



**Joint Authorities for Rulemaking of
Unmanned Systems**

JARUS GLOSSARY

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Abstract		
<p>The purpose of this JARUS Glossary is to promote a common understanding of the terms and abbreviations used in the JARUS deliverables' documents. We have also considered other definitions and terms from other organisations and working groups for general informational purposes. This is a living document that will be regularly updated.</p>		
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1 Introduction

This section introduces the Glossary (G) for all JARUS documents to the reader.

1.1 Glossary Objectives

This Glossary has the following objectives:

- To define all abbreviations used on all JARUS documents
- To define all applications and technical terms used with regards to UAS
- To thereby improve communication among the JARUS members and UAS community

1.2 Intended Audiences

This Glossary has the following intended audience:

- Civil Aviation Authorities
- Drones' users
- Industry
- Manufacturers
- Organisations or private entities
- Operators
- Researchers
- Scientists
- All stakeholders within the UAS community

1.3 References

This Glossary defines abbreviations and terms used in the following JARUS documents:

- [JAR doc 01 – Certification Specification for Light Unmanned Rotorcraft Systems \(CS-LURS\)](#), WG3, published Oct 2013
- [JAR doc 02 – RPAS C2 Link RCP](#) (See upgraded C2 Link RLP doc JAR doc 13), WG 5, published Oct 2014
- [JAR doc 03 – Flight Crew Licensing \(FCL\) Recommendation](#), WG 1, published Sep 2015
- [JAR doc 04 - AMC RPAS 1309](#) (package), WG 6, published Nov 2015
- [JAR doc 05 – Certification Specification for Light Unmanned Aeroplane Systems \(CS-LUAS\)](#), WG 3, published Dec 2016
- [JAR doc 06 – Specific Operations Risk Assessment \(SORA\)](#) (package with Annex A, B, C, D and E), WG 6, published June 2018.
- [JAR doc 07 – Controller Pilot Data Link Communications \(CPDLC\)](#), WG 5, published Jun 2016

- [JAR doc 10 – Flight Crew Licensing Guidance Material \(FCL GM\)](#), WG 1, published April 2017
- [JAR doc 13 – Required C2 Performance \(RLP\) concept](#), WG 5, published May 2016

This Glossary includes abbreviations and terms used in the following documents/sources:

- [ASTM International: F2395 -07 Standard Terminology for Unmanned Air Vehicle Systems](#) (Withdrawn 2014) *
- [EASA AMC CS-25.1309: Specific risk and standardised criteria for conducting aeroplane level safety assessments of critical systems](#) (Sep 2007)
- [EASA NPA 2-17-05, Introduction of a regulatory framework for the operation of drones](#)
- [EASA Policy Statement – Airworthiness Certification of Unmanned Aircraft Systems \(UAS\) E.Y01301](#) (2009)
- [EASA Prototype Commission Regulation on Unmanned Aircraft Operations. Explanatory Note](#) (Aug 2016)
- [EUROCAE ED-79A / SAE ARP4754A: Guidelines for Development of Civil Aircraft and Systems](#) (Dec 2010)
- [EUROCAE ED-80/RTCA DO-254: Design Assurance Guidance For Airborne Electronic Hardware](#) (Sep 2016)
- [EUROCAE Report ER-010: UAS/RPAS Airworthiness Certification “1309” System Safety Objectives and Assessment Criteria](#) *
- [EUROCONTROL RPAS ATM concept v4.0](#) (Feb 2017)
- [European Defence Agency, European Military Airworthiness Document EMAD 1, ed. 1.1, Definitions and acronyms document, May 2013](#)
- [European Military Airworthiness Certification Criteria \(EMACC\) handbook, Feb 2018](#)
- [FAA 14 CFR part 1.1 Definitions and Abbreviations](#)
- FAA Order VS 8000.367A: Aviation Safety (AVS) Safety Management System Requirements. [Superseded by FAA VS 8000.367B](#) (Sep 2017)
- [FAA AC 23.1309-1E – System Safety Analysis and Assessment for Part 23 Airplanes](#), Nov 2011

- [FAA AC 25.1309-1A - System Design and Analysis](#) (Jun 1988)
- [FAA AC 27. IB, AC 27.1309 – Certification of normal category rotorcraft](#) (May 2014)
- [FAA AC 29. 2C, AC 29. 1309 – Equipment, Systems and Installations](#) (May 2014)
- [FAA AC 431.35-1 Expected casualty calculations for commercial space launch and re-entry missions](#) (Aug 2000)
- [FAA ATO SMS Manual v1.1: Air Traffic Organization Safety Management Manual](#) (Jul 2017)
- [FAA Order JO 7210.3 AA: Facility Operation and administration](#) (Oct 2017)
- [FAA System Safety Handbook](#)
- [FAA, Flight Safety Analysis Handbook, Version 1.0](#) (Sep 2011)
- [FAA UAS ARC TCAT](#) (Aug 2012)
- [FAA-Order 8130.34C: Airworthiness Certification of UAS and Optionally Piloted Aircraft](#) (Aug 2013)
- [ICAO Annex 2 Amendment 43](#) (Apr 2012)
- [ICAO Annex 8: Airworthiness of Aircraft](#) (Apr 2005)
- [ICAO Cir 328 AN/190: Unmanned Aircraft Systems \(UAS\) \(2011\)](#)
- [ICAO Manual on RPAS Doc 10019*](#)
- [JAA AMJ 25.1309: Guidance material on Airworthiness approval and operational criteria](#) (May 1997)
- [Merriam-Webster](#)
- MITRE Corp/IEEE * (<https://ieeexplore.ieee.org> – to get docs. must sign in or purchase)
- [NA 131-01-01 AA, German standards](#) on UAS *
- [NATO STANAG 4703, Light UAS Airworthiness Requirements \(USAR-Light\) \(Nov 2016\) *](#)
- [Oxford Dictionary](#)
- [Regulation \(EC\) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation \(EC\) No 1592/2002 and](#)

[Directive 2004/36/EC](#) (Feb 2008)

- [RTCA DO-304 Guidance Material and Considerations for Unmanned Aircraft System* & DO-320 Operational Services and Environmental Definition \(OSED\) for Unmanned Aircraft Systems](#) *
- [RTCA SC-203 WG-4 Safety Definitions](#) *
- [UK CAA CAP 722: Unmanned Aircraft System Operations in UK Airspace – Guidance \(6th edition Mar 2015\)](#)
- [SAE International ARP4754A: Guidelines for Development of Civil Aircraft and Systems](#) *
- [SAE International ED-79A / ARP4754A: Guidelines for Development of Civil Aircraft and Systems - Enhancements, Novelties and Key Topics](#) *
- [SAE ARP4761 – Guidelines and methods for conducting the safety assessment process on civil airborne systems and equipment \(Dec 1996\)](#)
- [Safeopedia](#)
- [SKYbrary](#)
- [STANAG 4671 ed 3The INCOSE Systems Engineering Handbook, Version 3.2](#) (Haskins, 2010) ([ANSI/AIAA G-043-1992 Guide for the Preparation of Operational Concept Documents](#))UVS International
- [UK-CAA CAP 722 \(Unmanned Aircraft System Operations in UK Airspace Guidance\)](#)
- [UK-CAA CAP 780 \(Aviation Safety Review 2008\)](#)
- [Wikipedia](#)

Note: The listed documents were available at the time the JARUS deliverables were published. Some standards/documents have been superseded and may not be available electronically.

** Documents may require membership affiliation to access the content, and/or payment for copyrighted material or for duplication purposes.*

1.4 Glossary Overview

This Glossary has the following structure:

- *Introduction*, which introduces this Glossary to its readers.
- *Abbreviations*, which represent all project acronyms.
- *Definitions*, domain-specific and technical terms used in the JARUS published documents.

2 Abbreviations

A	aeroplane
ABSAA	Airborne-based sense and avoid
AC	alternating current
AC	advisory circular
ACAS (-X)	airborne collision avoidance system
ACP	aeronautical communications panel
A/C	aircraft
AD	airworthiness directive
ADF	automatic direction finding
ADS-B	automatic dependent surveillance — broadcast
ADT	air data terminal
AEC	airspace encounter categories
AFIS	aerodrome flight information service
AGL	above ground level
AIC	aeronautical information circular
AIP	aeronautical information publication
AIRAC	aeronautical information regulation and control
AIS	aeronautical information services
AIS	abbreviated injury scale
AltMOC	alternative means of compliance (in U.S.)
AMC	acceptable means of compliance

ANC	air navigation commission
ANSPs	air navigation service providers
A-NPA	advanced – notice of proposed amendment
A&O	alpha and omega
AOC	aircraft operator certificate
AP	autopilot
APU	auxiliary power unit
ARC	air-risk class
As	airship
ATC	air traffic control
ATCO	air traffic control officer
ATIS	automatic terminal information service
ATM	air traffic management
ATO	approved training organisation
ATPL	airline transport pilot licence
ATS	air traffic service
ATSP	air traffic service provider
ATSP/O	air traffic service provider or organisation
ATSU	air traffic service unit
ATM	air traffic management
AUM	all up mass
AW	airworthiness

AW	aerial work
B	balloon
BEM	basic empty mass
BITD	basic instrument training device
BRLOS	beyond radio line-of-sight
BVLOS	beyond vlos operations
C2	command and control
C3	command, control and communications
CA	collision avoidance
CAA	civil aviation authority
CAS	calibrated air speed
CAT	category
CDI	course deviation indicator
CDL	configuration deviation list
CFR	code of federal regulations
CG	centre of gravity
CFIT	controlled flight into terrain
CNS	communication, navigation and surveillance
CoA/CofA	certificate of airworthiness
CofA	certificate of authorization (in U.S.)
COM	communications
ConOps	concept of operations

COS	continued operational safety
COTS	commercial-off-the-shelf
CPA	closest point of approach
CPDLC	controller-pilot data link communications
CS	certification specifications
CS-LURS	certification for light unmanned rotorcraft systems
CS-LUAS	certification specification for light unmanned aeroplane systems
CSP	communication service provider
DAA	detect and avoid
DAL	development assurance levels
DC	direct current
DF	direction finding
DME	distance measuring equipment
DPATO	defined point after take-off
DPBL	defined point before landing
DOA	design organization approval
DR	dead reckoning navigation
DVE	degraded visual environment
EASA	European Aviation Safety Agency
ED-79A	EUROCAE- guidelines for development of civil aircraft and systems (parallel to sae arp 4754a)
EFIS	electronic flight instrument system
ELT	emergency locator transmitter

EM	electromagnetic
EOL	engine off landings
ERF	emergency recovery function
ERP	emergency response plan
ERPM	engine revolution per minute
ER-010	EUROCAE – technical report: uas / rpas airworthiness certification, "1309"
ET	expiration time
ETA	estimated time of arrival
EUROCAE	European Organisation for Civil Aviation Equipment
E-VLOS	extended visual line of sight
FAA	Federal Aviation Administration
FCC	flight control computer
FCL	flight crew licensing
FFS	full flight simulator
FH	flight hour
FHA	functional hazard analysis
FLARM	flight and alarm
FMEA	failure modes and effect analysis
FMS	flight management system
FIS	flight information service
FRMS	fatigue risk management system
FSS	fixed satellite service

FSTD	flight simulation training device
ft	feet
FTA	fault tree analysis
FTS	flight termination system
G	gravity forces
GBDAA	ground-based detect and avoid
GBSAA	ground-based sense and avoid
GCS	ground control station
GDT	ground data terminal
GLONASS	global orbiting navigation satellite system
GM	guidance material
GNSS	global navigation satellite systems
GPS	global positioning system
GRC	ground risk class
GPWS	ground proximity warning system
HALE	high-altitude long-endurance
H	helicopter
HITL	hardware-in-the-loop
HITL	human in the loop
HMI	human-machine interface
HF	high frequency
HRM	holistic risk model

HUMS	health and usage monitoring system
IAS	indicated air speed
ICA	instructions for continuing airworthiness
ICAO	international civil aviation organisation
IFR	instrument flight rules
IGE	in ground effect
ILS	instrument landing system
IMC	instrument meteorological conditions
IMSAFE	aeronautical information manual
ISA	international standard atmosphere
ISO	International standards organization
ITU/WRC	international telecommunications union/world radio conference
JARUS	joint authorities for rulemaking on unmanned systems
KE	impact kinetic energy
kg	kilogram
(L)	limited drone zone
LAANC	low altitude authorization and notification capability
LIDAR	light detection and ranging
LDP	landing decision point
LMT	local mean time
LRE	launch and recovery element
m	meter

MA	manoeuvre advisories
MAC	mid-air collision
MASPS	minimum aviation system performance standards
MAWS	minimum altitude warning system
MCAR	model civil aviation regulation
MCM	maintenance control manual
ME	multi-engine
MEP	multi-engine piston
METAR	aerodrome routine meteorological report
MIDCAS	mid-air collision avoidance system
MMEL	master minimum equipment list
MoMs	minutes of meeting
MOPS	minimum operational performance specification
MP	multi-pilot
MOR	mandatory occurrence reporting
MPL	multi-crew pilot licence
MR	multicopter
MTOW	maximum take-off weight
(N)	no drone zone
NAA	national aviation authority
N/A	not applicable
NDB	non-directional beacon

