ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY

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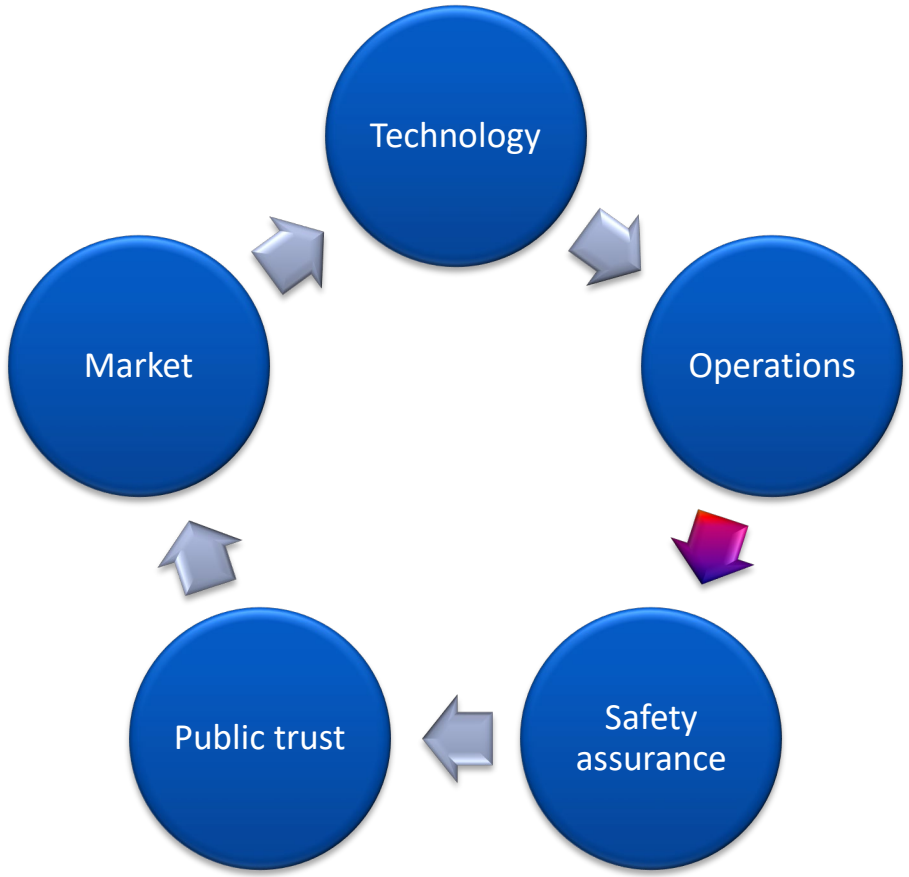
AAM, UAS, RPAS are real and ICAO is at work



- **Tech**, **ops**, **regs**..
- **RPAS/UAS** expertise
- States **mandate**
- **Not** a/c type
- **Not** a single CONOPS
- Broad **ecosystem:** operations, ATM, airworthiness, CNSS, HF, aerodromes, security, legal, economics, facilitation...

Credit NASA

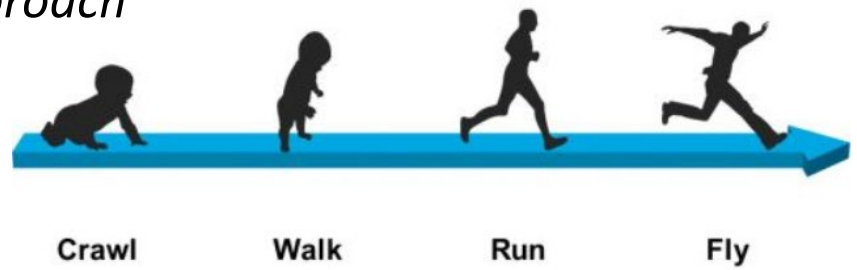
The importance of a strategic approach to harmonization



- Unlike conventional aviation, AAM tech, ops, regs advancing in **parallel**, not in sequence
- Ecosystem, i.e. need for **horizontal** integration (cross-disciplinary and cross-stakeholders)
- **Vertical**, i.e. depth of impacts:
  - regulatory methodology (ops-centric, risk/perf-based)
  - roles/resp. with automation
  - testing CC envelope..
- Decision: manage early **convergence** (strategic)

How to make it happen — practical pathways to global convergence

Crawl, walk, run, fly approach



Phase 1 : Initial phase

- Assessment (better understand the problem)
- Develop a holistic **vision** of the AAM ecosystem
- Identify **gaps** and **recommendations for work**, and the outline of a **strategy**
- Develop initial guidance

Phase 2 : Structuring the work

- ICAO Strategy and Roadmap
- Work programme approval
- Establishment of appropriate governance

