ROAD PAVEMENTS FORUM (RPF)

13 November 2019

"Overview of RPAS Regulations"

Introducing Premier Group

High level Aerial Survey

Satellite data

Low level Aerial Survey

Drone open pit survey
SLAM drone scanning

Terrestrial laser scanning

Drone Stockpile
Aerial Survey

Mobile SLAM laser scanning

Sonar water surveys

Underground SLAM
laser scanning
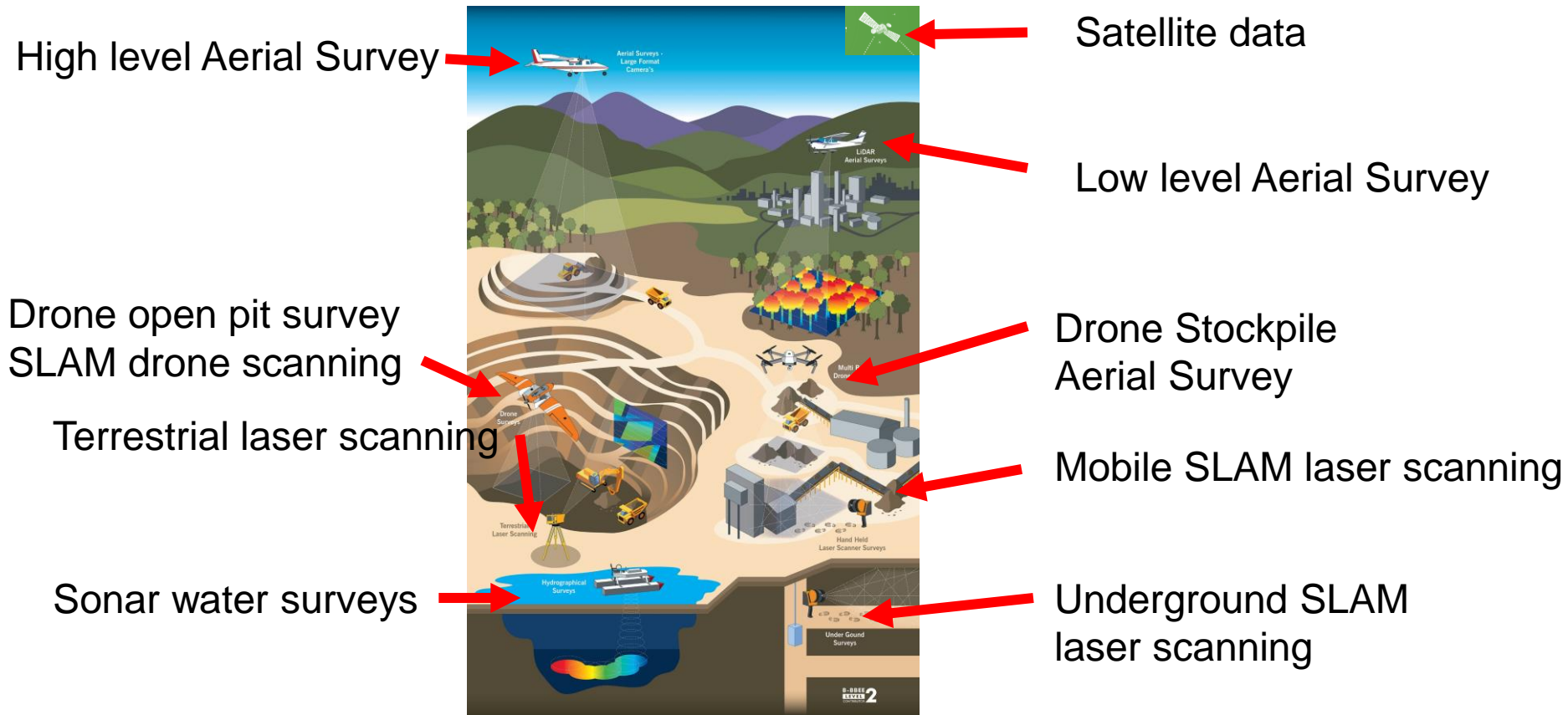
Purpose of the Presentation

1. Overview of the Regulatory Framework

2. RPAS Definitions and Concepts

3. Special Approvals (OpSpec)

4. RPAS Letter of Approval (RPL)

5. Remote Pilot License (RPL)

LICENSING

Which licenses do you need?

	Commercial	Corporate	Non-Profit
Air Service License (ASL)	x	-	-
RPAS Operator Certificate (ROC)	x	x	x

*Commercial operation: conducted for business purposes (mapping, security surveillance, anti-poaching, game counts, aerial application, etc.) for remuneration or hire.

*Corporate operation: non-commercial operation or use of RPAS by an entity for professional or aerial work as an aid to the conduct of their business.

