

Current Drone regulations

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Drone regulations

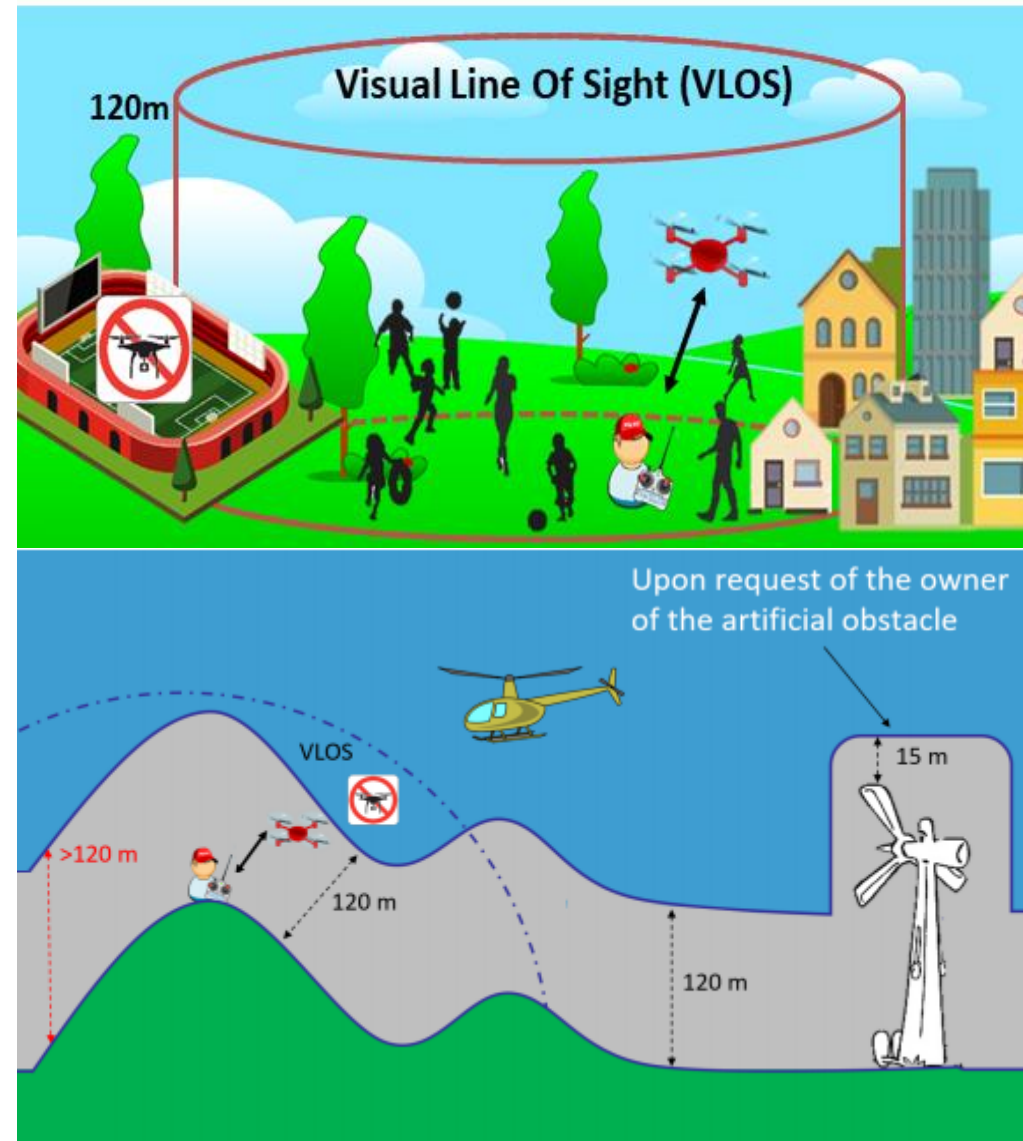
- ▶ EU regulations:
 - ▶ (EU) 2019/947: the rules and procedures for the operation of unmanned aircraft
 - ▶ (EU) 2019/945: unmanned aircraft systems (UAS)
 - ▶ (EU) 923/2012: Common Rules of the Air (SERA)
 - ▶ U-space regulation (applicability 26.1.2023)
- ▶ National regulations:
 - ▶ OPS M1-32: USE OF REMOTELY PILOTED AIRCRAFT AND MODEL AIRCRAFT IN AVIATION
 - ▶ Aviation Act
- ▶ International rules:
 - ▶ ICAO Annexes
 - ▶ Scope is "International IFR RPAS operations"
 - ▶ Applicability 2026
- ▶ Rules not applicable for operations conducted indoors!

