


Operational risk analysis overview for operations in the specific category PDRA – G03 Version 1.0: AMC 6 to Article 11 IR (EU) 2019/947		
Data of authorised UAS and operation		
1. UAS Operator Identification (eID)		
2. Manufacturer or Type Certificate holder		
3. Model name		
4. 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:	
5. Is the UAS tethered during the operation?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6. Maximum characteristic dimension (including propellers)		
7. Maximum take-off mass (MTOM) (indicated by the operator equal to or less than the manufacturer's specification)		
8. Maximum operational speed		
9. Type of propulsion system	<input type="checkbox"/> Electric <input type="checkbox"/> Combustion <input type="checkbox"/> Hybrid, specify type: <input type="checkbox"/> Other, please specify:	
10. Number of type certificate or design verification report (if available)		
11. Certificate of airworthiness (if available)		
12. Number of noise certificate (if available)		
13. Short description of proposed operation including the locations	<p>Please provide the geo-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:</p> <p>_____</p>	
Short description of proposed operation		
Place, Date	Name and Signature	

Compliance Matrix for PDRA – G03 Version 1.0

PDRA characterisation and conditions				
Topic	Method of proof	Condition	Reference to documentation	Proof
1. Operational characterisation (scope and limitations)				
Level of human intervention	Self-declaration	1.1 No autonomous operations: the remote pilot should have the ability to maintain control of the UA, except in case of a loss of the command-and-control (C2) link.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		1.2 The remote pilot should always be able to terminate the flight.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		1.3 Either the flight path should be preprogrammed or flexible routes should be preplanned to ensure the UA avoids obstacles in the operational volume.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		1.4 The remote pilot should only operate one UA at a time.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		1.5 The remote pilot should not operate the UA from a moving vehicle.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		1.6 The remote pilot should not hand the control of the UA over to another command unit.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."

PDRA characterisation and conditions				
Topic	Method of proof	Condition	Reference to documentation	Proof
UA range limit	Self-declaration	1.7 <u>Launch/recovery</u> : at VLOS distance from the remote pilot, if not operating from a safe prepared area. <i>Note: 'Safe prepared area' means a controlled ground area that is suitable for the safe launch/recovery of the UA.</i>	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		1.8 <u>In flight</u> : The range limit should be within the C2 link direct coverage, which ensures the safe conduct of the flight.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
Overflowed areas	Declaration supported by data	1.9 UAS operations should be conducted:		
		1.9.1 over sparsely populated areas, and	Document name: Page number:	<input type="checkbox"/> "I declare compliance." <i>Please describe how population density data is identified.</i>
		1.9.2 over or up to 15 m horizontal distance from a facility or infrastructure at the request of the person or entity that is responsible for that facility or infrastructure.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
UA limitations	Self-declaration	1.10 Maximum characteristic dimensions (e.g. wingspan, rotor diameter/area or maximum distance between rotors in the case of a multirotor): up to 3 m	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		1.11 Typical kinetic energy: up to 34 kJ	Document name: Page number:	<input type="checkbox"/> "I declare compliance."

PDRA characterisation and conditions				
Topic	Method of proof	Condition	Reference to documentation	Proof
Flight height limit	Self-declaration	1.12 The maximum height of the operational volume should not be greater than the size of the reserved or segregated airspace, if applicable, or the height defined according to para 3.9. <i>Note: See point 3.10 defining the air risk buffer to be considered.</i>	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
Airspace	Self-declaration	1.13 The UA should be operated: (refer also to point 3.9)		
		1.13.1 in 'atypical airspace' that is included in uncontrolled airspace;	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		1.13.2 in controlled airspace which the competent authority has defined it meets 'atypical airspace' requirements and with the relevant coordination as defined by competent authority; or	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
Visibility	Self-declaration	1.14 If take-off and landing are conducted in VLOS of the remote pilot, the visibility should be sufficient to ensure that no people are in danger during the take-off /landing phase. The remote pilot should abort the take-off or landing in case people on the ground are in danger.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
Others	Self-declaration	1.15 The UA should not be used to drop material or to carry dangerous goods, except for dropping items in connection with agricultural, horticultural or forestry activities where the carriage of such items does not contravene any applicable regulations.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."

