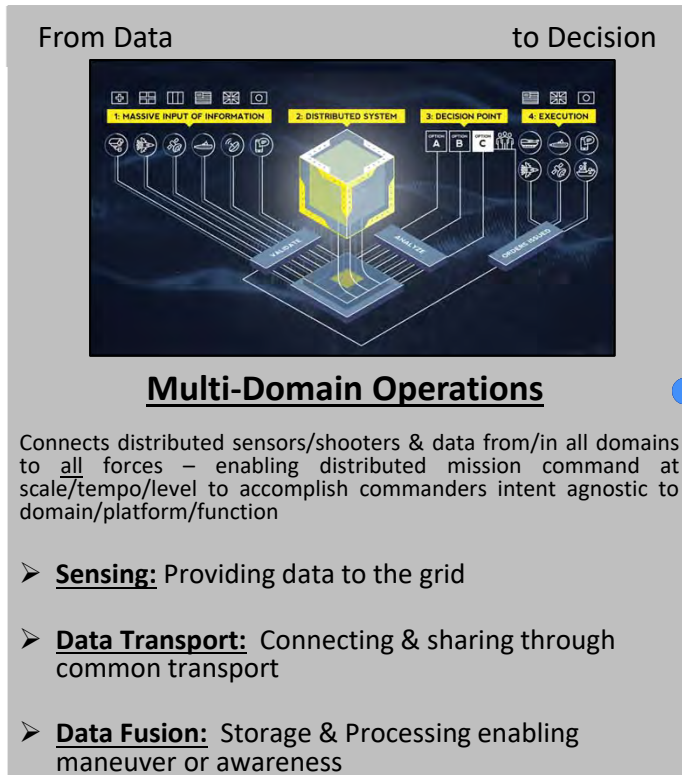
...and more...

Delivering Capability Consistent with the Future *Digital Air Force!*

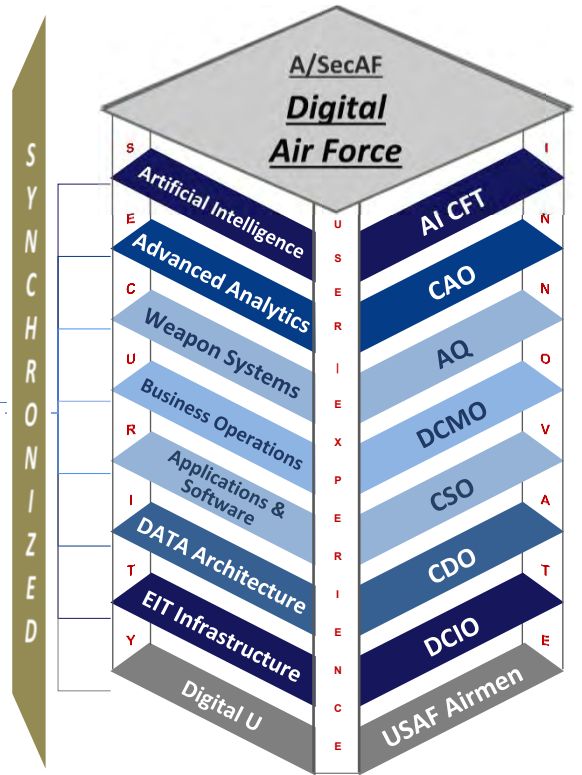


DELIVER...INNOVATE...GROW...D.I.G. IN!

The Digital Air Force Enabling – Multi-Domain Operations



- Shortened Decision Cycles
- Organic Analytics & Modeling
- Integrated Warfighting Capabilities
- Effective Business Processes
- Mission Designed Applications
- Using Data as a Strategic Asset
- Core Enterprise Infrastructure
- Digitally Developed Airmen



Multi-Domain Operations are not viable without the Digital Air Force



HNI FY19 Strategic Goals



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1. **Award all EITaaS RRE efforts by 2nd Qtr 2019** – C&S awarded Jun 19
 - Tyndall rebuild effort through an UCA – IOC by Mar 19 IAW COMACC request
- ~~2.~~ **Migrate 100 applications to CCE** – Not enough funds, expect 39 by end of CY19
3. **Deliver ALL O-365 services to ALL USAF users**
 - SharePoint Online and Skype for Business to CONUS by 31 Dec 2018
 - 40TB of SharePoint data migrated to SharePoint Online – FY20 Goal of 5 MAJCOMs
 - Microsoft Teams integration is a priority – Soft roll out to entire AF 26 Jul 19
4. **Realign portions of AF Cyberspace Defense (ACD) from HNI to HNC**
5. **Realign PKI SPO and AF Directory Services (AFDS) from HNC to HNI**
- ~~6.~~ **Award Logistics Rapid Acquisition Contract (LRAC)** – FY20 Goal
7. **Award SIPR modernization contract** – Contract awarded Jun 19
8. **Complete Dual Path Resiliency at Scott & WPAFB** – 27 Jan 18 & 2 Mar 19
9. **Deliver Data Integration and Machine Learning capabilities**
 - FM Data Integration on contract; CDO ref architecture in Cloud One plan developed
10. **Deliver LIMS-EV in CCE** – Go live on 17 Apr 19
11. **EMNS to 95% of AF users** – Completed 31 Jul 19

FY19 WAS A BANNER YEAR!



HNI FY20 Goals Programmatic



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- EITaaS—Post-RRE acquisition strategy approved
- EITaaS—add Spangdahlem & Pope for viability, begin scalability phase
- Cloud One—3 DevSecOps pathfinder environments available for agile/CICD activities (containerized)
- Cloud One—IL6
- Project Phoenix (Tyndall)—Phase 3 contract award and contractor ops begins
- Cloud One—Expand beyond business systems to C2 & weapons systems
- ERP—MROi services provided & cloud strategy approved, award post-G2 contract
- Cloud One-HmC—fully bedded down in HNI, nuances of best practices understood/documentated
- CHES/EIS—Implement Zero Stack, SPO migration to 5 MAJCOMs, Teams to FOC, O365 remote access, & PowerBI Pro integration
- Data Services—Award post-G2 contract – re-brand and showcase DS infrastructure capabilities
- Data Integration—Implement CDO Data Reference Architecture within Cloud One, transition Smart FM into Cloud One CDO-compliant architecture
- Cloud One--Hospice Zone available to customers
- Cloud One—Sunset GCSS-AF
- SIPR Modernization—ATO approval, first MAJCOM option awarded
- Identify Credential and Access Management (ICAM) – Establish HNI ICAM working group and architect/plan ICAM convergence with HNI programs
- Connectivity SPO stand up decision (future strategy for BITI)
- Cloud One—Develop plan for Organic CSSP capability
- AFINC—Dual Path Resiliency contract awarded & three Bottleneck Lite bases implemented
- EUX Triage team established in conjunction with Chief Experience Officer & 24th/ACC efforts
- Cloud One—Mobile Storefront contract award



HNI - Rapidly Getting Latest Tech to Warfighters: Key to the American Military Advantage



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