NextGen	next generation air transportation
NM	nautical mile
NMAC	near mid-air collision
NOTAM	notice to airmen
NOTAR	no tail rotor
NPA	notice of proposed amendment
OAT	outside air temperature
ODA	organization designation authorization
OBS	omni bearing selector
OGE	out of ground effect
OLS	obstacle limitation surfaces
OPS	operations
ORG	organisations
OSO	operation safety objectives
PBN	performance-based navigation
PIC	pilot-in-command
PICUS	pilot-in-command under supervision
POA	production organisation approval
PPL	private pilot licence
QDM	magnetic heading
QE	qualified entities
QFE	atmospheric pressure at aerodrome elevation

QNH	altimeter sub-scale setting to obtain elevation when on the ground
RA	risk assessment
RCP	required communication performance
RCTP	required communication technical performance
RF	radio frequency
RLOS	radio line-of-sight
RLTP	required link technical performance
R/T	radiotelephony
RLP	required link performance
ROC	rpas operator certificate
RP	remote pilot
RPA	remotely piloted aircraft
RPAS	remotely piloted aircraft system
RPC	Remote pilot competence
RPIC	remote pilot-in-command
RPIL	remote pilot
RPL	remote pilot licence
RPL(A)	remote pilot licence category aeroplanes
RPL(As)	remote pilot licence category airship
RPL(B)	remote pilot licence category balloon
RPL(H)	remote pilot licence category helicopter
RPL(MR)	remote pilot licence category multicopter

RPM	revolution per minute
RPS	remote pilot station
RR	risk ratios
RRPM	rotor revolution per minute
RTC	restricted type certificate
RTF	radiotelephony failure
RVSM	reduced vertical separation minimum
RWC	remain-well-clear
SAA	sense and avoid
SAIL	specific assurance and integrity levels
SARPs	standards and recommended practices
SATCOM	satellite communication
SDAF	see, decide, action, and feedback
SE	single-engine
S&A	see and avoid
SEP	single-engine piston
SERA	standardised European rules of the air
SESAR	single European sky ATM research
SIDs	standard instrument departures
SITL	software-in-the-loop
SLPC	single lever power control
SMS	safety management system

SME	subject matter experts
SOP	standard operating procedure
SORA	specific operational risk assessment
SOW	statement of work
SP	single-pilot
SPECI	aerodrome special meteorological report
SSP	state safety programmes
SSR	secondary surveillance radar
SWIM	system-wide information management
TAS	true air speed
TAWS	terrain awareness warning system
TC	type certificate
TCAS	traffic collision avoidance system
TCDS	type certificate data sheet
TDP	take-off decision point
TEM	threat and error management
TLS	target level of safety
TMPR	tactical mitigation performance requirement
TMZ	transponder mandatory zone
TNT	unit of energy
TO	take off
TODA	take-off distance available

TORA	take-off run available
TRN	transaction
TSD	time sequence diagram
Tsloss	time (sustained loss of link)
TSO	technical standard order
TT	transaction time
UA	unmanned aircraft
UAS	unmanned aircraft systems
UASSG	unmanned aircraft systems study group
UAS.OPA	uas operations category a
UAS.OPB	uas operations category b
UAS.SEC	uas security requirements for uas operations
UAVs	unmanned aerial vehicles
U-Space	unmanned space
UTC	coordinated universal time
UTM	unmanned traffic management
V	velocity
VFR	visual flight rules
VHF	very high frequency
VHL	very high level
VLL	very low level
VLOS	visual line of sight

VMC	visual meteorological conditions
VO	visual observer
VOR	vhf omni-directional radio range
VOR	voluntary occurrence reporting
WG	working group
ZFM	zero fuel mass

3 Definitions – From A to Z

[A](#), [B](#), [C](#), [D](#), [E](#), [F](#), [G](#), [H](#), [I](#), [J](#), [K](#), [L](#), [M](#), [N](#), [O](#), [P](#), [Q](#), [R](#), [S](#), [T](#), [U](#), [V](#), [W](#) X, Y, Z

Note - Terms followed by one asterisk have no official status within ICAO.*

Term	Definition	Source
A back		
<i>abnormal situation</i>	One in which it is no longer possible to continue the flight using normal procedures but the safety of the aircraft or persons on board or on the ground is not in danger.	Skybrary
<i>acceptable means of compliance</i>	Non-binding standards adopted by EASA to illustrate means to establish compliance with the Basic Regulation and its Implementing Rules.	EASA
<i>acceptable means of compliance</i>	Non-binding standards adopted by NAA, to illustrate means to establish compliance with the Civil Aviation Law and its implementing acts. If no AMS is promulgated by an NAA, in alternative AMC adopted by JARUS or guidance developed by industry may be used.	JAR doc 14 – OPS Cat A & B – WG 2
<i>acceptable risk</i>	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.	VS 8000.367A - Aviation Safety (AVS) Safety Management System Requirements
<i>acceptable risk</i>	The residual (final) risk remaining after application of controls, i.e. Hazard Controls / Risk Controls, have been applied to the associated Contributory Hazards; that have been identified and communicated to management for acceptance.	FAA System Safety Handbook, Appendix A: Glossary

acceptable risk level	Level of risk posed to third parties the approving authority finds acceptable.	Custom WG6 (Taken from EASA)
accident	An unplanned event or series of events that results in death, injury, or damage to, or loss of, equipment or property.	VS 8000.367A - Aviation Safety (AVS) Safety Management System Requirements
accident	<p>An unplanned fortuitous event that results in harm, i.e. loss, fatality, injury, system loss; also see Risk Severity. The specific type and level of harm must be defined; the worst case severity that can be expected as the result of the specific event under study. Various contributory hazards can result in a single accident; also see Contributory Hazard, Cause, Root Cause, and Initiating Events.</p> <p>Accident. An unplanned event that results in a harmful outcome; e.g. death, injury, occupational illness, or major damage to or loss of property.</p> <p>Accident. An unplanned event or series of events resulting in:</p> <p>Death</p> <p>Injury</p> <p>Occupational illness</p> <p>Damage to or loss of equipment or property.</p> <p>Damage to the environment.</p>	FAA System Safety Handbook, Appendix A: Glossary

accident	<p>An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:</p> <p>A person is fatally or seriously injured as a result of:</p> <p>Being in the aircraft, or</p> <p>Direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or</p> <p>Direct exposure to jet blast,</p> <p>The aircraft sustains damage or structural failure which:</p> <p>Adversely affects the structural strength, performance or flight characteristics of the aircraft, and</p> <p>Would normally require major repair or replacement of the affected component,</p> <p>The aircraft is missing or is completely inaccessible</p>	ICAO Manual on RPAS Doc 10019 (2015)
accident	An unplanned event or series of events that results in death, injury, or damage to, or loss of, equipment or property.	FAA Order 8040.4A
adequate	What it is necessary, desirable or sufficient for a specific requirement.	Merriam-Webster
aerial work	An aircraft operation in which an aircraft is used for specialized service such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement.	ICAO Manual on RPAS Doc 10019 (2015) modified
aerodrome	Defined area (including any buildings, installations and equipment) on land or water or on a fixed, fixed off-shore or floating structure intended to be used either wholly or in part for the arrival, departure and surface movement of the aircraft.	ICAO Doc 10019 (2015) modified according to EU Regulation 923/2012

<i>aeronautical information publication</i>	A publication issued by an authorised AIS Provider containing aeronautical information of a lasting character essential to air navigation.	ICAO JAR doc 14 – OPS Cat A & B – WG 2
<i>airborne collision avoidance system (ACAS)</i>	An aircraft system based on secondary surveillance radar (SSR) transponder signals which operate independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.	ICAO Manual on RPAS Doc 10019 (2015)
<i>airborne sense and avoid</i>	Capability on-board the unmanned aircraft to perform both separation and collision avoidance functions to mitigate the inability for a UAS pilot to directly see and avoid other aircraft or to provide an alternate means of compliance to “See and Avoid” regulations.	
<i>aircraft</i>	A device that is used or intended to be used for flight in the air.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
<i>aircraft</i>	Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth’s surface.	ICAO Cir 328 AN/190 and ICAO Manual on RPAS Doc 10019 (2015)
<i>aircraft category</i>	Classification of aircraft according to specified basic characteristics, e.g. aeroplane, helicopter, glider, free balloon.	ICAO Cir 328 AN/190, and ICAO Manual on RPAS Doc 10019 (2015), and Dictionary of ICAO terminology (1967)

<i>aircraft engine</i>	An engine that is used or intended to be used for propelling aircraft. It includes turbo superchargers, appurtenances, and accessories necessary for its functioning, but does not include propellers.	14 CFR part 1.1 DEFINITIONS AND ABBREVIATIONS
<i>aircraft operating manual</i>	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. Note: The aircraft operating manual is part of the operations manual.	ICAO
<i>air data terminal</i>	The data link element consists of the air data terminal in the air vehicle and the ground data terminal (GDT) on the ground. Connectivity between the GDT and ADT is prerequisite for Level 2, 3, 4, and 5 interoperability.	STANAG 4586 ed 2
<i>airmanship</i>	The consistent use of good judgement and well-developed knowledge, skills and attitudes to maintain flight safety and accomplish flight objectives.	JAR doc 03 – FCL Recommendations – WG1
<i>airframe</i>	The fuselage, booms, nacelles, cowlings, fairings, air-foil surfaces (including rotors but excluding propellers and rotating air-foils of engines), and landing gear of an aircraft and their accessories and controls.	14 CFR part 1.1 DEFINITIONS AND ABBREVIATIONS
<i>airplane</i>	An engine-driven fixed-wing aircraft heavier than air, that is supported in flight by the dynamic reaction of the air against its wings.	14 CFR part 1.1 DEFINITIONS AND ABBREVIATIONS
<i>airport environment</i>	Airport environment is generally defined as; a) Class A, B, C, D, or E controlled airspaces which touch the surface with an airport and/or controlled airspaces which do not touch the surface, but in connection to an airport (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.	
airship	An engine-driven lighter-than-air aircraft that can be steered.	14 CFR part 1.1 DEFINITIONS AND ABBREVIATIONS
airspace encounter categories	The AEC is a qualitative classification of the rate at which 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, into 12 categorizations. 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 rate at which 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).	JAR doc 06 – SORA Annex C – WG6
airspace risk class	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.	
air traffic	All aircraft in flight or operating on the manoeuvring area of an aerodrome.	ICAO Manual on RPAS Doc 10019 (2015)
air traffic control service	A service provided for the purposes of: a) preventing collisions between aircraft and in the manoeuvring area between aircraft and obstructions; and b) expediting and maintaining an orderly flow of air traffic.	STANAG 4586 ed 2 and ICAO Manual on RPAS Doc 10019 (2015)
air traffic management	The aggregation of the airborne functions and ground-based functions (air traffic services, airspace management and air traffic flow management) required to ensure the safe and efficient movement of aircraft during all phases of operations.	JAR doc 02 - RPAS C2 link RCP – WG5
air traffic service	A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service,	ICAO Manual on RPAS

	approach control service or aerodrome control service).	Doc 10019 (2015)
air traffic services unit	A generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office.	ICAO Manual on RPAS Doc 10019 (2015)
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.	SAE ARP4761
airworthiness	The ability of an aircraft, or other airborne equipment or system, to operate in flight and on ground without significant hazard to aircrew, ground-crew, passengers (where relevant) or to other third parties.	EMAD 1 ed. 1.1
airworthiness codes	Product airworthiness requirements, applicable to the design of a product, that are approved by a competent airworthiness authority for the use with standardised aircraft categories (e.g. EASA CS, FAA FAR, STANAG, Def-STAN, etc.).	EMAD 1 ed. 1.1
airworthiness directive	A document issued or adopted by the authority which mandates actions to be performed on an aircraft to restore an acceptable level of safety, when evidence shows that the safety level of this aircraft may otherwise be compromised. (ref. EMAR 21)	EMAD 1 ed. 1.1
airworthy	Airworthy means the aircraft conforms to its type design and is in a condition for safe operation.	14 CFR part 3.5 (a) Definitions.
airworthy (condition)	The status of an aircraft, engine, propeller or part CAR Part 1. Note: 'airworthy condition' when it conforms to its approved design and is in a condition for safe operation.	ICAO Annex 8
airworthy (for the purpose of the sora)	A UAS is airworthy if the aircraft and all of its associated elements are in condition for safe operation.	FAA Order 8130.34C
altitude	The SORA divides the airspace into three generalized altitude bands: <ul style="list-style-type: none"> • Very Low Level (VLL) defined as roughly 500ft. AGL and below. • Integrated Airspace defined as roughly as airspace above 500ft. AGL, 	JAR doc 06 – SORA Annex C – WG6

