



### Future Attack Reconnaissance Aircraft (FARA)



### Future Unmanned Aircraft Systems (FUAS)



### Future Long Range Assault Aircraft (FLRAA)



### Modular Open Systems Approach (MOSA)





# Future Vertical Lift Cross Functional Team



## Demonstrated Capability: FARA from COCOM to Squad

- Find**
  - **Joint All Domain Command & Control (JADC2)**
  - **Multi-Intelligence (INT) Sensors**
    - Full Spectrum Targeting (FARA)
    - Air Launched Effects (Tailorable Payloads)
  - **Aided Target Recognition (AI Enabled)**
    - Improved probabilities, scan rates, coverage
    - Operations in GPS denied environments (visual/Alt NAV)
  - **Joint Interoperability**
    - Auto Messaging (Threat Detection, CAS, MEDEVAC)
  - **Resilient Network**
    - 8 x Waveforms/ Extending digital network to tactical edge
    - Flooding the zone w/ low cost drones/ Advanced Teaming
- Fix**
  - **Electronic Warfare**
    - Sense, Attack, C-UAS
- Finish**
  - **Decision Dominance**
    - Architecture, Automation, Autonomy, Interface (A3I) FARA
    - MOSA enabled lethal/ non-lethal effects
  - **Joint Interoperable Fires**
    - Navy, Air Force, USMC, SOCOM
    - 6 x Unique Kinetic Capabilities
- Exploit & Analyze**
  - **Air Assault Enabled by the Network**
    - Multi-INT Sensors (F3EA)
    - Scalable Control Interface (SCI)





## FVL Update

### Requirements & Signature Programs

#### • Future Attack Reconnaissance Aircraft

- ICRD JUN 18 → A-CDD APR 21
- Competitive Prototypes ~90%

#### • Future Long Range Assault Aircraft

- ICRD AUG 19 → A-CDD SEP 20
- CD&RR Phase 2 MAR 21-MAY 22

#### • Future Unmanned Aircraft Systems

- ALE ICRD OCT 19 → A-CDD MAY 20
- FTUAS ICD MAR 19 → A-CDD JUL 21

#### • Modular Open System Approach

- ICRD JUN 20 → Mission System Architecture Demo DEC 20

#### • Scalable Control Interface → A-CDD JAN 22

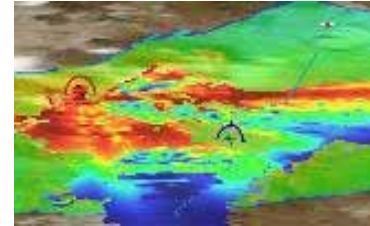
#### • Degraded Visual Environment → A-CDD JAN 22



### High Fidelity Modeling & Western Test Ranges

#### • High Fidelity Physics Based Modeling

- Phase I- EUCOM
- Phase II- INDOPACOM
- Phase III- INDOPACOM w/ Joint & Interagency (USN, USMC, JS, IC)
- 100K+ engineered modeling runs



#### • Demonstration and Experimentation

- China Lake, CA – AUG 19
- Project Convergence 20- SEP 20
- Eglin, AFB- MAR 21 (9 for 9 SPIKE)
- EDGE 21- MAY 21
- Project Convergence 21- NOV 21
- LRPM Shoot-off 4QFY24



### Studies (30+ in Last 2 Years)

#### • Affordability

- Congressional Budget Office
- Center for Strategic and International Studies
- Center for Strategic and Budgetary Assessments

#### • Lethality & Survivability

- RAND
- Air Cavalry Squadron (CEAD)
- FARA AoA (TRAC)

#### • Reduce Operations and Support

- Maintenance Free Operating Period
- Fire Point Wichita State University
- South Carolina University



### Soldier Touchpoints & Interoperability

#### • Soldier Touchpoints

- Future Tactical Unmanned Aerial System
  - Buy, Try & Inform directly to A-CDD
- FLRAA
  - 101st ABN and National Guard Maintainers
  - Air Assault Infantry Squad Egress
- SPIKE Missile (82nd ABN)
- Degraded Visual Environment (DVE)

#### • Interoperability

- EDGE & Project Convergence
  - Joint and International
- UK Cooperative Feasibility Assessment





