



Joint Authorities for
Rulemaking on Unmanned
Systems

JARUS guidelines on SORA

Annex I Glossary of Terms

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I.1 Introduction

This glossary is intended to assist applicants in using the SORA guidelines for the purpose of gaining authorization from the competent authority to operate an Unmanned Aircraft System in national airspace. The definitions represent the meanings understood and shared by the majority of the JARUS WG SRM team, but do not reflect authority consensus on meaning or definition.

I.2 List of Abbreviations

AEC	Airspace Encounter Category
AEH	Airborne Electronic Hardware
AIP	Aeronautical Information Publication
ANSP	Air Navigation Service Provider
ARC	Air Risk Class
AGL	Above Ground Level
AMC	Acceptable Means of Compliance
AO	Airspace Observer
ATC	Air Traffic Control
ATZ	Aerodrome Traffic Zone
BVLOS	Beyond Visual Line of Sight
C2	Command And Control
C3	Command, Control and Communication
CAA	Civil Aviation Authority
COTS	Commercial-Off-The-Shelf
CRM	Crew Resource Management
DAA	Detect and Avoid
ERP	Emergency Response Plan
EVLOS	Extended Visual Line of Sight
FHSS	Frequency-Hopping Spread Spectrum
FTB	Functional Test-Based
FTS	Flight Termination System
GRC	Ground Risk Class
GM	Guidance Material
GNSS	Global Navigation Satellite System
HMI	Human Machine Interface
HF	Human Factors

iARC	Initial Air Risk Class
ICAO	International Civil Aviation Organization
iGRC	Intrinsic Ground Risk Class
ISM	Industrial, Scientific and Medical
JARUS	Joint Authorities for Rulemaking on Unmanned Systems
METAR	Aviation Routine Weather Report (In (Aeronautical) Meteorological Code)
MCC	Multi-Crew Coordination
MTOM	Maximum Take-Off Mass
NAA	National Aviation Authority
OM	Operations Manual
OSO	Operational Safety Objective
PDRA	Predefined Risk Assessment
RCM	Remote Crew Member
RCP	Required Communication Performance
RF	Radio Frequency
RLP	Required C2 Link Performance
RP	Remote Pilot
SAA	Sense and Avoid
SAIL	Specific Assurance and Integrity Level
SLA	Service-Level Agreement
SMS	Safety Management System
SOP	Standard Operating Procedure
SORA	Specific Operations Risk Assessment
STS	Standard Scenario
SW	Software
S&A	See and Avoid
TCAS	Traffic Collision Avoidance System
TLOS	Target Level of Safety
TMPR	Tactical Mitigation Performance Requirement

UA	Unmanned Aircraft
UAS	Unmanned Aircraft System
UTM	UAS Traffic Management
VHL	Very High-Level Airspace
VLL	Very Low Level
VLOS	Visual Line of Sight

I.3 Glossary of terms

Term	Acronym	Definition
Abnormal situation		Situation in which it is no longer possible to continue the flight using normal procedures.
Acceptable risk		The level of risk that individuals or groups are willing to accept given the benefits gained. Each organization will have its own acceptable risk level, which is derived from its legal and regulatory compliance responsibilities, its threat profile, and its business/organizational drivers and impacts.
Adequate		What is necessary or sufficient for a specific requirement.
Adjacent airspace		The airspace adjacent to the operational volume. See point 2.2.6 of SORA v2.5 Main Body.
Adjacent ground area		The ground area adjacent to the ground risk buffer. See also point 2.2.5 of SORA v2.5 Main Body.
Aerodrome		A defined area, on land or on water, on a fixed, fixed offshore or floating structure, including any buildings, installations and equipment thereon, intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft;
Aerodrome environment		<p>Aerodrome environment is generally defined as:</p> <ul style="list-style-type: none"> a) Class A, B, C, D, or E controlled airspaces which touch the surface with an aerodrome and/or controlled airspaces which do not touch the surface, but in connection to an aerodrome (normally depicted on aeronautical charts and sectionals); or b) Any Mode C Veil (US) or TMZ (Europe) in Class A, B, C, D, or E, controlled airspace; or c) 5 nautical miles from an airport having an operational control tower; or d) 3 nautical miles from an airport with a published instrument flight procedure, but not an operational tower; or e) 2 nautical miles from an airport without a published instrument flight procedure or an operational tower; or f) 2 nautical miles from a heliport with a published instrument flight procedure.
Aeronautical information publication	AIP	A publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.
Air risk class	ARC	The ARC is an initial assignment of generic collision risk of airspace before mitigations are applied. ARC is assigned to AEC based on a qualitative assessment of collision risk of generic types of airspace.

