

Headquarters U.S. Air Force

Fly, Fight, Win

Collaborative Combat Aircraft

Why – What – How



U.S. AIR FORCE

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Problem Statement – Why CCA?

Rapidly Evolving Threats

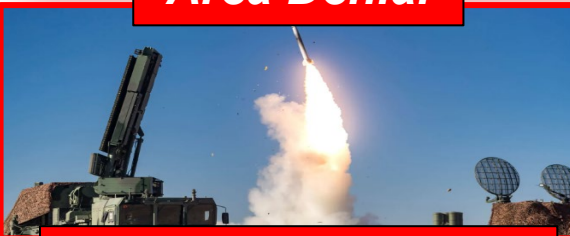


We Must Adapt

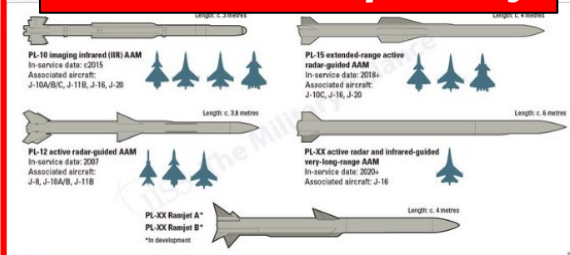
Numerical Superiority



Area Denial



Kinematic Capability



Technological Parity



**Risk-tolerant
Platforms**

**Flexible
System
Attributes**

Autonomy

**Collaborative
Combat Aircraft**

**Agile
Acquisition
Practices**

**Early
International
Partners**

CCA Strategy is Delivering Capability at Scale on Timeline To Achieve Air Superiority

Open Architectures & CCA Autonomy

Open Architectures

- Avoids vendor lock – maintain window of competition
- Enables rapid iteration – key to schedule
- Extensible to other platforms – Prevent double spending
- Underpins interoperability

CCA Inc 1 Autonomy



Collins Aerospace
An RTX Business



General Atomics + Collins RTX



Shield AI®



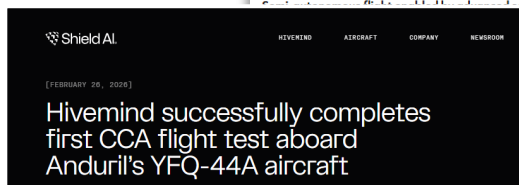
Anduril + Shield AI

Autonomy Approach

- Mission Autonomy (MA) Flying today!
- Warfighter inputs in lab and flight test informing tactics
- Shield AI, RTX , and Anduril mission autonomy have all flown on CCA



RTX's Collins Aerospace autonomy solution, Sidekick, flies GA-ASI's YFQ-42A CCA platform



Open Architectures & Standards

+

Reusable & Software-Defined Components

=

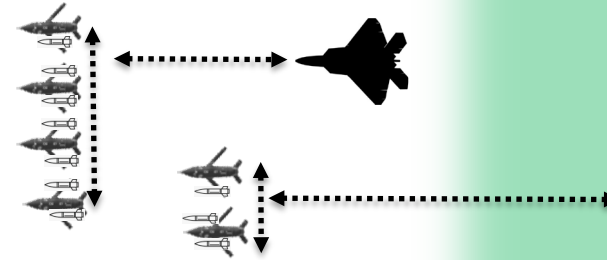
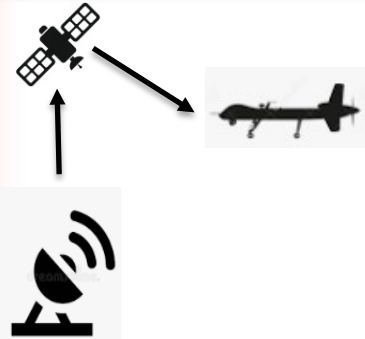
Reduced Cost and Schedule

Autonomy Makes it a CCA

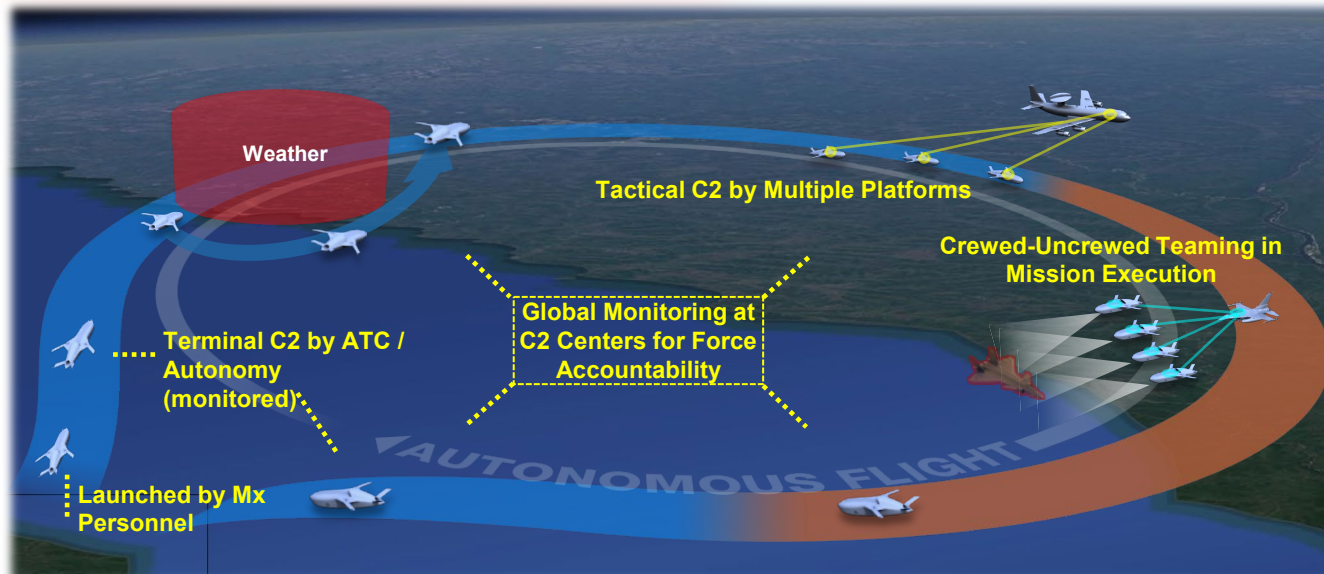
“Battle Managed” in Teams - Not “Flown”



