

# REMOTELY PILOTED AIRCRAFT SYSTEMS

Presented by:

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*CIVIL AVIATION  
AUTHORITY*

# SACAA MANDATE – CIVIL AVIATION ACT

## MANDATE (CONTEMPORARY TRANSLATION)

“Regulating the civil aviation industry to ensure **security and safety** by complying with the International Civil Aviation Organization (ICAO) SARPs, taking into consideration the local context.”

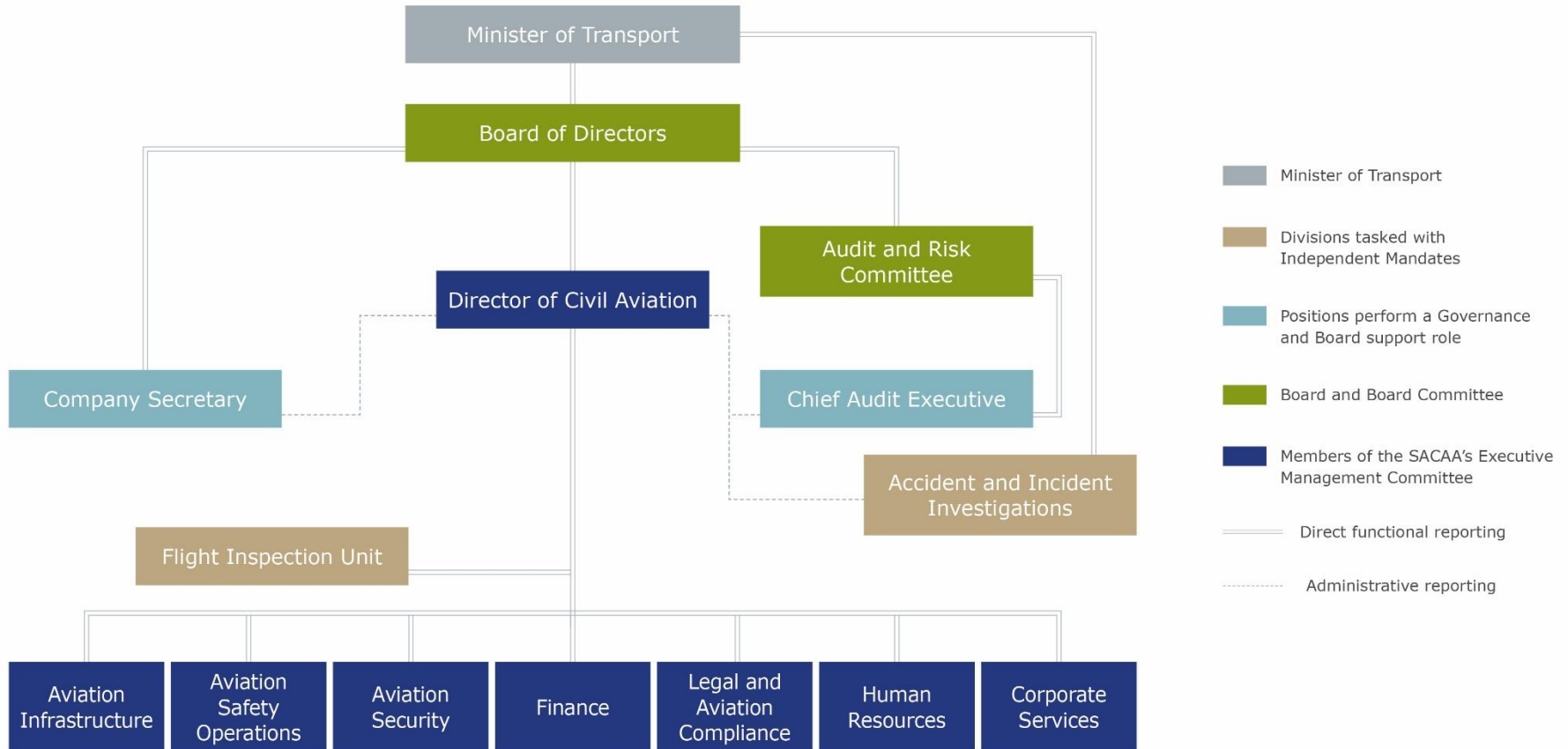
## OBJECTS OF THE CIVIL AVIATION AUTHORITY

- a) Control and regulate civil aviation safety and security
- b) Oversee the implementation and compliance with the National Aviation Security Program;
- c) Oversee the functioning and development of the civil aviation industry;
- d) Promote civil aviation safety and security;
- e) Develop any regulations that are required in terms of this Act; and
- f) Monitor and ensure compliance with this Act and the Convention.