New Drone register

- ▶ Operators must register themselves when flying a drone:
 - ▶ In the OPEN category:
 - ▶ with a MTOM of 250 g or more
 - ▶ that is equipped with a sensor able to capture personal data, unless it complies with Directive 2009/48/EC.
 - ▶ In the SPECIFIC category always
 - ▶ In the CERTIFIED category the UAS must be registered as well
- ▶ Operator can be a private person or a company
 - ▶ Carries the overall responsibility of the UAS operation
 - ▶ Must register according to the place of residence or the principal place of business
- ▶ National exemptions not possible

OPEN category

- ▶ No authorisation required
 - ▶ CE marked drone or a drone placed on the market before 1.1.2023
 - ▶ MTOM < 25 kg
 - ▶ Safe distance from people
 - ▶ Visual line of sight (VLOS)
 - ▶ Maximum flying height 120 m (AGL)
 - ▶ No dangerous goods or dropping items
- ▶ 3 subcategories:
 - ▶ A1, A2: Urban/populated areas
 - ▶ A3: Rural/sparsely populated areas



Subcategories A1-A3

31.12.2020 – 31.12.2022 (Transitional period)

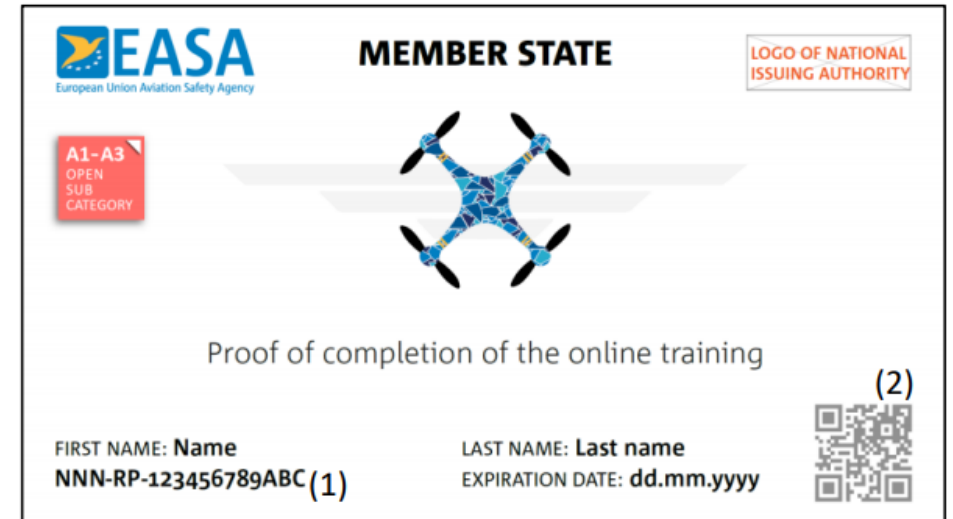
A1 Drone MTOM 500 g	A2 Drone weight 500 g - 2 kg	A3 Drone weight 500 g - 25 kg
<p>No flying above assemblies of people, overflying isolated people is possible</p> <p>No training/competency requirements</p>	<p>Flying in urban/populated areas at a safe distance (50 m) from people.</p> <p>Online exam + additional examination</p>	<p>Flying in rural/sparsely populated areas</p> <p>Online exam</p>

1.1.2023 → (After transitional period)

A1 Drone MTOM 900 g CE markings: C0 ja C1	A2 Drone weight 900 g - 4 kg CE markings: C2	A3 Drone weight 900g - 25 kg CE markings: C2, C3, C4
<p>No flying above assemblies of people, overflying isolated people is possible</p> <p>Drone weight 250–900g: Online exam <250g: No trg./comp. requirements</p>	<p>Flying in urban/populated areas at a safe distance (30 m) from people.</p> <p>Online exam + additional examination</p>	<p>Flying in rural/sparsely populated areas</p> <p>Online exam</p>

