

## UAS operations in the specific category

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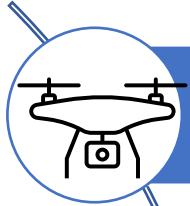


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UAS categories

# UAS categories

Open



Standard scenarios (declarative)

Specific



Certified



CE

PRESCRIPTIVE  
APPROACH

No prior authorisation

SORA

Prior authorisation needed

[Regulation \(EU\) 2019/945](#) (technical requirements and third country operations)

 [Regulation \(EU\) 2019/947](#) (registration and operational requirements)

It includes international IFR flights according to ICAO, however it will be addressed by a future proposal

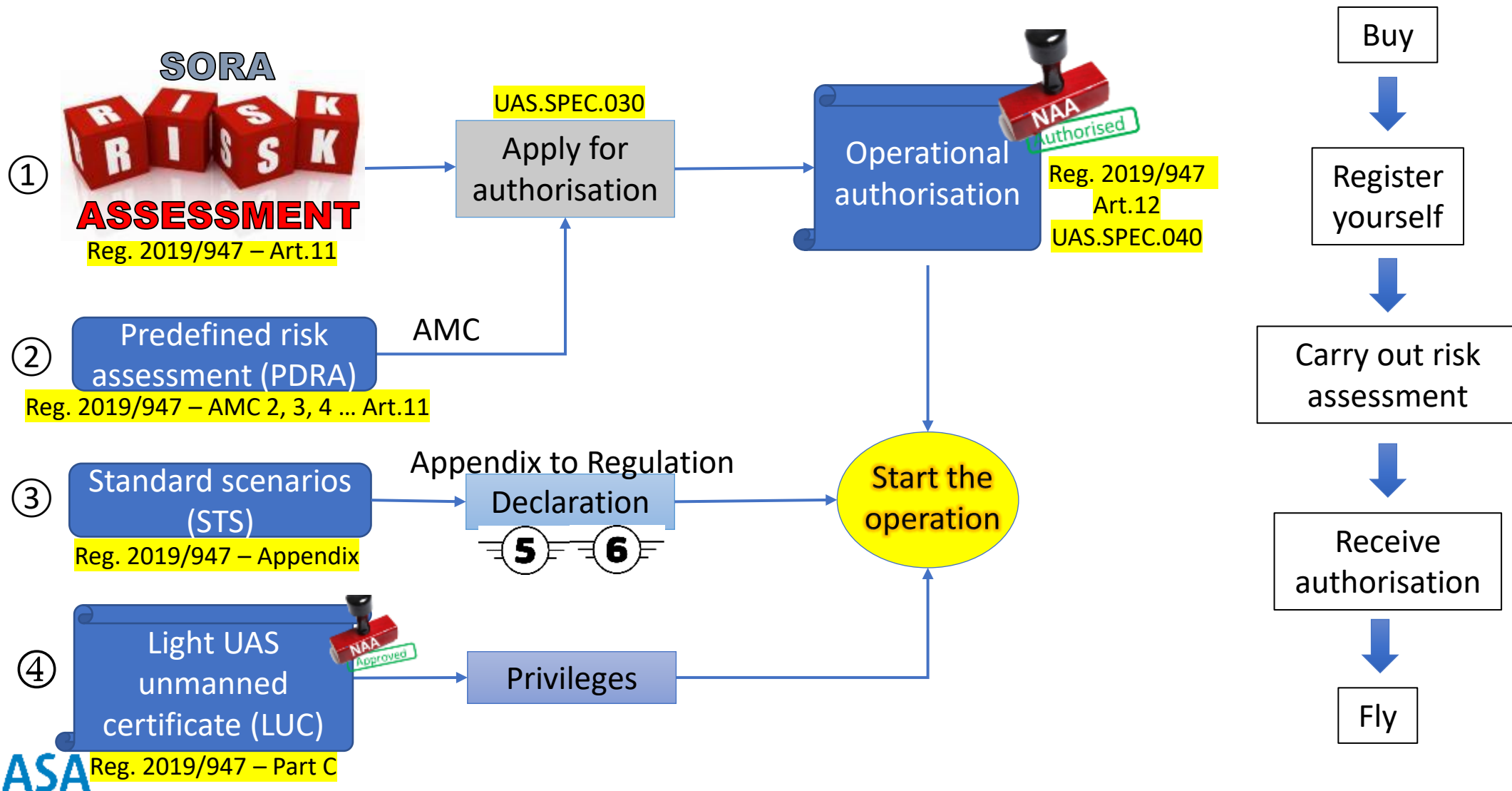
# Specific category

## Definition

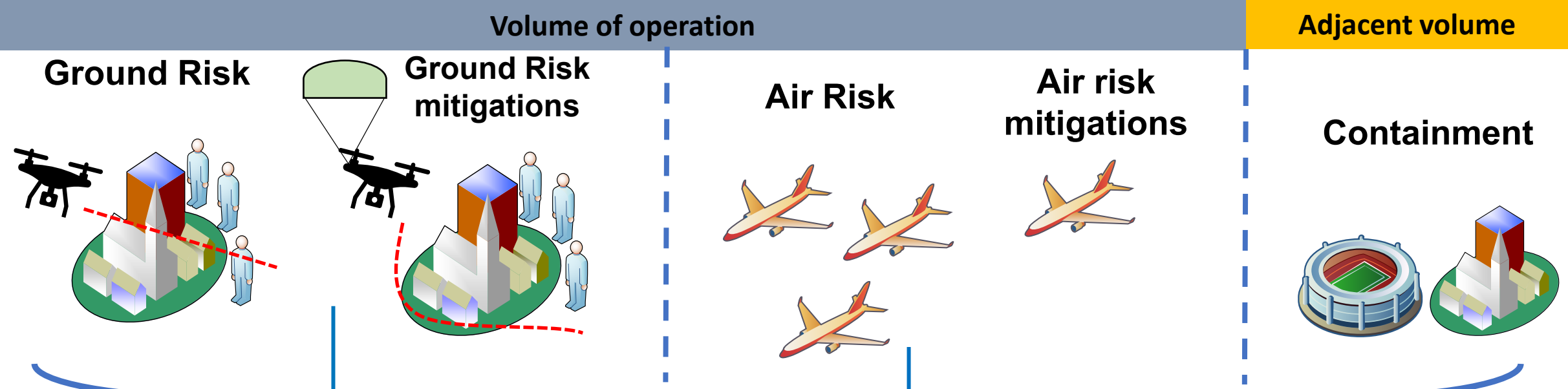
- It is a UAS operation exceeding the limitations defined in the 'open' category.
- Examples of UAS operations in the specific category:
