CROWS

CYBER RESILIENCY OFFICE FOR WEAPON SYSTEMS

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CROWS@US.AF.MIL

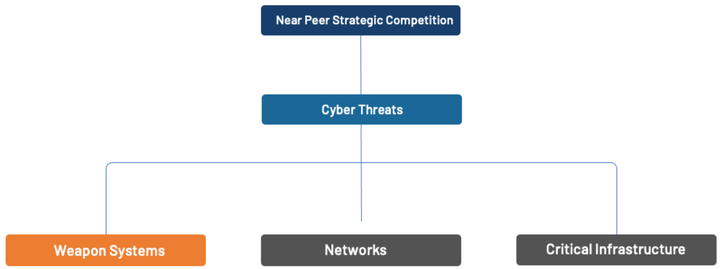
Learn More

CYBER RESILIENCY OFFICE FOR WEAPON SYSTEMS

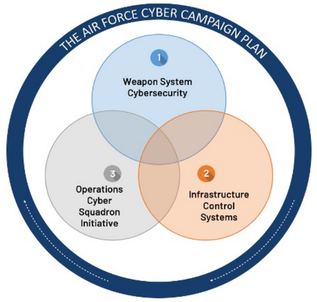
At a Glance

CROWS

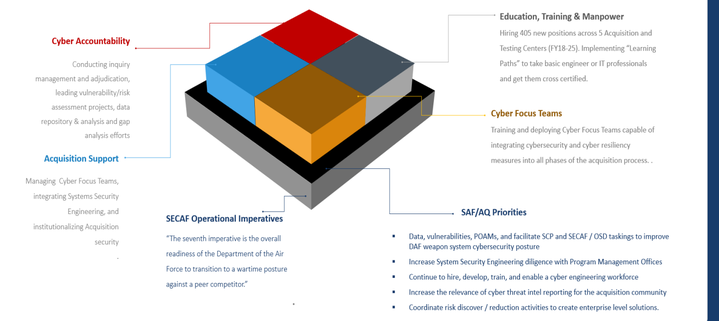
National Defense Strategy



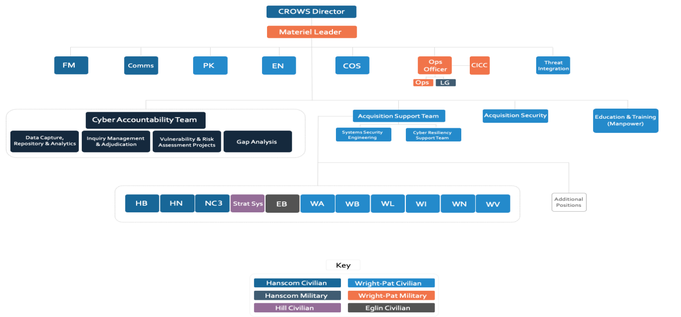
CROWS History



CROWS at a glance



Structure



Cyber Focus Teams **Operations** Branch

Train and deploy Cyber Focus Teams capable of integrating cybersecurity and cyber resiliency measures into all phases of the acquisition process; provide Cyber Incident Coordination across the DAF weapons systems

What: Increase cyber resiliency of weapon systems to maintain mission effective capability under adverse conditions

How:

- Learn about and analyze weapon systems to characterize its cyber posture
- Integrate cyber resiliency into system design documents & technical reviews
- Learn about and apply CROWS products, processes, tools, and best practices
- Provide expertise of cyber policy and guidance in cyber vulnerability analysis using system engineering
- Facilitate and assist in high priority mitigation efforts
- Assist in implementing cyber requirements early in acquisition life cycle

Hanscom AFB	
Battle Management	HB
C&N	HN
Nuclear Command Control and Communications	NC3

Wright Patterson AFB	
Cyber Incident Coordination Cell	CICC
Fighters and Advanced Aircraft	WA
Bombers	WB
Mobility & Training Aircraft	WL
ISR/SOF	WI
Agile Combat Support	WN
Presidential and Executive Airlift	WV