Term	Acronym	Definition
Aircraft operating manual		<p>A manual, acceptable to the State of the Operator, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of the aircraft.</p> <p>Note: The aircraft operating manual is part of the operations manual.</p>
Aircraft		Any machine that can derive support in the atmosphere from the reactions of the air other than the reaction of the air against the earth's surface.
Airframe		The fuselage, booms, nacelles, cowlings, fairings, airfoil surfaces (including rotors but excluding propellers and rotating airfoils of engines), and landing gear of an UA and their accessories and controls.
Airspace encounter categories	AEC	The AEC is a qualitative classification of the probability that a UAS would encounter a manned aircraft in typical civil airspace found in the U.S. and Europe. The airspace encounter risk was grouped by operational altitude, airport environment, controlled airspace, uncontrolled Mode C veil/TMZ airspace, and in uncontrolled airspace over rural and/or urban populations. The AEC is based on the assessment of the proximity (the more aircraft in the airspace, the higher the rate of proximity, the greater the risk of collision), geometry (an airspace structure which reduces the probability that an aircraft find themselves on collision courses), and dynamics (in general, the faster the speed of the aircraft in the airspace, the greater the number of collision risks over a set time). Airspace where there is a higher density of manned aircraft, few airspace structural controls, and high aircraft closing speeds, will experience higher airspace encounter rates than in airspace where there is low density, high airspace structure and slow speeds.
Airspace observer	AO	A person who assists the remote pilot by performing unaided visual scanning of the airspace in which the UA is operating to identify any potential hazard in the air.
Airworthiness		The condition of an item (aircraft, aircraft system, or part) in which that item operates in a safe manner to accomplish its intended function.
Applicant		Individual or organisation who desires to operate a UAS in a limited or restricted manner and submits the necessary technical, operational and human information related to the intended use of the UAS to the competent authority. See also point 2.5 (b) of SORA v2.5 Main Body.
Assembly of people		Area where persons are unable to move quickly away in case of a potential UAS crash due to the density of the people present.

Term	Acronym	Definition
Assurance		The level of verification required by the competent authority prior to granting an approval. All the integrity requirements must still be fulfilled by the UAS Operator, but the Verification of the implementation can happen prior to approval or after in auditing.
Atypical air environment		Defined as: <ul style="list-style-type: none"> a) Restricted Airspace or segregated Areas; b) Airspace where normally manned aircraft should not go (e.g., at a height low enough or close to an obstacle); c) Airspace not covered in Airspace Encounter Categories (AEC) 1 through 11.
Authority		The organization responsible within the state concerned with the certification of compliance with applicable requirements.
Authorization		The permit granted to an applicant by a competent authority.
Automatic system		Any system in which the UAS crew is supported by mechanized or computerized components executing predefined processes.
Autonomous UA		A UA with the ability and authority for decision making, problem-solving, and/or self-governance under possibly bounded, variable, or abnormal conditions.
Barrier		A material object or set of objects that separates, demarcates, or services as a barricade; or something immaterial that impedes or separates. Both physical and non-physical barriers are utilised and applied in hazard control; i.e., anything used to control, prevent or impede unwanted adverse energy flow and / or anything used to control, prevent or impede unwanted event flow.
Beyond visual line-of-sight	BVLOS	Means of flying the UAS without the direct, unaided visual supervision of the UA by the remote pilot.
Catastrophic		Failure condition that could result in one or more fatalities.
Certification		The legal recognition based on an appropriate assessment, that a product, part, service, organization, or person complies with the applicable requirements, through the issuance of a certificate, license, approval, or other documents as required by national laws and procedures, attesting such compliance.
Civil aircraft		Aircraft other than public/state or military aircraft.
Collision avoidance		Averting physical contact between an aircraft and any other object or terrain.
Command and control link		The data link between the UA and the command unit for the purposes of managing the flight.
Command unit		The equipment used to maintain control, communicate, guide, or otherwise pilot a UA.

