

Data of authorised UAS and operation

Manufacturer or Type Certificate holder	Model name
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Type of UAS configuration

<input type="checkbox"/> Conventional airplane	<input type="checkbox"/> Helicopter	<input type="checkbox"/> Multirotor	<input type="checkbox"/> Hybrid / VTOL
<input type="checkbox"/> Lighter than air	<input type="checkbox"/> Other, please specify:		

Is the UAS tethered during the operation?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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Maximum characteristic dimensions (including propellers)	Maximum take-off mass	Maximum operational speed
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Type of propulsion system

<input type="checkbox"/> Electric	<input type="checkbox"/> Combustion
<input type="checkbox"/> Hybrid, specify type:	<input type="checkbox"/> Other, please specify:

Number of type certificate or design verification report (if available)	Certificate of airworthiness (if available)
Number of noise certificate (if available)	

Transport of dangerous goods

Please specify reference to Operations manual (ConOps):	<input type="checkbox"/> No
<input type="checkbox"/> Yes	

Type of operation

<input type="checkbox"/> Visual line of sight (VLOS)	<input type="checkbox"/> Extended visual line of sight (EVLOS)
<input type="checkbox"/> Beyond visual line of sight (BVLOS)	

Specific Operations Risk Analysis

Step #1 Operations Manual (ConOps)

Description of proposed operations including the locations

Please provide the GPS coordinates for the operational volume (flight geography and contingency volume), the ground risk buffer and the air risk buffer (if available) as a separate file using either txt; .kmz or .kml.
Give reference to the file name:

Short description of proposed operations

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Step #2 UAS intrinsic Ground Risk Class

Type of operational areas on the ground (including flight geography, contingency volume and ground risk buffer)

<input type="checkbox"/> Controlled ground area	<input type="checkbox"/> Sparsely populated area
<input type="checkbox"/> Populated area	<input type="checkbox"/> Over assemblies of people

Specify the Intrinsic Ground Risk Class

Remarks/Reasoning for Step #2

Step #3 Final GRC determination

Specify the applied ground risk mitigations, if applicable (tick only if mitigations are applied)

M1 Strategic mitigations for ground risk Specify the level of robustness	
<input type="checkbox"/> None	<input type="checkbox"/> Low
<input type="checkbox"/> Medium	<input type="checkbox"/> High
M2 Effects of ground impact are reduced Specify the level of robustness	
<input type="checkbox"/> None	<input type="checkbox"/> Low
<input type="checkbox"/> Medium	<input type="checkbox"/> High
M3 An emergency response plan (ERP) is in place, the UAS operator is validated and effective Specify the level of robustness	
<input type="checkbox"/> None	<input type="checkbox"/> Low
<input type="checkbox"/> Medium	<input type="checkbox"/> High
Specify the Final Ground Risk Class	
Remarks/Reasoning for Step #3	

Step #4 Initial Air Risk Class

Classification of the airspace where the operation is intended to be conducted (multiple answers possible)

<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	<input type="checkbox"/> E	<input type="checkbox"/> F	<input type="checkbox"/> G
<input type="checkbox"/> Restricted area (ED-R)			<input type="checkbox"/> Danger area (ED-D)			
<input type="checkbox"/> TMZ		<input type="checkbox"/> RMZ		<input type="checkbox"/> ATZ		

Specify the Initial Air Risk Class and the reasoning for choosing it (refer to Figure 4 of AMC 1 to Article 11 of IR (EU) 2019/947)

<input type="checkbox"/> ARC-a	<input type="checkbox"/> ARC-b	<input type="checkbox"/> ARC-c	<input type="checkbox"/> ARC-d
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Remarks/Reasoning for Step #4

Step #5 Strategic air risk mitigations and final Air Risk Class

Specify, if strategic mitigations of the Air Risk Class were applied

<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Residual Air Risk Class (after strategic mitigation)			
<input type="checkbox"/> ARC-a	<input type="checkbox"/> ARC-b	<input type="checkbox"/> ARC-c	<input type="checkbox"/> ARC-d
Remarks/Reasoning for Step #5			

Step #6 TMRP and robustness level

Tactical Mitigations Performance Requirements

(refer to Annex D to AMC 1 to Article 12 of IR (EU) 2019/947)

<input type="checkbox"/> VL0S	<input type="checkbox"/> BVLOS	<input type="checkbox"/> No requirement (ARC-a)	<input type="checkbox"/> Low (ARC-b)	<input type="checkbox"/> Medium (ARC-c)	<input type="checkbox"/> High (ARC-d)
Remarks/Reasoning for Step #6					

Step #7 SAIL determination

Specific Assurance and Integrity Level

<input type="checkbox"/> SAIL I	<input type="checkbox"/> SAIL II	<input type="checkbox"/> SAIL III	<input type="checkbox"/> SAIL IV	<input type="checkbox"/> SAIL V	<input type="checkbox"/> SAIL VI
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Step #8 SAIL Identification of Operational Safety Objectives

Operational Safety Objectives

As per identified SAIL from Step #7 and 2.5.2 of AMC1 to Article 11 (Table 6) of RG (EU) 2019/947

Step #9 Adjacent area / airspace considerations

Safety requirement for containment

(if one of the checkboxes is ticked, enhanced containment measures apply)

Please specify the adjacent areas:	
<input type="checkbox"/> contain assemblies of people	<input type="checkbox"/> are ARC-d
If the operational volume is in a populated area:	
<input type="checkbox"/> M1 mitigation was applied	<input type="checkbox"/> The operating area is controlled ground area
Remarks/Reasoning for Step #9	

Step #10 Comprehensive safety portfolio

Compliance matrix for safety requirements

Please completely fill in the compliance matrix for SORA Step #10 that can be found on the next page.