PDRA characterisation and conditions					
Topic	Method of proof	Condition		Reference to documentation	Proof
2. Operational risk classification (according to the classification defined in AMC1 to Article 11 of the UAS Regulation)					
Final GRC	3	Final ARC	ARC-a	SAIL	II
3. Operational mitigations					
Operational volume (see Figure 2 of AMC1 Article 11)	Self-declaration	3.1 To determine the operational volume, the UAS operator should consider the position-keeping capabilities of the UAS in 4D space (latitude, longitude, height, and time).	Document name: Page number:	<input type="checkbox"/> "I declare compliance."	
		3.2 In particular, the accuracy of the navigation solution, the flight technical error of the UAS and the path definition error (e.g. map error) and latencies should be considered and addressed when determining the operational volume.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."	
		3.3 The remote pilot should apply the emergency procedures as soon as there is an indication that the UA may exceed the limits of the operational volume.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."	
Ground risk	Self-declaration	3.4 The UAS operator should establish a ground risk buffer to protect third parties on the ground outside the operational volume.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."	
		3.4.1 The default criterion should be the use of the '1:1 rule' (e.g. if the UA is planned to operate at a height of 25 m, the ground risk buffer should at least be 25 m).	Document name: Page number:	<input type="checkbox"/> "I declare compliance."	

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		3.4.2 A smaller ground risk buffer value may be applied by the applicant for a rotary wing UA using a ballistic methodology approach acceptable to the competent authority. The 1:1 rule may in certain cases not be sufficient to meet the target level of safety. In such a case, the competent authority may ask for a refinement of the definition of the ground risk buffer, based on criteria defined in SORA Step #9 depending on the adjacent air and ground risks.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		3.4.3 The 1:1 rule may in certain cases not be sufficient to meet the target level of safety. In such a case, the competent authority may ask for a refinement of the definition of the ground risk buffer.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		3.5 The operational volume and the ground risk buffer should be all contained in a sparsely populated area.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		3.6 The UAS operator should evaluate the area of operations, typically by means of on-site inspection or appraisal, and should be able to justify the significantly lower density of people at risk than in sparsely populated areas within the entire operational volume including the ground risk buffer.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."

PDRA characterisation and conditions				
Topic	Method of proof	Condition	Reference to documentation	Proof
		3.7 The UAS operator should ensure that the person or entity responsible for the facility or infrastructure has taken the necessary measures to protect the uninvolved persons present within the limits of the facility or infrastructure during the UAS operation.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		3.8 The UAS operator should include points 3.4 to 3.7 in the Operations Manual (OM) (see point 4.1.1) and declare compliance with those conditions.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
Air risk	Self-declaration	<p>3.9 The UAS operation should be conducted:</p> <p>3.9.1 in 'atypical airspace' which, for the purpose of this PDRA, is one of the following:</p> <p>3.9.1.1 in reserved or segregated airspace; the claim for ARC-a is met if a reserved or segregated airspace is established and approved for the purpose of conducting UAS operations under this PDRA, with the operational volume and air risk buffer, if applicable, being entirely contained in that reserved or segregated airspace;</p> <p>3.9.1.2 at a height of the flight geography of less than 30 m;</p> <p>3.9.1.3 when operating in the proximity of natural or artificial obstacles (e.g. trees, buildings, towers, cranes, fences, etc.) whose height is below 20 m, keeping the UA within the following distances:</p> <p>(i) 30 m horizontal distance;</p> <p>(ii) 15 m vertical distance from the top of the overflown obstacle;</p>	Document name: Page number:	<input type="checkbox"/> "I declare compliance."

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		<p>3.9.1.4 when operating in the proximity of natural or artificial obstacles (e.g. trees, buildings, towers, cranes, fences, etc.) whose height is above 20 m, keeping the UA within the following distances:</p> <ul style="list-style-type: none"> (i) 15 m horizontal distance; (ii) 15 m vertical distance from the top of the overflown obstacle; <p>3.9.2 away from all of the following:</p> <ul style="list-style-type: none"> (i) any known permanent or temporary take-off and landings areas for all types of manned aircraft; this also includes parking lots, parks and other areas where helicopters occasionally operate from, as well as sites where police and helicopter emergency medical services (HEMS), and search and rescue (SAR) helicopters occasionally operate from in cases of accidents or other emergencies; (iii) known military aircraft low-flying routes; (iv) any other known low-level manned aircraft operations in the intended area of operation (e.g. balloon operations authorised en route below 500 ft); (v) harbour/coastal areas where SAR operations may transit or operate; (vi) any known areas where other unmanned aircraft operate (including areas for model aircraft clubs or associations); or 		