Term	Acronym	Definition
Commercial-off-the-shelf	COTS	Components designed to be implemented into existing systems without extensive customization and for which design data are not always available to the customer.
Competent authority		The authority responsible to assess the safety measures proposed by the applicant for a safety operation, following a specific operation risk assessment (SORA) and issuing the operational authorisation. See also point 2.5 (e) of SORA v2.5 Main Body.
Competent third party		The party other than the competent authority that is responsible for reviewing supporting evidence for mitigations and operational safety objectives of an application. The competent authority may appoint organisations that perform this task for all or a selection of review items. The competent authority may also decide to perform this task by themselves, thus becoming itself the competent third party. See also point 2.5 (f) of SORA v2.5 Main Body.
Compliance		Successful performance of all mandatory activities; agreement between the expected or specified result and the actual result.
Component		Any self-contained part, combination of parts, subassemblies or units, which perform a distinct function necessary to the operation of the system.
Configuration		The requirements, design and implementation that define a particular version of a system or system component.
Configuration control/management		The process of evaluating, approving or disapproving, and coordinating changes to configuration items after formal establishment of their configuration identification.
Conformity		Aircraft or part checked against design documents for correctness.
Contingency area		The projection of the contingency volume on the surface of the earth.
Contingency procedures		Planned course of action designed by the organization to respond effectively to a future event or abnormal situation that may or may not happen. It includes procedures executed by the remote pilot or by the UA, in case of autonomous flights, to return to normal operations or allow the safe cessation of the flight.
Contingency volume		The volume of airspace outside the flight geography where contingency procedures are applied. See also point 2.2.3 of SORA v2.5 Main Body.
Controlled Airspace		Airspace Class A, B, C, D, and E. An airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification. Controlled airspace does not imply separation services are provided at all times. Classes A, B, C, D and E as described in ICAO Annex 11, 2.6.
Controlled ground area		Ground area where the UAS is operated and within which the UAS operator can ensure that only involved persons are present.

Term	Acronym	Definition
Cooperative aircraft		Aircraft that have an electronic means of identification (i.e., a transponder) aboard and operating.
Critical (function)		A function whose loss would prevent the continued safe flight and landing of the UA thereby causing a significant increase in the safety risk for the third parties and/or environment involved.
Critical area		The ground area where persons would be expected to be impacted by the UA in the event of a loss of control or an unplanned landing.
Critical infrastructure		Means systems and assets vital to national defence, national security, economic security, public health or safety including both regional and national infrastructure.
Critical systems		Systems needed to perform one or more critical functions.
Criticality		The degree of impact that a malfunction has on the operation of a system.
Danger area		A danger area is an airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.
Datalink		A term referring to all interconnections to, from and within the UAS. It includes control, flight status, communication, and payload links.
Demonstration		A method of proof of performance by observation.
Detect and avoid	DAA	The capability to see, sense or detect conflicting traffic or other hazards and take the appropriate action to comply with the acceptable rules of flight.
Emergency recovery capability		UAS safety feature that provides for the cessation of the UAS operation in a manner that minimises risk to persons on the ground, other airspace users and critical infrastructure (e.g., return to home).
Emergency procedures		Planned course of action designed by the UAS operator to respond effectively to an emergency condition. They deal with controlling the aircraft to either return to a state where the operation is 'in control' or to minimise hazards until the flight has ended. It includes procedures that are executed by the remote pilot or by the UA. See also 2.3.2 (d) of SORA v2.5 Main Body.
Emergency response plan	ERP	Plan of actions to be conducted in a certain order or manner, in response to an emergency event. For additional information, please refer to 2.3.2 (e) of SORA v2.5 Main Body.