R-VLOS (Restricted Visual line-of-sight)

An operation within 500m of the remote pilot AND below the height of the highest obstacle within 300m of the RPA, in which the remote pilot maintains direct and unaided visual contact with the RPA to manage its flight and meet separation and collision avoidance responsibilities.

RPAS Definitions and Concepts
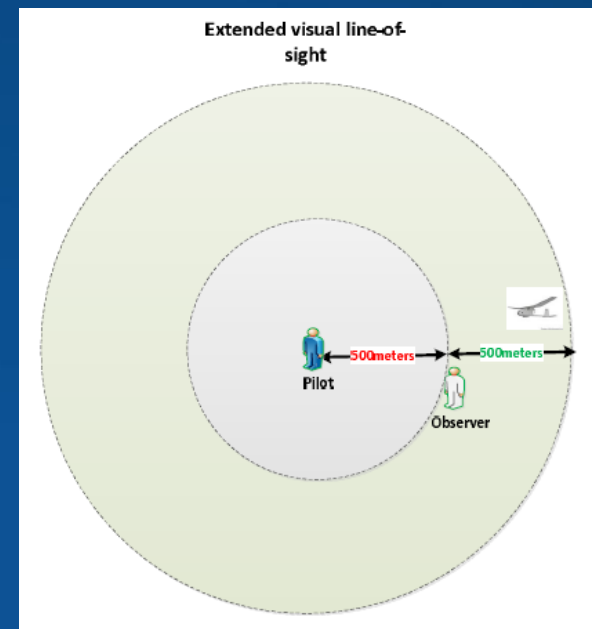
VLOS (Visual line-of-sight)

An operation below 400 ft above surface in which the remote pilot, maintains

direct and unaided visual contact with the RPA at a distance not exceeding 500 m.
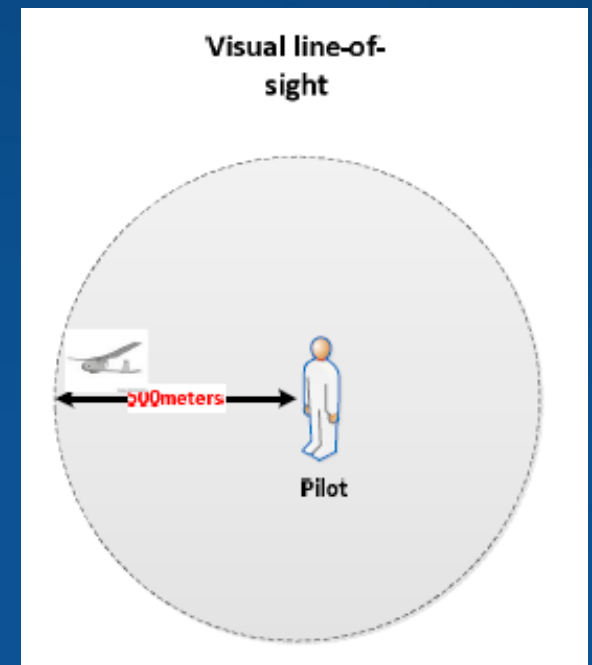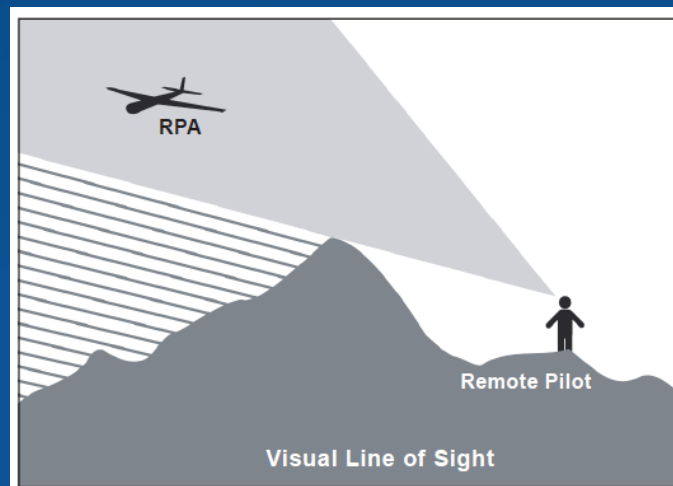
E-VLOS (Extended visual line-of-sight)

An operation below 400 ft above surface in which an observer, maintains direct and unaided visual contact with the remotely piloted aircraft at a distance not exceeding 1000 m from the pilot

B-VLOS (Beyond visual line-of-sight)