Eglin AFB	
Armament	EB

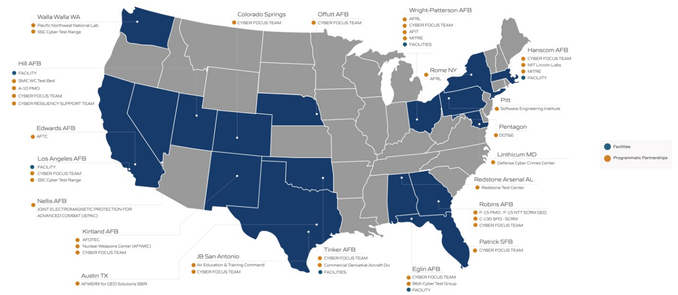
Hill AFB	
Strategic Systems	Strat Sys

Space Systems Command (SSC)	
Assured Access to Space	AATS
Battle Management/C2 (LA/Col Springs)	BMC3
Military Comm & Positioning, Nav & Timing (LA/Col Springs)	MCPNT
Space Domain Awareness & Combat Power (Col Springs)	SDACP
Space Sensing (LA/Col Springs)	SS

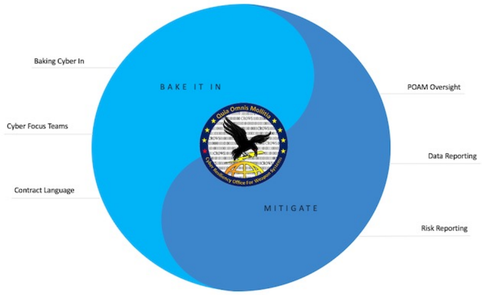
SAF/AQ
BMC3

The Impact of CFTs

Programmatic Footprint



Full Lifecycle Support Activity



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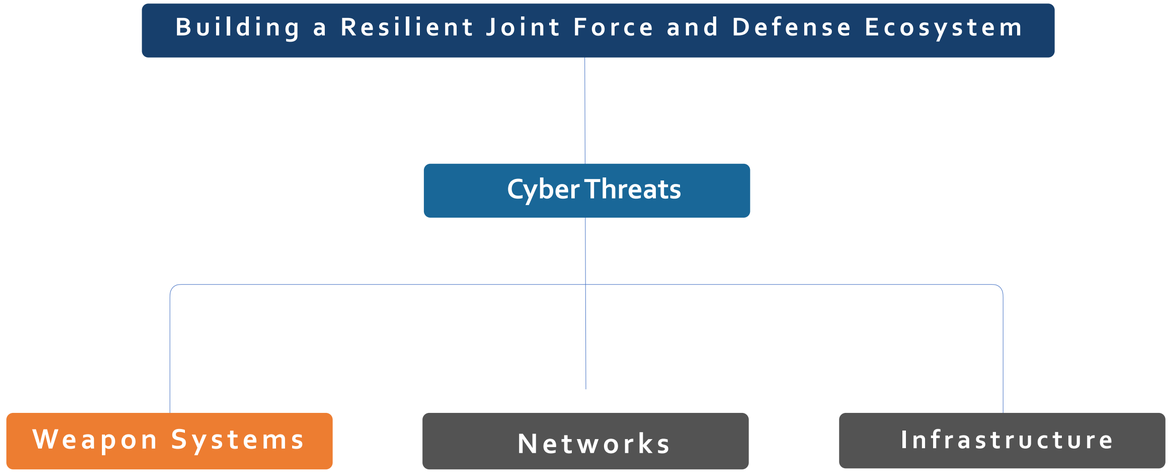
National **Defense** Strategy

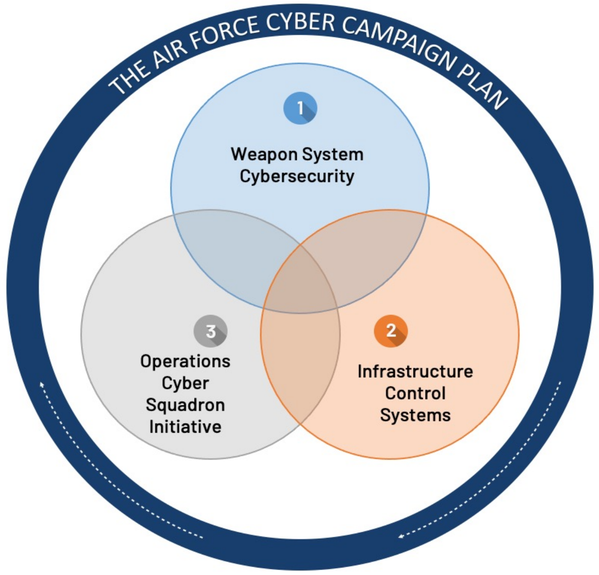
"Because the cyber and space domains empower the entire Joint Force, **we will prioritize building resilience in these areas**."