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		3.9.3 in reserved or segregated airspace; the claim for ARC-a is met if a reserved or segregated airspace is established and approved for the purpose of conducting UAS operations under this PDRA, with the operational volume and air risk buffer, if applicable, being entirely contained in that reserved or segregated airspace.		
		3.10 The UAS operator should establish an air risk buffer to protect third parties in the air, outside the operational volume, if: 3.10.1 airspace classified as ARC-d is adjacent to the operational volume; or 3.10.2 the competent authority or the	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		3.11 The air risk buffer as per point 3.10 should be contained where the probability of encounter with manned aircraft and other airspace users is low, as defined by the competent authority.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		3.12 Before the flight, the UAS operator should assess the proximity of the planned UAS operation to manned aircraft activity.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
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 AMC1 UAS.SPEC.030(3)(e) and to the complementary information in GM1 UAS.SPEC.030(3)(e));	Document name: Page number:	<input type="checkbox"/> "I declare compliance and supporting evidence is included in the OM."

PDRA characterisation and conditions				
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		4.1.2 develop a procedure to ensure that the security requirements applicable to the area of operations are complied with during the intended operation;	Document name: Page number:	<input type="checkbox"/> "I declare compliance and supporting evidence is included in the OM."
		4.1.3 develop measures to protect the UAS against unlawful interference and unauthorised access;	Document name: Page number:	<input type="checkbox"/> "I declare compliance and supporting evidence is included in the OM."
		4.1.4 develop procedures to ensure that all operations comply with Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data. In particular, the UAS operator should carry out a data protection impact assessment, when this is required by the data protection national authority of the Member State with regard to the application of Article 35 of that Regulation;	Document name: Page number:	<input type="checkbox"/> "I declare compliance and supporting evidence is included in the OM."
		4.1.5 develop guidelines for its remote pilots to plan UAS operations in a manner that minimises nuisance, including noise and other emissions-related nuisance, to people and animals;	Document name: Page number:	<input type="checkbox"/> "I declare compliance and supporting evidence is included in the OM."
		4.1.6 develop an emergency response plan (ERP) in accordance with the conditions for a 'medium' level of robustness (please refer to AMC3 UAS.SPEC.030(3)(e);	Document name: Page number:	<input type="checkbox"/> "I declare compliance and that the ERP is available to the competent authority for review."

PDRA characterisation and conditions				
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		4.1.7 validate the operational procedures in accordance with the provisions for a 'medium' level of robustness included in AMC2 UAS.SPEC.030(3)(e);	Document name: Page number:	<input type="checkbox"/> "I declare compliance and that the description for meeting this condition is available to the competent authority for review."
		4.1.8 ensure the adequacy of the contingency and emergency procedures and prove it through any of the following: (a) dedicated flight tests; or (b) simulations, provided that the representativeness of the simulation means is proven for the intended purpose with positive results; or (c) any other means acceptable to the competent authority;	Document name: Page number:	<input type="checkbox"/> "I declare compliance and that the description for meeting this condition is available to the competent authority for review."
		4.1.9 have a policy that defines how the remote pilot and any other personnel in charge of duties essential to the UAS operation can declare themselves fit to operate before conducting any operation;	Document name: Page number:	<input type="checkbox"/> "I declare compliance and that the description for meeting this condition is available to the competent authority for review."

