

Working Group: Technology Development in Aviation (RPAS)



transport

Department:
Transport
REPUBLIC OF SOUTH AFRICA



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Summit on the
Review of Civil Aviation Policy
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1. Application Regulatory Frameworks

Policies:

- 1.) National Civil Aviation Policy (NCAP)

Regulations:

- 1.) Civil Aviation Regulations
- 2.) Civil Aviation Technical Standards

Charters:

- 1.) N/A

Ministerial Order

- 1.) N/A

2. Policy and Legislative Gaps Identified

Policy gaps (if any):

- All entities that operate within the RPAS environment should receive awareness training on a regular basis.
- Any means that is intended for the management of RPAS should promote safe operations not only for RPAS operations but for all airspace users including manned aircraft.
- Currently there is no levy structure for RPAS operations within the Republic.
- Registration does apply to all RPAS operated within the national airspace or sold within the boundaries of South Africa.
- Regulatory reform is necessary for RPAS regulations as the industry adapts to the matures. Deliberations on RPAS regulations needs to align with stakeholders' expectations, technological advancements, and industry best practices.

3. Problem Situation Landscape

- **Current influx of foreign** designed and manufactured RPAS, whilst local manufacturers seem somewhat discouraged.
- **Uncontrolled access** or distribution of RPAS in the Republic (i.e. any store from spaza shops to hypermarkets may sell or distribute RPAS.
- Lack of enforcement by law enforcement agencies, other than CAA.
- Lack of public awareness (i.e. parents buy kids RPAS as toys, people privacy invasion etc)
- Growing RPAS **infringements** in civil airspace (Airliners, airports, GA etc.);
- RPAS detection and integration with the current ATM/CNS systems has not yet been established
- Accommodation of RPAS within the National Airspace, through the FUA process is a lengthy process, and could lead to non-compliance to the regulations
- No clear policy **position on use of UTM framework** and establishment.

4. Policy Statements

Policy Statement 1:

- Government must establish a levy structure for all RPAS registered and operated in the Republic, especially those that are operated for economic or commercial purposes.

Policy Statement 2:

- There must easily accessible electronic or digital register for all RPAS intended to be operated within the national airspace, distributed or sold within the boundaries of South Africa.

Policy Statement 3:

- Controlled access and distribution of RPAS in the Republic (e.g. any store from spaza shops to hypermarkets may sell or distribute RPAS.), but none of those retailers are registered for distribution of such controlled and security sensitive items.

4. Policy statements ...Con't

Policy Statement 4:

[No: 76 in the National Civil Aviation Policy]

- The South Africa Civil Aviation Authority (SACAA) should remain responsible for the regulation 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.
- All civilian RPAS registered in South Africa or operated by an entity established in South Africa will remain subject to the SACAA's aviation safety, security and environmental oversight including their operators, pilots and maintenance personnel. Furthermore, all civilian RPAS operators established outside South Africa wishing to conduct aerial work for reward in the airspace over South African territory must request and obtain authorisation from the all relevant authorities prior to the commencement of such operations.

4. Policy Statements ...Con't

Policy Statement 5:

- System wide collaboration and technology integration to ensure safer and efficient air transportation of goods, passengers and other services.

Policy Statement 6:

- Streamlined technological infrastructure planning, licensing of air services, access by law enforcement and economic agencies, allocation of air traffic rights and permutations on the flexible use of the airspace.

Policy Statement 7:

- Except those operated for recreational purpose, all RPAS must be installed with a device able to ensure monitoring and tracking of an a particular RPAS whilst in operations over the South African airspace.