"In the space domain, the Department will reduce adversary incentives for early attack **by fielding diverse, resilient, and redundant satellite constellations.**



A Brief **History** of CROWS

"The task force will **diagnose the extent of the cyber threat and the vulnerabilities** that currently impact our core missions, will plan to develop a risk management plan that will allow the Air Force to fly, fight and win in a cyber-contested environment, and **will recommend investment priorities to the SECAF and CSAF** for how best to address the cybersecurity challenges. - Lt Gen Bill Bender, USAF CIO, 2015

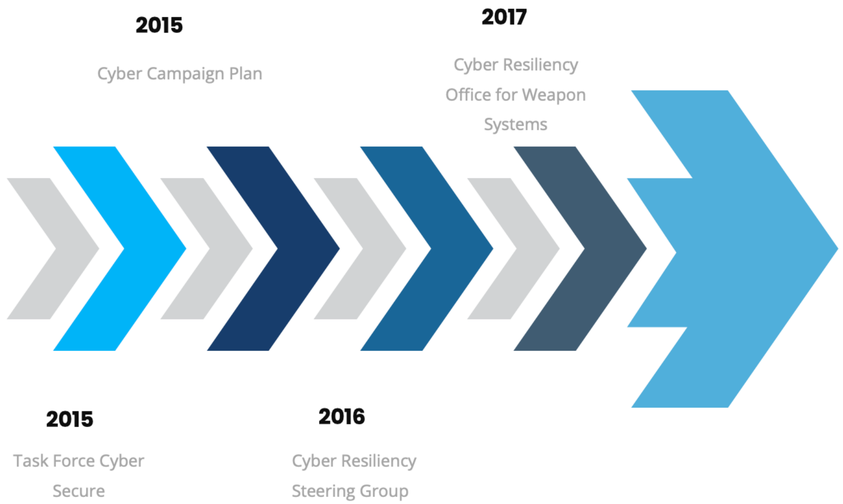


Cyber Campaign Plan

Forged out of 2015's Task Force Cyber Secure, an initiative enacted by then Air Force Chief of Staff Gen. Mark A. Welsh, the Cyber Campaign Plan was developed to synchronize cyber security efforts across the Air Force enterprise to improve the security of information and warfighting systems.

- Acquisition – Weapon System Cyber Resiliency led by the Secretary of the Air Force for Acquisition, Technology, and Logistics (SAF/AQ)
- Infrastructure – Industrial Control Systems and Supervisory Control and Data Acquisition (ICS/SCADA)
- Operations – Communication Squadron Initiative led by the SAF/Chief Information Officer

CROWS TIMELINE



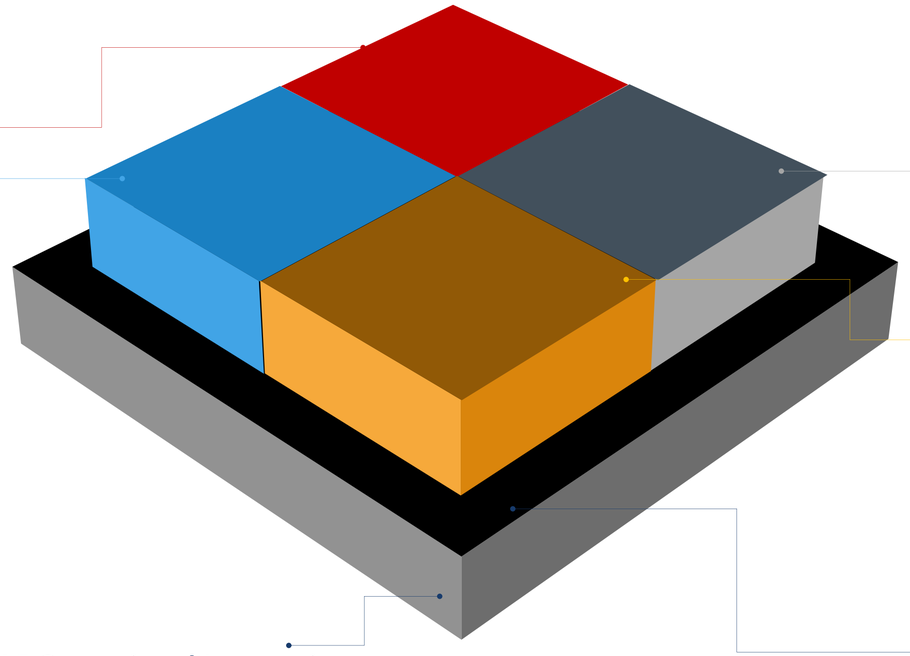
CROWS at a glance

Cyber Accountability

Conducting inquiry management and adjudication, leading vulnerability/risk assessment projects, data repository & analysis and gap analysis efforts

Acquisition Support

Managing Cyber Focus Teams, integrating Systems Security Engineering, and institutionalizing Acquisition security



Education, Training & Manpower

Hiring 405 new positions across 5 Acquisition and Testing Centers (FY18-25). Implementing “Learning Paths” to take basic engineer or IT professionals and get them cross certified.

