FY22 Aviation Safety Research Portfolio Budget Programming Grouped by Domain/Program Area, Sorted by Control Account Number

A11E.FCMS.13 Transfer of New Technologies for Enhancement of GA Safety A11E.HF.2 A Systems Approach to Automated Flight Decks A1R A11E A11E.HF.2 A Systems Approach to Automated Flight Decks A1R A11E A11E.HF.2 A Systems Approach to Automated Flight Decks A1R A11E A11E.HF.2 A Systems Approach to Automated Flight Decks A1R A11E A11E.HF.2 A Systems Approach to Automated Flight Decks A1R A11E A11E.HF.2 A Systems Approach to Automated Flight Decks A1R A11E A11E.HF.2 A A11E.HF.3 A11E.HF.3 A11E.HF.3 A11E.HF.3 Integrated Flight and Propulsion Control A1R A11E A11E.SIM.13 Development of Control Surface and Stabilizer Freeplay Limits A1R A11E Program Area: Continued Airworthiness - Structures A11E.SIM.1 Development of Control Surface and Stabilizer Freeplay Limits A1R A11E A11E.SIM.4 MMPDS Support and Design Values for Emerging Materials A1R A11E A11E.SIM.8 A11E.SIM.8 MAPDS Support and Design Values for Emerging Materials A11E.SIM.8 A11E.SIM.8 A11E.SIM.9 MASGRO Enhancement, Standardization and Material Properties Database Generation for Damage Tolerance Analysis A11E.SIM.10 Ag/SEAT Airframe Usage and Operational Loads Monitoring A1R A11E A11E.SIM.11 Effect of Turbulence on Aircraft Structural Loading A11E.SIM.11 Effect of Turbulence on Aircraft Structural Loading A11E.SIM.14 Reliability of Structural Health Monitoring (SHM) A11E.SIM.15 Inspection of Emerging Metallic Structures and Technologies A1R A11E A11E.SIM.15 Damage Tolerance and Durability Issues A11E.SIM.16 Damage Tolerance and Durability Issues A11E.SIM.18 Automated Nondestructive Inspection (ANDI) A1R A11E A11E.SIM.18 Automated Nondestructive Inspection (ANDI) A1R A11E A11E.SIM.15 Inspection of Emerging Metallic Structures from Rotor Burst and B1ade Release Program Area: Terminal Area Safety A11H.TAS.11 Immersive Flight Simulation Models A11H.TAS.12 Reducing Human Error AFS A11H Domain: Digital Systems and Technology Program Area: Digital Systems Safety Onboard Network Security and Integrity (Aircraft Systems Information System A11D A11D.SDS.7 Validation of Avio		
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A11F.PS.1 Advanced Analysis Methods for Impact of Aircraft Materials from Rotor Burst and Blade Release Program Area: Terminal Area Safety 8 A11H.TAS.5 Enhanced Helicopter Vision Systems (EHVS) A11H.TAS.10 Improved Helicopter Simulation Models A11H.TAS.11 Immersive Flight Simulation AFS A11H A11H.TAS.12 Reducing Human Error AFS A11H Domain: Digital Systems and Technology Program Area: Digital System Safety A11D.SDS.1 Onboard Network Security and Integrity (Aircraft Systems Information Security Protection) A11D.SDS.6 Complex Digital Systems A11D.SDS.7 Validation of Avionics Requirements for Space Based Augmentation System A11D.SDS.7 A11D.SDS.7	ANG-E2	
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A11D.SDS.1 Security Protection) AIR A11D Security Protection) AIR A11D		
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A11D.SDS.7 Validation of Avionics Requirements for Space Based Augmentation System Authentication All A11D	ANG-E2	\$1,450
	ANG-E2	
Domain: Environment & Weather Impact Mitigation		
Program Area: Aircraft Icing		