Term	Acronym	Definition
Environment		<p>a) The aggregate of operational and ambient conditions to include the external procedures, conditions, and objects that affect the development, operation, and maintenance of a system. Operational conditions include traffic density, communication density, workload, etc. Ambient conditions include weather, EMI, vibration, acoustics, etc. and</p> <p>b) Everything external to a system which can affect or be affected by the system.</p>
Equipment		A complete assembly—operating either independently or within a system/sub-system—that performs a specific function.
Extended visual line of sight	EVLOS	A UAS operation whereby the remote pilot maintains an uninterrupted situational awareness of the airspace in which the UAS operation is being conducted via visual airspace surveillance through one or more airspace observers, possibly aided by technology means. The RPIC has a direct control of the UAS at all time.
Failure		A loss of function or a malfunction of a system or a part thereof.
Failure mode		The way in which the failure of an item occurs.
Flight geography		The volume within which the UAS operator plans to conduct the operation under normal operating procedures. See also point 1.4(e) of SORA main body.
Flight manual		A manual containing limitations within which the aircraft is to be considered airworthy, and instructions and information necessary to the flight crew members for the safe operation of the aircraft.
Flight termination system	FTS	Procedure or function which aims to immediately end the flight.
Flux capacitor		A device that creates a controlled temporal displacement field when subject to a specific threshold of kinetic energy, typically realised through vehicular motion that results in the penetration of the space time continuum.
Flyaway		A condition due to loss of control of the operation, where the UAS is leaving the operational volume and it is not possible to regain control of the UA with none of the normal, contingency or emergency procedures being effective.
Functional test-based	FTB	An approach to demonstrate compliance with some OSOs, as defined in Section 3 of Annex E to SORA v2.5.
Geo-awareness		A function that, based on the data provided by the competent authority or ANSP, detects a potential breach of airspace limitations and alerts the remote pilots so that they can take immediate and effective action to prevent that breach.
Geo-caging		An automatic function that helps the remote pilot to maintain the UAS within the defined overall volume (a 'cage').

Term	Acronym	Definition
Geo-fencing		An automatic function for preventing the UA from entering a prescribed volume.
Ground risk buffer		An area on the surface of the earth, which surrounds the footprint of the contingency volume and that is specified in order to minimise the risk to third parties on the ground in the event of the UA leaving the contingency volume. See also point 2.2.4 of SORA v2.5 Main Body.
Handover		The act of passing command and control from one command unit to another.
Hazard		A potentially unsafe condition resulting from failures, external events, errors, or a combination thereof.
Height		The vertical distance of a level, a point, or an object considered as a point, measured from a specified datum.
Human error		Human action with unintended consequences.
Human Factors	HF	Factors affecting human performance and referring to principles that apply to aeronautical design, certification, training, operations and maintenance, and that seek safe interfaces between the human and other system components by proper consideration of human performance.
Human Factors principles		Principles which apply to aeronautical design, certification, training, operations and maintenance and that seek safe interface between the human and other system components by proper consideration to human performance.
Initial air risk class	iARC	Initial classification of the airspace before risk mitigations are applied.
Intrinsic ground risk class	iGRC	Initial classification of the ground risk before ground mitigations are applied.
Incident		An occurrence other than an accident that affects or could affect the safety of operations.
Industry Standard		<p>A published document established by consensus and approved by a recognized body that sets out specifications and procedures to ensure that a material, product, method or service meets its purpose and consistently performs to its intended use.</p> <p>Standards are industry developed standards that define minimum safety and performance requirements of an acceptable product or a means of compliance to specific requirements.</p>
Inspection		An examination of an item against a specific standard.

Term	Acronym	Definition
Integrated airspace	IA	Integrated airspace is considered 500 ft. AGL up to VHL airspace (≈FL600) and any airspace where manned aircraft will operate below 500 ft. AGL for take-off and landing. It is airspace where UAS are expected to conform and comply with the existing manned aircraft operating rules, procedures, and equipage.
Integrity		Attribute of a system or an item indicating that it can be relied upon to work as expected.
Involved person		Person directly involved with the operation of the UAS or fully aware that the UAS operation is being conducted near them. Involved persons are fully aware of the risks involved with the UAS operation and have accepted these risks. The UAS operator informs Involved persons of the risks and provides training on the relevant emergency procedures and/or contingency plans.
Loss of control of the operation		Situations where: <ul style="list-style-type: none"> — outcome of the situation highly relies on providence; or — cannot be handled by a contingency procedure.
Lost link (loss of datalink)		The loss of command and control link contact with the UA such that the remote pilot can no longer intervene in the UA's flight control.
Maintenance		Inspection, overhaul, repair, preservation, and/or the replacement of parts.
Malfunction		The occurrence of a condition whereby the operation is outside specified limits.
Maximum take-off mass	MTOM	The maximum UA mass, including payload and fuel, as defined by the design organisation or the builder, at which the UA can be operated.
Mid-air collision	MAC	An accident where two aircraft come into contact with each other while both are in flight.
Minimum aviation system performance standards	MASPS	A MASPS specifies characteristics that should be useful to designers, installers, service providers and users of systems intended for operational use within a defined volume. Where the systems are global in nature, the system may have international applications that are taken in to consideration. The MASPS describes the system (subsystems / functions) and provides information needed to understand the rationale for system characteristics, operational goals, requirements and typical applications. Definitions and assumptions essential to proper understanding of the MASPS are provided as well as minimum system test procedures to verify system performance compliance (e.g., end-to-end performance verification).
Mitigation		A means to reduce the risk of a hazard.