  - BVLOS
  - with a UAS with MTOM > 25 kg
  - in urban environment with UAS with a MTOM > 4 kg or without proper CE class mark
  - higher than 120m
  - with the purpose of dropping material

# Specific category

Requirements based on the risk assessment performed by the UAS operator



# Overview of SORA methodology



SAIL (specific assurance and integrity level) = combined risk level

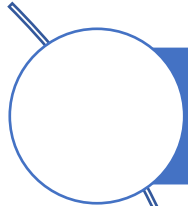
**Risk level determination**

SAIL determination				
Final GRC	Residual ARC			
	a	b	c	d
≤2	I	II	IV	VI
3	II	II	IV	VI
4	III	III	IV	VI
5	IV	IV	IV	VI
6	V	V	V	VI
7	VI	VI	VI	VI
>7	Category C operation			

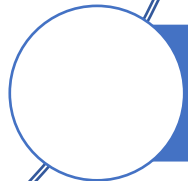
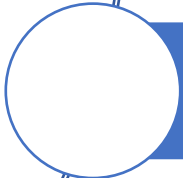
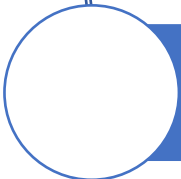
**Requirements determination**



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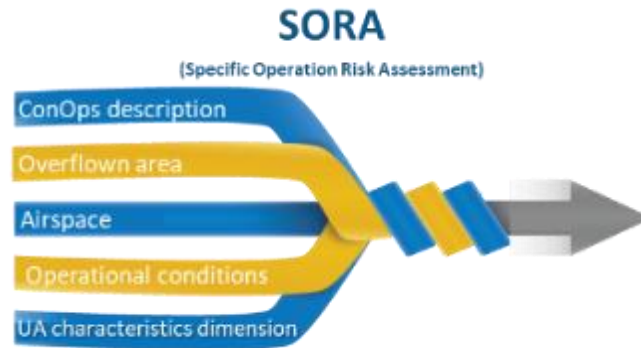
Standard Scenarios description