	<p>and below FL600.</p> <ul style="list-style-type: none"> • Very High Level (VHL) defined as roughly as airspace above FL600. 	
analysis	An evaluation based on decomposition into simple elements.	SAE ARP4761
applicant	In the context of the SORA, an applicant refers to the individual or organization 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 for the NAA to evaluate the risks associated with the operation for the purpose of authorizing the operation in an agreed upon manner according to established conditions and limitations of the operation.	Custom WG6
approval	The act of formal sanction of an implementation by a certification authority.	SAE ARP4761
approved	Accepted by the certification authority as suitable for a particular purpose.	SAE ARP4761 (ICAO)
approved	Accepted by a Contracting State as suitable for a CAR Part 1 particular purpose.	ICAO Annex 8
assessment	An evaluation based upon engineering judgment.	SAE ARP4761
assurance	The planned and systematic actions necessary to provide adequate confidence that a product or process satisfies given requirements.	
atm function	An individual operational component of air traffic services. Examples of ATM functions include, but are not limited to, the application of separation between aircraft, the re-routing of aircraft, and the provision of flight information.	JAR doc 02 - RPAS C2 link RCP – WG5
atypical airspace	Atypical Airspace is defined as; a) Restricted Airspace; b) Airspace where normal manned aircraft cannot go (e.g. airspace within 100 ft. of buildings or structures); c) Airspace characterization where the encounter rate of manned aircraft (encounter is defined as proximity of 3000 ft. horizontally and \pm 350 ft.	JAR doc 06 – SORA Annex C – WG6

	vertically) can be shown to be less than 1E-6 per flight hour during the operation); d) Airspace not covered in Airspace Encounter Categories (AEC) 1 through 12.	
authority	The organization or person responsible within the State (Country) concerned with the certification of compliance with applicable requirements.	SAE ARP4761
authority	Authority responsible for the airworthiness of military aircraft hereto and "the Authorities" means all the military Authorities responsible for airworthiness hereto.	EMAD 1 ed. 1.1
authorised representative	Any natural or legal person established in [State] who has received a written mandate from a manufacturer to act on his behalf in relation to specified tasks with regard to the latter's obligations for placing a product on the market.	
authorization	UAS operational approval granted to an applicant by a NAA.	
automatic	The execution of a predefined process or event that requires UAV System crew initiation.	STANAG 4671 ed 3 (draft)
automatic (function)	The execution of predefined processes or events that do not require direct UAS crew initiation and/or intervention.	
automatic dependent surveillance – broadcast ADS-B	A means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link.	ICAO Manual on RPAS Doc 10019 (2015)
automatic flight	A flight following pre-programmed instructions, loaded in the unmanned aircraft (UA) flight control system, that the UA executes	
automatic operation	A phase of flight following pre-programmed instructions that the UA executes while pilot intervention remains possible at all times, under normal conditions without possibility of immediate pilot intervention in the control of the flight	NPA 2017-05 (A) EASA JAR doc 14 – OPS Cat A & B – WG 2

<i>automated take-off and landing</i>	The ability of the AV to be launched with a single command once planning and pre-flight has been conducted and permission to launch has been granted. Includes releasing the AV from a securing device and flight of the AV to the first waypoint and the ability to land and secure the AV with a single command once the air vehicle has been stationed at a gate position no closer than 100 meters to the landing spot.	STANAG 4586 ed 2
<i>autonomous (function)</i>	The execution of predefined processes or events that do not require direct UAS crew initiation and/or intervention.	RTCA SC-203 WG-4 Safety Definitions
<i>autonomous aircraft*</i>	An unmanned aircraft that does not allow pilot intervention in the management of the flight.	ICAO Cir 328 AN/190 CAP 722 ICAO Manual on RPAS Doc 10019
<i>autonomous aircraft</i>	An UA that does not allow intervention by a remote pilot in the management of the flight.	
<i>autonomous operation*</i>	An operation during which a remotely-piloted aircraft is operating without pilot intervention in the management of the flight.	ICAO Cir 328 AN/190 and ICAO Manual on RPAS Doc 10019
<i>autonomous operation</i>	An operation during which an unmanned aircraft is operating without pilot intervention in the management of flight.	CAP 722 And ICAO Manual on RPAS Doc 10019
<i>autonomous operation</i>	A phase of a UA flight, during which a remotely piloted aircraft is operating, by design and under normal conditions, without possibility of immediate pilot intervention in the control of the flight.	JAR doc 14 – OPS Cat A & B – WG 2
<i>availability</i>	The probability that an operational communication transaction can be initiated when needed.	JAR doc 02 - RPAS C2 link RCP – WG5

availability	Qualitative or quantitative attribute that a system or item is in a functioning state at a given point in time. It is sometimes expressed in terms of the probability of the system (item) not providing its output(s) (i.e. unavailability).	ARP4754A
b back		
barrier	A circumstance or obstacle that keeps people or things apart or prevents communication or progress.	Oxford Dictionary
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 utilized 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.	FAA System Safety Handbook, Appendix A: Glossary
beyond visual line of sight (BVLOS)	A type of UA operation in which the remote crew, including the remote pilot and possible observers, is unable to maintain continuous unobstructed and unaided visual contact with the UA.	NPA 2017-05 (A) EASA JAR doc 14 – OPS Cat A & B – WG 2
beyond visual line of sight (BVLOS)	For the purposes of this assessment, BVLOS is a means of flying the UAS without the direct, unaided visual supervision of the aircraft by the person manipulating the flight controls.	
bow-tie representation	In the context of the SORA, a means chosen to illustrate the proposed risk model; it is not intended to support an application for authorization.	
buffer	The period of time between initiation of a manoeuvre and its completion. This is longer than the transaction completion time.	JAR doc 02 - RPAS C2 link RCP- WG5
c back		
calendar month	A period of a month beginning and ending with the dates that are conventionally accepted as marking the beginning and end of a numbered month (as January 1 through January 31 in the Gregorian calendar).	JAR doc 03 – FCL Recommendations – WG1

calendar year	A period of a year beginning and ending with the dates that are conventionally accepted as marking the beginning and end of a numbered year (as January 1 through December 31 in the Gregorian calendar).	JAR doc 03 – FCL Recommendations – WG1
candidate	The person being tested or checked by the RPAS examiner applicant. This person may be a remote pilot for whom the test or check would be required, or the inspector of the competent authority who is conducting the RPAS examiner certification assessment of competence.	
catastrophic	Failure conditions that could result in one or more fatalities.	JARUS AMC RPAS.1309
catastrophic	Edition 2: Failure conditions that result in a worst credible outcome of at least uncontrolled flight (including flight outside of pre-planned or contingency flight profiles/areas) and/or uncontrolled crash, which can potentially result in a fatality. Or Failure conditions which could potentially result in a fatality to UAV crew, ground staff, or 3 rd	STANAG 4671 ed 3 (draft)
cause	Something that brings about an event; a person or thing that is the occasion of an action or state; a reason for an action or condition.	FAA System Safety Handbook, Appendix A: Glossary
certificate of airworthiness	It is a permit or formal document for operation, issued for an aircraft by the national aviation authority to certify that an aircraft is airworthy.	Cranfield University
certification	Recognition that a product, part or appliance, organisation or person complies with the applicable airworthiness requirements followed by the declaration of compliance.	EMAD 1 ed. 1.1
certification	The legal recognition that a product, service, organization, or person complies with the applicable requirements. Such certification comprises the activity of technically checking the product, service, organization or person, and the formal recognition of compliance with the applicable requirements by issue of a certificate, license, approval, or other documents as required by national laws and procedures.	SAE ARP4761

certification	<p>Legal recognition by the certification authority that a product, service, organization or person complies with the applicable requirements. Such certification comprises the activity of checking the product, service, organization or person and the formal recognition of compliance with the applicable requirements by issue of certificate, license, approval or other document as required by national law or procedures. In particular, certification of a product involves:</p> <p>(a) the process of assuring the design of a product to ensure that it complies with a set of standards applicable to that type of product so as to demonstrate an acceptable level of safety, (acceptable risk);</p> <p>(b) the process of assessing an individual product to ensure that it conforms to the certified type design;</p> <p>(c) the issue of any certificate required by national laws to declare that compliance or conformity has been found with applicable standards in accordance with item (a).</p>	FAA System Safety Handbook, Appendix A: Glossary
certification authority	Organization or person responsible for granting approval on behalf of the nation of manufacture.	SAE ARP4761
certification authority	The organization or person responsible within the state (country) concerned with the certification of compliance with applicable requirements.	FAA System Safety Handbook, Appendix A: Glossary
certification review item	A document recording Deviations, Special Conditions, new Means of Compliance or any other certification issue which requires clarification and interpretation, or represents a major technical or administrative issue.	EMAD 1 ed. 1.1
certification specifications	Standards adopted by NAA indicating means to show compliance with the Civil Aviation Law and Regulations and which can be used by an organisation for the purpose of certification. If no such applicable standards have been adopted by NAA then Certification Standards adopted by other aviation authorities or JARUS CS or standards developed by industry could apply.	JAR doc 14 – OPS Cat A & B – WG 2

chase aircraft	A manned aircraft flying in close proximity to UA (RPA) that carries a qualified observer and/or UA (RPA) pilot for the purpose of seeing and avoiding other aircraft and obstacles.	Custom WG6 (Taken from FAA UAS ARC TCAT)
civil aircraft	Aircraft other than public/state aircraft	Custom WG6 (Taken from-Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS)
civil aviation authority	The government regulatory agency that governs aircraft, airmen, and operations. In the United States this is the Federal Aviation Administration (FAA).	ASTM International: F2395 -07
classification (failure condition)	A discrete scale allowing categorization of the severity of the effects of a failure condition. The classification levels are defines in the appropriate CFR/CS advisory material (section 1309): Catastrophic, Hazardous/Severe-Major, Minor, or No Safety Effect.	ARP4754A
collision avoidance	Averting physical contact between an aircraft and any other object or terrain.	RTCA-DO-320 OSD
collision avoidance	The capability to take the appropriate avoidance action. Designed to act only if Separation Assurance has been breached.	JAR doc 04 – AMC RPAS – WG 6
command and control (C2) link	The data link between the remotely-piloted aircraft and the remote pilot station for the purposes of managing the flight.	ICAO Cir 328 AN/190 CAP 722 and ICAO Manual on RPAS Doc 10019 (2015)
command and control link	A data transmission used for control of the RPA that transmits RPA crew commands from the GCS to the RPA (uplink) and RPA status data from the RPA to the GCS (downlink).	STANAG 4671 ed 3 (draft)

command and control required communication performance (C2 Link RCP)	A statement of the performance requirements for operational communication in support of specific RPAS C2 functions (including ATM functions when relayed by the RPA and supported by the C2 link).	JAR doc 02 -RPAS C2 link RCP
commercial air transport	The transport of passengers, cargo or mail for remuneration or hire	JAR doc 03 – FCL recommendations – WG1
commercial air transport operation	An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.	ICAO Manual on RPAS Doc 10019 (2015)
commercial operation	An aircraft operation conducted for business purposes (mapping, security surveillance, wildlife survey, aerial application, etc.) other than commercial air transport, for remuneration or hire.	ICAO Cir 328 AN/190
commercial operation	Any operation of an aircraft, in return for remuneration or other valuable consideration, which is available to the public or, when not made available to the public, which is performed under a contract between an operator and a customer, where the latter has no control over the operator.	Art. 3(i) EC Regulation 216/2008
commercial-off-the-shelf	Components designed to be implemented into existing systems without extensive customization and for which design data are not always available to the customer.	
complexity	An attribute of systems or items which makes their operation difficult to comprehend. Increased system complexity is often caused by such items as sophisticated components and multiple interrelationships.	SAE ARP4761
compliance	Successful performance of all mandatory activities; agreement between the expected or specified result and the actual result.	SAE ARP4761

complexity	An attribute of functions, systems or items which makes their operation, failure modes or failure effects difficult to comprehend without the aid of analytical methods.	ED-79A / ARP4754A JAR doc 04 – AMC RPAS 1309 – WG 6
component	Any self-contained part, combination of parts, subassemblies or units, which perform a distinct function necessary to the operation of the system.	SAE ARP4761
communication transaction time	The maximum time for the completion of the operational communication transaction after which the initiator should revert to an alternative procedure.	JAR doc 02 - RPAS C2 link RCP – WG 5
communication system	A means that allows transmission and reception of data between the remote control stations and the RPAS	JAR doc 02 - RPAS C2 link RCP – WG 5
communication system	A means that allows ATC communication between the RPAS crew in the remote control station and the air traffic control service.	STANAG 4671 ed 3 (draft)
competency	A combination of skills, knowledge and attitude required to perform a task to the prescribed standard.	JAR doc 03 – FCL Recommendations – WG1
competency	Possession of the required level of knowledge, skills, experience and where required, proficiency in English, to permit the safe and efficient provision of aviation services. The quality of being adequately or well qualified physically and intellectually to accomplish assigned responsibilities.	Skybrary
concept of operations	A user-oriented document that describes systems characteristics for a proposed system from a user's perspective. A CONOPS also describes the user organization, mission, and objectives from an integrated systems point of view and is used to communicate overall quantitative and qualitative system characteristics to stakeholders.	MITRE Corp/IEEE