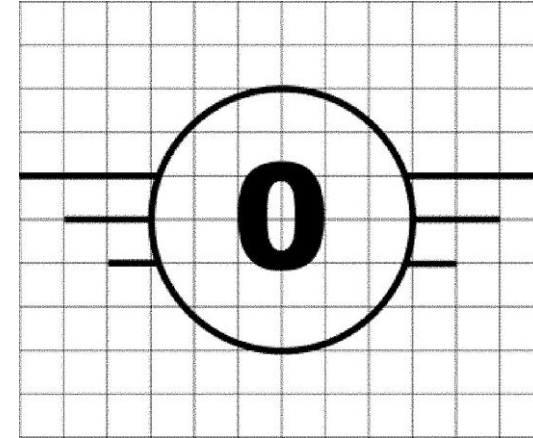
Training and competency requirements

- ▶ Open category:
 - ▶ Online theoretical knowledge examination A1/A3
 - ▶ When flying a drone with MTOM of 250g or more
 - ▶ Until 1.1.2023 MTOM of 500 g or more
 - ▶ Online training (self study material)
 - ▶ Additional theoretical knowledge examination
 - ▶ For A2 subcategory operations
 - ▶ A1/A3 exam + self-practical training + A2 exam
→ Remote pilot certificate of competency
 - ▶ National exemption until 1.1.2022
- ▶ Specific category:
 - ▶ AMC/GM to be published this year



(EU) 2019/945: Unmanned Aircraft Systems (UAS)

- ▶ Requirements for classes C0-C6
- ▶ Drones must meet the requirements by 1.1.2023
 - ▶ Current drones may be retrofitted or recalled
 - ▶ Transitional periods for certain drones placed on the market before 1.1.2023
 - ▶ < 250 g, OPEN A1
 - ▶ < 25 kg, OPEN A3
- ▶ Obligations of manufacturers, importers and distributors



CERTIFIED category

- ▶ Operations to be conducted in the CERTIFIED category when:
 - ▶ Transporting people