Direct Aircraft Control (RPA)



(CCA) Intent-based Commands and Monitoring



Multiple Air Vehicle Controllers (Roles-based C2)



Optimizes the Human-Machine Team

Agile Acquisition Practices

CCA Air Vehicles

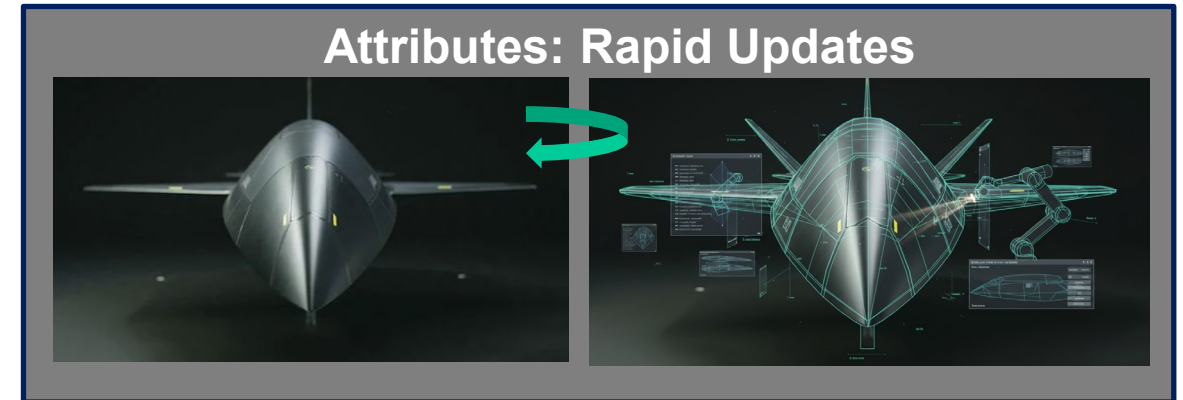
- **Speed to capability**
 - Preliminary design to production in < 3 years
 - Exercising supply chains with prototype fleet
 - Tailored Airworthiness
 - Risk tolerant flight test
- **Continuous Competition**
 - Three new MDSs: YFQ-42, YFQ-44, YFQ-48
 - Multiple vendors competing for Production
 - Open mission systems
 - Incremental approach with larger vendor pool



New Program: What we have learned

Pathfinder for Acq Transformation

- Schedule is sacred – Concurrency is expected
- No JCIDS
- Software sold separately



Operational Experimentation

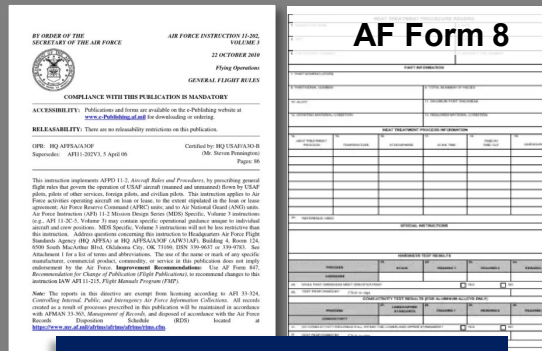
- Early warfighter engagement
- Exercises with prototypes
 - Operational concepts inform acquisition
- *Continued despite mishap!*

Scaling CCA: Can our Culture Adapt?

Cultural Challenges (Overcoming Legacy Mindsets)



Stovepiped Training Systems



Restrictive Guidance



Past Lessons on Autonomy

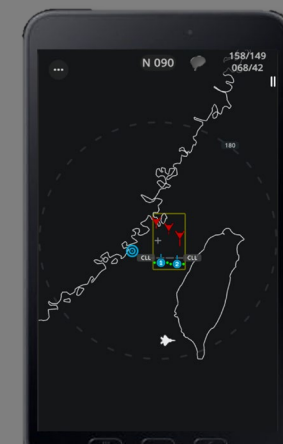
Cultural Opportunities (Embracing the New)



Multi-Capable Airmen



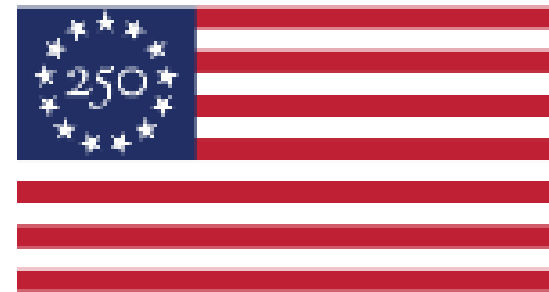
Multiple AVCs



Intuitive Technology



Questions



Freedom 250