Phase 3 : Development phase

Leveraging ICAO Experience Integrating RPAS

AAM – Designing the Future Ecosystem

- AAM Study Group (2023–current) shaping global approach
- Vision for the global AAM ecosystem
- Gap analysis of ICAO provisions
- Recommendations for future ICAO work
- ICAO Strategy for AAM

1. ICAO expertise in delivering regulatory frameworks for unmanned aviation (intl', IFR, ctrl a/s)
2. Strategic approach: Vision, gaps, rec. for work
3. Active ICAO expert groups (RPASP, AAM SG)

RPAS – Delivered Regulatory Foundation

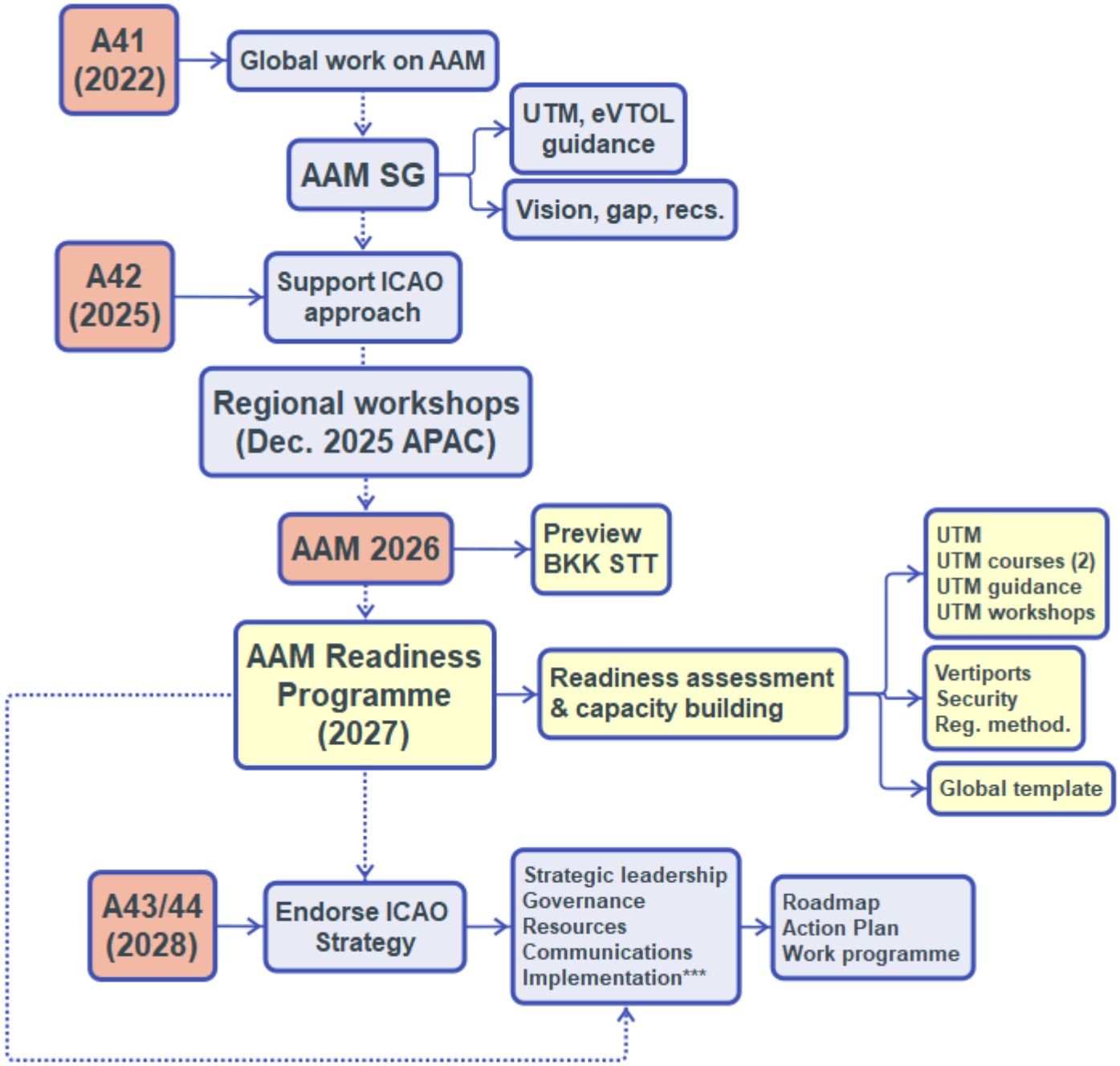
- Adopted SARPs & PANS across multiple Annexes (1, 2, 6, 8, 10, 14, 19...)
- Operational regulatory framework enabling safe integration
- Evidence-based provisions developed over a decade (2014-current)
- Supporting State and industry implementation today