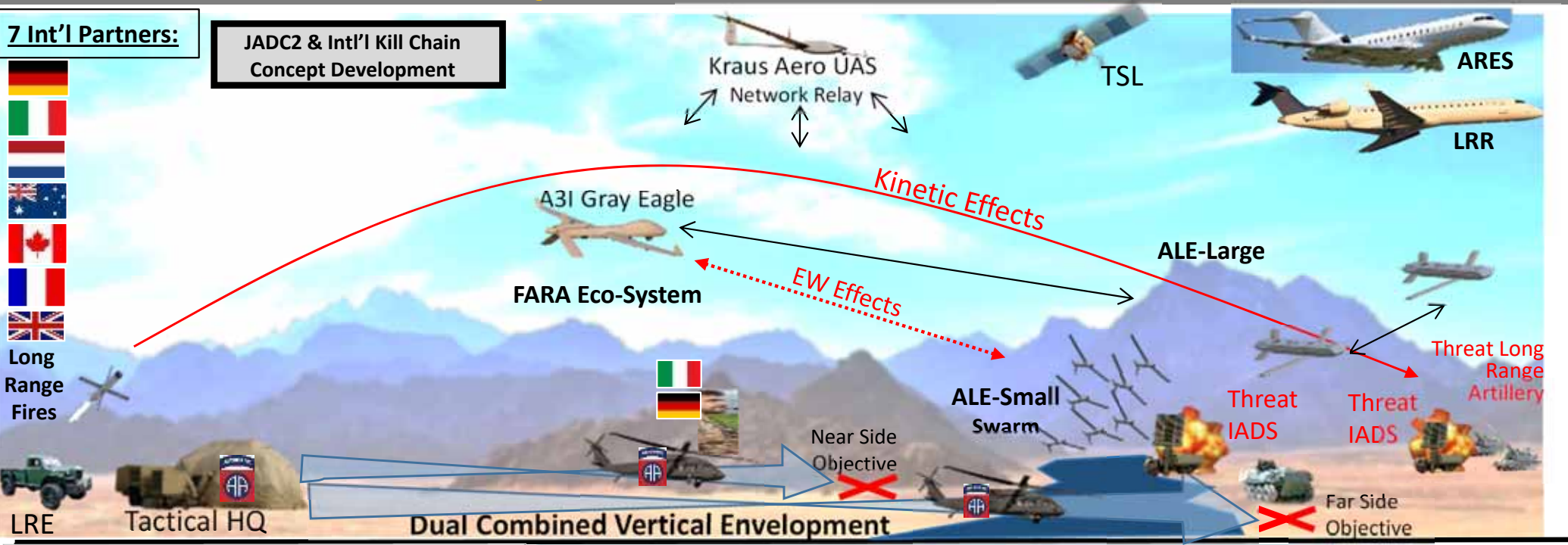
7 Int'l Partners:



Long Range Fires



JADC2 & Int'l Kill Chain Concept Development



### 5 W's:

- Who:** 5x CFT partners + AI2C, and 7 International Partners
- What:** EDGE 22 / PC22 Risk Reduction Event
- When:** 25 APR – 13 MAY 2022
- Where:** Dugway Proving Ground, UT
- Why:** Rehearse key aspects of PC22 Use Cases in a theater relevant environment.

### Key Exercise Objectives

- **Interoperability**
- **Network:** Cross-Domain Solution with International Partners
- **Reach** (Physical, Digital)
- **Improved Multi-INT Sensors**
- **Air Launched Effects- Swarming**
  - DILR, Geo-Locate, EW, Cooperative Search, GPS-Denied
- **Electronic Warfare:** Sense/ Attack/ C-UAS
- **Fires**

### 16 Participating Org's:

- FVL CFT
- NET CFT
- SL CFT
- APNT CFT
- NGCV CFT
- AI2C
- SOCOM
- DARPA
- ARL
- C5ISR
- 82<sup>nd</sup> ABN
- AFC**
- CCDC
- ATEC
- TDD-A/M
- PEO AVN (PM UAS)
- PM AMSA
- PM ASE
- Kraus Aero