

# FY22 Aviation Safety Research Portfolio Budget Programming

Grouped by Domain/Program Area, Sorted by Control Account Number

**Portfolio: built to \$34.8M in contract funds (official target)**

Control Account Number	Title of Research Requirement (these are links to the AVS RE&D Management System KSN proposal write-ups with cost estimates attached at the bottom of each)	AVS S/O	BLI	Performing Organization	Contract Funding Amount Proposed for Integrated Budget Plan (\$K)
<b>Domain: Aircraft Safety Assurance</b>					
<b>Program Area: Fire Research and Safety</b>					
1 A11A.FCS.1	<a href="#">Aircraft Fire Safety</a>	AIR	A11A	ANG-E2	\$3,500
<b>Program Area: Propulsion and Fuel Systems</b>					
2 A11B.PS.4	<a href="#">Improved Nondestructive Evaluation (NDE) to Prevent Uncontained Engine Failures</a>	AIR	A11B	ANG-E2	
<b>Program Area: Advanced Materials/Structural Safety</b>					
3 A11C.SIC.2	<a href="#">Composite Maintenance Technology</a>	AIR	A11C	ANG-E2	
4 A11C.SIC.3	<a href="#">Seat Testing Methods</a>	AIR	A11C	ANG-E2	
5 A11C.SIC.14	<a href="#">Certification &amp; Maintenance Protocols for Bonded Joints</a>	AIR	A11C	ANG-E2	
6 A11C.SIC.15	<a href="#">Non-Metallic Additive Manufacturing</a>	AIR	A11C	ANG-E2	
7 A11C.SIC.12	<a href="#">Continued Operational Safety (COS) and Certification Efficiency (CE) for Emerging Composite Technologies and Applications</a>	AIR	A11C	ANG-E2	
8 A11C.SIC.13	<a href="#">Element-level Test Standards for Aviation Composites</a>	AIR	A11C	ANG-E2	
<b>Program Area: Continued Airworthiness - Systems</b>					
9 A11E.ES.8	<a href="#">Large Electric Energy Storage System</a>	AIR	A11E	ANG-E2	
10 A11E.ES.9	<a href="#">High Voltage Electric Aircraft System</a>	AIR	A11E	ANG-E2	
11 A11E.FCMS.13	<a href="#">Transfer of New Technologies for Enhancement of GA Safety</a>	AIR	A11E	ANG-E2	
12 A11E.HF.2	<a href="#">A Systems Approach to Automated Flight Decks</a>	AIR	A11E	ANG-E2	\$750
13 A11E.RS.5	<a href="#">Wire Strike Avoidance</a>	AIR	A11E	ANG-E2	
14 A11E.RS.7	<a href="#">Helicopter Fuel System Drop Test</a>	AIR	A11E	ANG-E2	
15 A11E.RS.8	<a href="#">Integrated Flight and Propulsion Control</a>	AIR	A11E	ANG-E2	
16 A11E.SIM.13	<a href="#">Development of Control Surface and Stabilizer Freeplay Limits</a>	AIR	A11E	ANG-E2	\$630
<b>Program Area: Continued Airworthiness - Structures</b>					
17 A11E.SIM.4	<a href="#">MMPDS Support and Design Values for Emerging Materials</a>	AIR	A11E	ANG-E2	\$130
18 A11E.SIM.8	<a href="#">Metal Additive Manufacturing (AM) for Aircraft, Engine, and Propeller Applications</a>	AIR	A11E	ANG-E2	
19 A11E.SIM.9	<a href="#">NASGRO Enhancement, Standardization and Material Properties Database Generation for Damage Tolerance Analysis</a>	AIR	A11E	ANG-E2	
20 A11E.SIM.10	<a href="#">Ag/SEAT Airframe Usage and Operational Loads Monitoring</a>	AIR	A11E	ANG-E2	
21 A11E.SIM.11	<a href="#">Effect of Turbulence on Aircraft Structural Loading</a>	AIR	A11E	ANG-E2	
22 A11E.SIM.14	<a href="#">Reliability of Structural Health Monitoring (SHM)</a>	AIR	A11E	ANG-E2	
23 A11E.SIM.15	<a href="#">Inspection of Emerging Metallic Structures and Technologies</a>	AIR	A11E	ANG-E2	
24 A11E.SIM.16	<a href="#">Damage Tolerance and Durability Issues</a>	AIR	A11E	ANG-E2	
25 A11E.SIM.17	<a href="#">Novel Material and Structures for Future Aircraft Applications</a>	AIR	A11E	ANG-E2	
26 A11E.SIM.18	<a href="#">Automated Nondestructive Inspection (ANDI)</a>	AIR	A11E	ANG-E2	
<b>Program Area: Aircraft Catastrophic Failure Prevention Research</b>					
27 A11F.PS.1	<a href="#">Advanced Analysis Methods for Impact of Aircraft Materials from Rotor Burst and Blade Release</a>	AIR	A11F	ANG-E2	
<b>Program Area: Terminal Area Safety</b>					
28 A11H.TAS.5	<a href="#">Enhanced Helicopter Vision Systems (EHVS)</a>	AFS	A11H	ANG-E2	
29 A11H.TAS.10	<a href="#">Improved Helicopter Simulation Models</a>	AFS	A11H	ANG-E2	
30 A11H.TAS.11	<a href="#">Immersive Flight Simulation</a>	AFS	A11H	ANG-E2	
31 A11H.TAS.12	<a href="#">Reducing Human Error</a>	AFS	A11H	ANG-E2	
<b>Domain: Digital Systems and Technology</b>					
<b>Program Area: Digital System Safety</b>					
32 A11D.SDS.1	<a href="#">Onboard Network Security and Integrity (Aircraft Systems Information Security Protection)</a>	AIR	A11D	ANG-E2	
33 A11D.SDS.6	<a href="#">Complex Digital Systems</a>	AIR	A11D	ANG-E2	\$1,450
34 A11D.SDS.7	<a href="#">Validation of Avionics Requirements for Space Based Augmentation System Authentication</a>	AIR	A11D	ANG-E2	
<b>Domain: Environment &amp; Weather Impact Mitigation</b>					
<b>Program Area: Aircraft Icing</b>					