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		4.1.10 if the operation takes place in reserved or segregated airspace, as part of the procedures that are contained in the OM (point 4.1.1 above), include the description of the following:		
		(a) the method and means of communication with the authority or entity that is responsible for the management of the airspace during the entire period of the reserved or segregated airspace being active, as mandated by the authorisation; <i>Note: The communication method should be published in the notice to airmen (NOTAM), which activates the reserved airspace to also allow coordination with manned aircraft.</i>	Document name: Page number:	<input type="checkbox"/> "I declare compliance and that supporting evidence available to the competent authority for review."
		(b) the personnel in charge of duties essential to the UAS operation, who are responsible for establishing that communication;	Document name: Page number:	<input type="checkbox"/> "I declare compliance and that supporting evidence available to the competent authority for review."
		4.1.11 designate for each flight a remote pilot with adequate competency and other personnel in charge of duties essential to the UAS operation if needed;	Document name: Page number:	<input type="checkbox"/> "I declare compliance and that supporting evidence is included in the OM."
		4.1.12 ensure that the UAS operation effectively uses and supports the efficient use of the radio spectrum in order to avoid harmful interference;	Document name: Page number:	<input type="checkbox"/> "I declare compliance and that supporting evidence is included in the OM."

PDRA characterisation and conditions				
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		4.1.13 keep for a minimum of 3 years and maintain up to date a record of the information on UAS operations, including any unusual technical or operational occurrences and other data as required by the declaration or by the operational authorisation.	Document name: Page number:	<input type="checkbox"/> "I declare compliance and that record-keeping data is available to the competent authority for review."
UAS maintenance	Self-declaration	4.2. The UAS operator should:		
		4.2.1 ensure that the UAS maintenance instructions that are defined by the UAS operator are included in the OM and cover at least the UAS manufacturer's instructions and requirements, when applicable; and	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		4.2.2 ensure that maintenance staff follow the UAS maintenance instructions when performing maintenance;	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		4.2.3 keep for a minimum of 3 years and maintain up to date a record of the maintenance activities conducted on the UAS;	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		4.2.4 establish and keep up to date a list of the maintenance staff employed by the operator to carry out maintenance activities;	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		4.2.5 comply with point UAS.SPEC.100, if the UAS uses certified equipment.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."

PDRA characterisation and conditions				
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External services	Self-declaration	4.3 The UAS operator should ensure that the level of performance for any externally provided service necessary for the safety of the flight is adequate for the intended operation. The UAS operator should declare that this level of performance is adequately achieved.	Document name: Page number:	<input type="checkbox"/> "I declare compliance." <input type="checkbox"/> n/a
		4.4 The UAS operator should define and allocate the roles and responsibilities between the UAS operator and the external service provider(s), if applicable.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
5. Conditions for the personnel in charge of duties essential to the operation				
General	Self-declaration	5.1 The UAS operator should ensure that all personnel in charge of duties essential to the UAS operation are provided with competency-based theoretical and practical training specific to their duties, which consists of theoretical elements defined in AMC1 UAS.SPEC.050(1)(d) and practical elements defined in AMC2 UAS.SPEC.050(1)(d).	Document name: Page number:	<input type="checkbox"/> "I declare compliance and that supporting evidence is included in the OM." <i>Evidence of training is available at the request of the competent authority.</i>
		5.2 The UAS operator should keep and maintain up to date a record of all the relevant qualifications and training courses completed by the remote pilot and the other personnel in charge of duties essential to the UAS operation and by the maintenance staff for at least 3 years after those persons have ceased to be employed by the organisation or have changed position within the organisation.	Document name: Page number:	<input type="checkbox"/> "I declare compliance." <i>Record-keeping data is available for inspection at the request of the competent authority.</i>

PDRA characterisation and conditions				
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Remote pilot	Self-declaration	5.3 The remote pilot has the authority to cancel or delay any or all flight operations under the following conditions:	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		5.3.1 the safety of persons is jeopardised;	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		5.3.2 property on the ground is jeopardised;	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		5.3.3 other airspace users are in jeopardy;	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		5.3.4 there is a violation of the terms of the operational authorisation.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		5.4 The remote pilot should:		
		5.4.1 not perform any duties under the influence of psychoactive substances or alcohol, or when they are unfit to perform their tasks due to injury, fatigue, medication, sickness or other causes;	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		5.4.2 be familiar with the manufacturer's instructions provided by the manufacturer of the UAS;	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		5.4.3 ensure that the UA remains clear of clouds;	Document name: Page number:	<input type="checkbox"/> "I declare compliance."

