ANAC NATIONAL CIVIL AVIATION AGENCY – BRAZIL

Drones in Brazil (ANAC)

Regulatory scenario and plans for the future

18 November 2020

Legal competences

ANAC (National Civil Aviation Agency)

- Aircraft design and production certification
- Continuing airworthiness
- Pilot licensing
- Certification of operators
- Operational rules

DECEA (Airspace Control Department)

- Rules for airspace use
- Air traffic management

ANATEL (Telecommunications Agency)

- Allocation of radiofrequency
- Certification of telecommunication devices

Development timeline

Decision 127

UAS ops by Federal Police Dept

Jan: Proposal by ABIMDE

Jun: ANAC UAS WG

Sep: 1st workshop (classification and topics)

2011 2012 2013

IS 21-002A

UAS experimental ops

https://pbs.twimg.com/media/BsBz6fCIUAEmB_V.jpg:large

Development timeline

Feb: 2nd workshop (conceptual rule)

2014

2015

Sep-Nov: Public consultation (277 contributions)

2017

May: RBAC-E nº 94 issued

Classification of RPA

- Class 1: MTOW above 150 kg;
- Class 2: MTOW below or equal to 150 kg and above 25 kg;
- Class 3: MTOW between 250g and 25 kg.

Due to its small hazard potential, there is almost no requirement for operating drones lighter than 250g.

IMPORTANT: Classification is only applicable for non-recreational users!

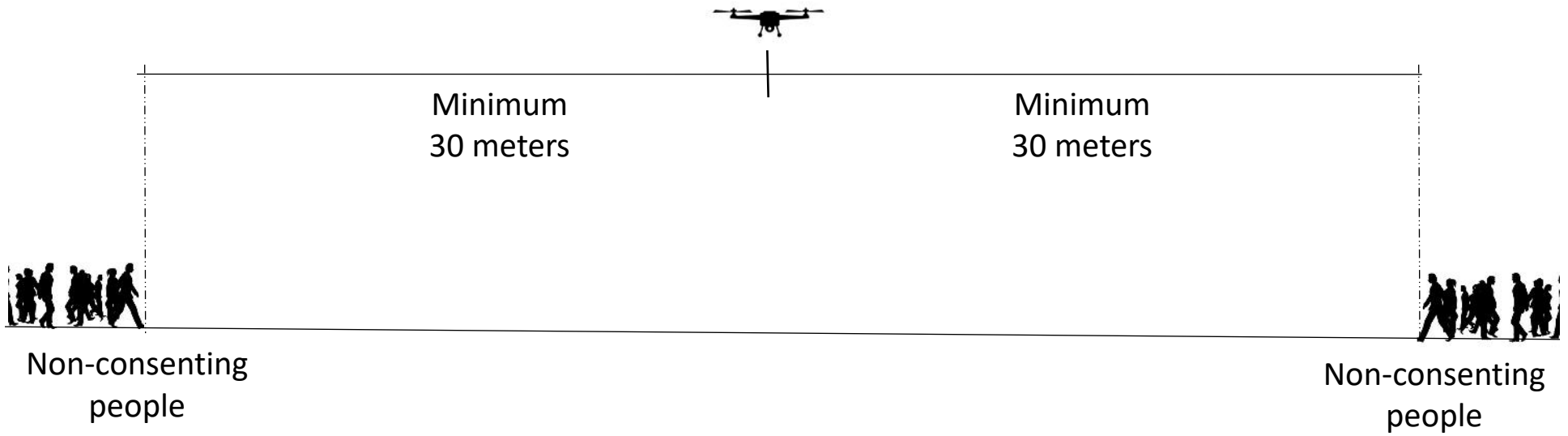
Rule - Summary

	Class 1 RPAS	Class 2 RPAS	Class 3 RPAS	Model aircraft
Aircraft registration	Traditional	Traditional	VLOS 400 feet: Inscription Other: Traditional	Inscription
Design approval or authorization	Yes	Yes (simplified)	Only for BVLOS or above 400 feet (simplified)	No
Minimum age for operation	18 y.o.	18 y.o.	18 y.o.	No
Operational risk assessment	Yes (IS E94-003)	Yes (IS E94-003)	Yes (IS E94-003)	No
Medical certificate	Yes (RBAC 67)	Yes (RBAC 67)	No	No
License and rating	Yes	Yes	Only for ops above 400 feet	Only for ops above 400 feet
Operation area	Distant from third parties (see more in “Where can you fly?”)			