Cyber Focus Teams

Training and deploying Cyber Focus Teams capable of integrating cybersecurity and cyber resiliency measures into all phases of the acquisition process. .

SECAF Operational Imperatives

“The seventh imperative is the overall readiness of the Department of the Air Force to transition to a wartime posture against a peer competitor.”

CROWS Priorities

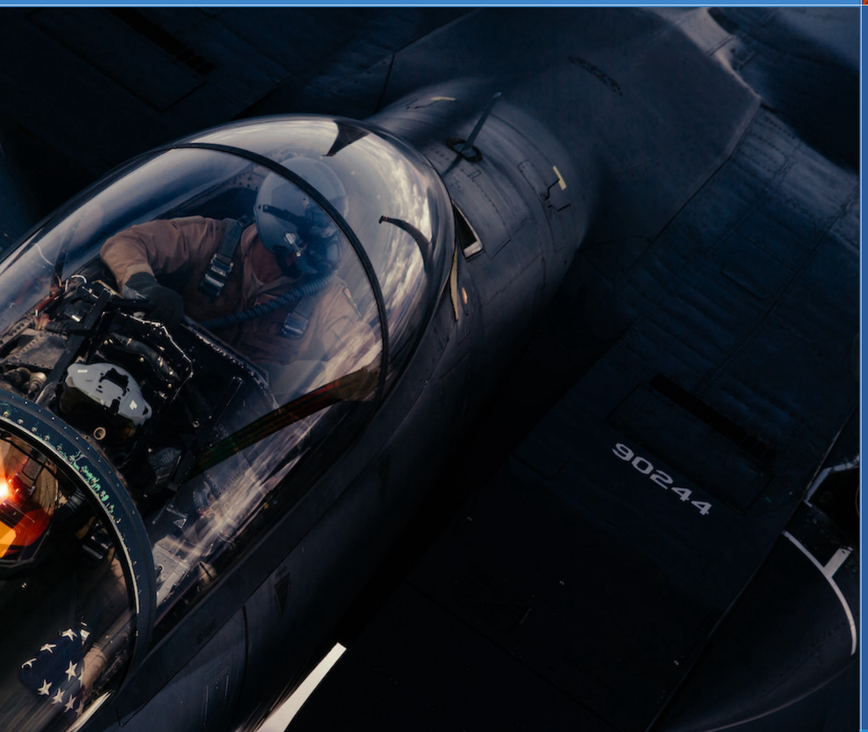
- Data, vulnerabilities, POAMs, and facilitate SCP and SECAF / OSD taskings to improve DAF weapon system cybersecurity posture
- Increase System Security Engineering diligence with Program Management Offices
- Continue to hire, develop, train, and enable a cyber engineering workforce
- Increase the relevance of cyber threat intel reporting for the acquisition community
- Coordinate risk discover / reduction activities to create enterprise level solutions.

MISSION

INCREASE THE CYBER RESILIENCY OF AIR AND SPACE FORCE WEAPON SYSTEMS TO MAINTAIN MISSION EFFECTIVE CAPABILITY UNDER ADVERSE CONDITIONS