Have all safety requirements been described and met?

<input type="checkbox"/> Yes	<input type="checkbox"/> No
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Signature

Date	Place
Printed name	
Signature	

Step #10 Comprehensive Safety Portfolio

Ground risk mitigations

Mitigation	Level of robustness				Remarks (e.g. EASA design verification)	Reference to documentation		
	Document name	Page number	Chapter number					
M1 Strategic mitigation for ground risk	<input type="checkbox"/> None	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
M1 Tethered operation <small>(fill in only if tethered operation)</small>	<input type="checkbox"/> None	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
M2 Effects of ground impact are reduced <small>(e.g. parachute)</small>	<input type="checkbox"/> None	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
M3 An emergency response plan (ERP) is in place, the UAS operator is validated and effective	<input type="checkbox"/> None	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				

Strategic air risk mitigations

Mitigation	ARC reduction	Remarks (e.g. EASA design verification)	Reference to documentation		
			Document name	Page number	Chapter number
Air Risk Class mitigation	<input type="checkbox"/> ARC-d (AEC 1 or 2) <input type="checkbox"/> ARC-c <input type="checkbox"/> ARC-d (AEC 1 or 2) <input type="checkbox"/> ARC-b <input type="checkbox"/> ARC-d (AEC 3) <input type="checkbox"/> ARC-c <input type="checkbox"/> ARC-d (AEC 3) <input type="checkbox"/> ARC-b <input type="checkbox"/> ARC-c (AEC 4) <input type="checkbox"/> ARC-b <input type="checkbox"/> ARC-c (AEC 5) <input type="checkbox"/> ARC-b <input type="checkbox"/> ARC-c (AEC 6,7,8) <input type="checkbox"/> ARC-b <input type="checkbox"/> ARC-c (AEC 9) <input type="checkbox"/> ARC-b				

Operational Risk Analysis Overview for Operations in the Specific Category

SORA – AMC 1 to Article 11 IR (EU) 2019/947

Tactical Mitigations Performance Requirements

	TMPR	Remarks (e.g. EASA design verification)	Reference to documentation		
TMPR-level	<input type="checkbox"/> VLOS <input type="checkbox"/> BVLOS <input type="checkbox"/> No requirement (ARC-a) <input type="checkbox"/> Low requirement (ARC-b) <input type="checkbox"/> Medium requirement (ARC-c) <input type="checkbox"/> High requirement (ARC-d)		Document name	Page number	Chapter number
TMPR-function	Detect				
	Decide				
	Command				
	Execute				
	Feedback loop				
TMPR-robustness	TMPR integrity and assurance objectives				

Adjacent area/airspace considerations

	Level of containment	Remarks (e.g. EASA design verification)	Reference to documentation		
Safety requirement	<input type="checkbox"/> Basic containment <input type="checkbox"/> Enhanced containment		Document name	Page number	Chapter number

Operational Risk Analysis Overview for Operations in the Specific Category

SORA – AMC 1 to Article 11 IR (EU) 2019/947

Operational Safety Objectives

	Level of containment				Remarks (e.g. EASA design verification)	Reference to documentation		
	Optional	Low	Medium	High		Document name	Page number	Chapter number
OSO #01 Ensure that the UAS operator is competent and/or proven	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
OSO #02 UAS manufactured by competent and/or proven entity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
OSO #03 UAS maintained by competent and/or proven entity		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
OSO #04 UAS developed to authority recognised design standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
OSO #05 UAS is designed considering system safety and reliability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
OSO #06 C3 link characteristics are appropriate for the operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
OSO #07 Inspection of the UAS (product inspection) to ensure consistency with the Co-nOps		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
OSO #08 Operational procedures are defined, validated and adhered to		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
OSO #09 Remote crew trained and current and able to control the abnormal situation		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

Operational Risk Analysis Overview for Operations in the Specific Category

SORA – AMC 1 to Article 11 IR (EU) 2019/947

	Level of containment			Remarks (e.g. EASA design verification)	Reference to documentation		
	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High		Document name	Page number	Chapter number
OSO #10 Safe recovery from a technical issue	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
OSO #11 Procedures are in-place to handle the deterioration of external systems supporting UAS operations	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
OSO #12 The UAS is designed to manage the de-terioration of external systems support-ing UAS operations	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
OSO #13 External services supporting UAS opera-tions are adequate for the operation	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
OSO #14 Operational procedures are defined, validated and adhered to	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
OSO #15 Remote crew trained and current and able to control the abnormal situation	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
OSO #16 Multi-crew coordination	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
OSO #17 Remote crew is fit to operate	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
OSO #18 Automatic protection of the flight enve-lope from human error	<input type="checkbox"/> Optional <input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
OSO #19 Safe recovery from human error	<input type="checkbox"/> Optional <input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				

Operational Risk Analysis Overview for Operations in the Specific Category

SORA – AMC 1 to Article 11 IR (EU) 2019/947

	Level of containment				Remarks (e.g. EASA design verification)	Reference to documentation		
						Document name	Page number	Chapter number
OSO #20 A human factors evaluation has been performed and the human machine interface (HMI) found appropriate for the mission	<input type="checkbox"/> Optional	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
OSO #21 Operational procedures are defined, validated and adhered to		<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
OSO #22 The remote crew is trained to identify critical environmental conditions and to avoid them		<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
OSO #23 Environmental conditions for safe operations are defined, measurable and adhered to		<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				
OSO #24 UAS is designed and qualified for ad-verse environmental conditions	<input type="checkbox"/> Optional	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High				

Signature

Date	Place
Printed name	
Signature	