An operation in which the remote pilot cannot maintain direct unaided visual contact with the remotely piloted aircraft to manage its flight and to meet separation and collision avoidance responsibilities visually
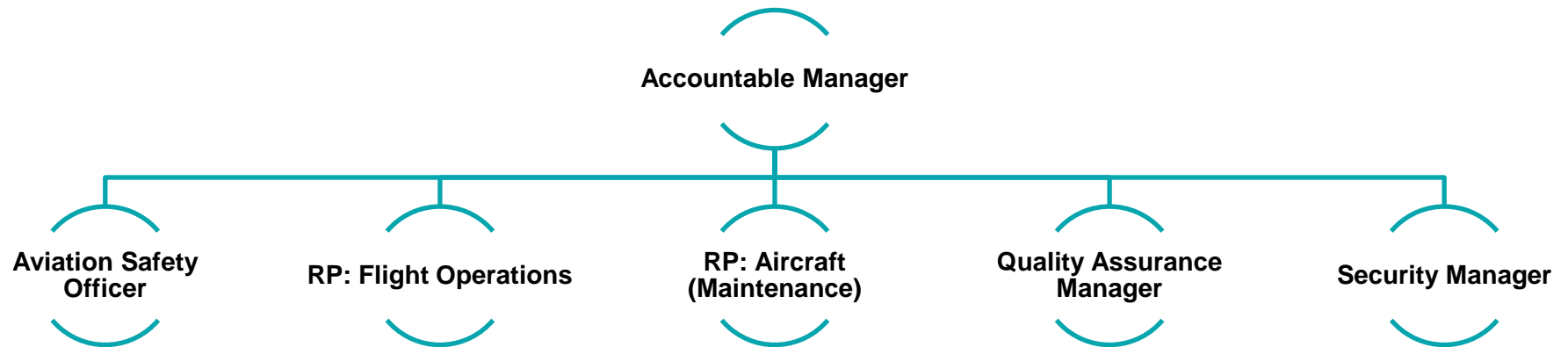
ROC Application

RPAS Operator Certificate (ROC):

- Management Structure

- Operations Manual and other documents

- Type of operations

- RPAS to be flown

- Personnel licensing

ROC Nominated Postholders

Accountable Manager

- **Aviation Safety Officer**
- **RP: Flight Operations**
- **RP: Aircraft (Maintenance)**
- **Quality Assurance Manager**
- **Security Manager**

"must have the appropriate knowledge, qualifications, skills, experience and training and must demonstrate the ability to perform or supervise their assigned duties"
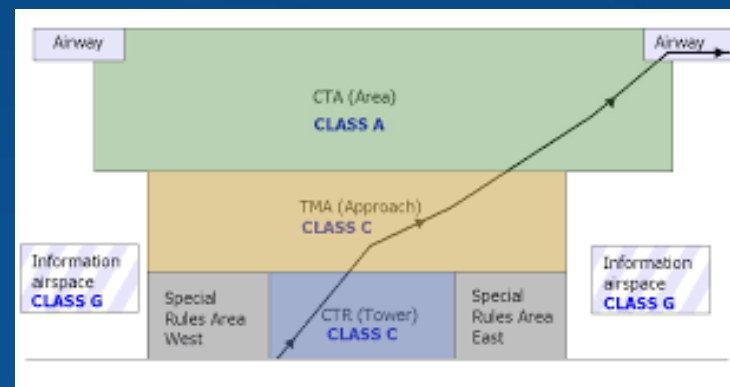
Type of Operation: Special Approvals

Landing / taking off from public road

"Holder of an ROC _and_ as approved by the Director of Civil Aviation"

Type of Operation: Special Approvals

Operations in Controlled Airspace

"Holder of an ROC <u>and</u> as approved by the Director of Civil Aviation"

Type of Operation: Special Approvals

Releasing, dispensing, dropping, delivering
or deploying object / substance

"Holder of an ROC <u>and</u> as approved by the Director of Civil Aviation"

Type of Operation: Special Approvals

Carriage of Dangerous Goods

"Holder of an ROC <u>and</u> as approved by the Director of Civil Aviation"

Type of Operation: Special Approvals

Operations >400ft AGL

Didn't want to bore you with 15 minutes of clouds, so this has been edited.

"Holder of an ROC <u>and</u> as approved by the Director of Civil Aviation"

