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INTEGRATING RPAS IN ATM SYSTEMS

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RPAS/3 Symposium Chengdu 10-12 September 2018

Airspace Integration

➤ Regulation
- Set airworthiness standards
- Define training requirements

➤ Airworthiness
- Validate design
- Document safety

➤ Training
- Qualify manufacturers, pilots, controllers
- Implement and improve safety and regulatory structure

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Regulatory Efforts

World Wide
- ICAO
  - Airworthiness
  - Operations – Leading Contingency Ops Framework
  - Development
- NIAG
  - US Del
- CANSO
  - Co-Chair Collaborative Airspace Working Group
  - Small RPAS Position Statement
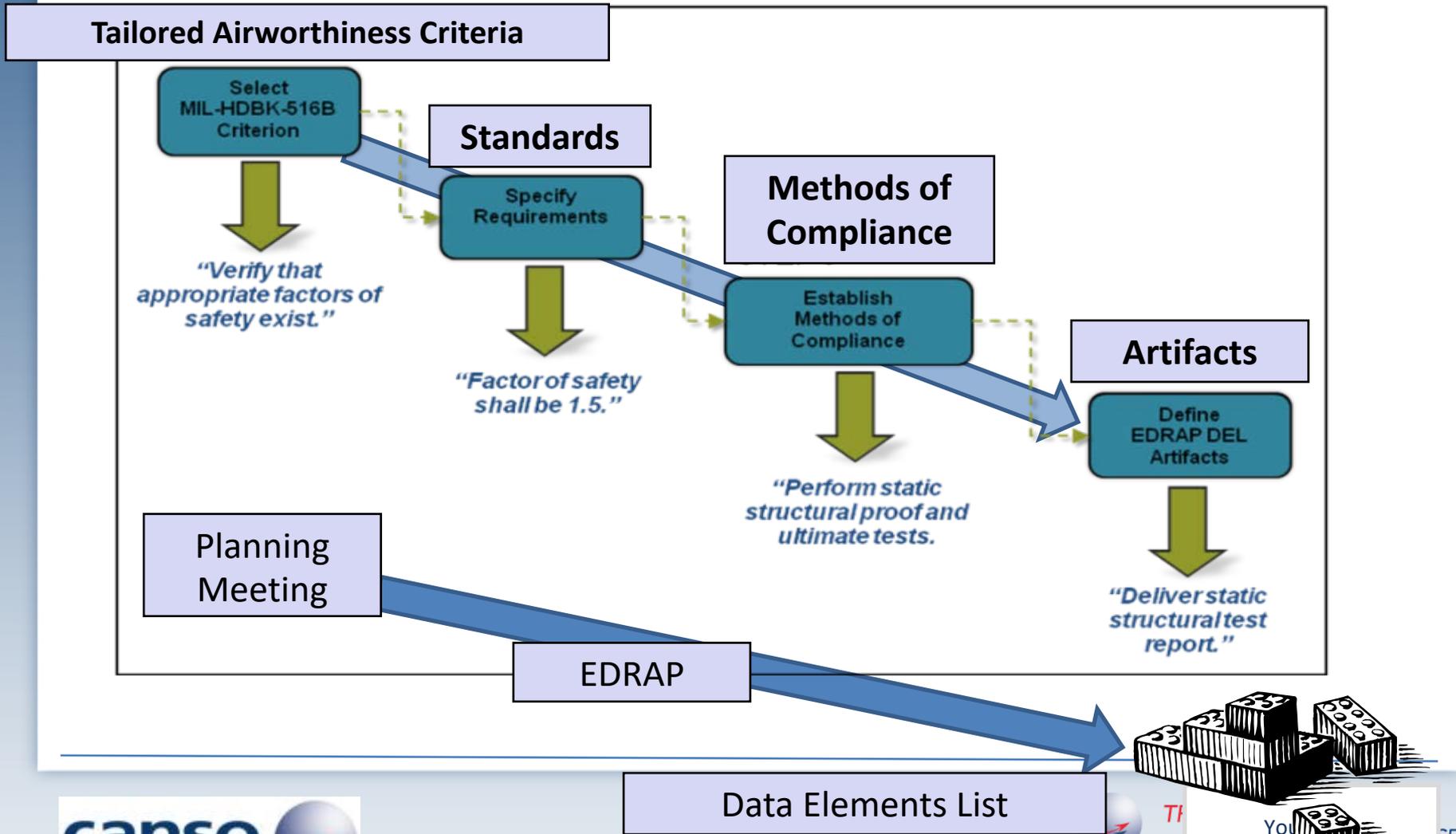 - RPAS Training Manual
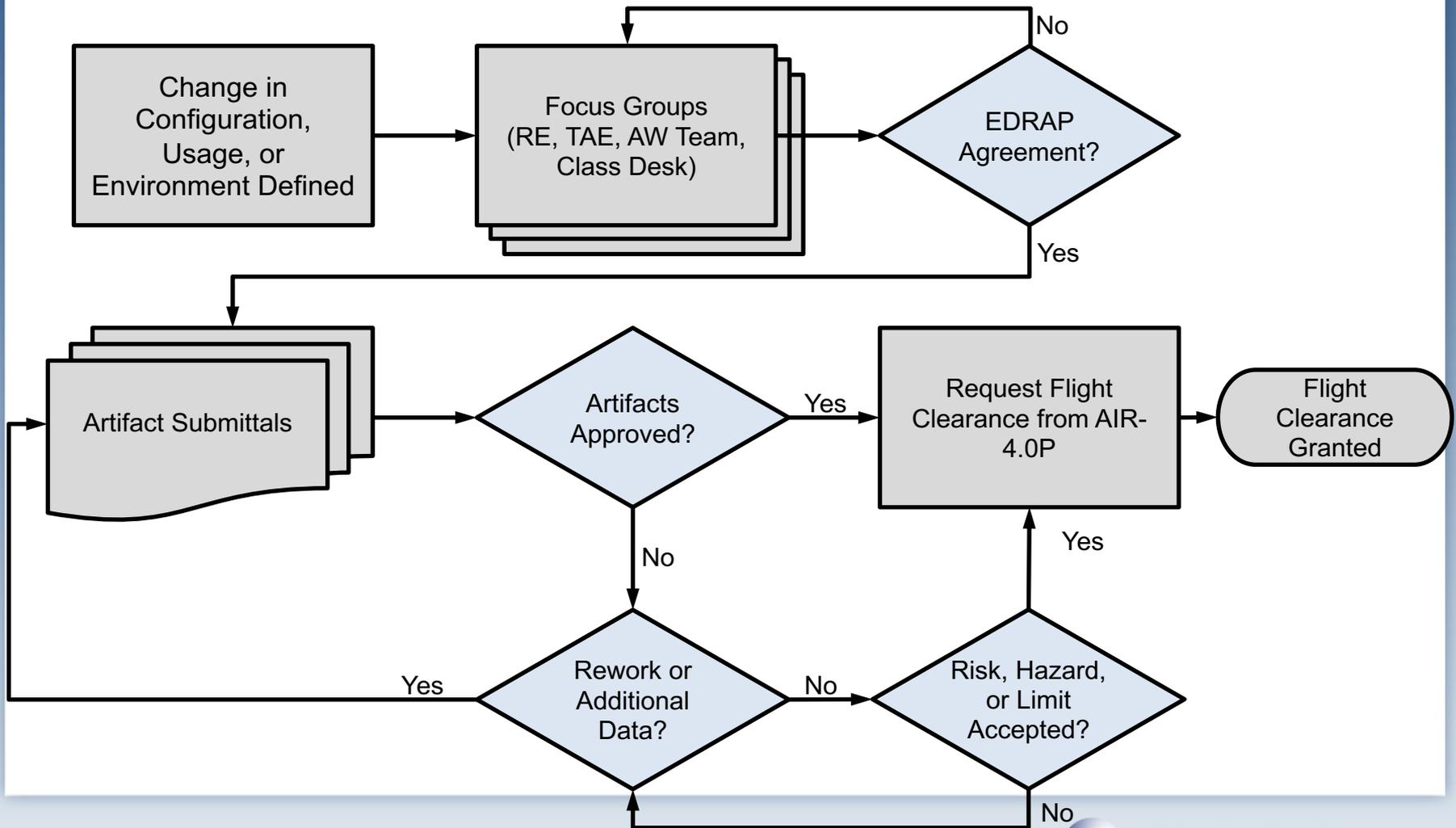- AU CASA
  - UAS Steering Committee
- EUROCAE WG-73
  - 1309, Airworthiness, Flight Crew Licensing