GOALS

BAKE CYBER RESILIENCY INTO NEW WEAPON SYSTEMS AND MITIGATE CRITICAL VULNERABILITIES IN FIELDED WEAPON SYSTEMS



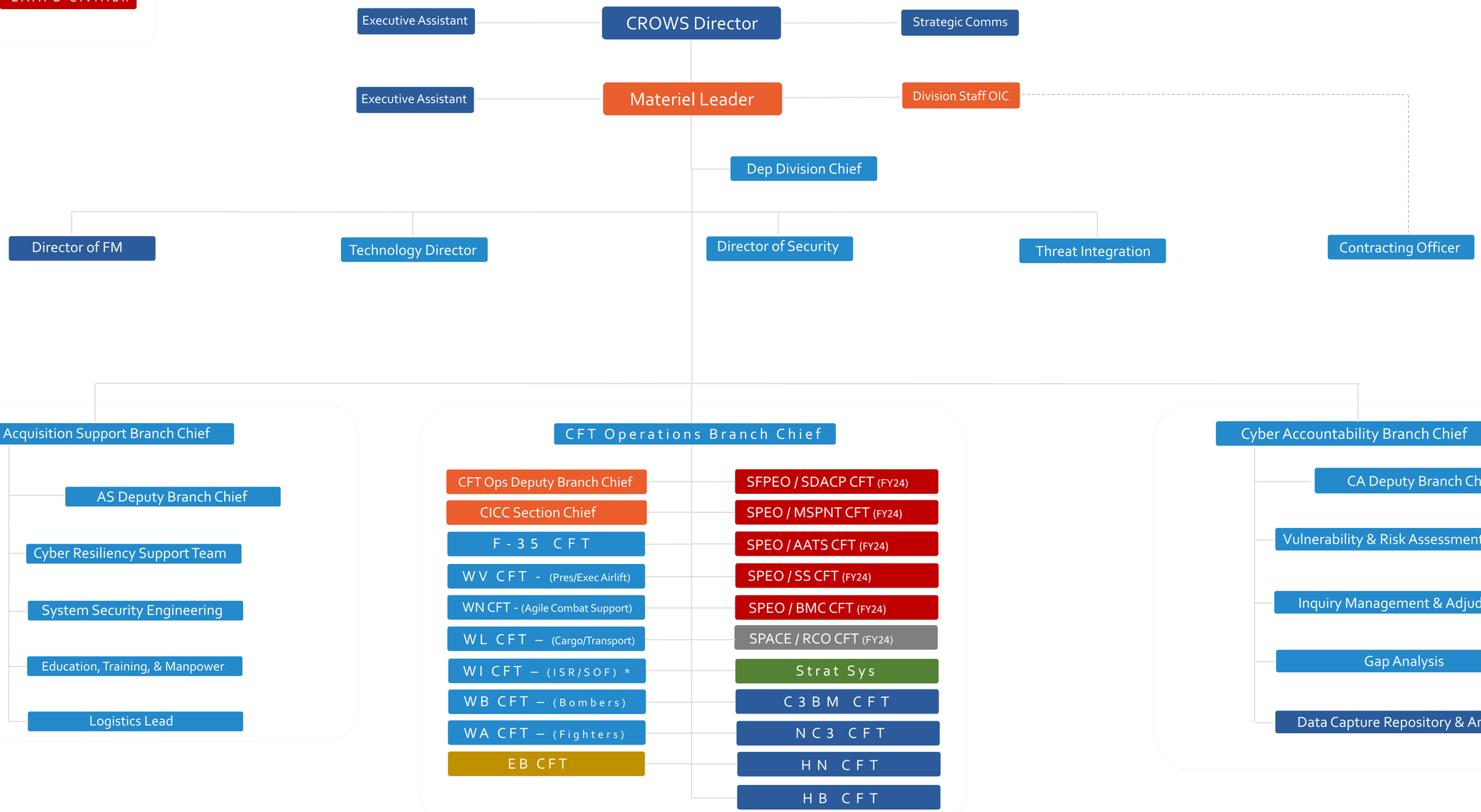
VISION

CYBER RESILIENCY EMBEDDED INTO AIR AND SPACE FORCE WEAPON SYSTEMS AND INGRAINED IN DEPARTMENT OF THE AIR FORCE CULTURE

CROWS STRUCTURE

Key

- Hanscom Civilian
- Hill Civilian
- Wright-Pat Civilian
- Eglin Civilian
- Wright-Pat Military
- LAAFB Civilian
- Kirtland Civilian



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C3IN	HN
Nuclear Command Control and Communications	NC3

Wright-Patterson AFB

Cyber Incident Coordination Cell	CICC
Fighters and Advanced Aircraft	WA
Bombers	WB
Mobility & Training Aircraft	WL
ISR/SOF	WI
Agile Combat Support	WN
Presidential and Executive Airlift	WV

Tinker AFB

Mobility & Training Aircraft	WL
Presidential and Executive Airlift	WV

Eglin AFB

Armament	EB

Hill AFB

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Space Domain Awareness & Combat Power (Col Springs)	SDACP
Space Sensing (LA/Col Springs)	SS

Space Rapid Capabilities Office (SpRCO)

SRCO

SAF/AQ

BMC3

Cyber Focus Teams

How **Cyber Focus Team** Impact the Program Office and CROWS Cyber Resiliency Mission

Support and assist program level system security working groups, provide core directorate level and embedded program level cyber security and PPP/SSE support with resources/skillsets.