# Specific category – Standard scenario

Developed by EASA as simplification for the UAS operator

Low risk  
operational  
scenario



Detailed mitigation measures  
easy to be implemented



Appendix to Regulation  
(EU) 2019/947

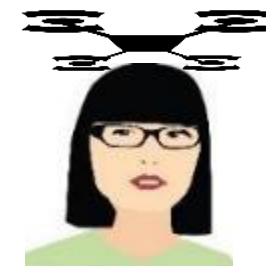
NAA



Declaration



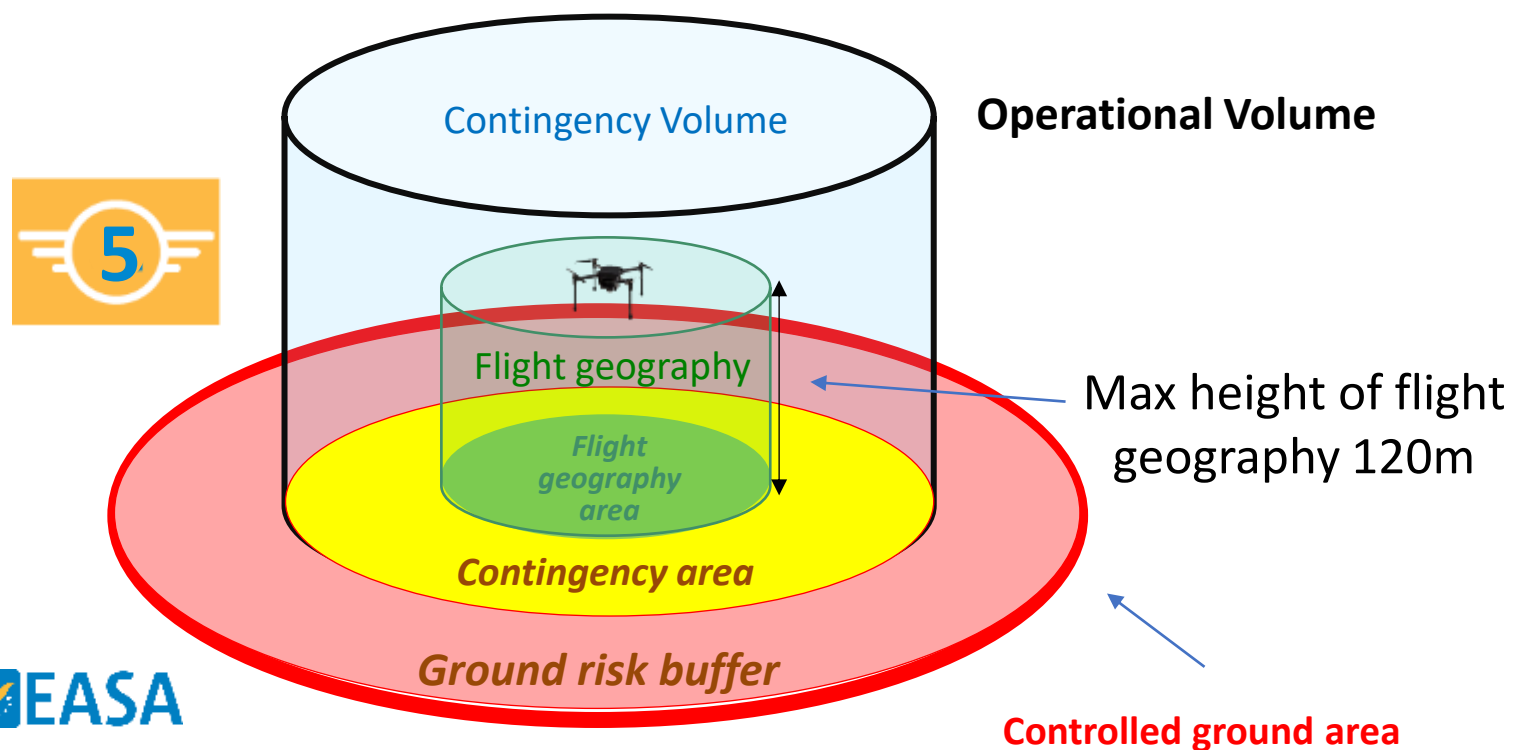
confirmation of receipt  
and completeness




