

# Standards to Enable RPAS/UAM/AAM

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# About SAE International

## Vision

SAE is the leader in connecting and educating mobility professionals to enable safe, clean and accessible mobility solutions.

## Ends

SAE International provides society and the global mobility engineering community with:

- **Neutral forums** that convene to address society's mobility needs
- The most reliable and comprehensive collection of **engineering resources** that advance mobility
- STEM education and professional development programs that inspire and **build mobility's current and future workforce**
- **Consensus-based standards** to advance quality, safety and innovation
- A **global community** whose collective wisdom makes mobility safe, clean and accessible

Advanced  
manufacturing



Advanced  
materials

Advanced  
propulsion



Automated  
& unmanned

Blockchain



Cybersecurity

Connectivity



Quantum  
computing

Electrification



Workforce  
development

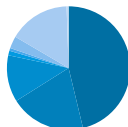
# The Public-Private Partnership: Civil Aviation



Transport  
Canada

Transports  
Canada

Ministry of Land, Infrastructure and Transport  
Civil Aviation Bureau



SARPs  
MANUALS

REGULATIONS

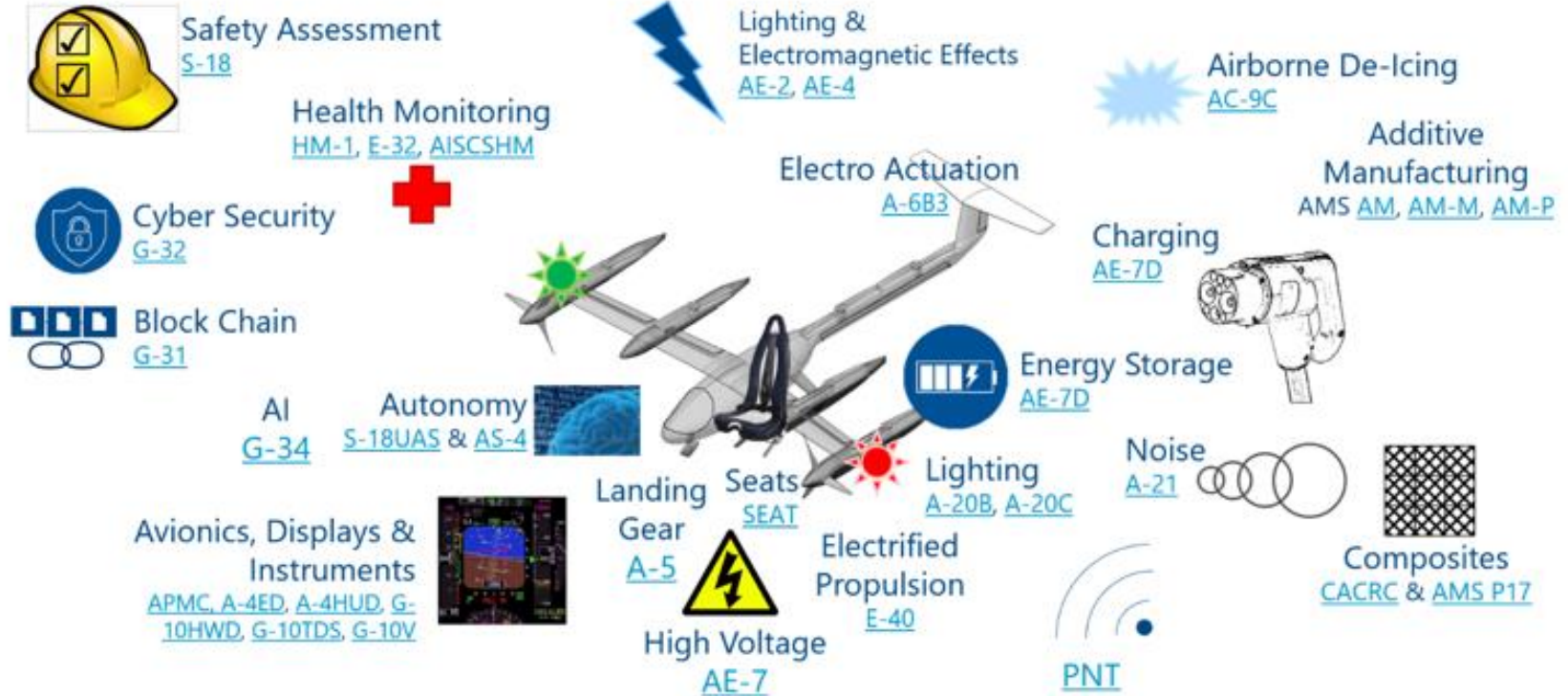
ACs, CS,  
POLICIES

INDUSTRY  
STANDARDS

Tasking Request  
111 SAE standards  
referenced by ICAO

170+ SAE standards  
in EASA Material  
400+ SAE standards  
on FAA material  
17 Tasking  
Requests

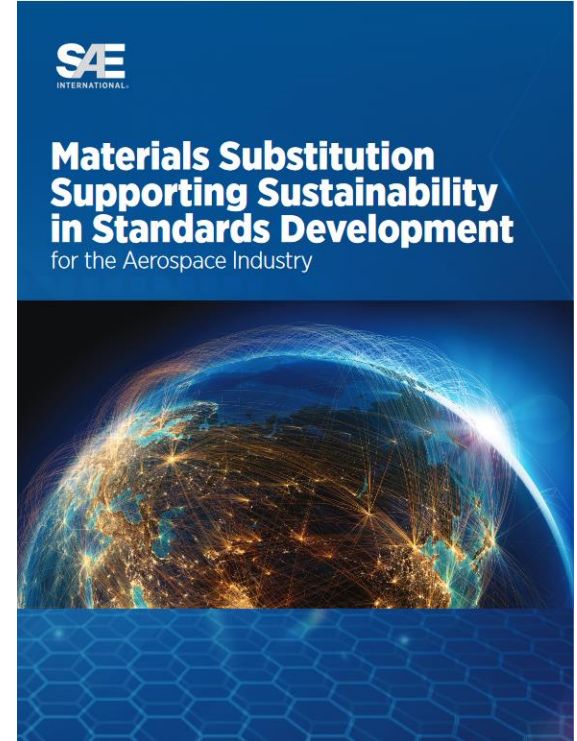
# Standards Supporting RPAS/UAM/AAM



# Driven by Environmental Concerns

Standards enabling industry to advance technology to meet ambitious environmental targets, including:

- Hybrid & Electric Propulsion – E-40, AE-7
- Electrification – EASG, AE-7, AE-10 & AE-11,
- Alternative Propulsion – AE-7F, AE-5
- Lightweight materials – Composites, additively manufactured products – AMS-AM, AMS-P17, AMS-CACRC
- Emissions Measurement & Modelling – noise and particulate emissions – A-21, E-31
- Replacement technologies for hazardous chemicals (e.g. REACH) – AMS Metals & Non Metals
- Partnership with IAEG (International Aerospace Environment Group)



# Enabling Advanced Air Mobility

New material systems – new materials + high production rate:  
SAE AAM Materials Task Group

AMS-AM – Additive Manufacturing

AMS-P17 – Polymer Matrix Composites

AMS-CACRC – Composite Repair

SEATS – Taking the established: applying to VTOL.

Worked jointly with EUROCAE to develop AS6849 -

Performance Standards for Passenger and Crew Seats in Advanced Air  
Mobility (AAM) Aircraft– published October 2022



# SAE G-35 – Modelling, Simulation & Training for Emerging Technologies

- Help to establish guidelines for the creation of regulations to support the safe operation of these platforms in the existing airspace
- Ensure that the operators of these vehicles, (piloted, largely autonomous, or remotely controlled); are trained to the same or better standards than the pilots in the traditional multi-engine passenger airplane segment.
- Create guidelines and standards that take advantage of the advances in high fidelity modeling and simulation, computing power, and new technologies to drive efficiencies during development, verification and validation, and certification using concepts like the digital twin and digital thread, and technologies like VR, XR, and MR.