… in other words

	OPEN	SPECIFIC	CERTIFICATED
Applicability	Class 3 RPAS operating VLOS up to 400 feet + model aircraft	Class 2 RPAS and other Class 3 RPAS operations	Class 1 RPAS
Aircraft registration	Inscription (SISANT online tool)	Traditional	Traditional
Design evaluation	None	Design authorization (RBAC-E No. 94)	Type certification (RBAC No. 21)
Remote pilot license and rating	No	Required only for operating C2 RPAS or +400 ft	Required
Medical certificate	No	Required only for operating Class 2 RPAS	Required
Public aerial service authorization	No	No	Required

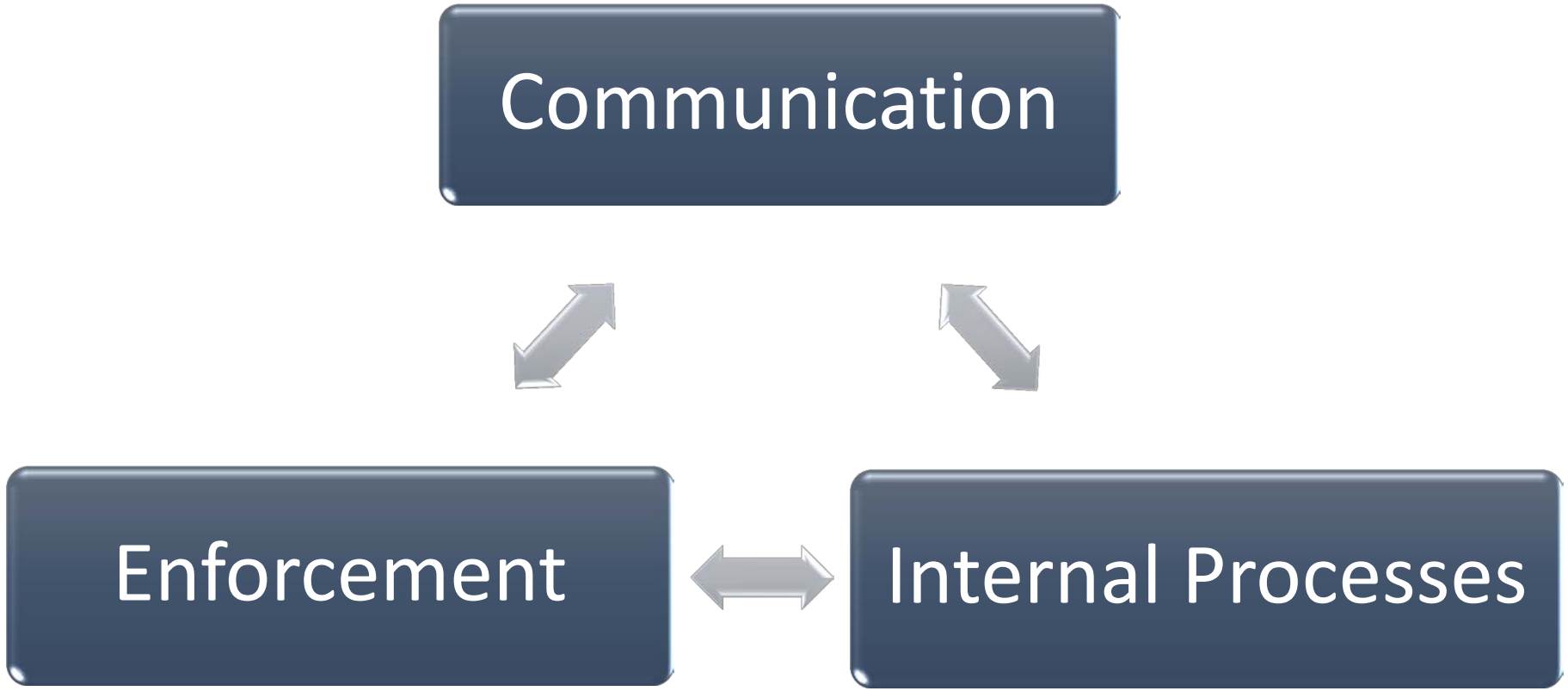
Area distant from third parties



Not applicable if:

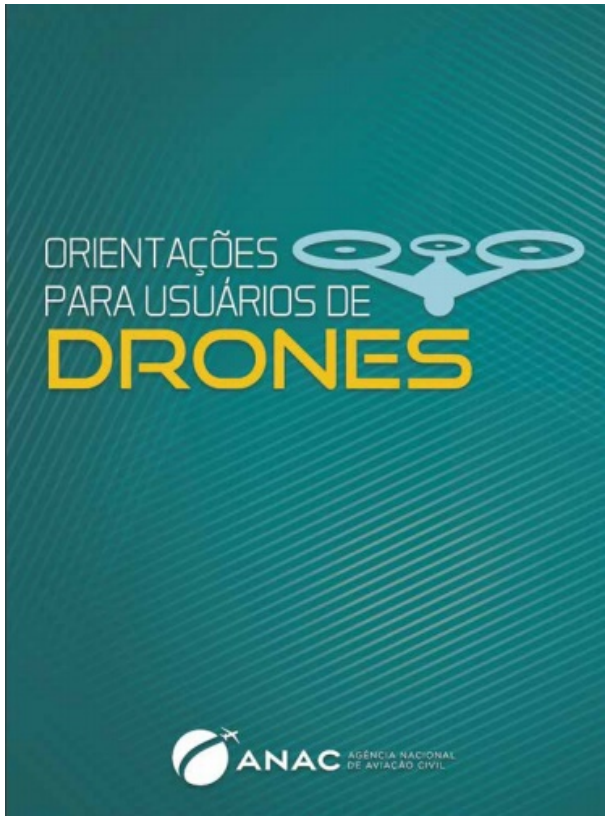
- MTOW below 250 grams. (E94.103(i))
- a mechanical barrier strong enough to isolate and protect uninvolved and non-consenting persons in case of an accident. (E94.3(a)(3))
- Operations by a public institution engaged in security, police, tax and customs inspection, to search for vectors of disease transmission, civil defense and/or firefighting or an operator in behalf of one of these. (E94.103(g))

Implementation Process



Communication

- Outreach campaign developed and implemented simultaneously with the publication of the rule:
  - Two press conferences (Brasilia and Sao Paulo)
  - Meeting with associations (industry, operators, pilots, drone users)
  - Hangout session with digital influencers
  - Participation in DroneShow 2017 (3,100 participants)
  - Dedicated portal: www.anac.gov.br/drones
  - Publication of Guidance material (one Guide for the general public and four Advisory Circulars)



Implementation Process

- Several procedures and systems needed to be developed/adjusted:
  - SISANT: new system for “open category” (free, online, automated)
  - RPAS Design Authorization – Design Authorization Data Sheet (DADS)
    - Modifications to the authorized design
  - Special Airworthiness Certification
    - New certificate template
    - New procedure
    - New registration category
  - Issuance of remote pilot license/rating

CERTIFICADO DE AERONAVEGABILIDADE ESPECIAL DE AERONAVE REMOTAMENTE PILOTADA - CAER
SPECIAL AIRWORTHINESS CERTIFICATE FOR REMOTELY PILOTED AIRCRAFT

MARCAS *Registration Marks*: PR-BFI

I – DADOS DA AERONAVE *(Aircraft)*

Fabricante *Manufacturer*	XMOBOTS	**Modelo** *Model*	ARATOR 5B
Número de Série *Serial Number*	70	**Ano de Fabricação** *Year of Manufacture*	2017
Categoria de Registro *Registration Category*	R01	**Peso Máximo de Decolagem** *Maximum Take Off Weight*	3.5 kg (7.7 lb)
Tipo de Operação Autorizada (VLOS/BVLOS) *Type of Operation Authorized (VLOS/BVLOS)*	VLOS	**Modelo da Estação de Pilotagem Remota** *Remote Pilot Station Model*	XPLANNER 3
Especificações Técnicas *Design Authorization Data Sheet (DADS)*	ERPAS-1815080-00		

II – PROPÓSITO DO VOO (Purpose of the Flight)

Operação de aeronave remotamente pilotada seguindo os preceitos do RBAC-E nº 94.