# European Standard Scenario STS - 01

## Regulation 2019/947 – Appendix 1 – Chapter 1

- VLOS, below 120m (also in urban environment)
- with a UAS bearing a C5 Class identification label
- Ensure no involved person is present in the controlled ground area



	Operational declaration
	<p><b>Data protection:</b> Personal data included in this declaration is processed by the competent authority pursuant to Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). It will be processed for the purposes of the performance, management and follow up of the oversight activities according to Commission Implementing Regulation (EU) 2019/947.</p> <p>If you require further information concerning the processing of your personal data or you wish to exercise your rights (e.g. to access or rectify any inaccurate or incomplete data), please refer to the contact point of the competent authority.</p> <p>The applicant has the right to make a complaint regarding the processing of the personal data at any time to the national Data Protection Supervisory Authority.</p> <p>UAS operator registration number</p>

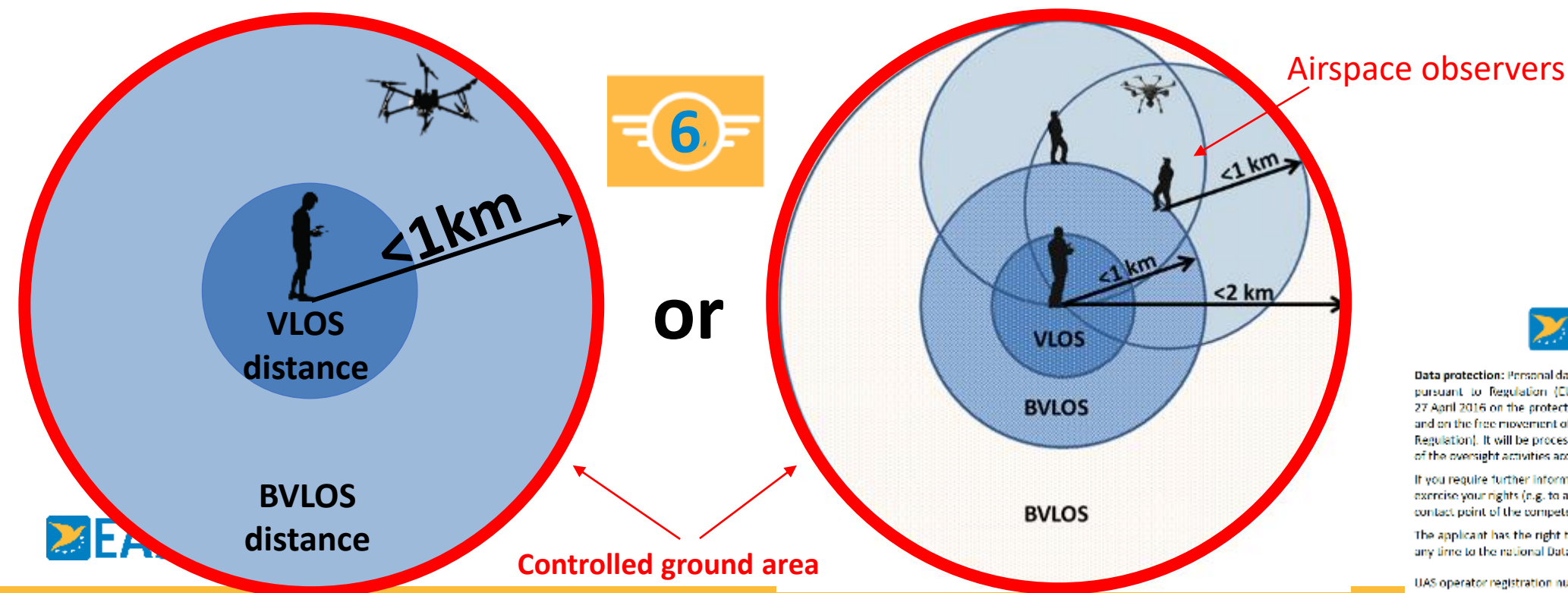
# European Standard Scenario STS - 02

## Regulation 2019/947 – Appendix 1 – Chapter 2

- BVLOS (up to 1km distance or 2 km if airspace observer is used),
- below 120m (over sparsely populated area)
- with a UAS bearing a C6 Class identification label
- Ensure no involved person is present in the controlled ground area



The image shows a form for EASA C6 Class identification. It includes the EASA logo, the text 'Please write this in your own national language', and fields for 'First Name', 'Last Name', and 'UAS operator registration number'. A QR code is also present.