Portiolio: bi	ouilt to \$34.8M in contract funds (official target)				Contract Funding
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	Amount Proposed for Integrated Budget Plan (\$K)
A11D.AI.1	Research on Ice Crystal Icing Conditions to Address Fundamental Knowledge of High Altitude Icing on Turbine Engine Damage and Powerloss	AIR	A11D	ANG-E2	\$300
A11D.AI.2	Safe Operations and Take-off in Aircraft Ground Icing Conditions	AFS	A11D	ANG-E2	\$520
	Program Area: Alternative Fuels for General Aviation				
A11M.PS.5	Alternative Fuels for General Aviation	AIR	A11M	ANG-E2	\$5,888
Domain: Human	Performance & Aeromedical Factors Program Area: Flight Deck/Maintenance/System Integration Human				
	Factors				
A11G.HF.10	Maintenance Human Factors to Support Risk-Based Decision Making and Maintenance Safety Culture	AFS	A11G	ANG-C1 (with AAM-500)	
		4.56	1110	ANG-C1 (with	42.225
A11G.HF.11	Pilot Training, Qualification, Procedures and Flight Operations	AFS	A11G	AAM-500)	\$3,336
A11G.HF.13	Human Factors Considerations and Emerging Trends Associated with Helicopter Air Ambulance Operations	AFS	A11G	ANG-C1 (with AAM-500)	\$1,000
A11G.HF.14	Supporting the Next Generation of Aviation Maintenance	AFS	A11G	ANG-C1 (with AAM-500)	
A11G.HF.4	Advanced Vision Systems (EFVS, EVS, SVS, CVS), Head-Up Displays (HUD), and Head Mounted Displays (HMD): Operational Standards & Approval Criteria	AFS	A11G	ANG-C1 (with AAM-500)	\$1,300
A11G.HF.8	Fatigue Mitigation in Flight Operations	AFS	A11G	ANG-C1 (with AAM-500)	
A441 AN4 4	Program Area: Aeromedical Research	0.004	4441	A A B A COO	Ć4 002
A11J.AM.1	CAMI Agranges Medical Systems Analyses	AAM	A11J	AAM-600	\$1,002
A11J.AM.2	CAMI Aerospace Medical Accident Investigation & Prevention	AAM	A11J	AAM-600	64.630
A11J.AM.3	CAMI Human Protection & Survival	AAM	A11J	AAM-600	\$1,620
A11J.FCMS.2	System Failures that result in Air Contamination	AIR	A11J	AAM-600	\$750
A11J.FCS.13 A11J.FCS.14	<u>Dynamic Crash Conditions for Supersonic Transports</u> Passenger Retention of Cabin Safety Information	AIR AIR	A11J A11J	AAM-600 AAM-600	\$25
A11J.FCS.7	Effects of cabin seat pitch and alternative seat configurations on evacuation	AIR	A11J	AAM-600	\$223
A11J.FCS.8	Expanded use of analytical modeling in cabin safety applications	AIR	A11J	AAM-600	
A11J.FCS.9	Ditching exit ratings and evaluation of virtual reality for experimental protocols	AIR	A11J	AAM-600	
A11J.RS.2	Rotorcraft Injury Mechanism Analysis – Procedure Development and	AIR	A11J	AAM-600	
	Validation n Performance & Planning				
Domain. Aviatio	Program Area: System Safety Management				
A11H.RS.1	Loss of Control (LOC-I)	AIR	A11H	ANG-E2	
A11H.SSM.9	Helicopter Flight Data Monitoring and Analysis	AVP	A11H	ANG-E2	\$590
A11H.SSM.23	General Aviation Flight Data Monitoring and Analysis	AVP	A11H	ANG-E2	,
A11H.SSM.25	Adapting a NAS-Wide, Top-Down Safety Risk Model to Accommodate	AVP	A11H	ANG-E2	
A11H.SSM.26	Bottom-Up Safety Risk Assessment ANSP Sector Risk Profile Tool - Surface Safety (SRPT-Surface)	AOV	A11H	ANG-E2	\$853
A11H.SSM.29	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	AVP	A11H	ANG-E2	, , , , , , , , , , , , , , , , , , ,
A11H.SSM.30	ANSP Sector Risk Profile Tool – Aeronautical Information Services (ANSP- SRPT-AIS)	AOV	A11H	ANG-E2	\$592
	Program Area: Unmanned Aircraft Systems Research				
A11L.UAS.2	Detect and Avoid (DAA) Multi Sensor Surveillance Data Fusion	AIR	A11L	ANG-C2	
A11L.UAS.23	UAS Command and Control Link Compatibility	AIR	A11L	ANG-C2	
A11L.UAS.43	Unmanned Flight Data Monitoring and Analysis	AVP	A11L	ANG-C2	1
A11L.UAS.51	ASSURE COE Management Budget Minority Outroach Loarning Platform for	AUS	A11L	ANG-C2	1
A11L.UAS.53	Minority Outreach UAS as a STEM Minority Outreach Learning Platform for K-12 Students	AUS	A11L	ANG-C2	
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A11L.UAS.68 A11L.UAS.71	<u>Disaster Preparedness and Response</u> Establish risk-based thresholds for approvals needed to certify UAS for safe	AUS	A11L	ANG-C2	\$1,950

	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	Safety Risks and Mitigations for UAS Operations On and Around Airports FY22	AUS	A11L	ANG-C2	\$750		
69	A11L.UAS.74	Establish pilot proficiency requirements	AUS	A11L	ANG-C2	\$750		
70	A11L.UAS.75	UAS Wake Research	AUS	A11L	ANG-C2	\$795		
71	A11L.UAS.77	UAS Standards Tracking, Mapping, and Analysis	AUS	A11L	ANG-C2	\$750		
72	A11L.UAS.78	UAS Cyber Security and Safety	AUS	A11L	ANG-C2	\$800		
73	A11L.UAS.79	Section 383 UAS Detection and Mitigation	AUS	A11L	ANG-C2	\$2,180		
74	A11L.UAS.80	Icing, Snow and Rain Means of Compliance for UAS	AIR	A11L	ANG-C2			
75	A11L.UAS.81	Unmanned Aircraft Systems (UAS) Weather Research in the Boundary Layer	AFS	A11L	ANG-C2			
76	A11L.UAS.82	Unmanned Aircraft Systems (UAS) Weather Hazards Research	AFS	A11L	ANG-C2			
77	A11L.UAS.83	<u>Investigate and Identify the Key Differences Between Commercial Air Carrier Operations and Unmanned Transport Operations</u>	AUS	A11L	ANG-C2	\$790		
78	A11L.UAS.84	From Manned Cargo to UAS Cargo Operations: Future Trends, Performance, Reliability, and Safety Characteristics Towards Integration into the NAS	AUS	A11L	ANG-C2	\$790		