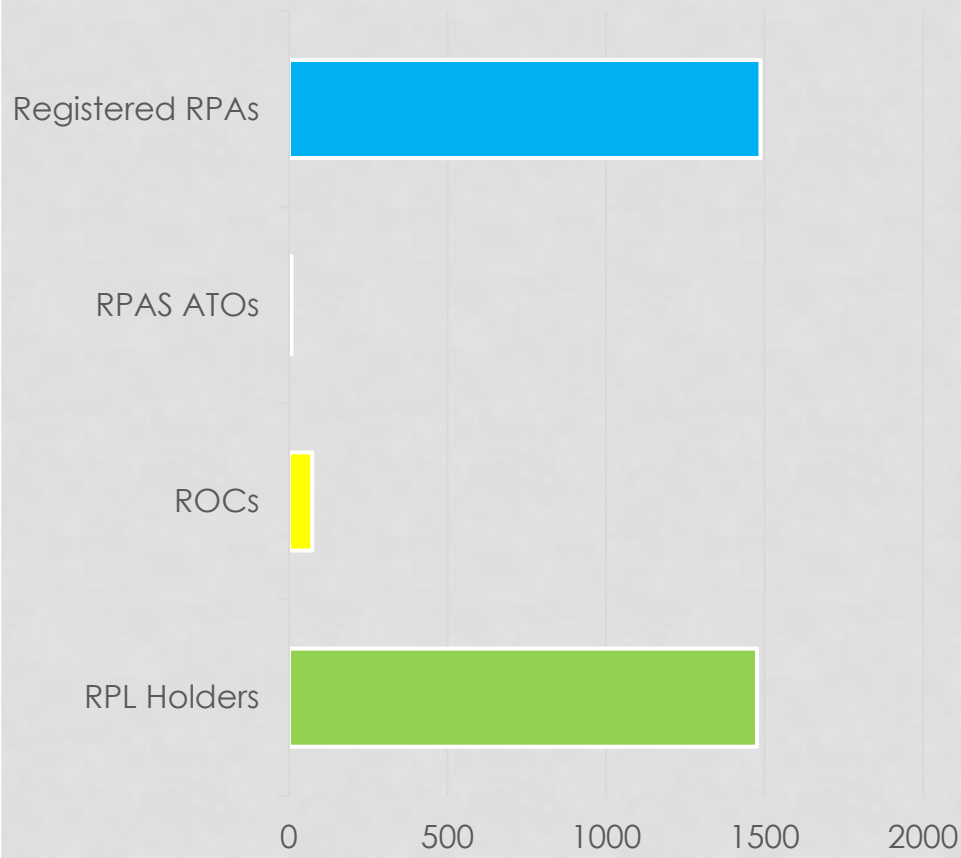
5. RSA RPAS Statistics (Current)

Civil Aviation Regulations, Part 101 was developed and were implemented in 2015.

The current regulations provide for authorisation of none-certified RPAS or RPA at least 20 KG and below, registration, aviation training schools and RPAS operator Certificates (ROC). Below is the current stats:

- RPAS Operators Certificate (ROC) holders: 74 (2%)
- RPAS Aviation Training Organisation (ATO): 8 (1%)
- Registered Remotely Piloted Aircraft (RPA): 1487 (49%)
- Remote Pilot License (RPL) Holders: 1476 (48%)

