The European UAS Regulation
Established 2002

17 years in operation

800+

aviation experts & administrators

Headquarters in Cologne
Office in Brussels

32 EASA member states = 28 + 4
EU + Switzerland, Norway, Iceland, Liechtenstein
Agenda

• Definitions and introduction
• The open category
• The specific category
• The U-space
• The certified category
Definitions

UAS

Involved person

Model aircraft = UAS

However special provisions apply

UAS Operator

Remote pilot

EASA
Legal Basis

Regulation EU 1139/2018 (EASA basic regulation) extends to all UAS the EU competence:

• EASA carries out on behalf of Member States the functions and tasks of the state of designs for all UAS
• EASA issues certificate of airworthiness for UAS, when needed

Only civil drones but ..... possibility to opt in for state and military aircraft
Performance Based, Risk-Based, Operation Centric

**OPEN category - Low risk**
- NO-PRE APPROVAL
- LIMITATIONS: 25 kg, Visual Line of Sight (VLOS), height <120m, system of zones
- 3 Sub-categories: fly over, close, far from people

**SPECIFIC - Increased risk**
- Authorisation by NAA based on specific operation risk assessment (SORA)
- Declaration in case of standard scenario; LUC

**CERTIFIED - Risk as manned aviation**
- Certification of UAS [by EASA], approval of the operator and licensed pilot (unless autonomous flight) [by the NAAs]

**General public / recreational purpose**
- Model Flying, Photographers

**BVLOS operations (linear inspections, aerial work, …)**
- Transport of goods

**Air Taxi**
- International IFR (cargo, passengers)
- Package delivery over people
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**NPA planned for Q4 2020**
Status on EU Regulations for Operations in Open and Specific Category

- **Commission Delegated Regulation (EU) 2019/945** (technical requirements and third country operations)
  - entered into force and became applicable on 1st July 2019

- **Commission Implementing Regulation (EU) 2019/947** (operational requirements and registration)
  - entered into force on 1st July 2019
  - will become applicable on 1st July 2020
  - AMC and GMs published on EASA website

- *They directly replace national drone regulations*
Registration of UAS Operators

UAS Operators shall register themselves when they operate:

- **In the open category:**
  - UAS with an MTOM > 250g
  - UAS (non toys) with an MTOM < 250g equipped with a sensor able to capture personal data
  - UAS which, in the case of an impact, can transfer to a human a kinetic energy greater than 80 Joules (e.g. a UAS with MTOM = 250 g and speed > 130 km/h)

- **In the specific category:** All operators

Member State of residence or main place of business
Registration of Unmanned Aircraft

The Unmanned Aircraft shall be registered when a certificate of airworthiness is required
Tools for Enforcement Authorities

• Interoperable & real-time registration databases for:
  • UAS operators
  • certified unmanned aircraft

• Local E-identification broadcasting:
  • UAS operator registration number and UA unique serial number
  • Remote pilot or UA take-off position
  • UA current position, height, timestamp
  • Direction and speed of the UA

• UA marked with UAS operator registration number
Flexibility for Member States

Geographical zones defined by Member States

- Geo-awareness
- Identification
- Mass
- Product requirements

Geo-awareness on drones to support remote pilots
The Open Category

Your safety is our mission.
Open Category

- MTOM < 25 Kg
- Remote pilot minimum age 16, unless supervised (it may be reduced to 12, no minimum age for toys)
- No carriage of dangerous goods
- No dropping of material
- No autonomous operations

Additional limitations based on operational subcategory:

- A1 fly over people
- A2 fly close to people
- A3 fly far from people

VLOS (Visual Line of Sight)

Privately built with MTOM<250g

Privately built with MTOM<25kg
Rules Made Simple for UAS operators

Each drone package will include consumer information
Open Category - Subcategory A1

- No flight over groups of people

MTOM < 250g

Privately built with MTOM < 250g
Open Category - Subcategory A1

- No flight over groups of people
- Reasonably expect that no uninvolved person is overflown. In case of unexpected overfly over uninvolved persons, the remote pilot shall reduce as much as possible the time during which the unmanned aircraft overflies those persons
Open Category - Subcategory A2

- **MTOM < 25 Kg**

- **Visual Line Of Sight (VLOS)**
  - **120m**
  - **5m or 30m**

- **No flight over uninvolved people**

- **UAS at a horizontal distance of at least 30 metres from uninvolved persons, or up to a of 5 metres when low speed mode function is activated**
Open Category - Subcategory A3