Operational declaration

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UAS operator registration number

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-  PDRA description
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# Application process in case of PDRA

Apply for authorisation

PDRA characterisation and conditions			
Topic	Method of proof	Condition	Proof <sup>2</sup>
		3.6 The applicant should evaluate the area of operations typically by means of an on-site inspection or appraisal, and should be able to justify a reduced density of people at risk in the operational area and the ground risk buffer.	<i>Please include a reference to the relevant chapter/section of the OM.</i> 'I declare compliance.'
Air risk	Self-declaration	3.7 The operational volume, including the air risk buffer, if applicable, should be entirely contained in the reserved or segregated airspace.	<i>Please include a reference to the relevant chapter/section of the OM.</i> 'I declare compliance.'
Observers		n/a	
4. UAS operator and UAS operations conditions			
UAS operator and UAS operations	Declaration supported by data	4.1 The UAS operator should:	
		4.1.1 develop an operations manual (OM) (for the template, refer to <a href="#">AMC1 UAS.SPEC.030(3)(e)</a> and to the complementary information in <a href="#">GM1 UAS.SPEC.030(3)(e)</a> );	<i>Please describe how this condition is met.</i> 'I declare compliance and that supporting evidence is included in the OM.'
		4.1.2 develop procedures to ensure that the security requirements applicable to the area of operations are complied during the intended operation;	<i>Please include a reference to the relevant chapter/section of the OM.</i> 'I declare compliance and that supporting evidence is included in the OM.'
		4.1.3 develop measures to protect the UAS against unlawful interference and unauthorised access;	<i>Please include a reference to the relevant chapter/section of the OM.</i> 'I declare compliance and that supporting evidence is included in the OM.'

**Compliance evidence**

**Operator exposition**

**Application for an operational authorization**

**Data protection:** Personal data included in the application is processed by the competent authority pursuant to [Regulation \(EU\) 2018/626](#) of the European Parliament and of the Council of 27 April 2018 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing [Directive 95/46/EC](#) (General Data Protection Regulation). It will be processed for:

**1. UAS operator data**

1.1 UAS operator registration number

1.2 Name of the UAS operator

1.3 Name of the accountable manager

1.4 Operational point of contact  
Name



# List of published PDRAs

PDRA Ref	UAS Characteristics	Main Ops characteristics	Typical ops
PDRA-S01 <i>AMC4 Article 11</i>	MTOM=25 kg Max dimension 3m	<ul style="list-style-type: none"> <li>✓ VLOS;</li> <li>✓ Controlled ground area also over populated area;</li> <li>✓ Controlled or uncontrolled airspace less than 150m AGL;</li> </ul>	Agricultural works, short range cargo ops
PDRA-S02 <i>AMC5 Article 11</i>	MTOM=25 kg Max dim 3m	<ul style="list-style-type: none"> <li>✓ BVLOS up to 1km or 2km with AO;</li> <li>✓ Controlled ground area over sparsely populated area;</li> <li>✓ Controlled or uncontrolled airspace less than 150m AGL;</li> </ul>	Surveillance, agricultural works, short range cargo ops
PDRA-G01 <i>AMC2 Article 11</i>	Max dim 3m	<ul style="list-style-type: none"> <li>✓ BVLOS with Aerial Obs;</li> <li>✓ over sparsely populated area;</li> <li>✓ Uncontrolled airspace less than 150m AGL;</li> </ul>	Surveillance, long range cargo ops
PDRA-G02 <i>AMC3 Article 11</i>	Max dim 3m	<ul style="list-style-type: none"> <li>✓ BVLOS;</li> <li>✓ over sparsely populated area;</li> <li>✓ Segregated airspace (Height of segregated airspace).</li> </ul>	All range of ops
PDRA-G03 <i>AMC6 Article 11</i>	Max dim 3m	<ul style="list-style-type: none"> <li>✓ BVLOS;</li> <li>✓ over sparsely populated area;</li> <li>✓ Max height of 30m or within 15m from obstacles</li> </ul>	Linear inspections, agricultural works

