Chengdu, China

中国成都

RPAS / 3

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ICAO RPAS PROGRAMME MANAGER

Wrap-up Session

A new approach to CATEGORIZATION?

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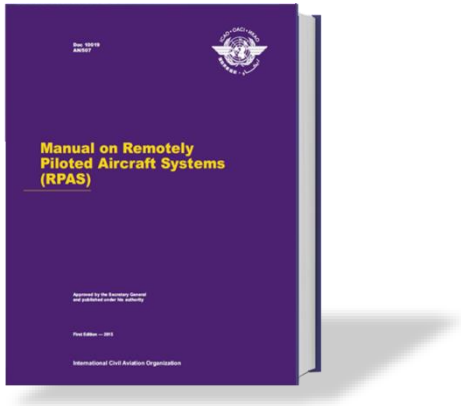
- Categorization of RPAS and UAS is more complex than for manned aviation
- Must consider a flexible operation centric, performance and risk-based approach
- Harmonization is critical to developing a global standard and guidance for categorization

International Civil Aviation Organization

Regulation is a need and implementation is the key?



Regulation is a need and implementation is the key?

- Need for a flexible licensing and training framework that is adaptable to innovation in future operations
- Training will be defined by operators and ATOs
- Competency-based training and assessment accommodates diversity of RPAS operations

International Civil Aviation Organization

Implementing harmonized regulations?

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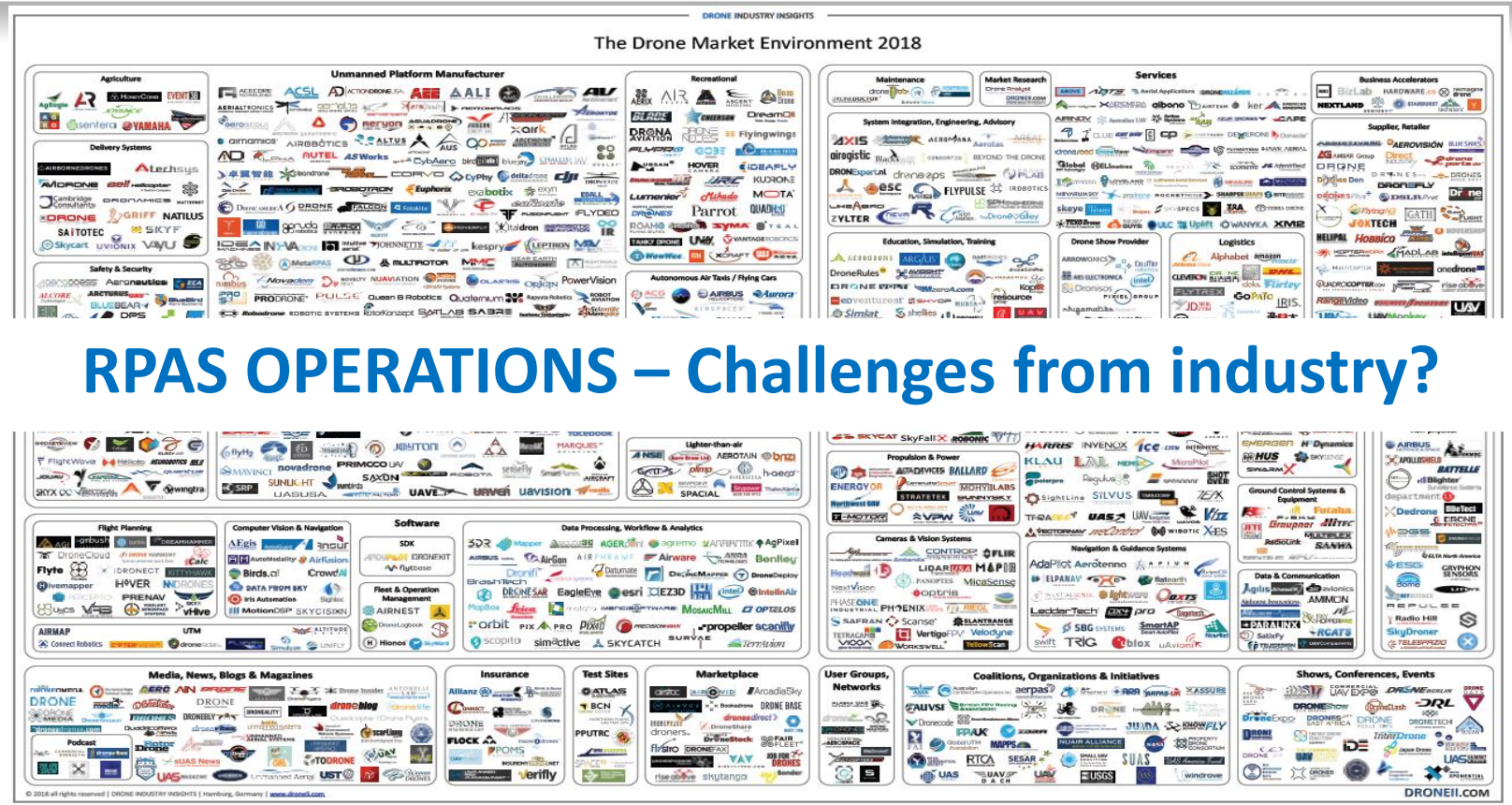
- Challenges
  - States are different stages of regulatory and technological implementation
  - Lack of resources to engage in international harmonization activities
- Benefits
  - Scalability and interoperability, which are necessary to accommodate rapid and yet disparate pace of technological advancement
  - Assists States with conducting and delegating safety oversight functions to other States or RSOOs

International Civil Aviation Organization



RPAS OPERATIONS – Challenges from industry?