Apply Systems Security Engineering into all Systems Engineering phases, bring teams together that emphasizes a shared purpose, ensures PP & SSE is an integral aspect of program management.

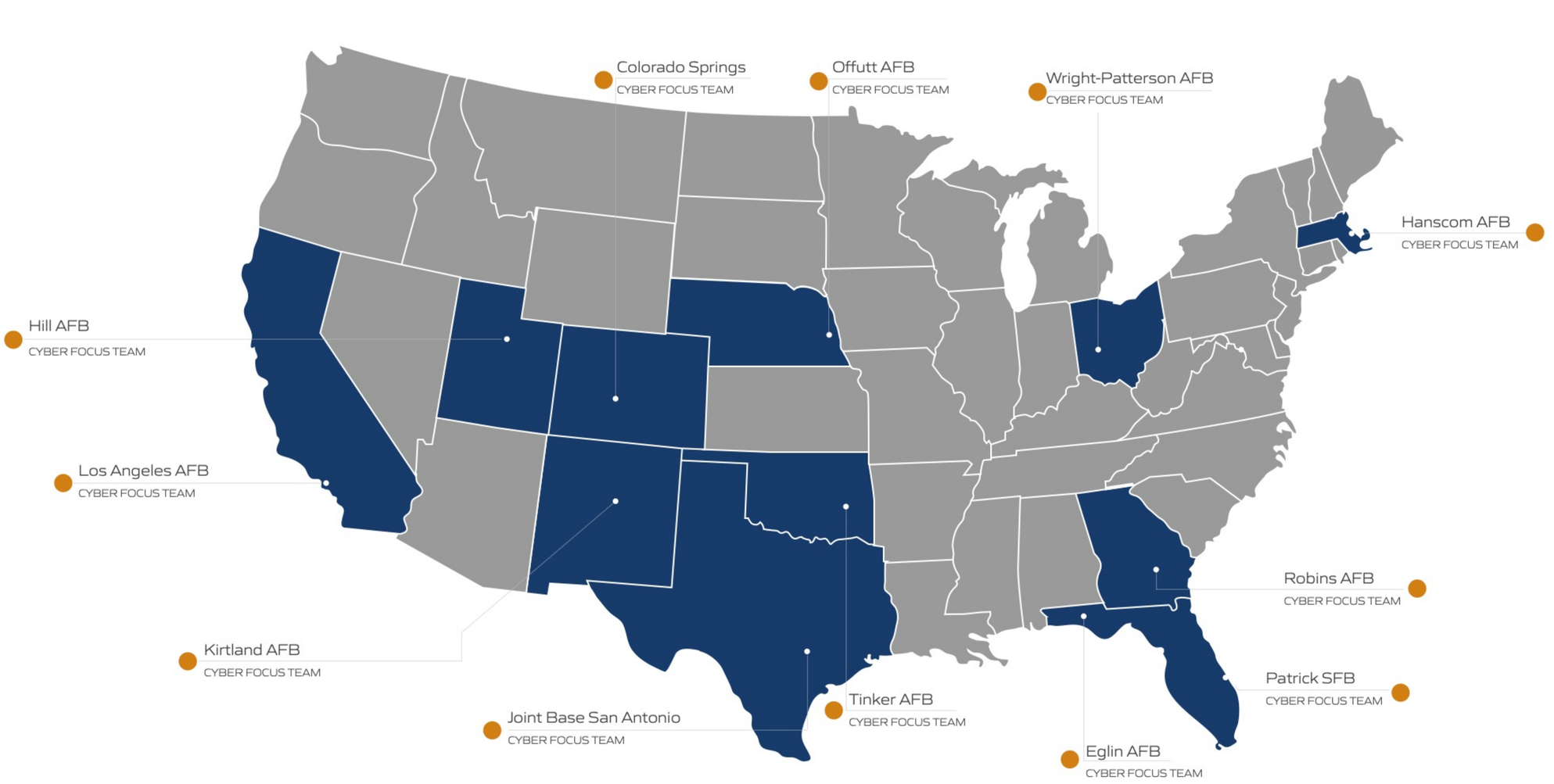
Share information, provide recommendations and guidance to the weapon system Program Office, empowering leadership to make good decisions. Strengthen Intelligence integration activities.