III – LIMITAÇÕES OPERACIONAIS (Operating Limitations)

1. Esta autorização deverá estar disponível na estação de pilotagem remota que estiver sendo usada para pilotar esta aeronave. (*This authorization shall be available in the remote pilot station that is being used to pilot this aircraft.*)
2. A aeronave para a qual este certificado foi emitido não satisfaz os padrões de aeronavegabilidade estabelecidos no Anexo 8 da Convenção sobre Aviação Civil Internacional. (*The aircraft to which this certificate is issued, does not meet the airworthiness standards prescribed in the Annex 8 to the Convention on International Civil Aviation.*)
3. Esta aeronave deve ser operada de acordo com as regras estabelecidas no RBAC-E 94. A operação deve ser realizada apenas em áreas distantes de terceiros, exceto se expressamente permitido pela ANAC. (*This aircraft shall be operated in accordance with the rules set in RBAC-E 94. The operation shall be conducted only in areas away from third parties, except if allowed by ANAC.*)

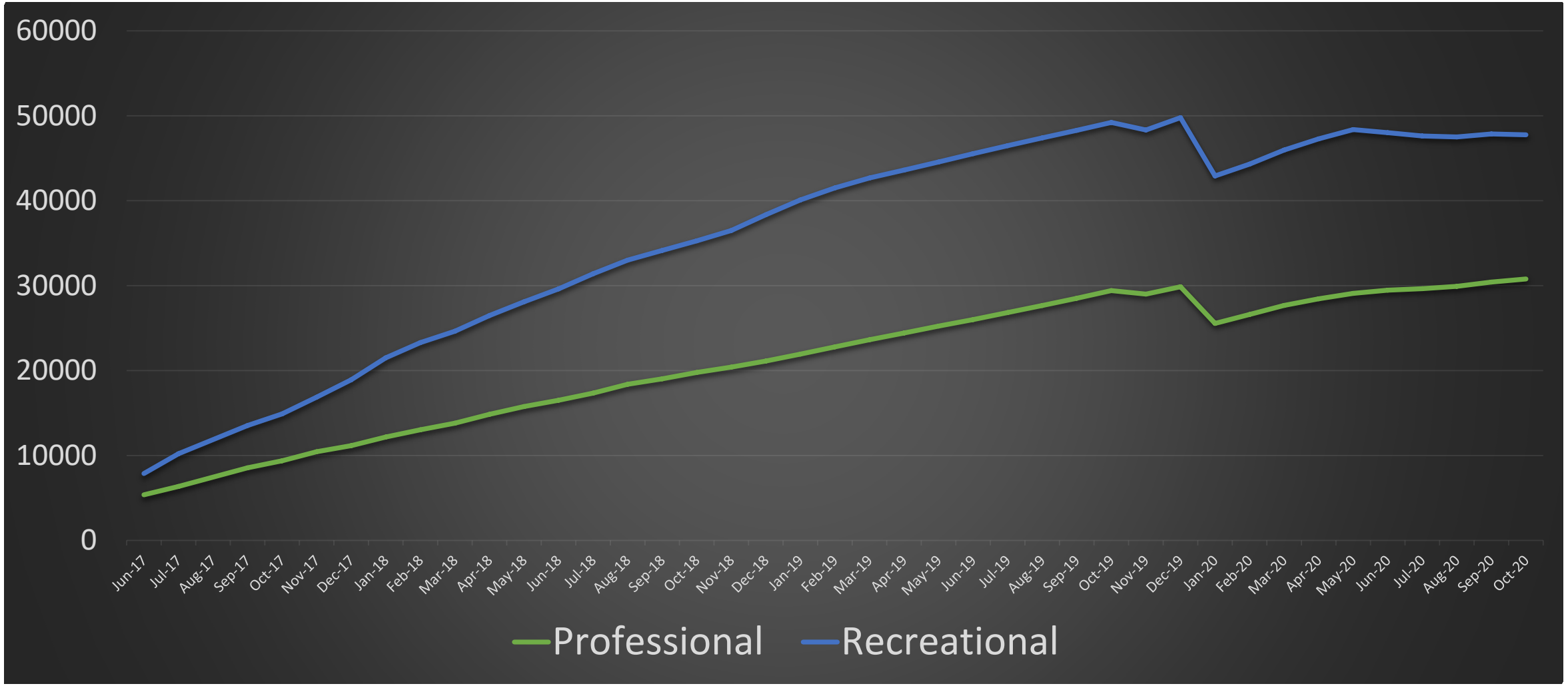
IV – AUTORIZAÇÃO ANAC (ANAC Authorization)