Term	Acronym	Definition
Minimum operational performance specification	MOPS	A MOPS provides standards for specific equipment(s) useful to designers, installers and users of the equipment. The word "equipment" used in a MOPS includes all components and units necessary for the system to properly perform its intended function(s). The MOPS provides the information needed to understand the rationale for equipment characteristics and requirements stated. The MOPS describes typical equipment applications and operational goals and establishes the basis for required performance under the standard. Definitions and assumptions essential to proper understanding are provided as well as installed equipment tests and operational performance characteristics for equipment installations.
Multiple Simultaneous UAS Operations	MSO	<p>UA operations where multiple UAs are under a common (centralized) flight management and the individual UA's either:</p> <ul style="list-style-type: none"> — operate relative to each other under the common flight management, (e.g., formation flights with a swarm of UAS performing displays for entertainment) or — operate independent of each other under the common flight management.
National aviation authority	NAA	Also referred as civil aviation authority, it is a government statutory authority in each country that oversees the approval and regulation of civil aviation.
Night		The hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise, as may be prescribed by the appropriate authority. Note: Civil twilight ends in the evening when the centre of the sun's disc is 6 degrees below the horizon and begins in the morning when the centre of the sun's disc is 6 degrees below the horizon.
Operation out of control		An operation unintentionally being conducted, outside of the limits approved in the authorisation.
Operational life		It is defined by the UAS design organisation as the maximum flight hours and/or cycles an UAS operator should use the UAS while continuously conforming with the maintenance design requirements.
Operator's manual	OM	A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties. Annex A to SORA illustrate an example for its content.
Operational volume		It is the volume in which the operation takes place safely. It is made by the combination of the flight geography and the contingency volume. See also point 2.2.1 of SORA v2.5 Main Body.
Parachute		A device used or intended to be used to retard the fall of a body or object through the air.
Population density		The number of people living per unit of an area (e.g., per square mile or square km).

Term	Acronym	Definition
Procedure		Standard, detailed steps that prescribe how to perform specific tasks.
Process		Set of inter-related resources and activities, which transform inputs into outputs.
Qualification		Process through which a State/ competent authority/applicant ensures that a specific implementation satisfies applicable requirements with a level of confidence.
Quantification		The act of assigning a numerical value to or measuring the probability that a specific event will occur.
Reliability		The probability that an item will perform a required function under specified conditions, without failure, for a specified period of time.
Remote crew member		A member of the crew that performs duties essential to the safety of flight whose duties and responsibilities has been assigned to these by the UAS operator. It may include the remote pilot in command, observers, maintenance staff, launch and recovery system operators etc.) is part of the remote crew.
Remote pilot (in command)	RPIC	A person, nominated by the UAS operator, responsible for the safe conduct of the flight of a UA by operating its flight controls, either manually or, when the unmanned aircraft flies automatically, by monitoring its course and remaining able to intervene and change the course at any time.
Risk		The combination of the frequency (probability) of an occurrence and its associated level of severity.
Risk analysis		The development of qualitative and / or quantitative estimate of risk based on evaluation and mathematical techniques.
Risk assessment		The process by which the results of risk analysis are used to make decisions.
Risk estimation		The combination of the consequences and likelihood of the harm.
Risk ratio		<p>The ratio between a conditional probability with a mitigating system, divided by a conditional probability without a mitigating system. An example of conditional probability is the chance that, given an encounter, a potential MAC occurs.</p> <p>A relative risk measure, which compares the probability of an event in an unmitigated scenario to the probability of the same event in a mitigated scenario.</p>
Robustness		Property of mitigation measures and OSOs resulting from combining the safety gain provided by the mitigation measures and the level of assurance and integrity that the safety gain has been achieved.