5. RSA RPAS Statistics (Graphical Representation)



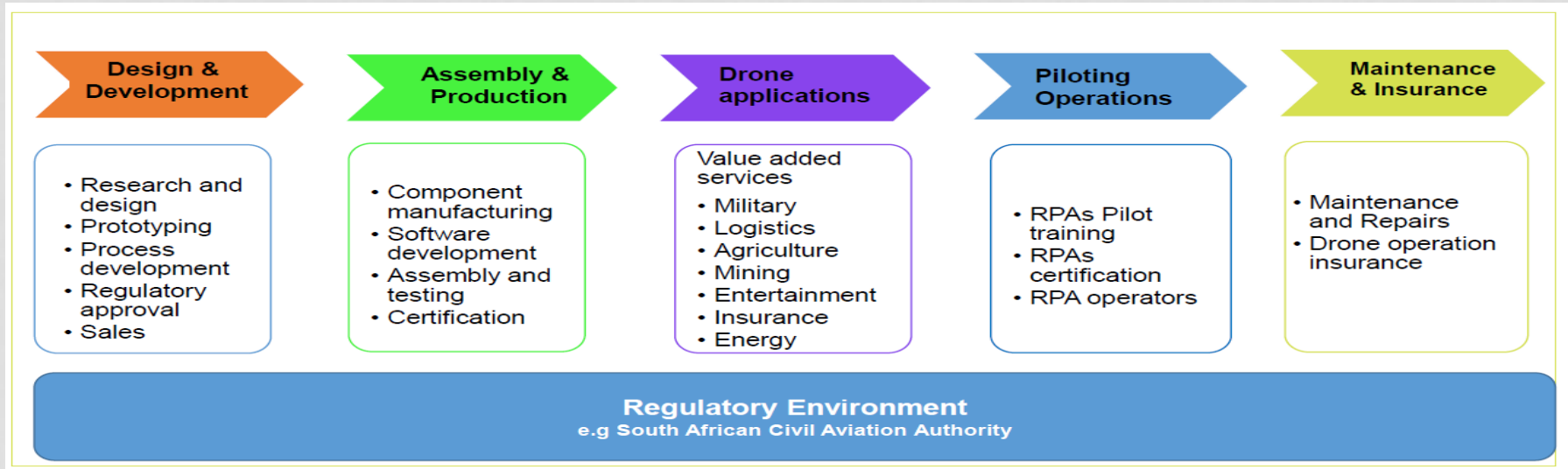
■ RPL Holders
 ■ ROCs
 ■ RPAS ATOs
 ■ Registered RPAs
 ■ RPL Holders
 ■ ROCs
 ■ RPAS ATOs
 ■ Registered RPAs

6. Key RPAS utilisation sectors in RSA

- ▶ Health Services Sector
- ▶ Safety and Security Sector
- ▶ Real Estate Sector
- ▶ Mining and Energy Sector
- ▶ Boarder Patrol Sector
- ▶ Postage and Delivery Sector
- ▶ Wild Life Preservation and Anti-Poaching Sector
- ▶ Media Sector
- ▶ Fire-fighting Sector
- ▶ Construction Sector
- ▶ Insurance Sector
- ▶ Search and Rescue Sector

7. RPAS Economic Value Chain

Creating an enabling environment for SMME (innovation space) and value proposition for South Africa.



Provide greater opportunities and participation of PDI's, Women and Youth.

8. Desired End State

- **Public and private partnership** on the planning, development and implementation of latest technologies for the benefit of the air transport sector.
- **Seamless adaptation and incorporation of emerging technologies** to regulations and policies governing the air transport sector.
- **Establish RPAS SWIM (Systems Wide Information Management)** amongst the stakeholders to ensure data sharing and eliminate futile silo operations amongst stakeholders. This will promote effective and seamless **RPAS monitoring and management.**
- Record of all RPAS operating or intended to be operated within the South African airspace.
- The registration process should link national RPAS regulations as an awareness mechanism for operators and/or owners.

8. Desired End State

- **Availability of guidance material** that will guide cross-border/international UAS operations that have not been covered in ICAO material.
- **Steady research on RPAS**, engage various stakeholders on RPAS, periodically review RPAS regulations.
- **Investment in transformative technology** that enables future-state aviation capabilities by using real-time system principles. Include infrastructure, systems and technology that will increase enterprise awareness, workflow/process automation, and collaboration.
- Concentrated financial investment to pursue **local industrialisation** and promote the establishment of incubation agencies to **drive local product development** and implementation.
- A **digital or electronic platform** for enabling registration of RPAS.

9. Next Steps

- Establish partnerships and collaborations between public and private sectors with keen interest in the air transport sector.
- **Awareness programme** aimed at exposing existing regulations to stakeholders should be put in place (e.g. including point of sale, police services, etc.).
- Establish **monitoring and tracking** regulations for RPAS operations other than recreational.
- Deliberations between all stakeholders on RPAS management platforms and/or solutions for full integration of RPAS into the national airspace.
- Ensure that all means for management of RPAS comply with relevant established national and international Standards and Recommended Practices (SARPs).
- **Databases** of OEM's, operators, maintenance facilities/individuals, pilots and distributors of all RPAS operated with the Republic.

10. WAY FORWARD

**Stakeholders Engagements!!!!
SUMMIT!!!**

**THANK
YOU**