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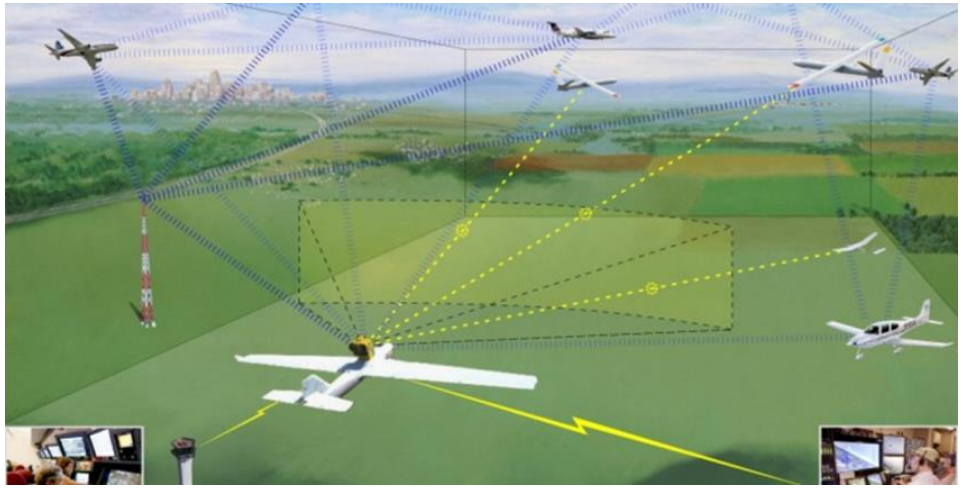
- The vision of a few years ago is already here
- Commitment to deploy enabling technologies safely and responsibly
- Industry has a duty to ensure regulators have the right information and expertise to make informed decisions

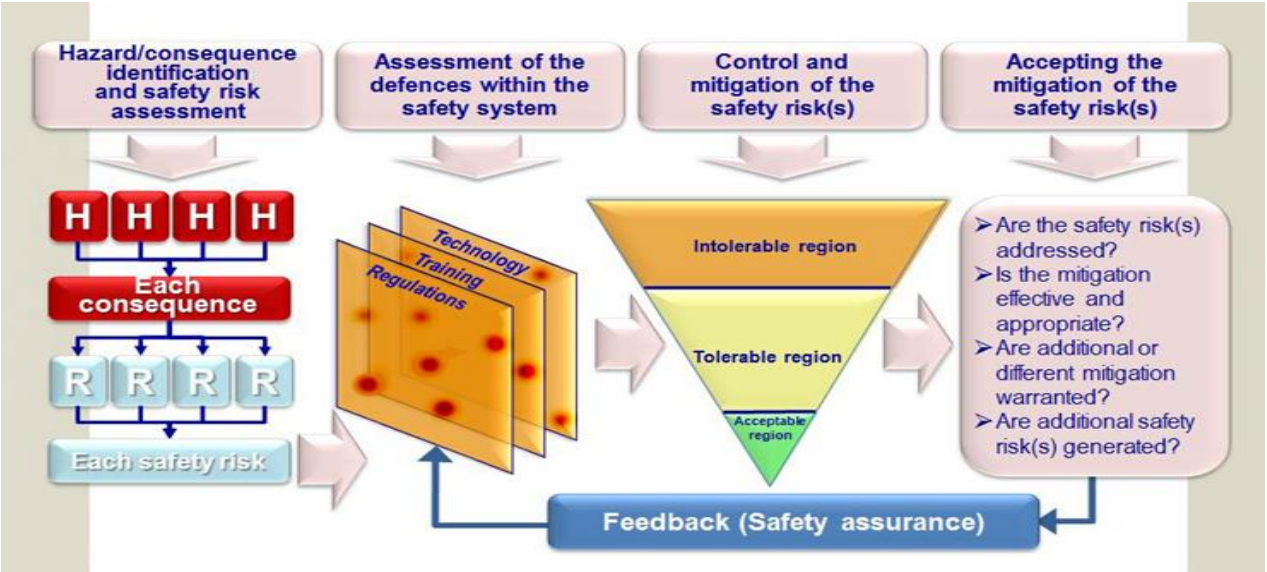
INTEGRATION PLANS – Do we really need to integrate RPAS into the ATM system?



INTEGRATION PLANS – Do we really need to integrate RPAS into the ATM system?