concept of operations	<p>Describes the way the system works from the operator's perspective. The ConOps includes the user description and summarizes the needs, goals, and characteristics of the system's user community. This includes operation, maintenance, and support personnel.</p> <p>For the purposes of this Guide, the concept of operations is defined as follows: <i>A verbal and graphic statement, in broad outline, of an organization's (enterprise's) assumptions or intent in regard to an operation or series of operations of new, modified or existing organizational (enterprise) systems. The concept of operations frequently is embodied in long-range strategic plans and annual operational plans. In the latter case, the concept of operations in the plan covers a series of connected operations to be carried out simultaneously or in succession to achieve an organizational (enterprise) performance objective. The concept is designed to give an overall picture of the organization's (enterprise's) operation. It is also called the CONOPS.</i></p>	<p>The INCOSE Systems Engineering Handbook, Version 3.2 (Haskins, 2010) (ANSI/AIAA G-043-1992 Guide for the Preparation of Operational Concept Documents)</p>
configuration	The requirements, design and implementation that define a particular version of a system or system component.	FAA System Safety Handbook, Appendix A: Glossary
configuration control/management	The process of evaluating, approving or disapproving, and coordinating changes to configuration items after formal establishment of their configuration identification.	FAA System Safety Handbook, Appendix A: Glossary
conformity assessment	The process demonstrating whether specified requirements relating to a product, process, service, system, person or organisation have been fulfilled.	
consensus standard	Means, for the purpose of certificating UAS, an industry-developed consensus standard that applies to aircraft design, production, and airworthiness. It includes, but is not limited to, standards for aircraft design and performance, required equipment, manufacturer quality assurance systems, production acceptance test procedures, operating instructions, maintenance and inspection procedures, identification and recording of major repairs and major alterations, and continued airworthiness.	Custom WG6 (Taken from Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS)
consensus standard	Consensus standards are industry developed standards that define minimum safety and performance requirements of an acceptable product or a means of compliance to specific requirements. Standards organizations include, but are	

	not limited to, the Radio Technical Commission for Aeronautics (RTCA), SAE International (SAE), ASTM International (ASTM), and the European Organization for Civil Aviation Equipment (EUROCAE).	
continued airworthiness	The monitoring, reporting and corrective action processes used for in-service aircraft to assure they maintain the appropriate safety standard defined during the initial airworthiness processes throughout their operational life.	CAP 722
continued safe flight and landing	The capability for continued controlled flight and landing at a suitable airport, possibly using emergency procedures, but without requiring exceptional pilot skill or strength. Some airplane damage may be associated with failure condition, during flight or upon landing.	FAA AC 25.1309
contingency procedures	Planned course of action designed to help an organization respond effectively to a significant future event or situation that may or may not happen.	
continuing airworthiness	The system of management of the aircraft and the scheduling and actioning of ongoing preventative and corrective maintenance to confirm correct functioning and to achieve safe, reliable and cost effective operation.	CAP 722
continuing airworthiness	All of the processes ensuring that, at any time in its operating life, the aircraft complies with the airworthiness requirements in force and is in a condition for safe operation.	EMAD 1 ed. 1.1
continuing airworthiness	The set of processes by which an aircraft, engine, propeller or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life.	ICAO Manual on RPAS Doc 10019 (2015)
continuity	The probability that an operational communication transaction can be completed within the communication transaction time.	JAR doc 02 - RPAS C2 link RCP – WG 5
control	<ul style="list-style-type: none"> • FAA Definition. Safety Risk Control: A means to reduce or eliminate the effects of hazards. • ATO Definition. Anything that is validated or verified to mitigate or manage the risk of a hazard's effect or occurrence. (See "Mitigation.") 	FAA ATO SMS Manual

control (safety risk)	A means to reduce or eliminate the effects of hazards.	VS 8000.367A - Aviation Safety (AVS) Safety Management System Requirements
control station	The equipment used to maintain control, communicate, guide, or otherwise pilot an unmanned aircraft.	RTCA DO-320 OSD
controlled airspace	Controlled airspace means an airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification. Note--Controlled airspace is a generic term that covers Class A, Class B, Class C, Class D, and Class E airspace.	
controlled airspace	An airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification. Note: Controlled airspace is a generic term which covers ATS airspace Classes A, B, C, D and E as described in Annex 11, 2.6.	ICAO Manual on RPAS Doc 10019 (2015)
controlled airspace	For the purposes of this assessment, Controlled Airspace is defined as Class A, B, C, D, and E airspace. Controlled airspace does not imply separation services are provided at all times.	JAR doc 06 – SORA Annex C – WG6
controlled flight	Any flight which is subject to an air traffic control clearance.	ICAO Manual on RPAS Doc 10019 (2015)
controlled flight into terrain	Events where aircraft collide with obstacles (e.g. terrain, buildings, masts, trees etc.) while in flight.	Skybrary
Controller-pilot data link communications (CPDLC)	A means of communication between controller and pilot, using data link for ATC communications.	ICAO Manual on RPAS Doc 10019 (2015)
conversion	The action taken by a r State in issuing its own remote pilot licence on the basis of a remote pilot licence issued by another State for use on RPA registered in that State.	JAR doc 03 – FCL Recommendations – WG1

cooperative aircraft	Aircraft that have an electronic means of identification (i.e., a transponder) aboard and operating.	FAA Order JO 7210.3
credit	Recognition of alternative means or prior qualifications.	JAR doc 03 – FCL Recommendations – WG1
crew member	A person assigned by an operator to duty on an aircraft during a flight duty period.	ICAO Cir 328 AN/190, ICAO Annex 6
crewmember	Crewmember means a person assigned to perform duty in an aircraft during flight time.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
critical function	A function whose loss would prevent the continued safe flight and landing of the unmanned aircraft (UA).	Custom WG6 (Taken from RTCA SC-203 WG-4 Safety Definitions)
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 safety functions, in which failure would cause a significant increase in the safety risk for the third parties and/or environment involved.	
criticality	Indication of the hazard level associated with a function, hardware, software, etc., considering abnormal behaviour (of this function, hardware, software, etc.) alone, in combination or in combination with external events.	SAE ARP4761
criticality	The degree of impact that a malfunction has on the operation of a system.	FAA System Safety Handbook, Appendix A: Glossary
cross-country	A flight between a point of departure and a point of arrival following a pre-planned route using standard navigation procedures.	JAR doc 03 – FCL Recommendations – WG1

c2 link	The datalink used for the purpose of command and control functions in a RPAS.	JAR doc 02 - RPAS C2 link RCP
c2 link rcp type	A label (e.g. C2 link RCP X) that represents the values assigned to C2 link RCP parameters for communication.	JAR doc 02 - RPAS C2 link RCP – WG 5
c2 link rcp type allocation	The process of apportioning the various C2 LINK RCP type values to the various parts of the system.	JAR doc 02 - RPAS C2 link RCP
d back		
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.	ICAO Annex 11: Air Traffic Services
data communication	The transfer of information between functional units by means of data transmission according to a protocol.	STANAG 4586 ed 2
datalink	A term referring to all interconnections to, from and within the remotely piloted aircraft system. It includes control, flight status, communication, and payload links.	UVS International
data link	A wireless communication channel between one or more GCS and one of more RPA, or between multiple RPA. Its utility may include but is not limited to exchange of command & control or payload data. A data link may consist of: (1) Uplink – Transmittal of RPA crew commands from the GCS to the RPAS. (2) Downlink – Transmittal of RPA status data from the RPA to the UCS.	STANAG 4671 ed 3 (Draft)
datalink availability	Availability of a data link is the long-term ratio of the actual RF channel operation time to scheduled RF channel operation time.	STANAG 4671 ed 3 (draft)
datalink communications	A form of communication intended for the exchange of messages via a data link.	ICAO Manual on RPAS Doc 10019 (2015)
declaration of compliance	A statement, signed by the Head of Design or by an authorised representative, to show compliance with all applicable type-certification basis and, where applicable, environmental protection requirements. It declares that the aircraft is airworthy within the specific design limitations.	EMAD 1 ed 1.1

<i>defined airport environment</i>	The region surrounding an airport or heliport where arriving and departing manned aircraft typically fly.	JAR doc 06 – SORA Annex C – WG6
<i>delegated entity</i>	A legal or natural person accredited and under continuous assessment by a competent aviation authority, which may conduct certain certification or oversight tasks.	JAR doc 14 – OPS Cat A WG 2
<i>demonstration</i>	A method of proof of performance by observation.	SAE ARP4761
<i>design</i>	The result of the design process.	SAE ARP4761
<i>detect and avoid</i>	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.	ICAO Cir 328 AN/190 JAR doc 04 – AMC RPAS 1309 – WG 6 ICAO Manual on RPAS Doc 10019 (2015) (modified)
<i>development assurance</i>	All those planned and systematic actions used to substantiate, at an adequate level of confidence, that errors in requirements, design and implementation have been identified and corrected such that the system satisfies the applicable certification basis	ED-79 A/ARP4754A JAR doc 04 – AMC RPAS 1309 – WG 6
<i>distributor</i>	Any natural or legal person in the supply chain, other than the manufacturer or the importer, who makes a product available on the market.	
e back		
<i>economic operators</i>	The manufacturer, the authorised representative, the importer and the distributor.	

effect	The real or credible harmful outcome that has occurred or can be expected if the hazard occurs in the defined system state.	FAA ATO SMS Manual
effective maximum range	Measure of data link coverage over a horizontal distance that is a function of frequency, availability, bit error rate, climate area and altitude.	STANAG 4671 e 3 (draft)
electronic identification	The capability to identify a UA in flight without direct physical access to the aircraft.	JAR doc 14 – OPS Cat A & B – WG 22
emergency recovery capability	A means or function that ends the flight following a potentially Catastrophic failure condition, with the intent of reducing the danger to third parties on the ground and in the air. (For example, by use of a ballistic parachute recovery system or through pre-defined emergency recovery procedures).	JAR doc 04 – AMC RPAS 1309 – WG 6
emergency recovery capability	UAS safety feature that provides for the cessation UA flight in a manner that minimizes risk to persons on the ground, other airspace users and critical infrastructure.	
emergency recovery procedures	Procedures that are executed by the UA pilot in command or by the aircraft to mitigate the effect of failures that cause or lead to an emergency condition.	FAA UAS ARC TCAT
emergency response plan	Plan of actions to be conducted in a certain order or manner, in response to an emergency event.	
encounter	<p>A temporal or spatial boundary. The SORA used two definitions of encounter:</p> <ul style="list-style-type: none"> • Two aircraft coming within a distance of less than 3000ft. horizontal and +/- 350ft, vertical. This definition is applicable to: <ul style="list-style-type: none"> ○ AEC 7, 8, 9 and 10 ○ AEC 4 and 5, 1200ft. AGL and below • Two aircraft with a Closest Point of Approach (CPA) of 100 seconds or less. <ul style="list-style-type: none"> ○ AEC 6a, 6b, and 6c ○ AEC 1, 2, and 3 below FL180 	JAR doc 06 – SORA Annex C – WG6

	<ul style="list-style-type: none"> ○ AEC 4 and 5 above 1200ft. AGL and below FL180 	
end system	<p>A system that contains the human-machine interface, application processing, and is distinct from system components interfacing the communication services.</p> <p>Note: This definition is modified from RTCA DO-264 / EUROCAE ED-78A to remove technological dependencies.</p>	JAR doc -7 – CPDLC - WG 5
emergency situation	One in which the safety of the aircraft or of persons on board or on the ground is endangered for any reason.	Skybrary
engineering judgment	Refers to the decision made by an engineer based on the available data to propose a design or a line of action.	Custom WG6
entire set of examinations	An examination in all subjects required by the licence level.	JAR doc 10 - FCL GM – WG1
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.</p> <p>(b) Everything external to a system which can affect or be affected by the system.</p>	FAA System Safety Handbook, Appendix A: Glossary
equipment	A complete assembly—operating either independently or within a system/sub-system—that performs a specific function.	FAA ATO SMS Manual
error	An occurrence arising as a result of an incorrect action or decision by personnel operating or maintaining a system. (2) A mistake in specification, design, or implementation.	(1) (JAA AMJ 25.1309) (2) SAE ARP4761
error	An action or inaction by the flight crew that leads to deviations from organisational or flight crew intentions or expectations.	JAR doc 03 – FCL Recommendations – WG1
error management	The process of detecting and responding to errors with countermeasures that reduce or eliminate the consequences of errors, and mitigate the probability of	JAR doc 03 – FCL Recommandations –

	errors or undesired aircraft state.	WG1
evaluate	A comprehensive review of an applicant's UAS and all associated elements of the system. The applicant is expected to provide any and all information necessary to allow the NAA to objectively determine if the aircraft can be safely operated in accordance with the proposed ConOps.	
event	An occurrence which has its origin distinct from the aircraft, such as atmospheric conditions (e.g., wind gusts, temperature variations, icing, lightning strikes), runaway conditions, fires.	Custom WG6 (Taken from SAE ARP4761)
event	An occurrence that creates a hazard.	FAA System Safety Handbook, Appendix A: Glossary
event sequence diagram	See Sequence Diagram	
examination	The demonstration of knowledge in one or more examination papers	JAR doc 10 - FCL GM – WG1
examination paper	A set of questions to be answered by a candidate for examination	JAR doc 10 - FCL GM – WG1
extended visual line of sight (EVLOS)	A type of operation in which the remote pilot does not maintain continuous unobstructed and unaided visual contact with the UA, however one or more visual observers do, allowing monitoring the flight path of the UA in relation to other aircraft, persons, and obstacles, for the purpose of maintaining separation from them and avoiding collisions	NPA 2017-05 (A) EASA JAR doc 14 – OPS Cat A – WG 2
extended visual line of sight (EVLOS)	An Unmanned Aircraft System (UAS) operation whereby the Pilot in Command (PIC) maintains an uninterrupted situational awareness of the airspace in which the UAS operation is being conducted via visual airspace surveillance, possibly aided by technology means. The PIC has a direct control of the UAS at all time.	JAR doc 06 SORA Annex I
external event	An occurrence which has its origin distinct from the aircraft or the system being examined, such as atmospheric conditions (e.g. wind gusts/shear, temperature variations, icing, lightning, navigation, and surveillance services),,	ARP4754A