Build and strengthen the cyber workforce by developing new skill sets (training), adding quality team members(recruiting), maintaining certifications, and improving processes to address cyber hygiene and resiliency.

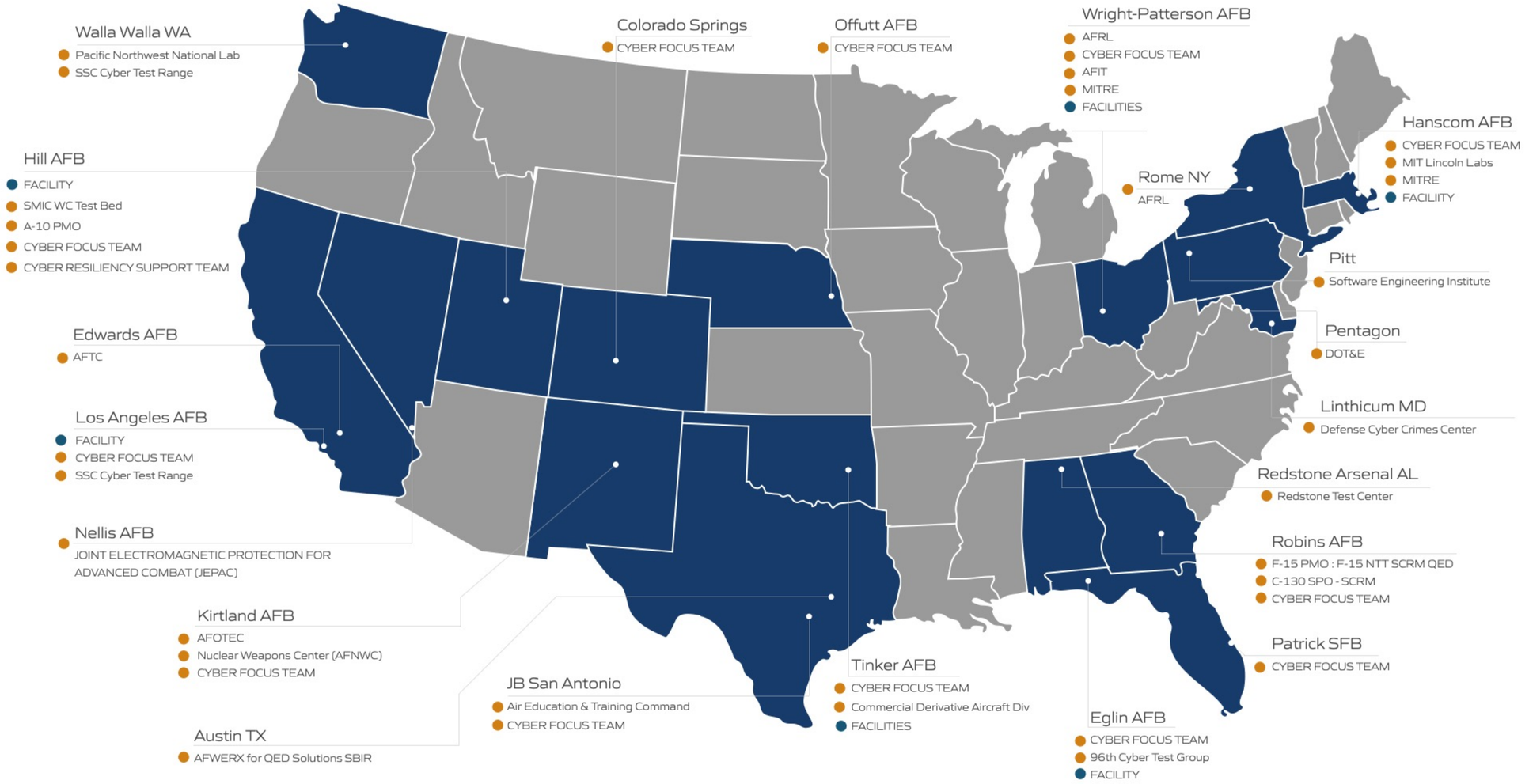
Help Programs manage data reporting (1637, assessments, POA&Ms) Shape the cyber resiliency future and culture by working as one team delivering innovative cyber resilient warfighter capabilities with speed and discipline.

Working together always works. It always works!

