

RSO

RSO i2 MISSION BRIEF - Innovation & Integration (i2)

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OVERVIEW

- **RSO Mandate**
- **Mission and Objective**
- **Board of Directors**
- **Strategy (Ideal Fit & Process)**
- **Innovation Pipeline (IAS)**
- **Technology Focus Areas**
- **Summary**



The objective of the RSO will be to develop, test, and deploy new technologies for implementation across the sustainment enterprise to improve readiness and reduce sustainment costs

- SECAF Wilson -
RSO Establishment Memo
23 July 2018



MISSION

Transform the operations and sustainment enterprise vital to the world's most advanced Air Force

OBJECTIVE

Increase mission readiness by identifying, applying and scaling technology essential to the operation and sustainment of the United States Air Force

**RSO
BOARD OF
DIRECTORS**



WILLIAM ROPER

SAF/AQ



**GEN ARNOLD
BUNCH**

AFMC/CC



**LT GEN WARREN
BERRY**

AF/A4



**LT GEN DONALD
KIRKLAND**

AFSC/CC



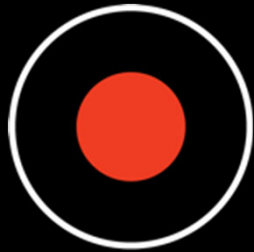
**LT GEN ROBERT
MCMURRY**

AFLCMC/CC

RSO i2 STRATEGY

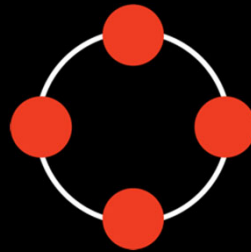
RSO Project “Ideal Fit”

- Alignment to RSO vision – increases readiness and/or reduces operations and sustainment costs
- Enterprise – projects for more than one customer or organization
- Motivated customer – champion (MAJCOM A4/SML) wanting to partner with RSO
- Problem definition – problem is established and clearly understood
- Mature technology – TRL 5+, MRL 5+
- Funded project



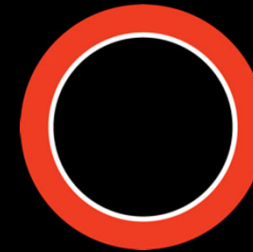
IDENTIFY

Identify, assess and develop mature, new and emerging technologies from across the public and private sectors.



APPLY

Prototype, validate and verify the utility of a solution in an Air Force environment.