	cabin and baggage fires, and bird-strike. The term is not intended to cover sabotage.	
f back		
fail operational	Fail Operational. A system designed such that if it sustains a fault, it still provides a subset of its specified behaviour.	FAA ATO SMS Manual
fail safe	A system designed such that if it fails, it fails in a way that will cause no harm to other devices or present a danger to personnel.	FAA ATO SMS Manual
fail-safe	A characteristic of a system whereby any malfunction affecting the system safety will cause the system to revert to a state that is known to be within acceptable risk parameters.	FAA System Safety Handbook, Appendix A: Glossary
fail-safe design (structures)	A design that retains its required residual strength after the failure or partial failure of a principal structural element. A fail-safe design typically consists of the fail-safe component or primary structural element, and a redundant or backup structural element. A fail-safe design is, therefore, often said to be a redundant design or a multi-load path design.	FAA AC 23-13A FATIGUE, FAIL-SAFE, AND DAMAGE TOLERANCE EVALUATION OF METALLIC STRUCTURE FOR NORMAL, UTILITY, ACROBATIC, AND COMMUTER CATEGORY AIRPLANES

fail-safe design (concept)	<p>The fail-safe design concept uses the following design principles or techniques in order to ensure a safe design. The use of only one of these techniques is seldom adequate. A combination of two or more is usually needed to provide a fail-safe design; i.e., to ensure that major failure conditions are improbable and that catastrophic failure conditions are extremely improbable.</p> <p>(1) Design Integrity and Quality, including Life Limits, to ensure intended function and prevent failures.</p> <p>(2) Redundancy or Backup Systems to enable continued function after any single (or other defined number of failure(s); e.g., two or more engines, hydraulic systems, flight control systems, etc.</p> <p>(3) Isolation of Systems, Components, and Elements so that the failure of one does not cause the failure of another. Isolation is also termed independence.</p> <p>(4) Proven Reliability so that multiple, independent failures are unlikely to occur during the same flight.</p> <p>(5) Failure Warning or Indication to provide detection.</p> <p>(6) Flight Crew Procedures for use after failure detection, to enable continued safe flight and landing or specifying crew corrective action.</p> <p>(7) Checkability: the capability to check a component's condition.</p> <p>(8) Designed Failure Effect Limits, including The capability to sustain damage, to limit the safety impact or effects of a failure.</p> <p>(9) Designed Failure Path to control and direct the effects of a failure in a way that limits its safety impact.</p> <p>(10) Margins or Factors of Safety to allow for any undefined or unforeseeable adverse conditions.</p> <p>(11) Error-Tolerance that considers adverse effects of foreseeable errors during the airplanes design, test, manufacture, operation, and maintenance .</p>	FAA AC 25.1309 1A SYSTEM DESIGN AND ANALYSIS
failure	The inability of a system, subsystem, component, or part to perform its required function within specified limits, under specified conditions for a specified duration. A failure may result in an unsafe condition and / or act, i.e. a hazard; the termination of the ability of a system element to perform a required function; the lack of correct performance. Failures and hazards are not interchangeable.	FAA System Safety Handbook, Appendix A: Glossary
failure	A loss of function or a malfunction of a system or a part thereof.	SAE ARP4761

failure condition	A condition with an effect on the aircraft and its occupants, both direct and consequential, caused or contributed to by one or more failures, considering relevant adverse operation or environmental conditions.	SAE ARP4761
failure condition	A condition having an effect on either the RPAS or third parties, or both, either direct or consequential, which is caused or contributed to by one or more failures or errors considering flight phase and relevant adverse operational or environmental conditions or external events?	STANAG 4671 ed 3 (draft)
failure condition	A condition having an effect on either the airplane or its occupants, or both, either direct or consequential, which is caused or contributed to by one or more failures or errors considering flight phase and relevant adverse operational or environmental conditions or external events.	FAA AC 23.1309-1E
failure effect	A description of the operation of a system or an item as the result of a failure; i.e., the consequence(s) a failure mode has on the operation, function or status of a system or an item.	SAE ARP4761
failure mode	The way in which the failure of an item occurs.	SAE ARP4761
fault	An undesired anomaly in an item or system.	SAE ARP4761
fire (hazards)	Fire include all types of live flames, causes of sparks, hot objects, and chemicals that are potential for ignition, or that can aggravate a fire to become large and uncontrolled.	WG6 Custom (Taken from Safeopedia)
first-person-view mode	a use of technology (goggles, display, etc.) in the operation of a UA where the remote pilot manoeuvres the UA through a forward looking camera installed on the aircraft, which offers a field of view comparable to a manned aircraft operation pilot sitting in a cockpit.	JAR doc 14 – OPS Cat A & B –WG 2
fit for flight	Condition of a type design being certified as compliant with applicable airworthiness requirements as well as of an aircraft having been serviced and inspected as meeting the certified design and prepared for the intended flight.	STANAG 4671 ed 3 (draft)

<i>flight control system</i>	<p>The flight control system comprises sensors, actuators, computers and all those elements of the RPAS, necessary to control the attitude, speed and flightpath of the RPA. The flight control system can be divided into 2 parts.</p> <p>Flight control computer: A programmable electronic system that operates the flight controls in order to carry out the intended inputs.</p> <p>Flight controls: Sensors, actuators and all those elements of the RPAS (except the flight control computer), necessary to control the attitude, speed and flightpath of the RPA.</p> <p>Flight controls can further be defined as: Primary flight control (those used in the RPAS by the flight control system for the immediate control of pitch, roll, yaw and speed), and secondary flight control, those controls other than primary flight controls, such as wheel brakes, spoilers and tab controls.</p>	STANAG 4671 ed 3 (draft)
<i>flight duty period*</i>	A period which commences when a remote crew member is required to report for duty that includes a flight or a series of flights and which finishes when the remote crew member's duty ends.	ICAO Manual on RPAS Doc 10019 (2015)
<i>flight manual</i>	A manual, associated with the certificate of airworthiness, 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.	ICAO Cir 328 AN/190
<i>flight plan</i>	Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.	ICAO Manual on RPAS Doc 10019 (2015)
<i>flight recovery system</i>	A device or function that provides for the safe recovery of a UA.	FAA UAS ARC TCAT
<i>flight simulation training device</i>	<p>any one of the following types of FSTDs in which flight conditions are simulated on the ground:</p> <p>(i) A flight simulator, which provides an accurate representation of the RPS of a particular RPA type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that type of RPA are realistically simulated;</p> <p>(ii) A flight procedures trainer, which provides a realistic RPS environment, and simulates instrument responses, simple control functions of mechanical,</p>	JAR doc 03 – FCL Recommendations – WG1

	electrical, electronic, etc. RPAS, and the performance and flight characteristics of RPA of a specific class.	
flight termination	Flight termination is a system, procedure or function which aims to immediately end the flight.	FAA UAS ARC TCAT
flight time — aeroplanes	<p>The total time from the moment an aeroplane first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight.</p> <p><i>Note: Flight time as here defined is synonymous with the term “block to block” time or “chock to chock” time in general usage which is measured from the time an aircraft first moves for the purpose of taking off until it finally stops at the end of the flight.</i></p>	<p>ICAO Cir 328 AN/190</p> <p>ICAO Manual on RPAS Doc 10019 (2015)</p>
flight time — helicopters	<p>The total time from the moment a helicopter’s rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.</p> <p><i>Note 1 to entry: The State may provide guidance in those cases where the definition of flight time does not describe or permit normal practices. Examples are: crew change without stopping the rotors and rotors running engine wash procedure following a flight. In any case, the time when rotors are running between sectors of a flight is included within the calculation of flight time.</i></p> <p><i>Note 2 to entry: This definition is intended only for the purpose of flight and duty time regulations.</i></p>	<p>ICAO Cir 328 AN/190</p> <p>ICAO Manual on RPAS Doc 10019 (2015)</p>
flying pilot	A person who operates the flying controls of an aircraft and is responsible for the flight trajectory of the aircraft.	ICAO Cir 328 AN/190
follow-me mode	It means an automatic function which may be used as an advisory tool for supporting the UA to not trespass geographical limitations in the airspace.	JAR doc 14 – OPS Cat A & B – WG 2
forced landing	A condition resulting from one or a combination of failure conditions that prevents the RPAS from normal landing on its planned main landing site although the flight control system is still able to maintain the RPAS controllable and manoeuvrable.	STANAG 4671 ed 3 (draft)

frequency	The number of times that something happens during a particular period.	Merriam-Webster
frequency estimation	An estimate of the number of times that something will happens during a particular period.	Custom WG6 (Taken from Merriam-Webster)
g back		
generic threat	A safety threat having no particularly distinctive quality or application	Custom WG6 (Taken from Merriam-Webster)
geocaching	An automatic function to maintain the UA inside a defined operating area or volume. .	
geo-fencing	Geo-fencing (geofencing) is a feature in a software program that uses the global positioning system (GPS) or radio frequency identification (RFID) to define geographical boundaries. A geofence is a virtual barrier.	Internet source, WhatIs.com
geo-fencing	Geo-fencing (geofencing) means an automatic function to limit the access of the UA to airspace areas or volumes provided as geographical limitations based on the UA position and navigation data.	EASA Prototype Commission Regulation on UAS JAR doc 14 – OPS Cat A & B – WG 2
geo-fencing	<p>A GEO-Fence contains a “Hard Fence” and a “Soft Fence”</p> <p>Hard Fence: The border of the area which shall not be crossed with a certain probability</p> <p>Soft Fence: The border of the area on which action must be taken to prevent crossing the “Hard Fence”. The area within the “Soft Fence” is the “Nominal Area of Operation”.</p> <p>The “Hard Fence” and the “Soft Fence” can be dynamic.</p> <p>The area between the “Hard Fence” and the “Soft Fence” is defined as the buffer.</p>	WG 3

	The buffer must take into account all elements which can have an influence on the size of the buffer as latency, accuracy, wind, altitude, UA-performance etc.	
geographical limitation	A restricted airspace volume defined through electronic map data.	JAR doc 14 – OPS Cat A & B – WG 2
glider	Glider means a heavier-than-air aircraft, that is supported in flight by the dynamic reaction of the air against its lifting surfaces and whose free flight does not depend principally on an engine.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
ground-based sense and avoid	Ground-based means of detecting airborne traffic and providing the necessary intelligence to the Unmanned Aircraft System (UAS) to mitigate the inability for a UAS pilot to directly see and avoid other aircraft or to provide an alternate means of compliance to “See and Avoid” regulations.	
ground control station	A facility or device from which the RPA is controlled and/or monitored for all phases of flight.	STANAG 4671 ed 3 (draft)
ground data terminal	The data link element consists of the air terminal in the air vehicle and the ground data terminal (GDT) that can be located either on the ground or in the air (e.g., Command and Control aircraft). Connectivity between the GDT and ADT is prerequisite for Level 2, 3, 4, and 5 interoperability.	STANAG 4671 ed 3 (draft)
ground staff	Qualified personnel necessary for ground operations (such as supplying the RPAS with fuel and maintenance) as stated in the RPAS System Flight Manual or in the RPAS Maintenance Manual.	STANAG 4671 ed 3 (draft)
guidelines	Recommended procedures for complying with regulations.	SAE ARP4761
h back		
handover*	The act of passing piloting control from one remote pilot station to another.	ICAO Cir 328 AN/190 CAP 722

		ICAO Manual on RPAS Doc 10019 (2015)
handover	The operation that consists in performing a RPAS command and control transfer from one GCS to another one or from one workstation to another one in the same GCS.	STANAG 4671 ed 3 (draft)
hardware	An object that has physical being. Generally refers to LRUs, circuit cards, power supplies, etc.	SAE ARP4761
harm	<p>The term harm, for the purpose of this document, relates to undesired events defined as:</p> <ul style="list-style-type: none"> a. Fatal injuries to third parties on the ground b. Fatal injuries to third parties in the air (Catastrophic MAC with a manned aircraft) c. Damage to critical infrastructure. <p>The consequence of every occurrence.</p>	Custom WG6 JAR doc 06 – SORA – WG 6
harm barrier identification	The identification of the mitigations applicable to a specific harm for a defined hazard. Harm barriers affect the likelihood that, once it occurs, the hazard can cause the harm and/or the severity of the consequences of the hazard with respect to the harm.	JAR doc 06 – SORA – WG6
harm identification	The identification of the harm for which the risk needs to be assessed. For the purposes of this document (SORA) three categories of harm have been identified: a. Fatal injuries to third parties on the ground [C1] b. Fatal injuries to third parties in the air (Catastrophic MAC with a manned aircraft) [C2] c. Damage to critical infrastructure [C3]	JAR doc 06 – SORA – WG6
harm likelihood estimation	The estimation (qualitative or quantitative) of the likelihood of the retained harm.	SRA_DRAFT_WG6
hazard	A potentially unsafe condition resulting from failures, malfunctions, external events, errors, or a combination thereof.	SAE ARP4761