Data de Emissão *Issue Date*	17 de junho de 2019 Jun 17, 2019

Enforcement

- Past experience from the 2016 Olympics
- Coordination with Ministry of Justice and Public Security
  - Joint Workshop on May 2017 (64 participants)
- Guide for Law Enforcement Agents
  - Published by the Secretariat of Civil Aviation (Ministry of Infrastructure) with support from ANAC, DECEA and ANATEL
  - RBAC-E No. 94 Subpart H: Link between criminal laws (felonies and misdemeanors) and rules for the safe operation of UAS
    - Fly aircraft without being properly licensed – expose aircraft to danger – put third parties in direct or imminent danger.

SISANT in numbers



Beyond SISANT (specific)

Arator 5B

Manufacturer: Xmobots (Brazil)
Authorized operations: E/VLOS (2 km from PIC or observer) up to 2,000 ft AGL or BVLOS below 400 feet AGL up to 5 km from RPS
Number of aircraft (CAER): 11

eBee Classic (RTK)
eBee Plus and eBee SQ

Manufacturer: Sensefly (Switzerland) represented by Santiago&Cintra (Brazil)
Authorized operations: BVLOS below 400 feet AGL up to 5 km from RPS
Number of aircraft (CAER): 35

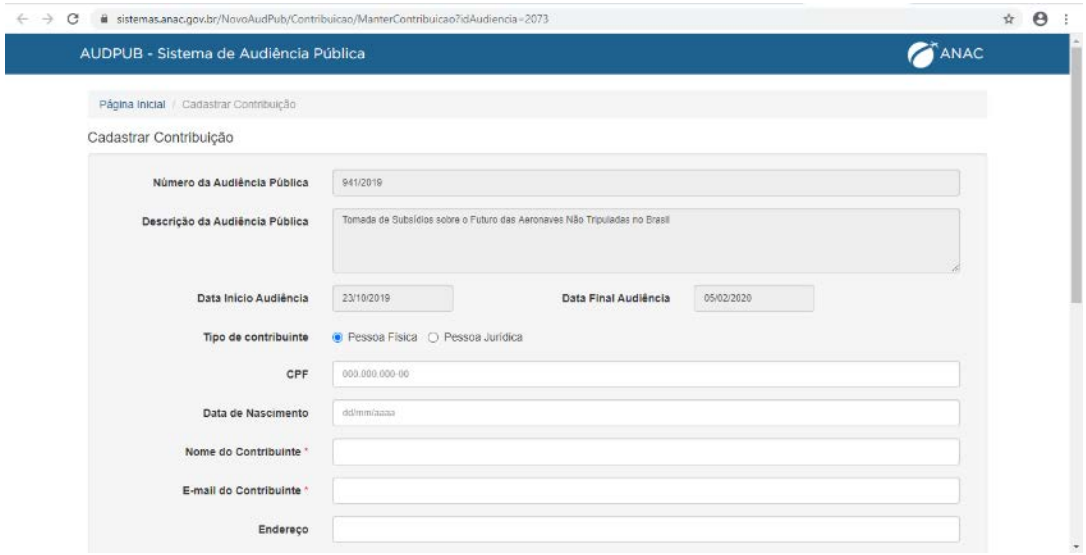
https://www.anac.gov.br/en/drones/list-of-authorized-rpas-designs

Lessons Learned

- Rules for the good
  - Excessive control punishes mostly the good operators
- Education and communication is essential
  - People will not comply with rules they don’t know/understand
- Need for public perception of value in the CAA participation
  - Perception of risk and consequences
  - Willingness to communicate with authorities
- Procedures have to able to accommodate the demand
  - If you can’t handle the demand, it will vanish from your eyes.