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		5.4.4 perform unaided visual scan of the airspace as required to avoid any potential collision hazard;	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		5.4.5 obtain updated information relevant to the intended operation about any geographical zones defined in accordance with Article 15 of the UAS Regulation; and	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		5.4.6 ensure that the UAS is in a safe condition to complete the intended flight safely and, if applicable, check whether the direct remote identification is active and up to date.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
Multi-crew coordination (MCC)	Self-declaration	Where multi-crew coordination (MCC) is required, the UAS operator should:		
		5.5 designate the remote pilot-in-command to be responsible for each flight;	Document name: Page number:	<input type="checkbox"/> "I declare compliance." <input type="checkbox"/> n/a
		5.6 include procedures to ensure the coordination between the remote crew members with robust and effective communication channels; those procedures should cover as a minimum the following:	Document name: Page number:	<input type="checkbox"/> "I declare compliance." <input type="checkbox"/> n/a
		5.6.1 the assignment of tasks to the remote crew members; and	Document name: Page number:	<input type="checkbox"/> "I declare compliance." <input type="checkbox"/> n/a
		5.6.2 the establishment of step-by-step communication; and	Document name: Page number:	<input type="checkbox"/> "I declare compliance." <input type="checkbox"/> n/a

PDRA characterisation and conditions				
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		5.7 ensure that the training of the remote crew covers MCC.	Document name: Page number:	<input type="checkbox"/> "I declare compliance." <input type="checkbox"/> n/a
Maintenance staff	Self-declaration	5.8 Any staff member authorised by the UAS operator to perform maintenance activities should have been duly trained regarding the documented maintenance procedures.	Document name: Page number:	<input type="checkbox"/> "I declare compliance." <i>Evidence of training is available at the request of the competent authority or its authorised representative.</i>
Personnel in charge of duties essential to the UAS operation are fit to operate	Self-declaration	5.9 The personnel in charge of duties essential to the UAS operation should declare that they are fit to operate before conducting any operation based on the policy defined by the UAS operator.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
6. Technical conditions				
General	Self-declaration	6.1 The UAS should be equipped with means to monitor the critical parameters for a safe flight, and in particular the following:		
		6.1.1 UA position, height or altitude, ground speed or airspeed, attitude, and trajectory;	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		6.1.2 UAS energy status (fuel, battery charge, etc.); and	Document name: Page number:	<input type="checkbox"/> "I declare compliance."

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		6.1.3 the status of critical functions and systems; as a minimum, for services based on RF signals (e.g. C2 link, GNSS, etc.), means should be provided to monitor the adequate performance and trigger an alert when the performance level becomes too low.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		6.2 The UAS performance and in particular its capability to keep the position in 4D space (latitude, longitude, height, and time) should be such that allows the remote pilot to conduct safely operations close to natural or artificial obstacles. <i>Note: The UA should be able to fly safely at a distance closer than 30 m to artificial or natural obstacles.</i>	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		6.3 The UAS should provide means to programme the UA flight path prior to take-off, or if utilising flexible routes, be equipped with means to avoid obstacles while staying within the intended operational volume.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		6.3.1. If flexible routes are utilised, the UAS should provide means to prevent the UA from breaching the horizontal and vertical limits of a programmable operational volume.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		6.4 The UAS should be protected against potential electromagnetic interferences from the infrastructure/facilities in the overflow area.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."

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Human-machine interface (HMI)	Self-declaration	6.5 The UAS information and control interfaces should be clearly and succinctly presented and should not confuse, cause unreasonable fatigue, or contribute to causing any disturbance to the personnel in charge of duties essential to the UAS operation such that this could adversely affect the safety of the operation.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		6.6 The UAS operator should conduct a UAS evaluation that considers and addresses human factors to determine whether the HMI is appropriate for the operation.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
C2 links and communication	Self-declaration	6.7 The UAS should comply with the appropriate requirements for radio equipment and the use of the RF spectrum.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		6.8 Protection mechanisms against interference should be used, especially if unlicensed bands (e.g. ISM) are used for the C2 link (mechanisms such as FHSS, DSSS or OFDM technologies, or frequency deconfliction by procedure).	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		6.9 The UAS should be equipped with a C2 link that is protected against unauthorised access to the C2 functions.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		6.10 In case of a loss of the C2 link, the UAS should have a reliable and predictable method for the UA to recover the C2 link or terminate the flight in a way that reduces the effect on third parties in the air or on the ground.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."