The building blocks of the airworthiness process

Tailored Airworthiness Criteria

Select MIL-HDBK-516B Criterion

"Verify that appropriate factors of safety exist."

Standards

Specify Requirements

"Factor of safety shall be 1.5."

Methods of Compliance

Establish Methods of Compliance

"Perform static structural proof and ultimate tests."

Artifacts

Define EDRAP DEL Artifacts

"Deliver static structural test report."

Planning Meeting

EDRAP

Data Elements List

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General Airworthiness Process Flow

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RPAS Training Requirements

➤ Impact
- Pilot licensing
- Maintenance licensing
- Air Traffic Services

➤ Programs must be developed that
- Leverage existing qualifications and certification criteria
- Utilize existing programs/process to identify unique requirements
- Provide a path to gain RPAS experience and exposure

➤ RPAS training programs provide unique challenges
- Highly automated systems must interact "seamlessly"
- Long duration flights
- Diverse skill sets
- Limited number of systems operating

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What will it take?

➤ Regulatory structure based on proven technology, training and safety strategies

➤ Sound manufacturing programs and process to maintain and build on existing aviation safety principles

➤ Documented training practices and the ability to maintain that proficiency

➤ Timeline that will keep pace with emerging technology and encourage innovation

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Thank you for inviting CANSO

Thank you!

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