

# NASA's Wildland Fire Initiative

## Multi-Disciplinary Collaboration in Wildfire



### ARMD

Aeronautics Research Mission Directorate

- Concept of operations
- Integrated systems architecture for persistent communication and remote sensing
- Airspace management tech
- UAS technology enabling communications, logistics, and 24-hour aerial suppression
- Aircraft and operations safety technologies

Aerial Suppression, Safe Airspace Operations, and Logistics

### SMD

Science Mission Directorate

- Tools and technology for improved management across the fire life cycle (pre-, active, and post-fire)
- Better observations/forecasts for risk assessments
- Increased detection and tracking of fire dynamics
- Improved predictions of post fire hazards
- Improved monitoring and forecasting of air quality

Prediction, Detection and Tracking, Mitigation Support

### STMD

Space Technology Mission Directorate

- Early-stage technology development, maturation, and demonstration
  - SBIR / STTR
  - Prizes, Challenges, and Crowdsourcing
- Transfer NASA Technology to spinoff products and service
- Flight Opportunities for testing through TechFlights solicitation, TechLeap prize, and OGA partnerships

Technology Advancement



Co-development with operational agencies and stakeholders for improvements across fire life cycle:

- Updated characterization of fuels
- Better forecasts for risk assessment
- Faster fire behavior models
- Increased detection and tracking of active fire dynamics and smoke plumes
- Improved mapping of burn severity
- Reduced uncertainty for post-fire hazards to air, land and watersheds

Delivering improved technology and capabilities to operational agencies through technology development, capability demonstration and transfer to operations