hazard	<ul style="list-style-type: none"> • FAA Definition. A condition that could foreseeably cause or contribute to an accident. • ATO Definition. Any real or potential condition that can cause injury, illness, or death to people; damage to or loss of a system, equipment, or property; or damage to the environment. A hazard is a prerequisite to an accident or incident. 	FAA ATO SMS Manual
hazard	A condition that could foreseeably cause or contribute to an accident.	VS 8000.367A - Aviation Safety (AVS) Safety Management System Requirements
hazard	A condition or an object with the potential to cause injuries, damage, loss of material or a reduction of the ability to perform a prescribed function.	JAR doc 14 – OPS Cat A & B – WG 2
hazard barrier identification	The identification of the mitigations applicable to a specific harm for a defined hazard. Harm barriers affect the likelihood that, once it occurs, the hazard can cause the harm and/or the severity of the consequences of the hazard with respect to the harm.	JAR doc 06 – SORA – WG6
hazard identification	Identification of a potentially unsafe condition resulting from failures, malfunctions, external events, errors, or a combination thereof.	Custom WG6 (Derived from SAE ARP4761)
hazard identification	The identification of the hazards related to the RPAS operation which may lead to the retained harm.	SRA_DRAFT_WG6
hazardous	<p>Failure conditions that either by themselves or in conjunction with increased crew workload, are expected to result in a controlled-trajectory termination or forced landing potentially leading to the loss of the RPA where it can be reasonably expected that a fatality will not occur.</p> <p>Or</p> <p>Failure conditions which could potentially result in serious injury to RPA crew or ground staff.</p>	STANAG 4671 ed 3 (draft)

helicopter	A rotorcraft that, for its horizontal motion, depends principally on its engine-driven rotors.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
holistic	Characterized by comprehension of the parts of something as intimately interconnected and explicable only by reference to the whole.	Oxford Dictionary
holistic risk model	Provides a generic framework to identify of the threats, hazards and controls applicable to any RPAS operation.	SRA_DRAFT_WG6
human error	Human action with unintended consequences.	FAA
human factors	UAS Human Factors function is to facilitate the identification and resolution of human-machine interface issues with UAS control station displays, controls, functionality, automation, and operator workload and system maintainability.	Custom WG6/AFS-86 HF
human factors principles	Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.	ICAO Annex 8 and ICAO Manual on RPAS Doc 10019 (2015)
human performance	Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.	ICAO Annex 8 and ICAO Manual on RPAS Doc 10019 (2015)
i back		
identification of generic threats	The identification of the issues that can cause the hazard to occur if not kept under control.	JAR doc 06 – SORA – WG6
importer	Any natural or legal person established in [State] who places a product manufactured in a different country on the [State] market.	

incident	An occurrence other than an accident that affects or could affect the safety of operations.	VS 8000.367A - Aviation Safety (AVS) Safety Management System Requirements, and ICAO Manual on RPAS Doc 10019 (2015)
incident	A near miss accident with minor consequences that could have resulted in greater loss. An unplanned event that could have resulted in an accident, or did result in minor damage, and which indicates the existence of, though may not define a hazard or hazardous condition. Sometimes called a mishap.	FAA System Safety Handbook, Appendix A: Glossary
indoor operation	An UA operation in which the hazard of the UA flying away is minimised by walls, ceiling, net or other physical limitation of the volume.	JAR doc 14 – OPS Cat A & B – WG 2
industry consensus standard	Aircraft industry develop and reach a consensus on an airworthiness standard that would govern (federal) agencies to use voluntary consensus standards in lieu of government-unique standards except where inconsistent with law or otherwise impractical. "Standard must define the minimum safety and performance requirements of an acceptable product—that is, ensure a safe aircraft for the operator.	Custom WG6
initial airworthiness	The system used to determine the applicable requirements and establish that an aircraft design is demonstrated to be able to meet these requirements.	CAP 722
initiator	A system that contains the human-machine interface, application processing, and is distinct from system components interfacing the communication services <i>Note: This definition is modified from RTCA DO-264 / EUROCAE ED-78A to remove technological dependencies.</i>	JAR doc 07 – CPDLC – WG5
inspection	An examination of an item against a specific standard.	SAE ARP4761

<i>inspector</i>	Inspector of the competent authority conducting the RPAS examiner competence assessment	
<i>Instructions for continuing airworthiness (ICA)</i>	A set of descriptive data, maintenance planning and accomplishment instructions, developed by a design approval holder in accordance with the certification basis for the aeronautical product. The ICAs provide air operators with the necessary information to develop their own maintenance programme and also for approved maintenance organizations to establish the accomplishment instructions	ICAO Manual on RPAS Doc 10019 (2015)
<i>instrument</i>	A device using an internal mechanism to show visually or aurally the attitude, altitude, or operation of an aircraft or aircraft part. It includes electronic devices for automatically controlling an aircraft in flight.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
<i>instrument meteorological conditions (IMC)</i>	Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions	ICAO Manual on RPAS Doc 10019 (2015)
<i>integrated airspace</i>	For the purposes of this assessment, 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.	
<i>integration</i>	The act of causing elements of an item to function together. (2) The act of gathering a number of separate functions within a single implementation.	SAE ARP4761
<i>integrity</i>	The probability of one or more undetected errors in a completed communication transaction.	JAR doc 02 - RPAS C2 link RCP – WG5
<i>integrity</i>	Attribute of a system or an item indicating that it can be relied upon to work correctly on demand.	

international civil aviation organization	A specialized agency of the United Nations that promotes the safe and orderly development of international civil aviation throughout the world.	FAA UAS ARC TCAT
intervisibility	The performance of a LOS (Line of Sight) data link signal, taking into consideration the interposed mass between the RPA antennas and the GCS antennas.	STANAG 4671 ed 3 (draft)
intrinsic	Belonging to a thing by its very nature.	
k back		
kinetic energy	Kinetic energy is energy of an object due to its motion. It is directly related to the mass or weight of the objective. Kinetic Energy = $\frac{1}{2}$ Mass x Velocity ²	MITRE Corporation
l back		
landing	The phase of a RPAS mission that involves the return of a RPA to the surface (ground or sea surface). This also includes the return of the RPA to the surface via parachute.	STANAG 4671 ed 3 (draft)
large aircraft	Any aircraft of more than 12,500 pounds (5.7 tonnes) maximum certified take-off weight.	FAA
large model aircraft	A model aircraft with a maximum take-off mass (MTOW) greater than or equal to 25 kg.	
latency	Delay in time between the sending of a unit of data at one end of a connection, until the receipt of that unit at the destination.	STANAG 4671 ed 3 (draft)
latent failure	A failure which is not detected and/or enunciated when it occurs.	SAE ARP4761
launch	Catapult and rocket assisted Take-off.	STANAG 4671 ed 3 (draft)
launch safety trace	The area, associated with a RPA launch, in which there may be a hazard which could result in a risk to personnel, equipment or property.	STANAG 4671 ed 3 (draft)

likelihood	The estimated probability or frequency, in quantitative or qualitative terms, of a hazard's effect or outcome.	VS 8000.367A - Aviation Safety (AVS) Safety Management System Requirements
likelihood	Estimation of the degree of confidence one may have in the occurrence of an event.	Custom WG6
likelihood estimation	The estimation (qualitative or quantitative) of the likelihood of the retained undesired event's harm.	SRA_DRAFT_WG6
limited ua zones	Restricted airspace volumes where civil UA operations are allowed under specific conditions.	JAR doc 14 – OPS Cat A & B – WG 2
loss of control out of control	Loss of the ability to manage or direct the continued operation of an unmanned aircraft (UA)/remotely piloted aircraft (RPA).	Custom WG6
loss of critical systems external to the rpas	Loss of functionality of unmanned aircraft (UA)/remotely piloted aircraft (RPA) systems critical to the safe flight and landing of an UA/RPA.	Custom WG6
lost link (loss of datalink)	The loss of command and control link contact with the remotely-piloted aircraft such that the remote pilot can no longer manage the aircraft's flight.	ICAO Cir 328 AN/190 CAP 722
m back		
maintenance	Maintenance means inspection, overhaul, repair, preservation, and the replacement of parts, but excludes preventive maintenance.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
maintenance	The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.	ICAO Annex 8

<i>maintenance</i>	The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification and the embodiment of a modification or repair.	ICAO Manual on RPAS Doc 10019 (2015)
<i>maintenance</i>	Inspection, overhaul, repair, preservation, and the replacement of parts.	
<i>maintenance programme</i>	A document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability programme, necessary for the safe operation of those aircraft to which it applies.	ICAO Manual on RPAS Doc 10019 (2015)
<i>malfunction</i>	The occurrence of a condition whereby the operation is outside specified limits.	SAE ARP4761
<i>malfunction</i>	Fail to operate in the normal or usual manner. Any anomaly which results in system deviation.	FAA System Safety Handbook, Appendix A: Glossary
<i>manoeuvring area</i>	That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.	ICAO Manual on RPAS Doc 10019 (2015)
<i>manufacturer</i>	Any natural or legal person who manufactures a product or has a product designed or manufactured under his name or trademark.	JAR doc 14 – OPS Cat A & B – WG 2
<i>market surveillance</i>	The activities carried out and measures taken by public authorities to ensure that products comply with the requirements set out in this Regulation and do not endanger health, safety or any other aspect of public interest protection.	
<i>master minimum equipment list (MMEL)</i>	A list established for a particular aircraft type by the organization responsible for the type design with the approval of the State of Design containing items, one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures.	ICAO Manual on RPAS Doc 10019 (2015)

medical certificate	Means acceptable evidence of physical fitness on a form prescribed by the Administrator.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
methodology	A set of methods and principles used to perform a particular activity.	Oxford Dictionary
methodology	A particular procedure or set of procedures.	FAA System Safety Handbook, Appendix A: Glossary
mid air collision	An accident where two aircraft come into contact with each other while both are in flight.	Skybrary
minimum aviation system performance standards	A MASPS specifies characteristics that should be useful to designers, installers, manufacturers, service providers and users of systems intended for operational use within a defined airspace. 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).	
minimum operational performance specification	A MOPS provides standards for specific equipment(s) useful to designers, manufacturers, 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.	

mitigation	A means to reduce the risk of a hazard. See Safety Risk Control.	VS 8000.367A - Aviation Safety (AVS) Safety Management System Requirements
model aircraft	An UA that is capable of sustained flight in the atmosphere and that is used for recreational flights.	JAR doc 14 – OPS Cat A & B – WG 2
model aircraft club or association	An organisation legally established in a Member State for the purpose of conducting recreational flights, air displays, sport or competition activities.	JAR doc 14 – OPS Cat A & B – WG 2
n back		
national aviation authority	A government statutory authority in each country that oversees the approval and regulation of civil aviation.	Wikipedia
national aviation authority	Any authority designated by a State or group of States and competent for rulemaking or oversight tasks.	JAR doc 14 – OPS Cat A & B – WG 2
near mid-air collision	Two aircraft coming within 500ft. horizon and +/- 100ft. vertical of each other. The SORA and its definitions do not apply to UAS on UAS engagements.	JAR doc 06 – SORA Annex C – WG6
night	Means the time between the end of evening civil twilight and the beginning of morning civil twilight, as published in the Air Almanac, converted to local time.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
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 degrees below the horizon and begins in the morning when the centre of the sun's disc is 6 degrees below the horizon.	ICAO
no ua zone	A restricted or prohibited airspace volume or other airspace volume, where civil UA operations are not allowed.	

non-civil (aircraft operations)	Public or state (aircraft operations)	Custom WG6
<ul style="list-style-type: none"> back 		
objective evidence	Information, which can be proved true, based on facts obtained through observation, measurement, test or other means.	FAA System Safety Handbook, Appendix A: Glossary
observer	A trained person who assists the UA pilot in the duties associated with the avoidance of hazards.	FAA UAS ARC TCAT
operate	Operate, with respect to aircraft, means use, cause to use or authorize to use aircraft, for the purpose (except as provided in Sec. 91.13 of this chapter) of air navigation including the piloting of aircraft, with or without the right of legal control (as owner, lessee, or otherwise).	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
operation out of control (UAS)	An operation being conducted, outside of the approved operations.	
operational communication transaction	The process a human uses to send an instruction, a clearance, flight information, and/or a request. The process is completed when that human is confident that the transaction is complete.	JAR doc 02 - RPAS C2 link RCP – WG 5
operational control	With respect to a flight, means the exercise of authority over initiating, conducting or terminating a flight.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
operational control	The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of safety of the aircraft and the regularity and efficiency of the flight.	ICAO Cir 328 AN/190
operations manual	A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.	ICAO Manual on RPAS Doc 10019

operator	Any person who causes or authorizes the operation of an aircraft, such as the owner, lessee, or bailee of an aircraft.	Title 49 part 830.1 Definitions
operator	A person, organization or enterprise engaged in or offering to engage in an aircraft operation. <i>Note 1 to entry: In the context of remotely piloted aircraft, an aircraft operation includes the remotely piloted aircraft system.</i>	ICAO Cir 328 AN/190 CAP 722 and ICAO Manual on RPAS Doc 10019 (2015)
operator of a ua	Any natural or legal person who operates or intends to operate a UA for recreational or other than recreational purposes, including commercial purposes.	
optionally piloted aircraft	A manned aircraft that can be flown by a remote pilot from a location not on-board the aircraft.	FAA-Order 8130.34C
p back		
parachute	A device used or intended to be used to retard the fall of a body or object through the air.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
part-uas	The rules applicable to the operation of a UA falling into the A or B category, as laid down in Annex II to this Regulation.	JAR doc 14 – OPS Cat A & B – WG 2
participant (active)	Active participants are those persons directly involved with the operation of the UAS or fully aware that the UAS operation is being conducted near them. Active participants are fully aware of the risks involved with the UAS operation and have accepted these risks. Active participants are informed on and able to follow relevant effective emergency procedures and/or contingency plans.	Custom WG6

