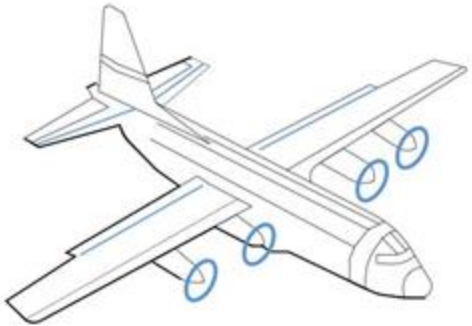
Reliable Robotics at AUVSI Hampton Roads

Oct 2, 2024

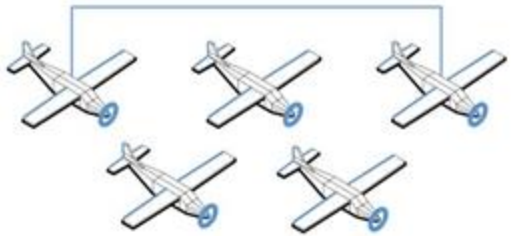
Uncrewed “Regional” Aircraft Provide High Dispatch Reliability and Cost Savings

C-130 Cargo Transporter



75% dispatch reliability
$110M+ acquisition cost*
$19,174/hr**

Reliable C208 UAS
90% of C-130 loads can fit on a
Reliable UAS cargo aircraft



98% individual dispatch reliability***
$5M individual acquisition cost
$2000/hr operational cost

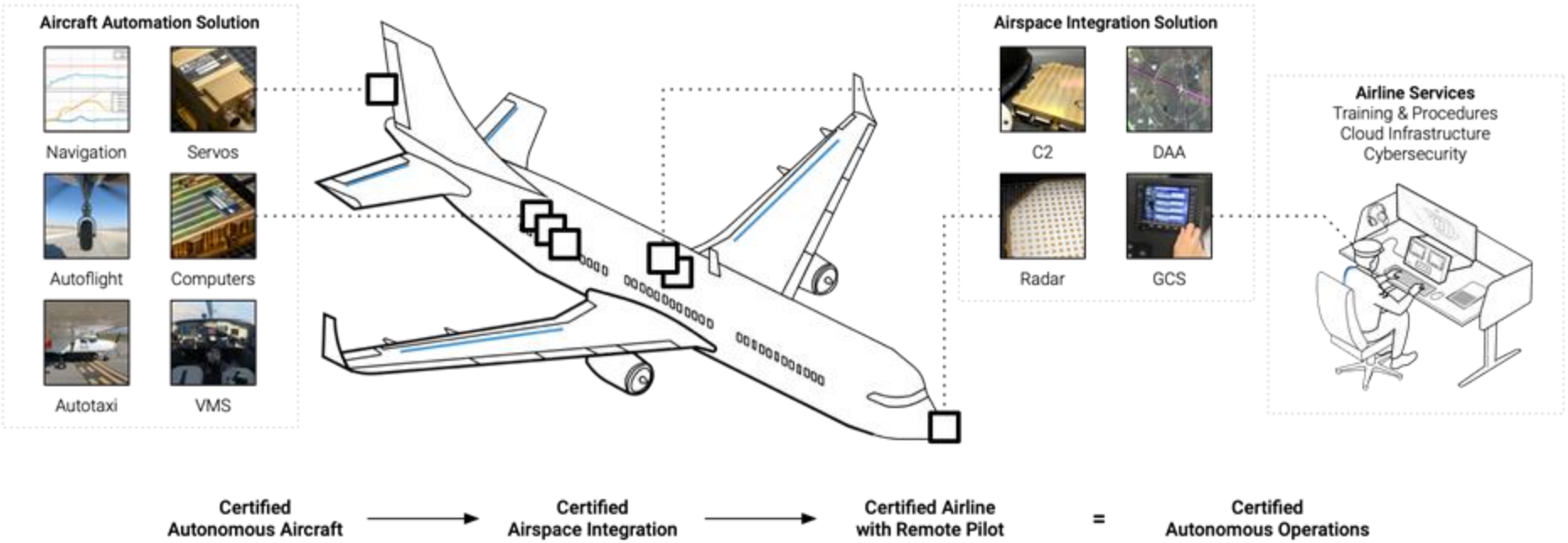
90% group dispatch reliability
$25M acquisition cost
$10,000/hr

The Air Force has a unique opportunity to redefine efficiency through autonomous operations, which can enable persistent maneuver in contested environments and simultaneous cargo delivery instead of our current sequential system.*

Col. Max Bremer
U.S. Air Force, Air Mobility Command

* OUSD, "Program Acquisition Cost by Weapon System - U.S. DoD FY25 Budget Request", March 2024
** GAO Report, "Weapon System Sustainment: Aircraft Mission Capable Goals Were Generally Not Met," November 2022
*** Analysis of Reliable Airlines C208 dispatch reliability for FedEx operations across 4,500 flights between 2022-2024

Reliable Robotics Key Enabling Technologies



Agile Deployment of an Autonomous C208

Demonstrated Conops in Military Operations:

- Leverage C208 with redundant automation capabilities to provide logistics services to 11 bases across California and Nevada.
- The aircraft operates autonomously during all phases of flight, including taxi, takeoff, en-route, and landing.
- A pilot was onboard the C208 to monitor the automation, or simply to perform manual flights if the exercise dictated it as beneficial.
- Ability to perform dynamic operations
  - Pelican Case with Mobile Control Station loaded into transportation vehicle (i.e., aircraft, truck, etc)
  - 20 minutes to unload pelican case and deploy an automated C208 aircraft
  - Monitor or control the autonomous aircraft from stationary or mobile ground locations.

Our platform-agnostic system enables rapid certification of advanced automation for a wide variety of aircraft

TODAY'S PROGRAMS

FUTURE AIRCRAFT

Commercial

Cessna 208 Caravan

Defense

Cessna 208 Caravan

KC-135

Dual-Use Platforms

ATR 72

Electric Aircraft

Next-Gen Narrowbody

C408 SkyCourier

King Air / C-12

Boeing 767 / KC-46

Boeing 737 NG / P-8

C-130 Hercules

Next-Gen Air-Refueling System (NGAS)