Portfolio: built to \$34.8M in contract funds (official target)					
Control Account Number	Title of Research Requirement (these are links to the AVS RE&D Management System KSN proposal write-ups with cost estimates attached at the bottom of each)	AVS S/O	BLI	Performing Organization	Contract Funding Amount Proposed for Integrated Budget Plan (\$K)
35 A11D.AI.1	<a href="#">Research on Ice Crystal Icing Conditions to Address Fundamental Knowledge of High Altitude Icing on Turbine Engine Damage and Powerloss</a>	AIR	A11D	ANG-E2	\$300
36 A11D.AI.2	<a href="#">Safe Operations and Take-off in Aircraft Ground Icing Conditions</a>	AFS	A11D	ANG-E2	\$520
	<b>Program Area: Alternative Fuels for General Aviation</b>				
37 A11M.PS.5	<a href="#">Alternative Fuels for General Aviation</a>	AIR	A11M	ANG-E2	\$5,888
	<b>Domain: Human Performance &amp; Aeromedical Factors</b>				
	<b>Program Area: Flight Deck/Maintenance/System Integration Human Factors</b>				
38 A11G.HF.10	<a href="#">Maintenance Human Factors to Support Risk-Based Decision Making and Maintenance Safety Culture</a>	AFS	A11G	ANG-C1 (with AAM-500)	
39 A11G.HF.11	<a href="#">Pilot Training, Qualification, Procedures and Flight Operations</a>	AFS	A11G	ANG-C1 (with AAM-500)	\$3,336
40 A11G.HF.13	<a href="#">Human Factors Considerations and Emerging Trends Associated with Helicopter Air Ambulance Operations</a>	AFS	A11G	ANG-C1 (with AAM-500)	\$1,000
41 A11G.HF.14	<a href="#">Supporting the Next Generation of Aviation Maintenance</a>	AFS	A11G	ANG-C1 (with AAM-500)	
42 A11G.HF.4	<a href="#">Advanced Vision Systems (EFVS, EVS, SVS, CVS), Head-Up Displays (HUD), and Head Mounted Displays (HMD): Operational Standards &amp; Approval Criteria</a>	AFS	A11G	ANG-C1 (with AAM-500)	\$1,300
43 A11G.HF.8	<a href="#">Fatigue Mitigation in Flight Operations</a>	AFS	A11G	ANG-C1 (with AAM-500)	
	<b>Program Area: Aeromedical Research</b>				
44 A11J.AM.1	<a href="#">CAMI Aerospace Medical Systems Analyses</a>	AAM	A11J	AAM-600	\$1,002
45 A11J.AM.2	<a href="#">CAMI Aerospace Medical Accident Investigation &amp; Prevention</a>	AAM	A11J	AAM-600	
46 A11J.AM.3	<a href="#">CAMI Human Protection &amp; Survival</a>	AAM	A11J	AAM-600	\$1,620
47 A11J.FCMS.2	<a href="#">System Failures that result in Air Contamination</a>	AIR	A11J	AAM-600	\$750
48 A11J.FCS.13	<a href="#">Dynamic Crash Conditions for Supersonic Transports</a>	AIR	A11J	AAM-600	
49 A11J.FCS.14	<a href="#">Passenger Retention of Cabin Safety Information</a>	AIR	A11J	AAM-600	\$25
50 A11J.FCS.7	<a href="#">Effects of cabin seat pitch and alternative seat configurations on evacuation</a>	AIR	A11J	AAM-600	\$223
51 A11J.FCS.8	<a href="#">Expanded use of analytical modeling in cabin safety applications</a>	AIR	A11J	AAM-600	
52 A11J.FCS.9	<a href="#">Ditching exit ratings and evaluation of virtual reality for experimental protocols</a>	AIR	A11J	AAM-600	
53 A11J.RS.2	<a href="#">Rotorcraft Injury Mechanism Analysis – Procedure Development and Validation</a>	AIR	A11J	AAM-600	
	<b>Domain: Aviation Performance &amp; Planning</b>				
	<b>Program Area: System Safety Management</b>				
54 A11H.RS.1	<a href="#">Loss of Control (LOC-I)</a>	AIR	A11H	ANG-E2	
55 A11H.SSM.9	<a href="#">Helicopter Flight Data Monitoring and Analysis</a>	AVP	A11H	ANG-E2	\$590
56 A11H.SSM.23	<a href="#">General Aviation Flight Data Monitoring and Analysis</a>	AVP	A11H	ANG-E2	
57 A11H.SSM.25	<a href="#">Adapting a NAS-Wide, Top-Down Safety Risk Model to Accommodate Bottom-Up Safety Risk Assessment</a>	AVP	A11H	ANG-E2	
58 A11H.SSM.26	<a href="#">ANSP Sector Risk Profile Tool - Surface Safety (SRPT-Surface)</a>	AOV	A11H	ANG-E2	\$853
59 A11H.SSM.29	<a href="#">Feasibility of utilizing the Integrated Safety Assessment Model (ISAM) to represent baseline NAS-wide General Aviation safety risk through validation of Knecht's (2015) total-flight-hour construct as a risk metric</a>	AVP	A11H	ANG-E2	
60 A11H.SSM.30	<a href="#">ANSP Sector Risk Profile Tool – Aeronautical Information Services (ANSP-SRPT-AIS)</a>	AOV	A11H	ANG-E2	\$592
	<b>Program Area: Unmanned Aircraft Systems Research</b>				
61 A11L.UAS.2	<a href="#">Detect and Avoid (DAA) Multi Sensor Surveillance Data Fusion</a>	AIR	A11L	ANG-C2	
62 A11L.UAS.23	<a href="#">UAS Command and Control Link Compatibility</a>	AIR	A11L	ANG-C2	
63 A11L.UAS.43	<a href="#">Unmanned Flight Data Monitoring and Analysis</a>	AVP	A11L	ANG-C2	
64 A11L.UAS.51	<a href="#">ASSURE COE Management Budget</a>	AUS	A11L	ANG-C2	
65 A11L.UAS.53	<a href="#">Minority Outreach -- UAS as a STEM Minority Outreach Learning Platform for K-12 Students</a>	AUS	A11L	ANG-C2	
66 A11L.UAS.68	<a href="#">Disaster Preparedness and Response</a>	AUS	A11L	ANG-C2	\$1,950
67 A11L.UAS.71	<a href="#">Establish risk-based thresholds for approvals needed to certify UAS for safe operation</a>	AUS	A11L	ANG-C2	\$750