Every Flight is Safe and Secure

Aviation Delivers Seamless, Accessible and Reliable Mobility for All

AAM Readiness Programme (ARP)



- Need for speed v. **method**
- Fine line: **inform/prepare** while fmks are still developing
- ICAO as global **forum**
  - Expert **groups**: AAM SG, RPASP..
  - AAM Readiness Programme (**ARP**)
  - **AAM 2026** (1-3 Dec. 2026, BKK)

ARP FEEDBACK LOOP

Preparing States for AAM

Assess → Analyze → Act → Improve → Reassess

1 READINESS ASSESSMENT



- Regulatory readiness
- Safety readiness
- Security readiness
- Institutional readiness

2 DATA & EVENDENCE

- Collect assessment results
- Performance metrics
- Trends & patterns
- Strengths & gaps

3 ANALYSIS & KNOWLEDGE

- Identify root causes
- Risk & gap analysis
- Determine focus areas
- Generate actionable insights

ARP DELIVERABLES

READINESS ASSESSMENT REPORT
Regulatory, safety, security and institutional readiness findings, gaps and recommendations

COURSE 1
ARP Fundamentals

WORKSHOP
AAM Readiness Workshop (Best Practices)

COURSE 2
Advanced ARP (Modular)

GUIDANCE MATERIAL
SOPs, checklists, templates, and best practices

5 TRAINING & IMPLEMENTATION

- Deliver courses & workshops
- Update training & SOPs
- Apply guidance & best practices
- Share lessons learned

6 IMPROVED AAM READINESS



Safety · Proficiency · Consistency · Operational Effectiveness

7 NEW READINESS ASSESSMENT

Measure impact of actions
Validate improvements
Identify new focus areas

CONTINUOUS IMPROVEMENT
Driving safer, more effective AAM implementation

- **ASSESS:** Evaluate readiness and collect evidence
- **ANALYZE:** Turn data into knowledge
- **ACT:** Create deliverables and implement improvements
- **IMPROVE:** Enhance readiness through training and guidance
- **REASSESS:** Validate progress and restart the cycle

ICAO

ICAO OUTPUTS vs. ARP OUTPUTS

Distinct Roles. Complementary Delivery. One Goal: Safe, Secure and Sustainable AAM.



1. EXISTING / COMMITTED ICAO OUTPUTS
FOUNDATIONAL INPUTS FOR ARP

Outputs already planned or committed under ICAO's RPAS/AAM work programme. They are not ARP deliverables, but ARP depends on them.

- **RPAS SARPs framework**
- **AAM Vision, gap analysis, and recommendations for future ICAO work**
- **Outline of the UTM online course**
- **Outline of the AAM readiness assessment questionnaire**
- **Foundational UTM implementation guidance material**

These deliverables provide the strategic direction, normative baseline, and initial tools that structure global convergence and enable ARP to operate effectively.

COMPLEMENTARY BY DESIGN

ICAO provides the framework and tools; ARP delivers readiness and implementation support.

2. MINIMUM ARP OUTPUTS
ARP ACCOUNTABILITIES (CONTINGENT ON RESOURCES)

Core deliverables ARP is responsible for, contingent on programme resourcing. Minimum set of outputs required for ARP to achieve its outcomes.

A. READINESS TOOLS & ASSESSMENTS

- State AAM Readiness Assessment Tool
- Readiness assessment methodology
- Initial pilot assessments
- Global AAM readiness baseline report

B. CAPACITY-BUILDING & IMPLEMENTATION SUPPORT

- Capacity-building workshops
- Advanced training programmes and technical modules, including:
  - UAS Traffic Management (UTM)
  - Vertiports
  - Early eVTOL implementation
  - Safety/security interfaces in AAM
  - Risk-based / operation-centric regulatory methodologies for UAS and AAM
  - International AAM operations
  - Economic considerations for AAM, *inter alia*

These outputs constitute the programme's operational delivery, enabling States to translate ICAO's strategic direction into practical readiness and safe deployment.

3. WHY THIS DISTINCTION MATTERS

CLARIFIES ACCOUNTABILITY
ICAO RPAS/AAM work provides strategic and normative foundations; ARP delivers readiness and implementation support.

AVOIDS DUPLICATION
ARP does not recreate RPAS/AAM outputs; it operationalizes them.

SUPPORTS RESOURCE PLANNING
Shows what ARP can deliver with baseline resources vs. what requires additional funding.

STRENGTHENS GOVERNANCE
Provides a transparent structure for reporting to ANC, Council, and Assembly.

ENABLES GLOBAL CONVERGENCE
Together, ICAO and ARP create an integrated pathway toward safe, secure and sustainable AAM.

ONE SHARED OUTCOME: Empowered States, harmonized frameworks, and the safe, secure and sustainable integration of AAM worldwide.

Merci!


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