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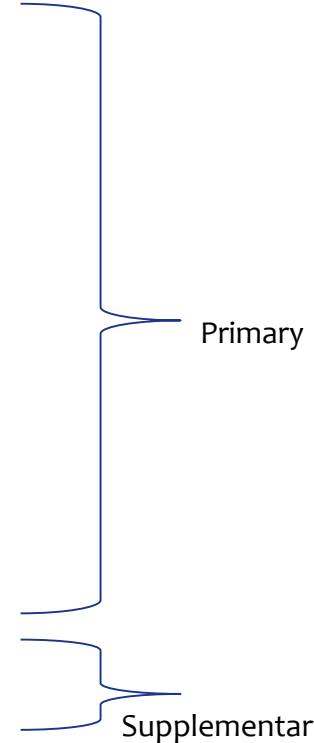


# SACAA CORPORATE STRUCTURE



# REGULATORY HIERARCHY

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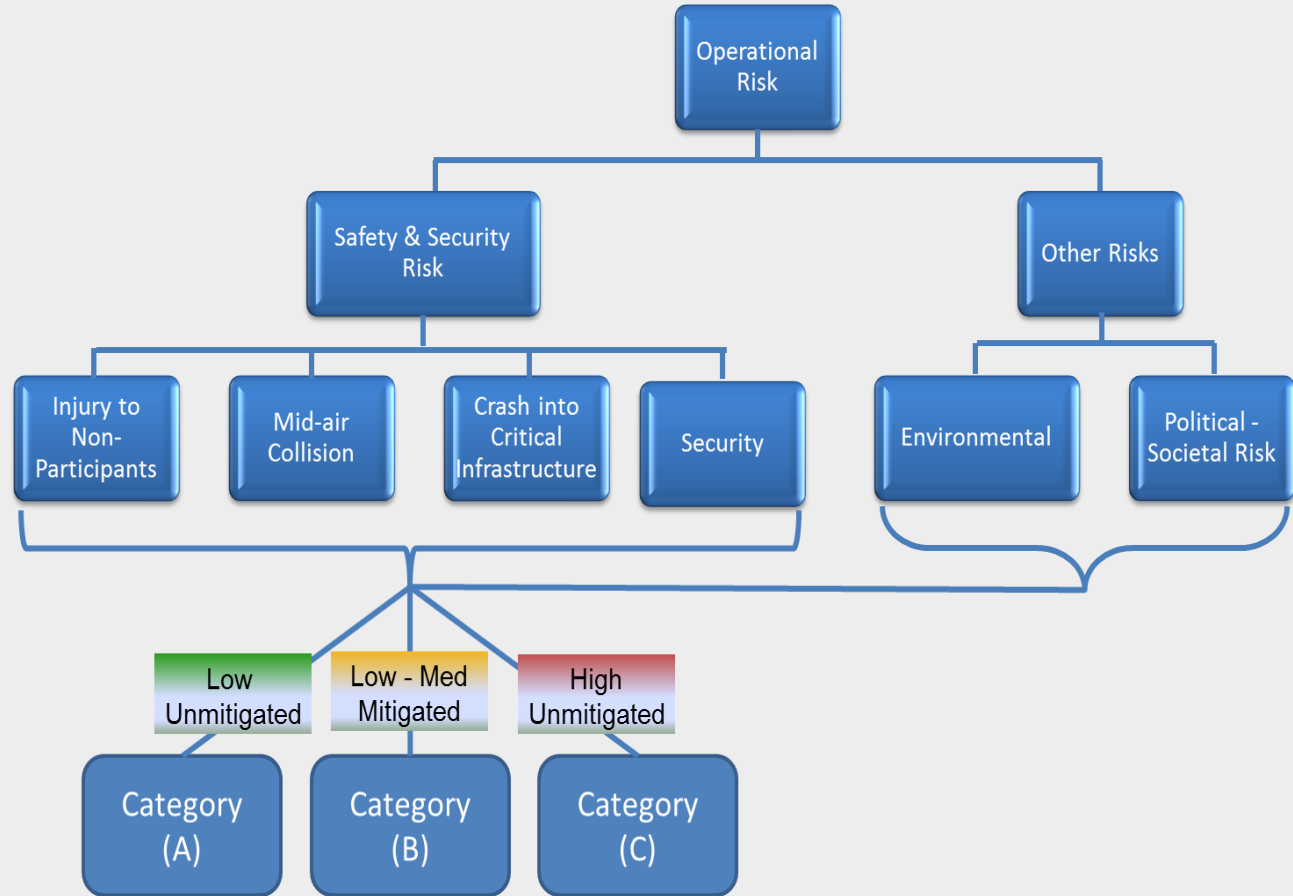


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**RISK  
CATEGORISATION  
CRITERIA**



# NATIONAL CIVIL AVIATION POLICY : PS 76

- The SACAA should remain **responsible for the regulation** of civilian Remotely Piloted Aircraft Systems (RPAS) within a **well-defined regulatory framework** to ensure **compliance with international norms and standards** pertaining to aviation safety, security and environmental protection, as **contained in the relevant international conventions** to which **South Africa subscribes**.
- Civilian **RPAS operations** must **at all times** be conducted **in compliance with the Chicago Convention**, its relevant **Annexes** and applicable Domestic law.
- The regulatory framework must continue to support the **evolution of RPAS** whilst ensuring a **sufficient level of safety and security**.