Term	Acronym	Definition
Rural air volume		In the context of the air risk, the volume not defined as urban environment and not within the aerodrome traffic zone (ATZ) of an airport.
Safety		The state in which the risk of harm to persons or property is reduced to, and maintained at or below, an acceptable level through a continuing process of hazard identification and risk management.
Safety objective		A measurable goal or desirable outcome related to safety.
Safety risk		The composite of predicted severity and likelihood of the potential effect of a hazard.
See and avoid	S&A	The requirement of the pilot of an aircraft to “see” and “avoid” a collision, and to remain well clear of other aircraft in accordance with, 14 CFR 91.113, SERA 3201, and ICAO Annex 2 section 3.2.
Segregated airspace		Airspace of specified dimensions allocated for exclusive use to a specific user(s).
Sense and avoid	SAA	See detect and avoid.
Separation		Maintaining a specific minimum distance between an aircraft and another aircraft or terrain to avoid collisions, normally by requiring aircraft to fly at set levels or level bands, on set routes or in certain directions, or by controlling an aircraft's speed.
Severity		The consequence or impact of a hazard’s effect or outcome in terms of degree of loss or harm.
Sheltering		Expected protection of people from the UA in case of crash into a building or structure.
Specific operation risk assessment	SORA	A methodology to guide both the applicant and the competent authority in determining whether a UAS operation can be conducted in a safe manner.
Specific category		Category of UAS where a proportionate approach to the assessment of the risk will be taken by requiring the UAS operator to present a specific operation risk assessment (SORA) of the UAS operation before operational approval will be granted by the competent authority.
Standard operating procedure	SOP	A set of instructions covering those features of operations which lend themselves to a definite or standardised procedure without loss of effectiveness.
Standard scenario		A description of a type of UAS operation, for which a specific operations risk assessment (SORA) has been conducted and on the basis of which mitigations means have been proposed that are deemed acceptable by the competent authority. The use of a standard scenario greatly simplifies and expedites the application process for the applicant and for the regulator.

Term	Acronym	Definition
Strategic conflict mitigation		A set of procedures aimed at reducing the UAS encounter probability prior to UAS take-off. Strategic mitigation is about controlling or mitigating risk by reducing local aircraft density or time of exposure of an individual UAS. These mitigations tend to take the form of operational restrictions of time or space. Strategic Mitigation does not fulfil the 14 CFR 91.113, SERA 3201, or ICAO Annex 2 section 3.2 to “see and avoid.” (Examples of Strategic Mitigation: an operational restriction to fly between the hours of 10PM and 3 AM; operational restriction to stay below 500 feet AGL; operational restriction to stay within 1 mile of a geographic location; etc.). Strategic Mitigation traces to the strategic layer of ICAO’s Conflict Management concept.
System		A combination of inter-related items arranged to perform a specific function(s).
System safety		System safety is a specialty within system engineering that supports program risk management. It is the application of engineering and management principles, criteria and techniques to optimize safety. The goal of System Safety is to optimize safety by the identification of safety related risks, eliminating or controlling them by design and/or procedures, based on acceptable system safety precedence.
Tactical conflict mitigation		The act of mitigating collision risk over a very short time horizon (minutes to seconds). Tactical mitigations take the form of SDAF loops (see, decide, action, and feedback loop). Tactical mitigation systems operate using a sensor to “see” the threat, “deciding” how to mitigate the risk, “acting” on the decision, and then having a system feedback in order to monitor the risk, and implement new corrections if needed. Tactical mitigation may fulfil the 14 CFR 91.113, SERA 3201 and ICAO Annex 2 section 3.2 “See and Avoid” requirement. (Examples of tactical mitigation: TCAS, ATC, ACAS, MIDCAS, DAA, ABSAA, GBSAA, see and avoid, etc.). Tactical mitigation traces to the separation provision and collision avoidance layers of ICAO’s conflict management concept.
Testing		The process of operating a system under specified conditions, observing or recording the results, and making an evaluation of some aspect of the system.
Third party		Party deriving no economic benefit and no control over risk associated with the UAS operation.
Threat		Occurrence that in the absence of appropriate threat barriers can potentially result in the hazard.
Total system error		All errors impacting the position of the UA. It includes the accuracy of the navigation solution, the flight technical error of the UAS, as well as the path definition error (e.g., map error) and latencies. Errors are usually determined by the interaction of several contributes, such as positioning sensors providing position, navigation and flight control systems, system and human latencies, and environment.