 - ▶ Transporting dangerous goods
 - ▶ Flying above assemblies of people with bigger drones
- ▶ Requirements in the certified category will be close to those in manned aviation
 - ▶ A/C registration
 - ▶ A/C type approval
 - ▶ More competency requirements for Remote pilot
- ▶ Regulation incomplete for certified operations



SPECIFIC category

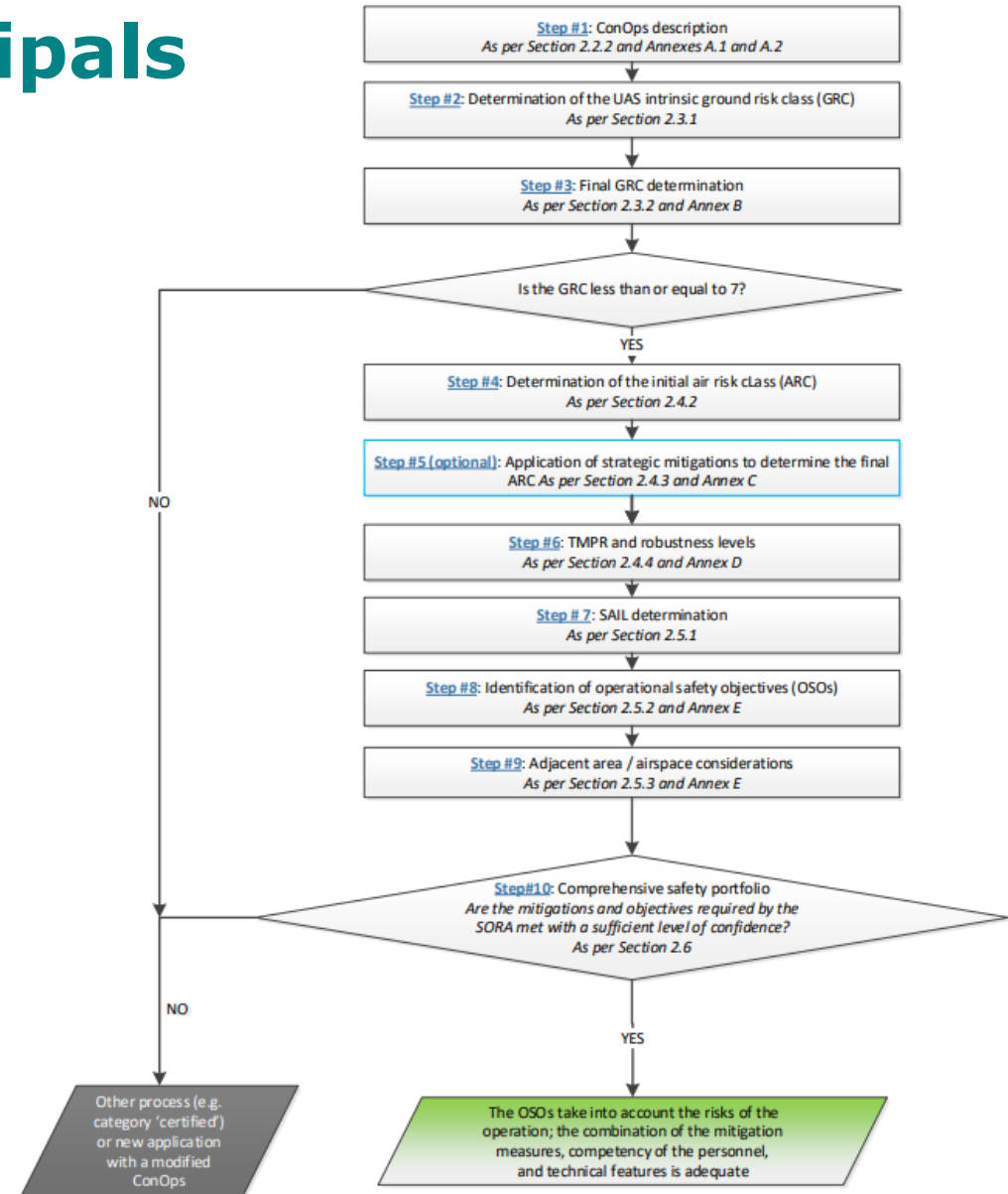
- ▶ All operations outside OPEN and CERTIFIED categories
- ▶ Operations can be based on
 - ▶ Declaration → Standard Scenario (STS) published by EASA
 - ▶ Operational authorisation granted by NAA → a PDRA or a SORA risk assessment
 - ▶ Authorisation from the NAA of the country you are registered in
- ▶ RP competency requirements can be defined case by case depending on the risk level
- ▶ Low risk operations (SAIL I, II)
 - ▶ a CE marked drone or approved for use in the operational authorisation
- ▶ Higher risk operations (SAIL III-)
 - ▶ EASA type approval may be required
- ▶ EU regulations set much higher requirements for future UAS than OPS M1-32

