

Aviation Safety RE&D Program

REDAC SAS Meeting

Presented to: **Subcommittee on Aviation Safety**
By: Mark S. Orr, AVS R&D Manager
Date: **February 26, 2020**



**Federal Aviation
Administration**

AVS RE&D Portfolio Development Process Redesign

- **RE&D Management Team redesigning the Portfolio Development Process**
 - AVS Representatives from AAM, AFS, AIR, AOV, AVP AUS
 - ANG Representatives from ANG-C and ANG-E
- **Redesigning “as we go” 11 key process steps**
 - Currently working step 5



Key Aviation Safety R&D Process Steps

- **Create, approve, and distribute FY22 Research Proposal Development Guidance**
- **Develop and Submit proposed research requirements**
- **Determine the rank order of submitted proposed research requirements**
- **Develop and review proposed research requirement cost estimates**
- **Develop and approve portfolio budget proposal**
- Develop and Submit Budget Narratives
- Respond to changes (budget, needs, research outputs, etc.)
- Execute research and Transfer research outputs
- Utilize research outputs for Regulations and Standards
- Affect desired Outcomes in the NAS
- Measure and Report on Program (i.e. plans, status, performance, etc.)



Activity	Start Date	End Date
1. AVS-1 approved FY22 Safety Research Portfolio Development Memo and RED Mgmt. Team approved Process Guidelines	6/20/2019	10/18/2019
2. Proposed Research Requirements All Draft Proposals due in KSN Final Proposals due in KSN	10/1/2019 11/30/2019	11/29/2019 12/31/2019
3. Rank ordered list	1/1/2020	1/16/2020
4. Cost Estimates	12/1/2019	12/31/2019
5. Portfolio Budget Proposal	12/31/2019	4/23/2020
5.1 Develop draft AVS portfolio to share with AVSMT, REDAC and ANG-E4	1/13/2020	2/14/2020
5.2 Management /REDAC Review and AVS-1 approved portfolio	2/14/2020	4/23/2020
6. Develop and Submit Budget Narratives	4/23/2020	6/1/2020



FY2022 Draft AVS RE&D Portfolio Development Process

How the RED Management Team got here:

- Developed and distributed Research Proposal Development Guidance from AVS-1
 - Proposal Development Guidance Emphasis:
 - Need for Data Driven and Risk Based Decisions
 - Safety Focused Research
 - Potential and Known Safety Issues
 - Align with FAA, DOT, Administration and Congressional Direction
- Developed & deployed new research proposal input template



FY2022 Draft AVS RE&D Portfolio Development Process

How the RED Management Team got here:

- Developed External Checklist to identify connections to:
 - US DOT Strategic Plan,
 - US DOT RD&T Strategic Plan,
 - OST Research Investment memo, and
 - OMB Research Budget Priorities memo



FY2022 Draft AVS RE&D Portfolio Development Process

How the RED Management Team got here:

- Developed Criterion aligned with AVSMT Direction
 - Safety
 - High, Moderate, and None (with supporting evidence)
 - Legislative Direction
 - Mandatory, Discretionary, and None (with supporting evidence)
 - Administration Direction (*other than the external checklist documents*)
 - Memo or None (with supporting evidence)
 - Administrators Commitments
 - Documented Commitments or None (with supporting evidence)
 - Regulatory Impact
 - Impact on Regulations, Standards/Policy/Guidance, or None (with supporting evidence)



FY2022 Draft AVS RE&D Portfolio Development Process

How the RED Management Team got here:

- Developed Rank Order Scoring and Ranking Methodology
 - Applied criteria with each of 7 offices independently scored the 78 proposals and
 - Determined initial relative rank order of the 78 proposals based on composite score calculated from all 7 score sets
 - Applied new grouping process to develop Rank Order
 - Group 1 – Legislative Direction (mandatory)
 - Group 2 – Core Responsibilities
 - Group 3a – Remaining Mission Critical
 - Group 3b – Remaining Proposals
 - Applied new process allowing each office to “adjust” individual proposals position within the group they ended up in



FY2022 Draft AVS RE&D Portfolio Development Process

How the RED Management Team got here:

- Developed Cost Estimate Template to collect the following information:
 - Requirement ID/Control Account Number
 - Requirement Title
 - Research Overview
 - Task Description/Output
 - Duration of Task
 - Justification of cost estimate
 - Funding Impact (Task)
 - Funding Impact (Sponsor Implementation Plan)
 - Optional Narrative
 - FY18 Allocation (\$k)
 - FY19 Allocation (\$k)
 - FY20 Allocation (\$k)
 - FY21 Planned (\$k)
 - FY22 Requested (\$k)
 - FY23 Requested (\$k)
 - FY24 Requested (\$k)
 - FY25 Requested (\$k)
 - FY26 Requested (\$k)



FY2022 Draft AVS RE&D Portfolio Development Process

How the RED Management Team got here:

- Developed Portfolio Budget Proposal
 - Applied new process for Performing organizations to offer integrated budget proposals
 - Obtained the FY22 contract funding target from Finance (\$34.8M)
 - Developed 2 optional budget scenarios under the target for AVSMT to consider
 - AVSMT chose the option (Mendoza Line) shown in the SAS Report we will go through tomorrow



Next Steps for FY22 Portfolio

- REDAC Review
 - Subcommittee on Aircraft Safety February 26
 - Human Factors Subcommittee March 10-11, 2020 NASA Ames
 - Full REDAC April 2020
- Final Brief to AVS-1 (April 23, 2020)

