AFWERX

AGILITY PRIME

"Prime the pump to advance US National Security and economic prosperity"

AFWERX Agility Prime is the Air Force's transformative vertical lift program, partnering with commercial industry to propel the third revolution in aerospace and field an new class of air mobility systems by 2023.

It is the only all-electric passenger aircraft program in the U.S. Government.

MISSION:

Expand technology transition paths to accelerate emerging dual-use markets by leveraging government resources for rapid and affordable fielding, while bolstering U.S. tech advantage.

WHY: U.S. Technological Advantage

1. **Strategic:** Build the domestic industrial base for an aerospace market estimated to be $1.0T by 2040

2. **Process:** Drive innovative new approaches for transiting technology to the field: contracts, airworthiness, testing

3. **Product:** Field new air mobility in FY23 (20+ use cases)

WHAT: Third Revolution in Aerospace

Electric Vertical Takeoff and Landing (eVTOL)

Organic Resupply Bus (ORBs)

Coalescence of 3 technologies fueled by commercial industry

1. **Electric:** Large electric power systems (auto industry)

2. **Autonomy:** AI/Autonomy/Simplified Vehicle Operations

3. **Manufacturing:** Advanced manufacturing and materials

ORBs: Revolutionize Mobility – alternative to current air, land, or sea vehicles

- Lower maintenance cost and time, through mechanical and hydraulic simplicity of electric

- Improved safety and reduce personnel demands, using advanced autonomy

- Affordable quantity, based on potential mass production

- Advanced acoustics and infrared employing distributed electric propulsion

- Greater flexibility and reduced infrastructure needs, with runway independence

Flight demo for SecAF, CSAF & CMSAF near downtown Austin

Engaged User Community:
- ACC
- AFMC
- AFGSC
- AFSOC
- AETC
- USMC
- USCG

Engagement
- MAJCOM/CC briefs
- Business case analytics
- Concept and use case development

Potential Missions:
- CSAR
- Distributed Logistics
- Emergency Response
- Base/Range Logistics
- Firefighting
- Dedicated Trainer

AGILITY PRIME GOALS FOR 2022:

- **Test:** Complete updated use-case assessments

- **Evaluate:** Identify which ORBs are best suited for the 20+ developing use cases – taxpayer savings and tactical utility

- **POM:** Determine best MAJCOMs for Initial Operational Capability by 2023 in a way that creates immediate value

- **Train:** Finalize operator and maintainer syllabus in AETC

- **Exercises:** Increase DoD exercise participation and public use demonstrations, including flights by Air Force operations

STRUCTURE: Diverse Partnerships

- **Industry** - developing tech

- **Investor** - providing capital

- **Interagency** - regulating

- **International** - partnering

- **Acquisition** - fielding

- **Laboratory** - validating tech

- **Warfighter** - innovating with new airpower concepts

STRATEGY: Co-investment with industry to field a capability in 2-4 years

- Partner with investors to identify emerging tech sectors

- Collaborate with the warfighter to find fit of dual-use tech

- Leverage commercial interest for warfighter need in a way that achieves 20:1 return on investment from taxpayer dollars all while bolstering emerging U.S. technologies

PROGRESS: In Just Over a Year

- **Industry:** 29 companies in Agility Prime "Air Race"

- **Airworthiness:** 4 complete – 2 in process

- **Contracts:** $100M+, 12 small business contracts, 250+ small business and university contracts for R&D

- **Co-investment:** Over $1B in commercial investment

- **Training:** AETC Agility Prime detachment & sims

- **Hardware:** 1st ORB & 1st charging station delivered

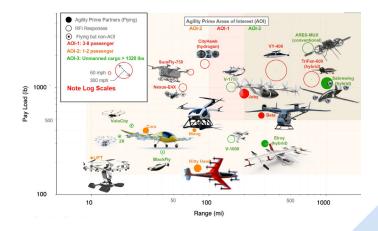## HOW: Collaborative Risk Reduction

1. **Tech Risk:** Opportunities for collaborative test and eval

2. **Regulatory Risk:** Early military airworthiness review

3. **Financial Risk:** Contracts for testing and early use cases

Agility Prime is the first Prime Program in the AFWERX Prime division, followed by the recently announced Orbital Prime program focused on Active Space Debris Remediation. Future Prime programs of interest include autonomy, energy, gaming, supersonics and microelectronics.