CROWS CYBER FOCUS TEAM FOOTPRINT

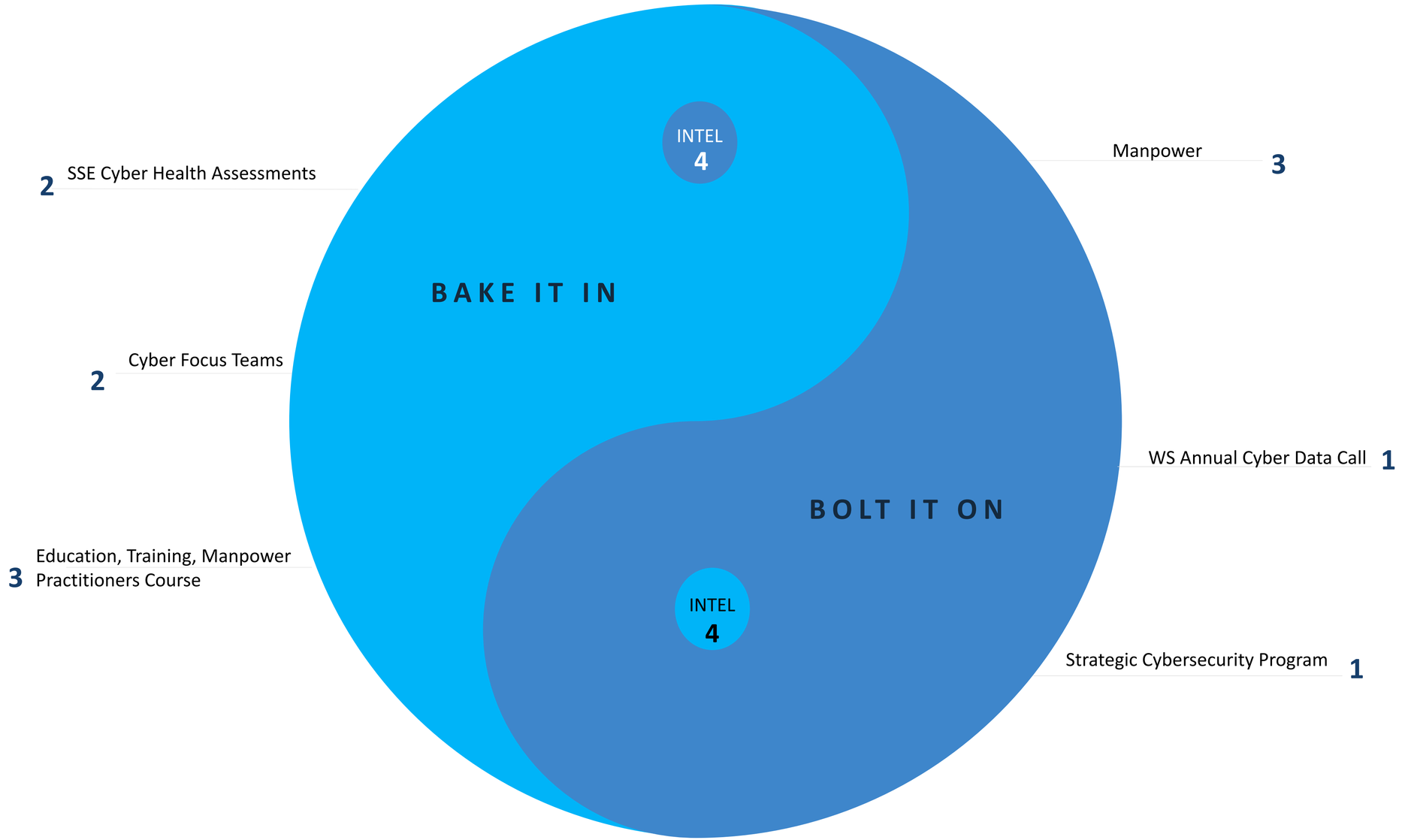


CROWS PROGRAMMATIC FOOTPRINT



1	2	3	4	5
Data Reporting, Vulnerabilities, 1637, SCP	Program Protection Systems Security Engineering	Education, Training, & Manpower	Strengthening Intelligence Integration	Strategic Technology Mitigation Roadmap

YIN & YANG
A FULL LIFE CYCLE SUPPORT ACTIVITY



2 SSE Cyber Health Assessments

Manpower 3

2 Cyber Focus Teams

WS Annual Cyber Data Call 1

3 Education, Training, Manpower Practitioners Course

Strategic Cybersecurity Program 1

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