Regulatory Improvement/Update

- ANAC identified the need to update regulation in accordance with market/society demands and needs.
- Request for Information (RfI) process
- Consultation period: 5 Nov 2019 - 5 Feb 2020

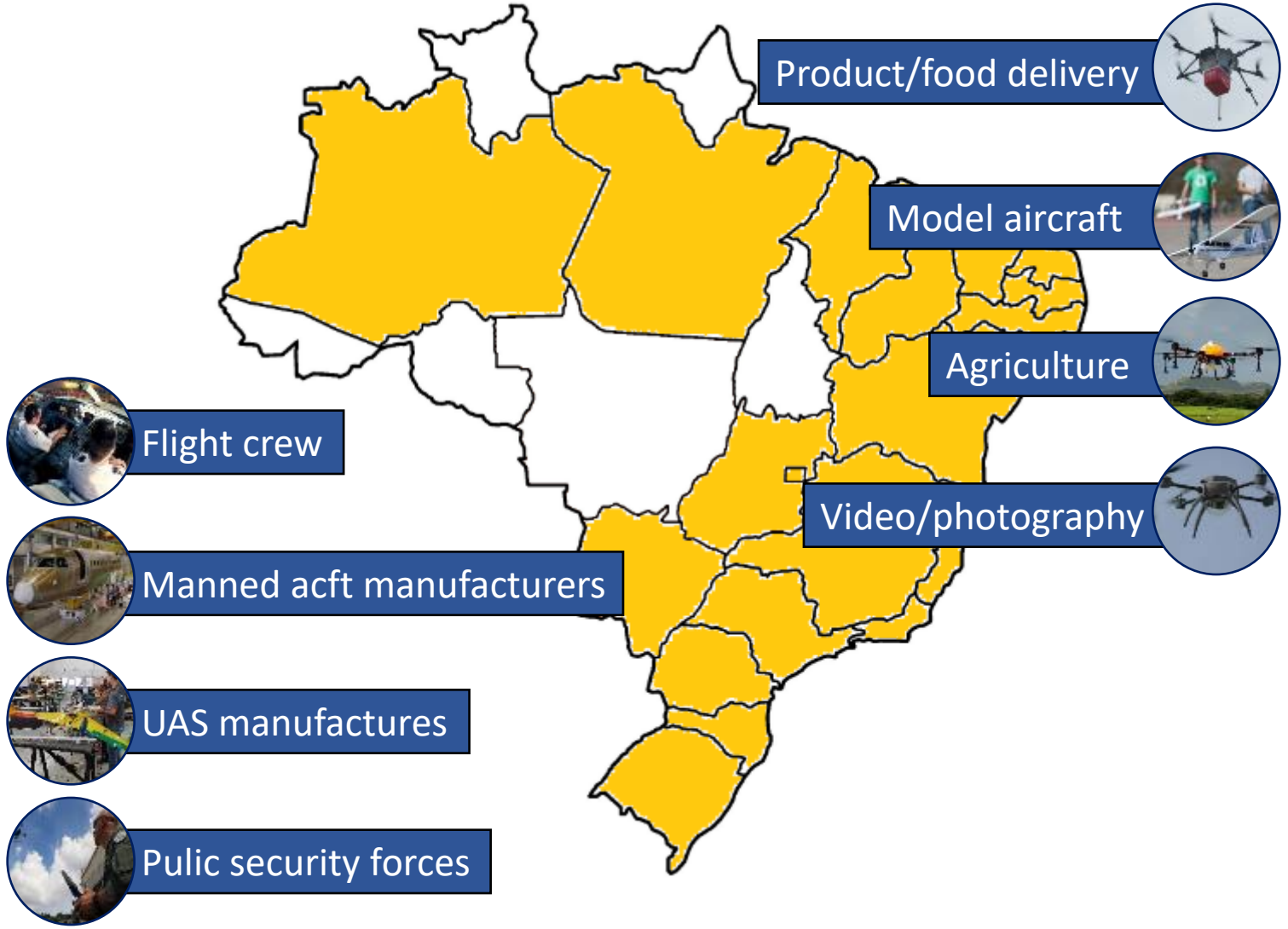


Regulatory Improvement/Update

Social participation

177 contributions

(124 people/institutions)



Regulatory Improvement/Update

	Main theme	Expected period
Front 1	Regulatory reorganization with greater focus in the intrinsic operational risk and revision of the rules for operations in limited environments.	2020-2021
Front 2	Development of technical criteria for new operational environments and scenarios.	2021-2022
Front 3	Electronic remote identification and other technical and operational criteria to support UTM environments.	To be defined in coordination with DECEA (ATM)

ANAC

www.anac.gov.br/en/drones

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