# List of PDRAs under development



JARUS Ref	UAS Charact.	Main Ops characteristics	Typical ops	Status
PDRA-05	Max dim 3m	<ul style="list-style-type: none"> <li>✓ BVLOS;</li> <li>✓ over sparsely populated area;</li> <li>✓ in airspace where at least 50% of manned a/c can be detected, less than 120m AGL</li> </ul>	All range of ops	Published by JARUS
PDRA-06	Max dim 8m	<ul style="list-style-type: none"> <li>✓ VLOS;</li> <li>✓ Over controlled ground area;</li> <li>✓ in airspace where at least 50% of manned a/c can be detected, less than 120m AGL</li> </ul>	Testing of prototype UAS	Under preparation
PDRA-07	Max dim 3m	<ul style="list-style-type: none"> <li>✓ BVLOS;</li> <li>✓ Over controlled ground area;</li> <li>✓ Airport environment</li> </ul>	Airport/runway inspections	Under preparation
PDRA-08	Max dim 1m	<ul style="list-style-type: none"> <li>✓ VLOS with aerial obs;</li> <li>✓ Over controlled ground area;</li> <li>✓ Segregated airspace;</li> </ul>	Swarming	Under preparation

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# LUC – Light UAS operator unmanned certificate



Applicable to all drones,  
independently of their weight

Voluntary for operations in SAIL I-II-III

**Mandatory for operations in SAIL IV-V-VI**

It requires a robust organisation (technically and financially) implementing Management System requirements

UAS operators are responsible of all aspects of the operation including pilot training – **NOT FOR THE DESIGN OF THE UAS**

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- EASA rulemaking activity

# Simplification – specific category

3 STS addressing SAIL II operations:

- STS 01 (VLOS) expanded allowing to operate over people based on the available mitigations
- STS 02 (BVLOS) expanded allowing to operate over people based on the available mitigations
- **New** STS 03 (VLOS) dedicated to agricultural, horticultural or forestry activities
- **Only UAS allowing manual intervention**

# STS -01 – ground risk

VLOS and ground observations

		UAS iGRC		
Critical area (m <sup>2</sup> )		6.5	65	
Maximum iGRC population density (people/km <sup>2</sup> )	Controlled ground area	1	1	
	< 5	2	3	
	< 50	3	4	
	< 500	4	5	
	< 5 000	5	6	
	< 50 000	6	7	
	> 50 000	7	8	

It may reach up to 50.000 people per km2



M1(C) – ground observation

+

Mitigations (defined by manufacturer):

→ **Optional M1(A)** - sheltering applicable to UAS < 25 kg;

→ **Optional M2** – if UA complies with MoC 2512



+

level of containment and size of the adjacent area defined by the manufacturer

# STS 02 – ground risk

Mitigations (defined by manufacturer):

→ **Optional M1(A)** - sheltering applicable to UAS < 25 kg;

→ **Optional M2** – if UA complies with MoC 2512



+

level of containment and size of the adjacent area defined by the manufacturer

		UAS iGRC				
Critical area (m <sup>2</sup> )		6.5	65	8 m	20 m	40 m
				75 m/s	120 m/s	200 m/s
Maximum iGRC population density (people/km <sup>2</sup> )	Controlled ground area	1	1	2	3	3
	< 5	2	3	4	5	6
	< 50	3	4	5	6	7
	< 500	4	5	6	7	8
	< 5 000	5	6	7	8	9
	< 50 000	6	7	8	9	10
	> 50 000	7	8	Not part of SORA		

It may reach up to 5.000 people per km2

# STS 03 – ground risk

		UAS iGRC		
Maximum UA characteristic dimension	and	1 m	3 m	8 m
Critical area		6.5	65	650
Maximum iGRC population density (people/km <sup>2</sup> )	Controlled ground area <0.5	1	1	2
	< 5	1	2	3
	< 50	2	3	4
	< 500	3	4	5
	< 5 000	4	5	6
		5	6	7
		-	-	-

→ M1(B) – over an area where the remote pilot reasonably expects that no uninvolved person will be overflowed



**0.5 people per km<sup>2</sup>**



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