**Portfolio: built to \$34.8M in contract funds (official target)**

Control Account Number	Title of Research Requirement (these are links to the AVS RE&D Management System KSN proposal write-ups with cost estimates attached at the bottom of each)	AVS S/O	BLI	Performing Organization	Contract Funding Amount Proposed for Integrated Budget Plan (\$K)
68 A11L.UAS.72	<a href="#">Safety Risks and Mitigations for UAS Operations On and Around Airports FY22</a>	AUS	A11L	ANG-C2	\$750
69 A11L.UAS.74	<a href="#">Establish pilot proficiency requirements</a>	AUS	A11L	ANG-C2	\$750
70 A11L.UAS.75	<a href="#">UAS Wake Research</a>	AUS	A11L	ANG-C2	\$795
71 A11L.UAS.77	<a href="#">UAS Standards Tracking, Mapping, and Analysis</a>	AUS	A11L	ANG-C2	\$750
72 A11L.UAS.78	<a href="#">UAS Cyber Security and Safety</a>	AUS	A11L	ANG-C2	\$800
73 A11L.UAS.79	<a href="#">Section 383 UAS Detection and Mitigation</a>	AUS	A11L	ANG-C2	\$2,180
74 A11L.UAS.80	<a href="#">Icing, Snow and Rain Means of Compliance for UAS</a>	AIR	A11L	ANG-C2	
75 A11L.UAS.81	<a href="#">Unmanned Aircraft Systems (UAS) Weather Research in the Boundary Layer</a>	AFS	A11L	ANG-C2	
76 A11L.UAS.82	<a href="#">Unmanned Aircraft Systems (UAS) Weather Hazards Research</a>	AFS	A11L	ANG-C2	
77 A11L.UAS.83	<a href="#">Investigate and Identify the Key Differences Between Commercial Air Carrier Operations and Unmanned Transport Operations</a>	AUS	A11L	ANG-C2	\$790
78 A11L.UAS.84	<a href="#">From Manned Cargo to UAS Cargo Operations: Future Trends, Performance, Reliability, and Safety Characteristics Towards Integration into the NAS</a>	AUS	A11L	ANG-C2	\$790