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		6.11 In the event of an emergency, the remote pilot should have effective means to communicate with the relevant bodies.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
Containment	Declaration supported by data	6.12 To ensure a safe recovery from a technical issue that involves the UAS or an external system that supports the operation, the UAS operator should ensure that:		
		6.12.1 no probable failure of the UAS or any external system that supports the operation should lead to operation outside the operational volume; and	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		6.12.2 it is reasonably expected that a fatality will not occur from any probable failure of the UAS, or any external system that supports the operation. <i>Note: The term 'probable' should be understood in its qualitative interpretation, i.e. 'anticipated to occur one or more times during the entire system/operational life of an item'.</i>	Document name: Page number:	<i>A design and installation appraisal is available, and covers at least the following:</i> — <i>the design and installation features (independence, separation, and redundancy); and</i> — <i>the particular risks (e.g. hail, ice, snow, electromagnetic interference, etc.) relevant to the type of operation.'</i>
	Declaration supported by data	6.13 The following additional conditions should apply if the adjacent area includes an assembly of people or if the adjacent airspace is classified as ARC-c or ARC-d (in accordance with the SORA):		

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		6.13.1 The UAS should be designed to standards that are considered adequate by the competent authority and/or in accordance with a means of compliance that is acceptable to that authority such that:	Document name: Page number:	<input type="checkbox"/> "I declare compliance." <input type="checkbox"/> n/a <i>Analysis and/or test data with supporting evidence is available.</i>
		6.13.1.1 the probability of the UA leaving the operational volume should be less than 10^{-4} /FH; and	Document name: Page number:	
		6.13.1.2 no single failure of the UAS or of any external system supporting the operation should lead to operation outside the ground risk buffer. <i>Note: The term 'failure' should be understood as an occurrence which affects the operation of a component, part, or element such that it can no longer function as intended. Errors may cause failures but are not considered to be failures. Some structural or mechanical failures may be excluded from the criterion if it can be shown that these mechanical parts were designed according to aviation industry best practices.</i>	Document name: Page number:	

PDRA characterisation and conditions				
Topic	Method of proof	Condition	Reference to documentation	Proof
		<p>6.13.2 SW and AEH whose development error(s) could directly lead to operations outside the ground risk buffer should be developed according to an industry standard or methodology that is recognised as adequate by the competent authority.</p> <p><i>Note 1: The proposed additional safety conditions cover both the integrity and the assurance levels.</i></p> <p><i>Note 2: The proposed additional safety conditions do not imply a systematic need to develop the SW and AEH according to an industry standard or methodology recognised as adequate by the competent authority. For instance, if the UA design includes an independent engine shutdown function that systematically prevents the UA from exiting the ground risk buffer due to single failures or an SW/AEH error of the flight controls from occurring, the intent of the conditions of point 6.13.1 above could be considered met.</i></p> <p><i>Note 3: For this PDRA, having adjacent airspace classified as ARC-c like a hospital heliport in uncontrolled airspace is also deemed subject to the above additional conditions (in addition to ARC-d, as per SORA Step #9 (c)).</i></p>	<p>Document name:</p> <p>Page number:</p>	

PDRA characterisation and conditions				
Topic	Method of proof	Condition	Reference to documentation	Proof
Remote identification ¹	Self-declaration	6.15 The UAS bears a unique serial number compliant with standard ANSI/CTA-2063-A-2019, Small Unmanned Aerial Systems Serial Numbers, 2019, according to Article 40(4) of Regulation (EU) 2019/945.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
		6.16 The UAS is equipped with a remote identification system according to Article 40(5) of Regulation (EU) 2019/945.	Document name: Page number:	<input type="checkbox"/> "I declare compliance."
Lights ¹	Self-declaration	6.17 If the UAS is operated at night, it is equipped with at least one green flashing light according to point UAS.SPEC.050(1)(l)(i) of the UAS Regulation.	Document name: Page number:	<input type="checkbox"/> "I declare compliance." <input type="checkbox"/> n/a
Place, Date			Name and Signature	

¹ Applicable from 1 July 2022.
FV.GO-UASOPA-01/08, Rev.1, 07.10.2022