

Headquarters U.S. Air Force

Integrity - Service - Excellence

E-3 AWACS, E-8 JSTARS, EC-130 Compass Call (Eazy Es), and Business Jets (Bizjets)



SAF/AQ-OTI

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Project Scope

- **Analyze current “Es” recapitalization plans and determine if the use of a Bizjet solution is viable**
- **Define COAs for senior leaders review**
 - **Address operational, financial, and timeline/schedule factors**



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Business Jets Background

- **Advances in business jets, sensors, and data processing make them viable options for Es missions**
 - **Long range, high speed and service ceiling**
 - **Low cost, high reliability and availability**
- **AF already operates a fleet of long range business jets**
 - **C-37A/B (Gulfstream V and G550 variants) - 9**
 - **C-40B/C (Boeing 737-700 variant) - 11**
 - **E-11 Battlefield Airborne Communications Node (BACN) (Bombardier Global Express 6000) – 4**

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Business Jets Operational Examples

■ **Gulfstream V / G500 / G550**

- **Gulfstream V C-37A/B – USAF (9)**
 - **VIP Transport**
- **G550 Conformal Airborne Early Warning (CAEW) – Israeli Air Force (3) & Singapore Air Force (4)**
 - **IAI EL/W-2085 sensor package - AESA phased array radar**
- **G550 Special Electronic Missions Aircraft (SEMA) - Israeli Air Force (3)**
 - **Special mission package**

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Business Jets Operational Examples

■ **Bombardier Global Express / Global 5000/6000**

- **Global Express - Royal Air Force (RAF) Raytheon Sentinel R1 Airborne Battlefield and Ground Surveillance Aircraft (5)**
 - **Main radar is an Raytheon Systems/BAE Systems dual-mode SAR/MTI Active Electronically Scanned Array (AESA) radar known as Sentinel Dual Mode Radar Sensor (DMRS)**
- **Global 6000 - USAF E-11A Battlefield Airborne Communications Node (BACN) (4)**
 - **Airborne communications relay and gateway system payload**
- **Global 5000 - Indian Air Force (AAF) Airborne Integrated Signals Intelligence Systems (AISIS)(2)**
 - **Developed by Israel's IAI/Elta for India. Main system is the IAI/Elta EL/I-3001 AISIS. Also includes a synthetic aperture radar for ground mapping (based on the IAI EL/M-2060 pod) and a Ground Moving Target Indication system (using IAI's lightweight EL/M-2055)**

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Business Jets Operational Examples

■ **Boeing 737-700 variant**

➤ **737-700 AEW&C - Royal Australian Air Force (RAAF) “Wedgetail” (6)**

- **Multimode electronically scanned array (MESA) radar enclosed in a fuselage-mounted structure nicknamed “top hat”**
- **Also operated by Republic of Korea Air Force (4) and Turkish Air Force (4)**



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Platform Considerations & Candidates

- **Timeline/Schedule**
- **Mission Requirements/CONOPS**
 - **Sensor size/volume**
 - **Payload**
 - **Range/time-on-station/In-flight refueling**
 - **Power/cooling requirements**
 - **Cabin/crew size**
- **Total Cost of Ownership**
 - **Acquisition, operations and sustainment costs**
- **Bizjet Candidates**
 - **Boeing 737 variants**
 - **Bombardier Global series**
 - **Gulfstream G series**