Term	Acronym	Definition
Transponder Mandatory Zone	TMZ	An airspace of defined dimensions wherein the carriage and operation of pressure-altitude reporting transponders is mandatory.
UA characteristic dimensions		<p>The width of the UA in the direction transversal to the direction of flight (refer to Annex F, critical area). For example:</p> <ul style="list-style-type: none"> — for fixed-wing UA, independent of the number of planes, including hybrid configurations, the UA characteristic dimension is the wingspan; — for conventional or coaxial helicopters UA, the UA characteristic dimension is the diameter of the main rotor; — for multicopter (e.g., hexacopter) UA, the UA characteristic dimension is defined by the maximum distance (i.e., the diagonal distance) between blade tips.
UAS traffic management (UTM)	UTM	A specific aspect of air traffic management which manages UAS operations safely, economically and efficiently through the provision of facilities and a seamless set of services in collaboration with all parties and involving airborne and ground-based functions. In Europe it is referred as U-space.
UAS component design and production organisation		The organisation designing and producing a component to be installed on a UAS (e.g., parachute). It is also responsible for carrying out the test, check compatibility and interface with the UAS models listed in the component instruction manual.
UAS component installer		The organisation responsible for installing a component (e.g., parachute) on a UAS model listed in the component instruction manual, using the procedure defined in the same manual. Depending on the level of integration of the component, the component installer may be the UAS operator or in some cases the UAS production organisation or one designated by them.
UAS operation		It may consist in one or multiple flights, even in different locations and with different purposes, conducted with a UAS with the same features, characterised by the same final air risk, final ground risk, SAIL score, ground and air risk mitigations and containment level.
UAS operator		A person or organization to operating one or more UAS. See also point 2.5(c) of SORA v2.5 Main Body.
Uncontrolled airspace		For the purposes of this assessment, uncontrolled airspace is defined as class G airspace.
Uninvolved persons		Persons located near a UAS operation and may or may not be aware that a UAS operation is being conducted. Uninvolved persons may or may not be aware of the risks associated with the operation and have not accepted these risks.
Unmanned aircraft	UA	An aircraft operating or designed to operate autonomously or to be piloted remotely.
Unmanned aircraft system	UAS	An UA, its command unit and command and control link.

Term	Acronym	Definition
Urban air volume		In the context of the air risk, it is the volume above a town or a city, starting from ground, where there is a higher probability that air operations (with or without pilots on board) may take place for several purposes (e.g., aerial work, delivery, transport, emergency etc.).
U-space		The UTM concept defined in Europe.
Validated		A term used to describe controls/safety requirements that are unambiguous, complete, and verifiable.
Verified		A term used to describe controls/safety requirements that are objectively determined to have been met by the design solution.
Very high-level airspace	VHL	The airspace from FL600 and above. The altitude of FL600 is not a hard value, but an initial value used in this assessment as a starting point for discussion. It may be adjusted by the regulating authorities as needed. UAS operating in VHL airspace may have to comply with operating rules, procedures, and equipment not yet identified. VHL is airspace where manned aircraft operations are very infrequent.
Very low-level airspace	VLL	The airspace from ground level to 500 ft AGL. The altitude of 500 ft AGL is not a hard value, but an initial value used in this assessment as a starting point for discussion and may be adjusted by the regulating authorities as needed. UAS operating in VLL airspace may have to comply with operating rules, procedures, and equipment not yet identified. VLL is airspace where manned aircraft operations are very infrequent. VLL airspace excludes Class A, B, C, D, E, and F airspaces, and airport environments.
Visual line of sight	VLOS	Type of UAS operation in which, the remote pilot is able to maintain continuous unaided visual contact with the UA and scan the airspace surrounding the UA. This, allows the remote pilot to control the flight path of the UA in relation to other aircraft for the purpose of avoiding collisions.