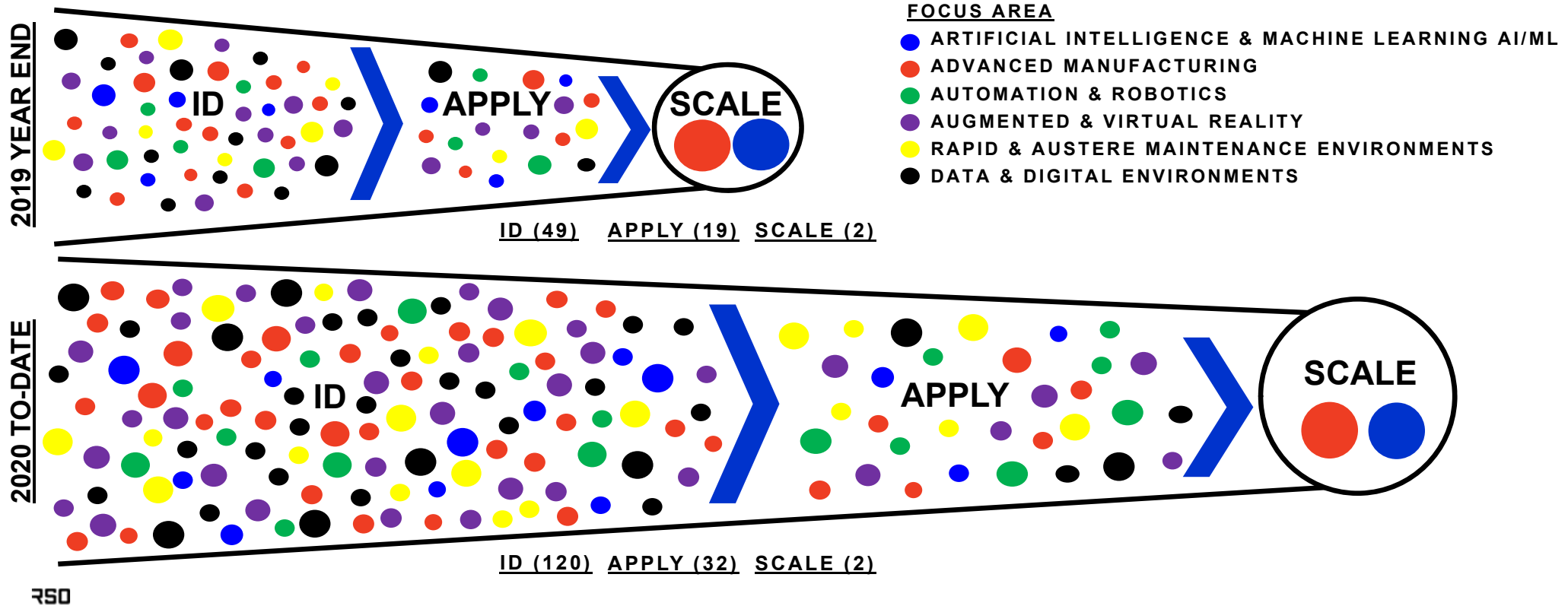


SCALE

Deploy technology or processes across the Air Force enterprise that successfully demonstrate the ability to decrease cost and/or increase readiness.

RSO Portfolio

Innovation Pipeline (IAS)



RSO Roles

- I2 Role is focused on ID & Apply phase
- Our strategy is not to duplicate existing innovation efforts but rather lift and shift to our problem areas
- Focused on delivering the very best technology and processes in the world
- Start with Small Business Innovative Research efforts
 - Problem statements posted, evaluated 2,000+ proposals, awarded 32 Phase 2 SBIRs
 - Supports multiple Technology Focus Areas

TECHNOLOGY FOCUS AREAS



ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

Our most prominent use of AI is in our Condition Based Maintenance Plus (CBM+) program.

CBM+ provides predictive health indicators for each aircraft

CBM+ is a proven methodology that is now active in the Air Force

CBM+ improves overall reliability



ADVANCED MANUFACTURING

Vision: Advanced Manufacturing as a U.S. Air Force ready solution

Working to identify, develop, transition, and scale advanced manufacturing technology for the advancement of the sustainment enterprise

Leveraging mature, new, and emerging am technology to reduce O&S costs and improve readiness



AUTOMATION & ROBOTICS

Applying automation and robotics to eliminate repetitive, manpower-intensive, or hazardous maintenance tasks

Focusing on COTS solutions to deliver capability and grow expertise based on customer pull

Identifying leading industry partners to provide cutting edge sustainment services driven by organic capability gaps

DATA & DIGITAL ENVIRONMENTS

Standardizing maintenance and sustainment data collection to streamline distribution of the data across the U.S. Air Force

Collecting the data, identifying what's useful, turning it into a functional format that can be used by machine learning and then leveraging it to inform smart and proactive decisions





AUGMENTED & VIRTUAL REALITY

Unifying geographically-dispersed expertise to accelerate training and proficiency levels of the U.S. Air Force sustainment workforce

Identifying industry leading AR/VR prototypes and preparing them for scaling to improve flight line operations and maintenance training

Leveraging Small Business Innovation Research (SBIR) process to identify multiple AR/VR prototypes and apply them to Air Force use cases



RAPID & AUSTERE MAINTENANCE ENVIRONMENTS

Providing Airmen with effective tools, leveraging modern, cross-cutting technologies to reduce the U.S. Air Force's logistical footprint and enhance mission capability

Identifying units suitable for rapid deployment to austere locations

Validating the suitability and effectiveness to determine the proper size, power, and energy requirements for austere location

SUMMARY

RSO

Objective: Increase mission readiness by identifying, applying and scaling technology essential to the operation and sustainment of the USAF

- Projects that increase readiness or decrease costs
- Utilize Innovation Funnel - ID, Apply and Scale projects
- Focus Areas:
 - AI/ML
 - Agile Mfg
 - Automation & Robotics
 - Data and Digital Environments
 - AR/VR
 - Rapid & Austere

FOR MORE INFORMATION:

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