- **No flight over uninvolved people**
- Conducted in an area where the remote pilot reasonably expects that no uninvolved person will be endangered within the range where the unmanned aircraft is flown during the entire time of the UAS operation
Training for Remote Pilots

- Privately built with MTOM<250g
  - Familiarisation with the manufacturer’s instructions

- Privately built with MTOM<25kg
  - Familiarisation with the manufacturer’s instructions
  - Complete the online training
  - Pass the online test

After passing the examination, the MS issues the proof to the remote pilot

Remote Pilot training proof of completion number
Open Category: Training for Remote Pilots

- Familiarisation with the manufacturer’s instructions
- Complete the online training
- Pass the online test
- Conduct a self-practical training in a “safe” area (A3 subcategory conditions)
- Declare completion of the practical training
- Pass a written test in an entity recognised by the competent authority
UAS Operator Registration Number vs Remote Pilot Training Proof of Completion Number

UAS operator registration number

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Open Category: Renewal of Remote Pilot Training

- Online theoretical competency and certificate of remote pilot competency are valid for 5 years
- Competencies need to be re-demonstrated or remote pilot may attend a seminar provided by the NAA or an entity recognised by the NAA
Flying in a Hilly Environment and Over Obstacles

Upon request of the owner of the artificial obstacle
Model Aircraft

**Option 1** - Article 16 regulation (EU) 2019/947

- Model clubs and associations may receive an authorisation from the NAA defining the applicable conditions (i.e. NAA may define the full set of rules such as minimum age, maximum altitude etc..). Registration still mandatory
- All members of an authorised model club or association must operate according to the procedures of the club or association

**Option 2**
Fly in areas designated by the NAA where different conditions apply

**Option 3**
Fly in subcategory A3

Privately built with MTOM<25kg
Responsibilities of UAS Operators

- Develop operational procedures adapted to the type of operation and the risk involved
- Ensure efficient use of radio spectrum
- Designate a remote pilot for each UAS operation
- Ensure that remote pilots and all other personnel supporting operations have the required competency and information
Responsibilities of UAS Operator

Update the information into the geo-awareness system

When operating a UAS with CE class mark ensure that the UAS is accompanied by the corresponding EU declaration of conformity

Ensure that all involved persons present in the area of the operation have been informed of the risks and have explicitly agreed to participate.
Responsibility of the Remote Pilot

Have the appropriate competency and carry a proof of competency

Obtain updated information about any geographical zones and comply with them

Ensure that the UAS is in a condition to safely complete the intended flight and operate the UAS in accordance with the user manual and manufactures’ procedures

Not perform duties under the influence of psychoactive substances or alcohol
Responsibility of the remote pilot

- Keep the UA in VLOS and maintain a thorough visual scan of the airspace surrounding the UA in order to avoid any risk of collision with any manned aircraft. Discontinue the flight if the operation poses a risk to other aircraft, people, animals, environment or property.

- Remote pilots may be assisted by an UAS observer, situated alongside them, who, by unaided visual observation, assists in safely conducting the flight.

- Do not fly close to or inside areas where an emergency response effort is ongoing unless with permission.
**Timeline**

- **Entry into force (1st July 2019)**
- **Applicability (1st July 2020)**
- **End of transitional period (1st July 2022)**

**Limited open category**

- UAS with MTOM < 500 g may operate in subcategory A1
- UAS with MTOM < 2 kg may be operated at a minimum horizontal distance of 50 m from people
- UAS with MTOM < 25 kg may be operated in subcategory A3

**Remote pilot competency defined by Member State**

**Open category according to EU Regulation**

**Limited open category**

- All UAS operators shall register themselves and register certified UAS

**National regulation fully applicable**

**Entry into force (1st July 2019)**

**Applicability (1st July 2020)**

**End of transitional period (1st July 2022)**
Timeline for Implementation

UAS without CE marking, purchased before this date, can still be operated in subcategory A1 and A3

Entry into force (1st July 2019)

Applicability (1st July 2020)

End of transitional period (1st July 2022)

All UAS to be operated in open category are put on the market with the CE mark

All model clubs and associations should receive an authorisation by the NAA
Summary of ‘Open’ Category

• New European Rules (Regulation (EU) 2019/947) will apply from mid 2020 and become fully applicable in mid 2022
• Registration of UAS operator and certified Unmanned Aircraft

• Flying in the Open Category is easy:

  Buy  ➔  Register  ➔  Train  ➔  Fly
You are the pilot!

https://easa.europa.eu/drones/

Your safety is our mission.