Type of Operation: Special Approvals

Flying within 10km radius from aerodrome

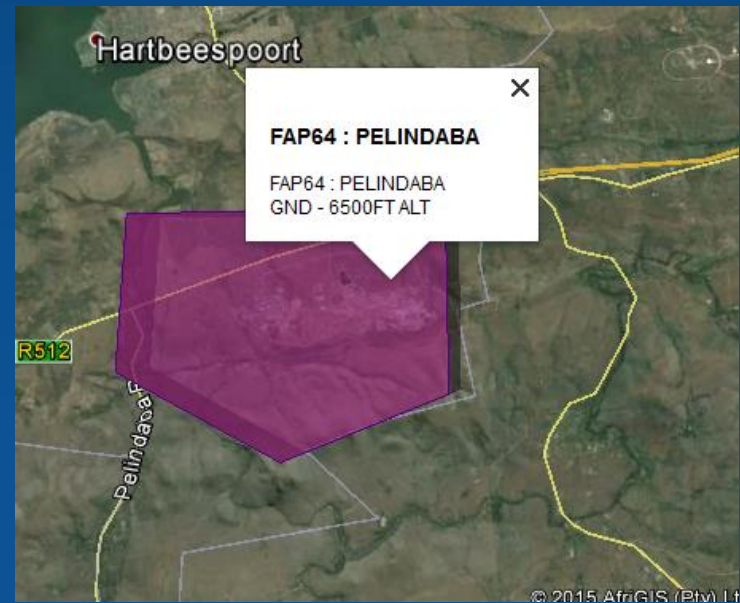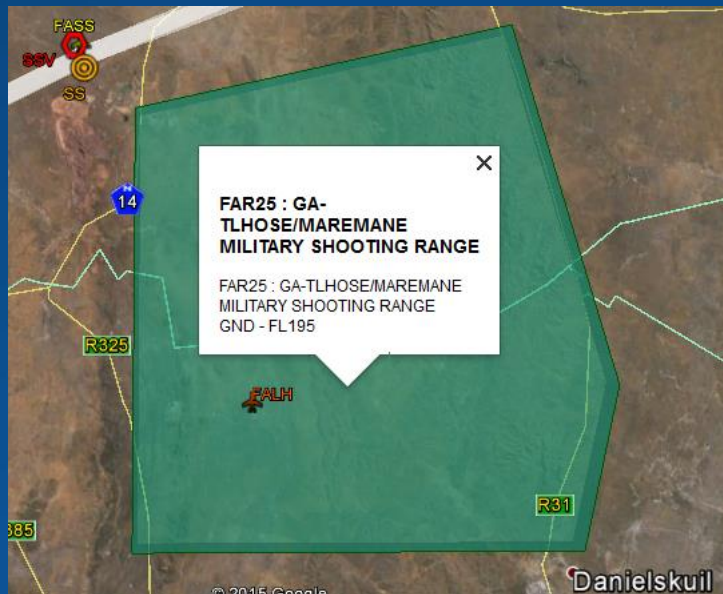DRONES SPOTTED FLYING TOO CLOSE TO PLANES OVER NY

"Holder of an ROC <u>and</u> as approved by the Director of Civil Aviation"

Type of Operation: Special Approvals

Flying within restricted airspace (FAR)

"Holder of an ROC _and_ as approved by the Director of Civil Aviation"

Type of Operation: Special Approvals

Flying adjacent to / above

- Nuclear Power Plant
- Prison
- Police Station
- Crime Scene
- Court of Law
- National Key Point
- Strategic Installation

"Holder of an ROC <u>and</u> as approved by the Director of Civil Aviation"

Type of Operation: Special Approvals

Flying Beyond Visual Line of Sight (B-VLOS)

"Holder of an ROC <u>and</u> as approved by the Director of Civil Aviation"

Type of Operation: Special Approvals

Flying at Night

"Holder of an ROC <u>and</u> as approved by the Director of Civil Aviation"

Type of Operation: Special Approvals

Flying directly overhead or within 50m from people

"Holder of an ROC <u>and</u> as approved by the Director of Civil Aviation"

Type of Operation: Special Approvals

Flying within 50m from buildings / structures

"Holder of an ROC <u>and</u> as approved by the Director of Civil Aviation"

Type of Operation: Special Approvals

Flying over, along or within 50m from public roads

"Holder of an ROC <u>and</u> as approved by the Director of Civil Aviation"

RLA (RPAS Letter of Approval)

<u>RPAS to be flown:</u>

- Certificate of Registration – registration markings on RPA

- RPAS Letter of Approval (RLA)
  - Technical Description
  - Operating limitations
  - RPAS System Safety
  - Flight manual / User guide
  - Maintenance Manual
  - Maintenance Schedule

- Certificate from ICASA?
  - Radio Type Approval
  - Radio Station License

- Manufacturer training

RPL (Remote Pilot License)

Remote Pilot's License (RPL):
- Categories = A / MR / H
- Valid for 12 - 24 months

Minimum Requirements:
- Not less than 18 years of age
- Medical certificate – Class 2
- Valid restricted certificate of proficiency in radiotelephony
- English Language Proficiency
- Ground School – pass a Theoretical Knowledge Examination
- Flight Training – pass a Skills Test
- Revalidation check every 12 months

RPA Observer training:
Internal training by Operator (ROC Holder)

Thank you!

Any further questions?