- There may be multiple, parallel paths to integration, but result will be full integration
- Timeline must keep pace with emerging technology and encourage innovation
- Must address low-altitude and high-altitude operations

BUILDING A PERFORMANCE-BASED REGULATORY FRAMEWORK FOR RPAS – Are States ready?



BUILDING A PERFORMANCE-BASED REGULATORY FRAMEWORK FOR RPAS – Are States ready?

- States are at different stages of implementation w/r PBR
- Greater need for guidance material from ICAO and regulators to explain operational risk assessments and required performance standards. Licensing is a precursor
- Collaboration with industry, through information-sharing, pilot projects, working groups is critical for developing PBR

Emerging technology: Legacy is comfortable innovation is challenging ?

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- International bodies (ICAO, JARUS, EASA) must expand regulatory scope and engage in regulatory innovation
- Partnership with industry is key to a regulatory framework that fosters innovation

RPAS OPERATIONS – Do all stakeholders have the same views on RPAS integration ?

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- Traditional stakeholders expect new entrants to fit into the system
- Willingness to engage with new entrants and technologies to find solutions

CIVIL AND MILITARY COLLABORATION – Civil or military ?

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- Continued cooperation between military and civil critical to safe effective and efficient use of the available airspace
- Additional cooperation in the area of UTM is needed
- Trust is the most important factor for civil/military cooperation activities

FOCUS ON CHINA – Activities and lessons learned

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- The scope of civil UAS application has grown extensively
- The National regulatory framework of Civil unmanned aviation continue to improve
- Actively pursuing cooperation at national and international levels (civil and military)

THE WAY FORWARD …….

International Civil Aviation Organization

- **Top priority is to maintain or improve the highest level of safety**
- **Progress through partnerships, collaboration and information-sharing**
- **Strong support for a consensus-based approach to the development of harmonized, performance-based, national and international standards**

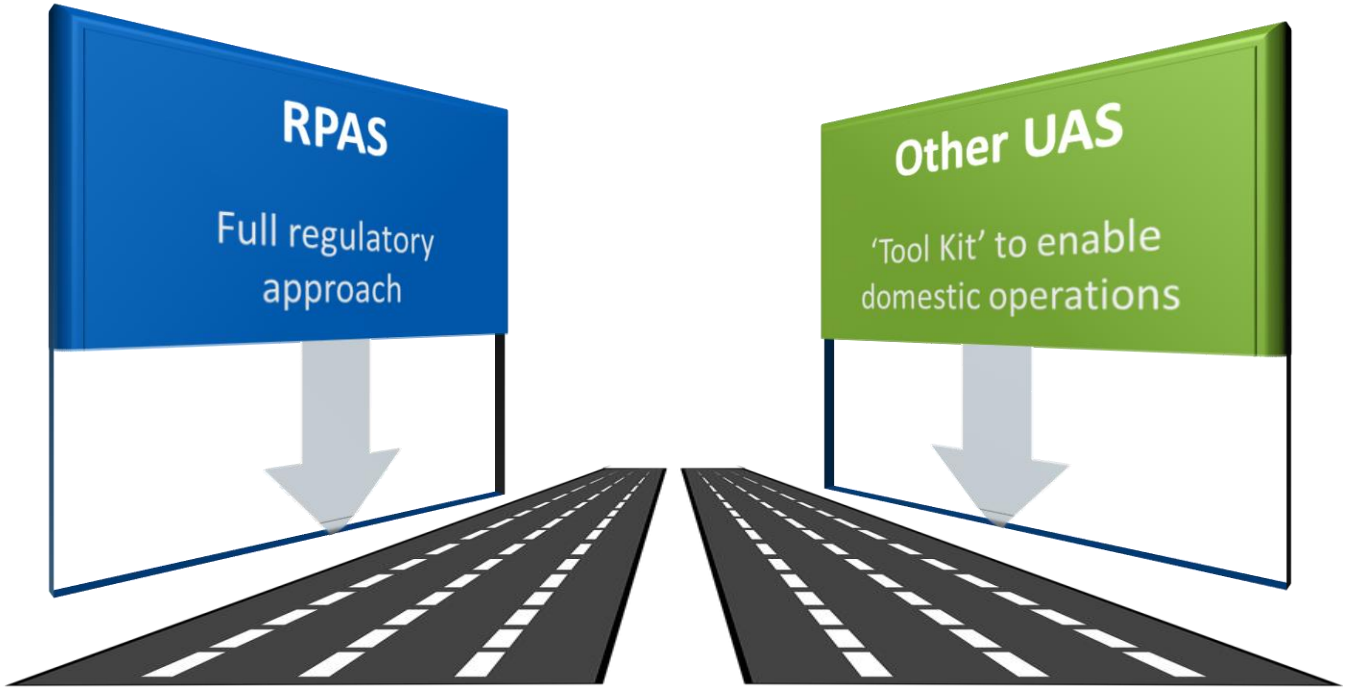
You need ICAO….

And

ICAO is you !

ICAO and UAS

Two Approaches – Two Streams of Work



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THANK YOU