PDRA's and STS's

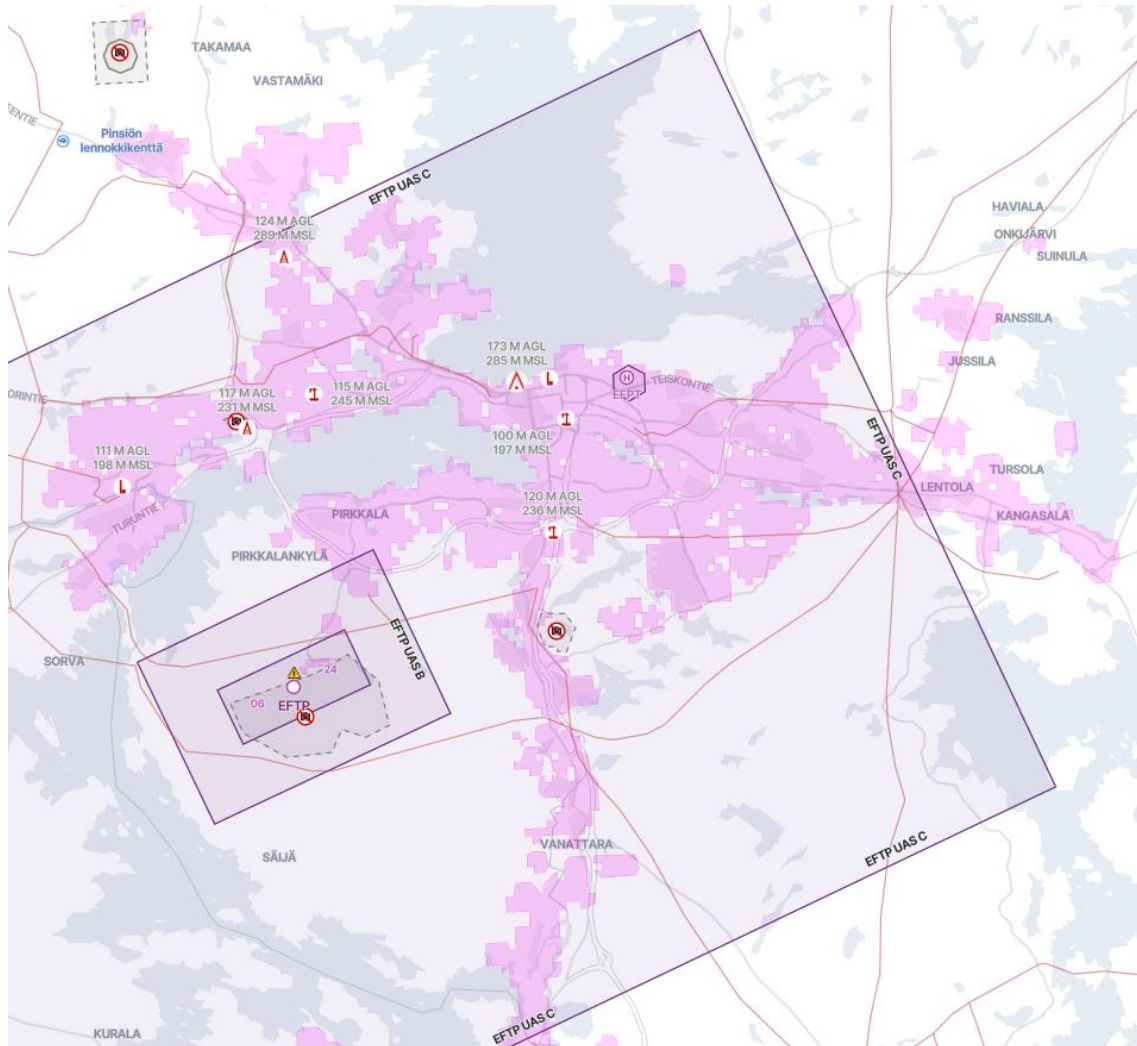
Name	Equipment	Overflown area	VLOS / BVLOS	Additional requirements	Flying height	Airspace	ARC	GRC	SAIL
PDRA-G01	3m / 34kJ	Sparsely populated	BVLOS		150 M	Uncontrolled	ARC-b		3 II
PDRA-G02	3m / 34kJ	Sparsely populated	BVLOS		Depending on the area	Tempo D/R	ARC-a		3 II
PDRA-S01	3m / 34kJ	Controlled ground area in populated	VLOS		120 M	All (a low probability of encountering manned aircraft)	ARC-b		3 II
PDRA-S02	3m / 34kJ	Controlled ground area in sparsely populated	BVLOS		120 M	All (a low probability of encountering manned aircraft)	ARC-b		3 II
PDRA-G03	3m / 34kJ	Sparsely populated	BVLOS	Atypical	50 M (fixed obstacle)	Atypical airspace	ARC-a		3 II
PDRA-G03	3m / 34kJ	Sparsely populated	BVLOS		150 M	Uncontrolled	ARC-b		3 II
STS-01	class C5, remote identification	over a controlled ground area	VLOS	Height near obstacle, no dangerous goods	120 M				
STS-02	class C6 , remote identification	over a controlled ground area entirely located in a sparsely populated environment	BVOLS (Airspace observers)	Height near obstacle, no dangerous goods minimum flight visibility is more than 5 km	120 M				

SORA risk assessment principals

- ▶ Intrinsic Ground risk class (GRC)
- ▶ Initial Air risk class (ARC)
- ▶ Risk mitigations
- Overall risk determination (SAIL I-VI)
- Operational Safety Objectives (OSO)
 - ▶ Requirements for equipment
 - ▶ RP competency
 - ▶ Operational area or volume



UAS geographical zones



- ▶ Restrict or prohibit UAS operations
 - ▶ Airports, CTR's, uncontrolled airfields, heliports, jails, police stations
- ▶ Exemption from one or more of the 'open' category requirements
 - ▶ For hobby, commercial, research and experimental purposes
 - ▶ Model aircraft flying fields
- ▶ Visual on droneinfo.fi and aviamaps.com
 - ▶ "Machine readable" format

National regulation OPS M1-32

USE OF REMOTELY PILOTED AIRCRAFT AND MODEL AIRCRAFT IN AVIATION

- ▶ For Aerial Work UAS operators
 - ▶ “Old” notification on the use of RPAS is required
 - ▶ Transitional period until 1.1.2022
- ▶ For model aircraft clubs
 - ▶ Transitional period until 1.1.2023
- ▶ For state unmanned aviation
 - ▶ Own regulation OPS M1-35 from 1.1.2023
- ▶ No exemption from EU registration requirement (new drone register)
- ▶ Restrictions of UAS geographical zones apply to all operators



TRAFICOM

Liikenne- ja viestintävirasto

Thank you

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