<i>participant (non-active)</i>	Passive participants are those persons who are located near a UAS operation and may or may not be aware that a UAS operation is being conducted. Passive participants may or may not be aware of the risks associated with the operation and have not accepted these risks.	Custom WG6
<i>payload</i>	Device or equipment carried by the RPA, which performs the mission assigned. The useful payload comprises all elements of the RPA that are not necessary for flight but are carried for the purpose of fulfilling specific mission objectives.	STANAG 4671 ed 3 (draft)
<i>permit to fly</i>	May be issued to an aircraft that does not meet applicable airworthiness requirements and as a result does not hold a valid certificate of airworthiness, but is capable of safe flight under defined conditions with operational restrictions on the use of the aircraft and does not satisfy the requirements for international flight.	Custom WG6 (taken from EASA and CAP 722)
<i>permit to operate</i>	A written authorization issued by the approving authority granting permission to operate (conduct commercial operations of) a specific RPAS/UAS for a specific purpose under specific operating requirement, limitations, restrictions.	Custom WG6
<i>pilot</i>	The person in direct control of the UA	CAP 722
<i>pilot (remote)</i>	A person charged by the operator with duties essential to the operation of a remotely-piloted aircraft and who manipulates the flight controls, as appropriate, during flight time.	CAP 722
<i>pilot (to)</i>	To manipulate the flight controls of an aircraft during flight time.	ICAO Cir 328 AN/190
<i>pilot in command</i>	Means the person who: (1) Has final authority and responsibility for the operation and safety of the flight; (2) Has been designated as pilot in command before or during the flight; and (3) Holds the appropriate category, class, and type rating, if appropriate, for the conduct of the flight.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS

<i>pilot-in-command</i>	The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.	ICAO Cir 328 AN/190
<i>pilot (in command)</i>	The pilot responsible for the operation and safety of an aircraft during flight time.	
<i>placing on the market</i>	Any supply of a product for distribution, consumption or use on the [State] market in the course of a commercial activity, whether in return for payment or free of charge.	
<i>population density</i>	The number of people living per unit of an area (e.g. per square mile); the number of people relative to the space occupied by them. (2) Population density is a statistic that tells you how many people live in a certain area.	Dictionary.com, statisticsshowto.com
<i>powered-lift</i>	Heavier-than-air aircraft capable of vertical takeoff, vertical landing, and low speed flight that depends principally on engine-driven lift devices or engine thrust for lift during these flight regimes and on nonrotating airfoil(s) for lift during horizontal flight.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
<i>practice</i>	Recommended methods, rules, and designs for voluntary compliance.	FAA System Safety Handbook, Appendix A: Glossary
<i>preventative maintenance</i>	Means simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
<i>primary system</i>	A system that provides the primary function.	JAR doc 04 – AMC RPAS 1309 – WG 6
<i>probability</i>	The measure of the likelihood that an event will occur.	
<i>procedure</i>	Standard, detailed steps that prescribe how to perform specific tasks.	

<i>process</i>	Set of inter-related resources and activities, which transform inputs into outputs.	FAA System Safety Handbook, Appendix A: Glossary
<i>propeller</i>	A device for propelling an aircraft that has blades on an engine-driven shaft and that, when rotated, produces by its action on the air, a thrust approximately perpendicular to its plane of rotation. It includes control components normally supplied by its manufacturer, but does not include main and auxiliary rotors or rotating air foils of engines.	Title 14, Code of Federal Regulations (14 CFR) part 1.1 DEFINITIONS AND ABBREVIATIONS
<i>primary function</i>	A function installed to comply with applicable regulations for the required function and provides the most pertinent controls or information instantly and directly to the pilot. For example, the Primary Flight Display (PFD) is a single physical unit that always provides the primary display and complies with the requirements of all the following: altitude, airspeed, aircraft heading (direction) and attitude. The PFD is located directly in front of the pilot and used instantly and first by the pilot. A standby or another display intended to be used in the event of failure of the PFD or as a cross reference is an example of a secondary system. For example, a brake control system normally uses the electronic brake system most of the time because of its better performance, but it does not comply with all the requirements. In this case, the mechanical brakes are used as the backup systems; yet, it is consider the primary with regard to meeting the requirements and the electronic brake system is the secondary.	JAR doc 04 – AMC RPAS 1309 – WG6
<i>primary system (p)</i>	A system that provides the primary function.	JAR doc 04 – AMC RPAS 1309 – WG6
q back		
<i>qr code</i>	A machine-readable code consisting of an array of black and white squares, typically used for storing identification or other information for reading by the camera on a smartphone or by other electronic device.	
<i>qualification</i>	Process through which a State/approval authority/applicant ensures that a specific implementation satisfies applicable requirements with a level of confidence.	RTCA-DO-320 OSED JAR doc 02 - RPAS C2 link RCP – WG5

qualified entities	Qualified entities are organisations which pose the necessary expertise and technical experience to verify on behalf of the National Supervisory Aviation Authority the compliance of common requirements established at EU level.	Skybrary
qualified entities	Qualified entities are organizations which possess the necessary expertise and technical experience to verify on behalf of the National Aviation Authority the compliance of common requirements.	
quantification	The act of assigning a numerical value to or measuring the probability that a specific event will occur.	Custom WG6
r back		
radio line-of-sight	A direct electronic point-to-point contact between a transmitter and a receiver.	ICAO Cir 328 AN/190
real time	Pertaining to the timeliness of data or information that has been delayed only by the time required for electronic communication. This implies that there are no noticeable delays.	STANAG 4586 ED 2
recall	Any measure aimed at achieving the return of a product that has already been made available to the end user.	
redundancy	Multiple independent means incorporated to accomplish a given function.	SAE ARP4761
redundancy	The existence in a system of more than one means of accomplishing a given function.	FAA System Safety Handbook, Appendix A: Glossary
reliability	The ability of a system to perform its required functions under stated conditions for a specified period of time. A reliable system is no total assurance of acceptable risk.	FAA System Safety Handbook, Appendix A: Glossary
reliability	The probability that an item will perform a required function under specified conditions, without failure, for a specified period of time.	SAE ARP4761

remote crew member	A licensed crew member charged with duties essential to the operation of a remotely piloted aircraft, during flight time.	ICAO Cir 328 AN/190 ICAO Manual on RPAS Doc 10019 (2015)
remote flight crew member	A licensed crew member charged with duties essential to the operation of a remotely piloted aircraft system during a flight duty period (TM).	ICAO Cir 328 AN/190 ICAO Manual on RPAS Doc 10019 (2015)
remote pilot	A person charged by the operator with duties essential to the operation of a remotely piloted aircraft and who manipulates the flight controls, as appropriate, during flight time.	JAR doc 03 – FCL Recommendations – WG1 ICAO Manual on RPAS Doc 10019 (2015)
remote pilot	A natural person who manipulates the flight controls of a UA, as appropriate, during a flight and is responsible for safely conducting the flight.	JAR doc 14 – OPS Cat A & B – WG 2
remotely piloted aircraft aeroplane (RPA(a))	An engine-driven fixed-wing RPA heavier than air which is supported in flight by the dynamic reaction of the air against its wings.	JAR doc 03 – FCL Recommendations – WG1
remotely piloted aircraft airship (RPA(as))	A power-driven lighter than air RPA.	JAR doc 03 – FCL Recommendations – WG1
remotely piloted aircraft helicopter (RPA(h))	A heavier-than-air RPA supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.	JAR doc 03 – FCL Recommendations – WG1
remotely piloted aircraft multi- rotor (RPA(mr))	A RPA rotorcraft having two or more usually symmetrically placed rotors whose flight stabilisation is through a combination of electro/mechanical sensors and computing devices.	JAR doc 03 – FCL Recommendations – WG1

remotely piloted aircraft observer	A trained and competent person designated by the operator who, by visual observation of the RPA, assists the remote pilot in the safe conduct of the flight.	JAR doc 03 – FCL Recommendations – WG1
remote pilot competency	A combination of skills, knowledge and attitudes required to perform a task to the prescribed standard, as listed in paragraph 6.4.2 of the ICAO RPAS Manual.	Doc 10019; first edition; 2015 JAR doc 14 – OPS Cat A & B – WG 2
remote pilot in command (rpic)	The remote pilot designated by the operator or the owner piloting its own UA, as being in command and charged with the safe conduct of a flight.	ICAO Manual on RPAS Doc 10019 (2015) JAR doc 14 – OPS Cat A & B – WG 2
remotely piloted	Control of an aircraft from a pilot station which is not on board the aircraft.	ICAO Cir 328 AN/190
remotely piloted aircraft	An aircraft where the flying pilot is not on board the aircraft. Note: This is a subcategory of unmanned aircraft.	ICAO Cir 328 AN/190
remotely piloted aircraft	An unmanned aircraft which is piloted from a remote pilot station.	CAP 722 JAR doc 04 – AMC RPAS 1309
remotely piloted aircraft observer	A trained and competent person designated by the operator who, by visual observation of the remotely-piloted aircraft, assists the remote pilot in the safe conduct of the flight.	CAP 722
remotely piloted aircraft observer	A remote crew member who, by visual observation of the remotely piloted aircraft, assists the remote pilot in the safe conduct of the flight.	ICAO Cir 328 AN/190
remotely piloted aircraft system	A remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other material relevant to the operation of the remotely piloted aircraft system.	CAP 722 ICAO Manual on RPAS Doc 10019 (2015)

		(modified)
remotely piloted aircraft system	An RPA, the associated RPS, the command control link between the two and any additional equipment, apparatus, appurtenance, software or accessory that is necessary for the safe operation of the RPA.	JAR doc 14 – OPS Cat A & B – WG 2
remotely piloted aircraft system	A set of configurable elements consisting of a remotely-piloted aircraft, its associated remote pilot station(s), the required command and control links and any other system elements as may be required, at any point during flight operation.	ICAO Cir 328 AN/190
remotely piloted aircraft system (RPAS) category	Established for the purposes of establishing Aviation Safety Regulator involvement in RPAS approvals.	JARUS WG7
remote pilot competency	A combination of skills, knowledge and attitudes required to perform a task to the prescribed standard, as listed in paragraph 6.4.2 of the ICAO RPAS Manual.	ICAO Manual on RPAS Doc 10019 (2015) JAR doc 14 – OPS Cat A & B – WG 2
remote pilot station (RPS)	A component of the UAS containing the equipment used to pilot the UA.	ICAO Manual on RPAS Doc 10019 (2015) JAR doc 14 – OPS Cat A & B – WG 2
remotely piloted station	The component of the remotely-piloted aircraft system containing the equipment used to pilot the remotely-piloted aircraft.	CAP 722 JAR doc 04 – AMC RPAS 1309
remotely piloted station	The station at which the remote pilot manages the flight of an unmanned aircraft.	ICAO Cir 328 AN/190
rpas c2 function	Function = Intended behaviour of a product based on a defined set of requirements regardless of implementation (from SAE ARP 4754A). Examples of RPAS C2 functions include all the functions by which a remote pilot is effectively having control over the RPA navigation, attitude and the RPA airborne systems.	JAR doc 13 – RLP concept – WG5

<i>rpas examiner applicant</i>	The person seeking certification as an RPAS examiner.	
<i>rpas operator certificate (ROC)*</i>	A certificate authorising an operator to carry out specified RPAS operations.	ICAO Manual on RPAS Doc 10019 (2015) JAR doc 14 – OPS Cat A & B – WG 2
<i>rpa observer</i>	A trained and competent person designated by the operator who, by visual observation of the remotely piloted aircraft, assists the remote pilot in the safe conduct of the flight.	ICAO Manual on RPAS Doc 10019 (2015)
<i>required communication performance (RCP)</i>	A system that contains the human-machine interface, application processing, and is distinct from system components interfacing the communication services. <i>Note: This definition is modified from RTCA DO-264 / EUROCAE ED-78A to remove technological dependencies.</i>	JAR doc 07- CPDLC – WG5
<i>required communication performance (RCP)</i>	A statement of the performance requirements for operational communication in support of specific ATM functions.	ICAO Manual on RPAS Doc 10019 (2015)
<i>required communication technical performance (RCTP)</i>	A system that contains the human-machine interface, application processing, and is distinct from system components interfacing the communication services. <i>Note: This definition is modified from RTCA DO-264 / EUROCAE ED-78A to remove technological dependencies.</i>	JAR doc 07- CPDLC – WG5
<i>required c2 performance (RLP)</i>	A statement of the performance requirements for the C2 end-to-end system in support of specific RPAS C2 functions (including ATM functions when relayed by the RPA and supported by the C2 link).	JAR doc 13 – RLP concept – WG5
<i>required link technical performance (RLTP)</i>	The technical transit time for C2 data delivery that does not include the human (or the automatic response system) times for message composition, operational response by human operator (or automatic system), and recognition of the operational response.	JAR doc 13 – RLP concept – WG5

responder	A human and/or machine party that is the target of a transaction and is required to provide an operational response.	JAR doc 07- CPDLC – WG5
risk	The frequency (probability) of occurrence and the associated level of hazard.	SAE ARP4761 SAE ARP4754A
risk	The composite of predicted severity and likelihood of the potential effect of a hazard.	FAA ATO SMS Manual
risk	The combination of the frequency (probability) of an occurrence and its associated level of severity.	SAE ARP 4754A EUROCAE ED-79
risk analysis	The development of qualitative and / or quantitative estimate of risk based on evaluation and mathematical techniques.	FAA System Safety Handbook, Appendix A: Glossary
risk analysis	Risk analysis is an evaluation of a potential hazard severity and probability of occurrence. For aircraft structural applications, the potential hazards include structural failures that can cause injury or death to personnel, damage to or loss of the aircraft, or reduction of mission readiness/availability.	EMACC
risk assessment	The process by which the results of risk analysis are used to make decisions.	FAA System Safety Handbook, Appendix A: Glossary
risk control	The Risk associated with the hazardous event under study is adequately controlled, by the reduction of severity and / or likelihood, via the application of engineering and/ or administrative hazard controls.	FAA System Safety Handbook, Appendix A: Glossary
risk estimation	The combination of the consequences and likelihood of the harm.	SRA_DRAFT
risk ratio	The risk ratio is the ratio between a conditional probability with a mitigating system, divided by a conditional probability without a mitigating system. The conditional probability is, given an encounter, an NMAC occurs. An encounter is defined as proximity of 3000 ft. horizontally and ± 350 ft. vertically. An NMAC is defined as proximity of 500 ft. horizontally and ± 100 ft. vertically.	

