# Introduction

Numerous efforts ongoing to develop UAS Categorization

Harmonization of the various schemes a concern

The ICAO RPAS Panel has had significant discussions on Categorization

Although the RPAS Panel's primary focus in on International IFR operations, it was deemed beneficial to develop a Categorization scheme, to provide:

- clear boundaries for the RPAS Panel's work, and

- provides others, not as familiar with the subject, with an understanding of what type of operations are addressed by proposed SARPs, and which would not be

MODEL AIRCRAFT

UNMANNED FREE BALLONS

RPAS

"DRONES"
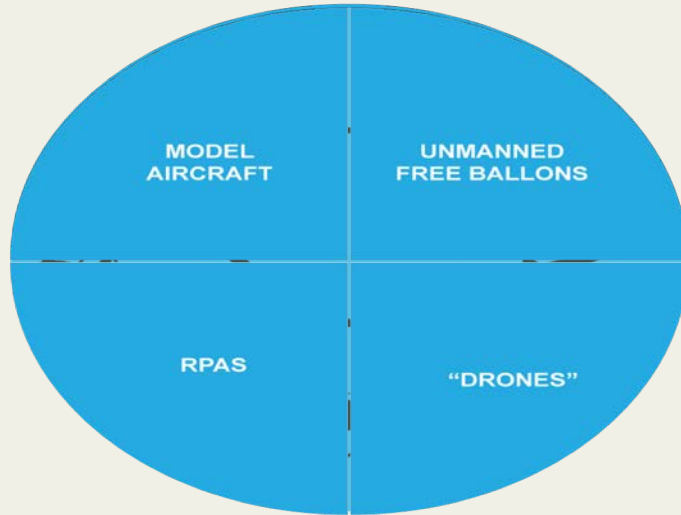
**UNMANNED AIRCRAFT**

# Operation-centric, risk-based approach
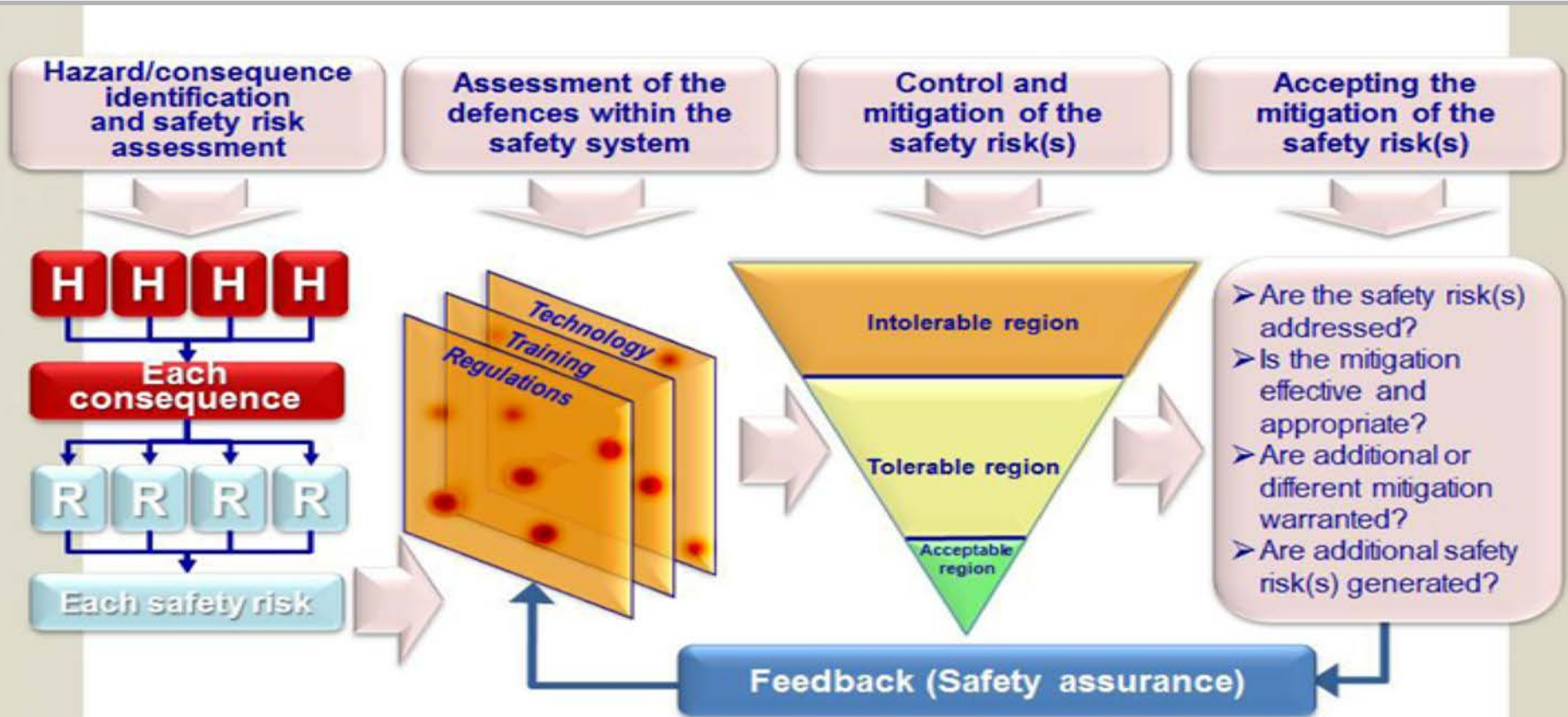
# Categorization Scheme

Supports concept that UAS regulations should be proportionate to the risk

Establishing a categorization scheme should assist States with regulatory development

Therefore the draft Annex 6 Part IV discusses a 3-category taxonomy:

- Category A (low risk)

- Category B (medium risk/regulated to lower risk)

- Category C (manned aviation approach)

# Category A

Addresses low risk operations

Operations conducted within defined limitations, for example:

- visual line-of-sight (VLOS)

- specified distances from aerodromes and people,

- maximum height above ground level (AGL), etc.)

Operations could be permitted without the need for any specific authorization

# Category B

Begins as medium risk but regulated to lower risk

Includes where:

- risks to persons is greater than those permitted in Cat A, or

- if sharing airspace with other aircraft, but risks are below what is warranted for traditional aviation certifications

Authorization required from the aviation authority

Restrictions and limitations based on the operations, UAS and personnel

Approvals based on risk and mitigations

# Category C (Manned aviation approach)

When risks increase to a level similar to manned aircraft, utilize traditional methods of regulating

Due to the higher associated risks, certification would be required for

- operator,
- flight crew, and
- remotely piloted aircraft (RPA)

Operations would likely be conducted beyond visual line-of-sight (BVLOS), however portions of the flight (e.g. launch and recovery) may operate within VLOS

ICAO Standards and Recommended Practices would be applicable to this category

# Food for thought

Categorization may be simple for manned aircraft (mass break point, etc.) but becomes more complex for UAS/RPAS

Categorization may result in more questions than answers

This categorization scheme is provided in our draft Annex 6 SARPs proposal

North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok

THANK YOU