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# RPAS REGULATIONS

- July 2015, South Africa promulgated regulations, Part 101.
- All Commercial, Corporate and Non-profit operations are regulated
- Requires a shift in regulatory approach in accordance with International Best Practices - CONOPS

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# TYPES OF RPAS

## Various sizes and shapes

### Gatewing x100



Weight: 2.2 kg  
Cruise: 80 km/h  
Range: 50km  
Ceiling: 750 m AGL

### Hawkeye UAV



Weight: 4.2 kg,  
Cruise: 55-60 km/h

### Discoverer



Weight: 21.5 + 10 kg  
Cruise: 76 km/h  
Range: 30 km  
Ceiling: 16000 ft.

### Black Hornet Nano helicopter



Weight: 14 g, Speed:  
35.4 km/h



Weight: 1000g  
Max speed: 15m/s  
Flight Time: 25mins

### Dassault nEUROn



Weight: 7000 kg  
Speed 980 km/h  
Ceiling: 45900 ft.

# RPAS STATISTICS - SOUTH AFRICA



ROC = 50



RPL = 1348

Registered  
RPAS = 1247

**RPAS South  
African  
Statistics**



RPAS Training  
Organisations  
= 6

RLA= 399

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# AFFECTED PARTIES & CONCERNED PARTIES AT NATIONAL LEVEL

## Security Cluster



**defence**

Department:  
Defence  
REPUBLIC OF SOUTH AFRICA



**state security**

State Security Agency  
REPUBLIC OF SOUTH AFRICA



**SOUTH AFRICAN POLICE SERVICE**  
Department of Police

## Business Oversight



**transport**

Department:  
Transport  
REPUBLIC OF SOUTH AFRICA



**science & technology**

Department:  
Science and Technology  
REPUBLIC OF SOUTH AFRICA



**the dti**

Department:  
Trade and Industry  
REPUBLIC OF SOUTH AFRICA



**AIRPORTS COMPANY**  
SOUTH AFRICA

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# WAY FORWARD



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# SOUTH AFRICAN PLANS

1. A need for a multi-stakeholder consultation forum: SARIF
2. Industry to contribute to the development and draft amendments to Part 101
3. SACAA and stakeholders collaborate on RPAS education, safety campaign and awareness
4. SACAA continues to participate at ICAO Panels and JARUS.
5. Importance of participating as (RSA INC) globally to secure synergy

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# RPAS Regulations

## Part 101

### **EIGHTH AMENDMENT OF THE CIVIL AVIATION REGULATIONS, 2015**

#### **Part 101: Remotely Piloted Aircraft Systems**

##### **Consists of Six Sub-parts:**

Subpart 1: General provisions

Subpart 2: Approval and registration

Subpart 3: Personnel licensing

Subpart 4: RPAS operating certificate

Subpart 5: RPAS operations

Subpart 6: Maintenance

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## Summary of subpart 1:

- Four types of operations:
  - Commercial
  - Corporate
  - Non-profit
  - Private
  
- RPAS classified Class 1 or 2
  - Less than 20kg
  - Line-of-sight
  - Below 400ft AGL
  - Low speed

## Summary of subpart 2:

- RPAS will be issued letter of approval
- RPAS will be issued a Certificate of Registration

### Summary of subpart 3:

- Pilots will be issued with an RPL
  - Aeroplane
  - Helicopter
  - Multi-rotor
- With the following ratings:
  - VLOS
  - EVLOS
  - BVLOS
- Following successful theoretical examination and skills test.

### Summary of subpart 4:

- Operators need to apply for an ROC
  - Commercial (ASLC req.)
  - Corporate
  - Non-profit
- Some of the requirements
  - Ops manual
  - OpSpec
  - SMS
  - Security

## Summary of subpart 5:

- Some operational limitations
  - Ops in controlled airspace
  - Transportation of DG
  - Night Ops
  - BVLOS
- Operations
  - Buildings/property
  - Public roads
  - People
  - Possibly close to other aircraft

## Summary of subpart 6:

- RPAS maintenance technician
  - Only for class 3 RPAS and higher

# THANK -YOU



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Are you using  
Remotely Piloted  
Aircraft?

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## IMPORTANT SAFETY INFORMATION FOR RPAS PRIVATE OPERATION

**Remotely Piloted Aircraft (RPAS) should be flown in a safe manner:**

**DO NOT**, through act or omission:

Endanger the safety of another aircraft or person therein or any person or property

**For private operation, RPAS may only be used for an individual's personal and private purposes where there is no commercial outcome, interest or gain.**

### Please adhere to the following for the safe operation of RPAS



#### Aerodromes

Not closer than 10 km from the airport, helipad or airstrip



#### Weather Conditions

Operate RPA in daylight and clear weather conditions



#### Rules of flight



#### Intoxication

Do not operate RPAS while intoxicated



#### Class of RPA

CLASS 1A or 1B (Mass < 7kg)



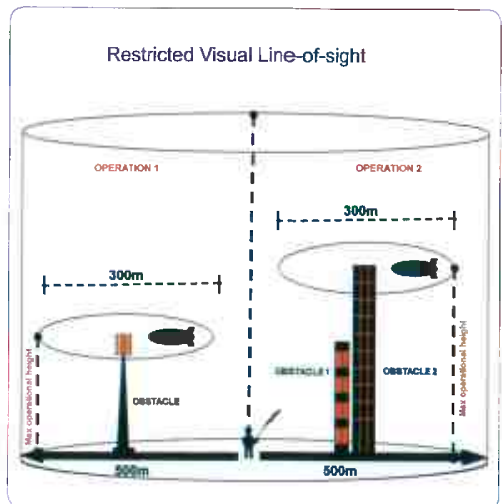
#### RPA vicinity

Do not operate RPA 50 m or closer to any: Person, property or public road



#### Airspace

Do not operate RPAS within:  
Controlled Airspace  
Restricted Airspace  
Prohibited Airspace



NOTE: "restricted visual line-of-sight (R-VLOS)" means an operation within 500 m of the remote pilot and below the height of the highest obstacle within 300 m of the RPA, in which the remote pilot maintains direct unaided visual contact with the RPA to manage its flight and meet separation and collision avoidance responsibilities.

## DON'TS

**DO NOT**, through act or omission, endanger the safety of another aircraft or person therein or any person or property through negligent flying/operation of Remotely Piloted Aircraft, or toy aircraft.

Do not fly/operate Remotely Piloted Aircraft or toy aircraft 50 m or closer from:

- Any person or group of persons (like sports field, road races, schools, social events, etc.)
- Any property without permission from the property owner.

Unless approved by the SACAA, **DO NOT** fly/operate Remotely Piloted Aircraft or toy aircraft:

- Near manned aircraft
- 10 km or closer to an aerodrome (airport, helipad, airfield)
- Weighing more than 7 kg
- In controlled airspace
- In restricted airspace
- In prohibited airspace.

Do not fly/operate Remotely Piloted Aircraft, or toy aircraft higher than 150 ft from the ground, unless approved by the Director of Civil Aviation of the SACAA.

*NOTE: The Director of Civil Aviation has designated an external organisation to oversee the operations of recreational aviation.*

*For more information on the operation of model aircraft, please contact the South African Model Aircraft Association (SAAMA), at [www.saama.org.za](http://www.saama.org.za).*

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# Remotely Piloted Aircraft Systems (RPAS)

Play by the rules and keep aviation safe



**KEEPING  
YOU SAFE  
IN THE SKY**

South African  
Civil Aviation Authority

Tel: 011 545 1000  
E-mail: [mail@caa.co.za](mailto:mail@caa.co.za)  
[www.caa.co.za](http://www.caa.co.za)

## Definitions:

**“Remotely piloted aircraft systems” (RPAS)** means unmanned aircraft which are piloted from a remote pilot station, excluding model aircraft and toy aircraft.

**“Toy aircraft”** means a product falling under the definition of an aircraft which is designed or intended for use in play by children.

**“Model aircraft”** means a non-human-carrying aircraft capable of sustained flight in the atmosphere and used exclusively for air display, recreational use, sport or competitions.



## Acceptable uses of RPAS

### For private use –

- (a) The RPAS may only be used for an individual's personal and private purposes where there is no commercial outcome, interest or gain;
- (b) The pilot must observe all statutory requirements relating to liability, privacy and any other laws enforceable by any other authorities.

### For all other use –

- (a) an RPA must be registered and may only be operated in terms of Part 101 of the South African Civil Aviation Regulations.

## Dangers of negligent operation of an RPA:

- (a) Collision with other aircraft, with possible fatal results
- (b) Injury to the public
- (c) Damage to people's property
- (d) Legal liability for breaking laws such as privacy by-laws and other laws enforceable by other authorities.



## Do's and Don'ts

### DO'S

- Fly/operate Remotely Piloted Aircraft or toy aircraft in a safe manner, at all times.
- Remotely Piloted Aircraft or toy aircraft should remain within the visual line of sight at all times.
- Fly/operate RPA in daylight and clear weather conditions.
- Inspect your aircraft before each flight.