<i>rlp</i>	Generic term for Required end to end C2 Link Performance	JAR doc 13 – RLP concept – WG5
<i>rlp availability (a)</i>	The required probability that an operational communication transaction can be initiated when needed.	JAR doc 13 – RLP concept – WG5
<i>rlp continuity ©</i>	The minimum proportion of operational communication transactions to be completed within the specified RLP transaction time, given that the service was available at the start of the transaction.	JAR doc 13 – RLP concept – WG5
<i>rlp transaction time (TT)</i>	The maximum time for the completion of a proportion of operational communication transactions after which the initiator should revert to an alternative procedure. Two values are specified: a) RLP nominal time (TT 95%). The maximum nominal time within which 95% of operational communication transactions is required to be completed b) RLP expiration time (ET). The maximum time for the completion of the operational communication transaction after which the initiator is required to revert to an alternative procedure.	JAR doc 13 – RLP concept – WG5
<i>rlp type</i>	A label (e.g. RLP X) that represents the values assigned to RLP parameters for communication.	JAR doc 13 – RLP concept – WG5
<i>rlp type allocation</i>	The process of apportioning the various RLP type values to the various parts of the system.	JAR doc 13 – RLP concept – WG5
<i>rlp integrity (I)</i>	The required probability that an operational communication transaction is completed with no undetected errors.	JAR doc 13 – RLP concept – WG5
<i>rlptx</i>	The maximum time allocated to the summed critical transit times for a C2 message, allocated to system X.	JAR doc 13 – RLP concept – WG5
<i>robustness</i>	Strong and effective in all or most situations and conditions.	

root cause	The contributory events, initiating events, which started the adverse event flow are considered root causes. Should these causes be eliminated the hazardous event would not have occurred. It should be noted that accidents are the result of many contributors, both unsafe acts and /or unsafe conditions; also see Contributory Hazards, Hazard.	FAA System Safety Handbook, Appendix A: Glossary
rotorcraft	A heavier-than-air aircraft that depends principally for its support in flight on the lift generated by one or more rotors.	14 CFR part 1.1 DEFINITIONS AND ABBREVIATIONS ICAO Manual on RPAS Doc 10019
rotorcraft	A power-driven heavier-than-air aircraft supported in flight by the reactions of the air on one or more rotors.	ICAO Manual on RPAS Doc 10019
route plan	A set of waypoints for the RPA to follow, as well as general air vehicle commands for auxiliary systems (e.g., lights, IFF, de-icing, etc.) and emergency operation commands. Taxi or flight patterns may be incorporated into the route either as a series of sequenced waypoints or as 'seed' waypoints with range and bearing information, which, will depend on the sophistication of the GCS and RPAS.	STANAG 4586 ED 2
routine operations	Common operations that are executed on a regular basis.	RTCA-DO-320 OSED
runway incursion	Events where aircraft collide on the runway or while one is on the ground and the other in the air close to the ground	Skybrary
rural population	It is defined as all areas not defined as Urban population.	JAR doc 06 – SORA Annex C – WG6
S back		
safety	Freedom from unacceptable risk of harm.	RTCA-DO-320 OSED

safety	The state in which the risk of harm to persons or property damage is acceptable.	VS 8000.367A - Aviation Safety (AVS) Safety Management System Requirements
safety	Safety is 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.	ICAO Doc 9859
safety	The state in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled to an acceptable level	ICAO Manual on RPAS Doc 10019 (2015)
safety analysis	All associated analysis methods, process, and / or techniques to systematically evaluate safety related risks.	FAA System Safety Handbook, Appendix A: Glossary
safety critical	All interactions, elements, components, subsystems, functions, processes, interfaces, within the system that can affect a predetermined level of risk.	FAA System Safety Handbook, Appendix A: Glossary
safety critical service	A service whose failure or malfunction may result in serious injuries to people or serious incident with other airspace user or damage to third party property.	JAR doc 14 – OPS Cat A & B – WG2
safety evaluation (specific to FAA experimental certification, safety evaluation)	A comprehensive review of an applicant's UAS, OPA, or OPA/UAS and all associated elements of the system. The applicant is expected to provide any and all information necessary to allow the FAA to objectively determine if the aircraft can be safely operated in the NAS. The form of this review is a presentation by the applicant to the FAA. The safety evaluation is a formal review of the information contained in the safety checklist and is performed at the discretion of the FAA.	FAA Order 8130.34C
safety management system (SMS)	A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures	ICAO Manual on RPAS Doc 10019 (2015)
safety objective	A measurable goal or desirable outcome related to safety.	VS 8000.367A - Aviation Safety (AVS) Safety

		Management System Requirements
safety requirement	Controls that have the potential to mitigate a cause of a hazard or the hazard's associated risk, but have not been verified as part of the system or its requirements.	FAA ATO SMS Manual
safety requirement	A safety condition or capability that must be met or passed by a system to satisfy a contract, standard, specification or other formally imposed document or need.	VS 8000.367A - Aviation Safety (AVS) Safety Management System Requirements
safety risk	The composite of predicted severity and likelihood of the potential effect of a hazard.	VS 8000.367A - Aviation Safety (AVS) Safety Management System Requirements
safety risk	The predicted probability and severity of the consequences or outcomes of a hazard.	ICAO Manual on RPAS Doc 10019 (2015)
specific assurance and integrity levels	The chosen parameter to consolidate the ground and air risk analysis and to drive the required activities. It represents the level of confidence that the UAS operation will stay under control.	JAR doc 06 SORA Package – WG 6
secondary system (s)	A redundancy system that provides the same function as the primary system.	JAR doc 04 – AMC RPAS 1309 – WG6
see, decide, action, and feedback loop	See, Decide, Action, and Feedback (SDAF) Loop. This is a very simplified structure of a Tactical Conflict Mitigation scheme. See Tactical Mitigation	
see and avoid	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).	ICAO Cir 328 AN/190

		ICAO Manual on RPAS Doc 10019 (2015)
segregation	The maintenance of independence by means of a physical barrier between two hardware components.	SAE ARP4761
sense and avoid	See Detect and Avoid.	
separation	The maintenance of independence by means of physical distance between two hardware components.	SAE ARP4761
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.	
separation assurance	The capability to maintain safe separation from other aircraft in compliance with the applicable rules of flight.	JAR doc 04 – AMC RPAS 1309 – WG 6
sequence diagram	An interaction diagram that shows how processes operate with one another and what is their order.	Wikipedia
severity	The consequence or impact of a hazard's effect or outcome in terms of degree of loss or harm.	VS 8000.367A - Aviation Safety (AVS) Safety Management System Requirements
single point failure	A single item of hardware, the failure of which would lead directly to loss of life, and / or system. Actually, a single malfunction, and / or failure, and /or error, of which would lead to loss of life, and / or system.	FAA System Safety Handbook, Appendix A: Glossary
sitting	A period of time established by the competent authority within which a candidate can take an examination. This period should not exceed 10 consecutive days. Only one attempt at each examination paper is allowed in one sitting.	JAR doc 10 - FCL GM – WG1

software	Computer programs, procedures, rules, and any associated documentation pertaining to the operation of a computer system.	SAE ARP4761
special conditions	Are introduced when the design features of a particular product or the experience in operation render any of the airworthiness code provisions inadequate or inappropriate to ensure conformity with essential requirements.	EMAD 1 ed. 1.1
special ua routes	ATS routes at very low level, accessible civil UA, subject to mandatory equipment functionality and performance and other conditions in this regulation.	JAR doc 14 – OPS Cat A & B – WG 2
special use airspace	Special use airspace or special area of operation (SAO) is the designation for airspace in which certain activities must be confined, or where limitations may be imposed on aircraft operations that are not part of those activities. Prohibited areas: <ul style="list-style-type: none"> • Restricted areas • Warning areas • Military operation areas (MOAs) • Alert areas • Controlled firing areas (CFAs) 	Title 14, Code of Federal Regulation (CFR) part 73
specific category	Category of RPAS where a proportionate approach to the assessment of the risk will be taken by requiring the RPA operator to present a Specific Operation Risk Assessment of the RPA operation before operational approval will be accepted by the appropriate aviation “authority”.	Custom WG6 (Taken from SRA_DRAFT_WG6)
specific operational risk assessment (SORA)	A means by which an aircraft operator is granted approval by certifying authorities to operate an unmanned aircraft system within the limitations set forth by the authorities in the Specific Category.	Custom WG6
specification	A collection of requirements which, when taken together, constitute the criteria which define the functions and attributes of a system, or an item.	SAE ARP4761

<i>standard</i>	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.	RTCA SC-203 UAS Architecture Workgroup 1. March 2013 DRAFT
<i>standard scenario</i>	The tool that will define the design requirements for the UAS. It may be proposed to the Agency by competent authorities, by UAS operators, by manufacturers or by standardisation bodies	GM1 UAS.SPEC.40 JAR doc 06 – SORA – WG6
<i>standard scenario</i>	A description of a UAS operation in the B category, for which mitigation measures have been determined, based on a specific operations risk assessment (SORA) and which is issued by a NAA in its AMC.	JAR doc 14 – OPS Cat A & B – WG 2
<i>standard operating procedure</i>	A set of instructions covering those features of operations which lend themselves to a definite or standardized procedure without loss of effectiveness.	
<i>state aircraft</i>	Aircraft used in military, customs and police services shall be deemed to be state aircraft	ICAO
<i>state of design</i>	The State having jurisdiction over the organization responsible for the type design	ICAO Manual on RPAS Doc 10019 (2015)
<i>state of the operator</i>	The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence	ICAO Manual on RPAS Doc 10019 (2015)
<i>strategic conflict mitigation</i>	For the purposes of this assessment, Strategic Conflict mitigation consists of procedures aimed at reducing the UAS encounter rates 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 (reference to ICAO ATM concept document).	
strategic mitigation	It consists of procedures and operational restrictions aimed at mitigating risk by reducing the UAS encounter rates, or time of exposure, prior to take-off.	JAR doc 06 – SORA Annex C – WG6
strategic mitigation by operational restriction	Operational restrictions under the control of the operator, aimed at mitigating collision risk prior to take-off. These operational restrictions take the form of; <ul style="list-style-type: none"> • Restricting operations to certain times of the day (e.g. fly at night, etc.) • Restricting operations within certain boundaries or airspace volumes. • Restricting operational time of flight (time of exposure) • Restricting certain types of risky operational behaviours. 	JAR doc 06 – SORA Annex C – WG6
strategic mitigation by structures and rules	The application of the airspace structure and flight rules, aimed at mitigating collision risk prior to take-off.	JAR doc 06 – SORA Annex C – WG6
swarm	Two or more UA whose motion is mutually and automatically coordinated, while the remote pilot controls the entire swarm through a single remote pilot station.	JAR doc 14 – OPS Cat A & B – WG 2
switchover	The operation that consist of performing the transfer of the UAV command and control from one data link channel to another channel within the same GCS.	STANAG 4671 ed 3 (draft)
system	A combination of inter-related items arranged to perform a specific function(s).	SAE ARP4761
system	A specific grouping of components or elements designed and integrated to perform a function.	RTCA SC-203 UAS Architecture Workgroup 1. March 2013 DRAFT

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.	FAA System Safety Handbook
system safety assessment	A systematic, comprehensive evaluation of the implemented system to show that the relevant safety requirements are met.	ARP4754A
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tactical conflict mitigation	For the purposes of this assessment, Tactical Conflict Mitigation is the act of mitigating collision risk over a very short time horizon (minutes to seconds). Tactical Mitigations take the form of SDAF loop's (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 (reference to ICAO ATM concept document).	
take-off	The process by which a RPA leaves the surface and attains controlled flight (includes launch via catapult or rocket assistance).	STANAG 4671 ed 3 (draft)
take off rejection point	Point in the take-off trajectory before which a rejected take-off results in the Light VTOL RPA: either automatically returning to a touchdown (if already airborne), or holding on the pad (if not already airborne); and after which, the Light VTOL RPA will automatically continue to a safe and stabilized airborne state.	STANAG 4738 AEP89

target level of safety (TLS)	A generic term representing the level of risk which is considered acceptable in particular circumstances.	ICAO Annex 6 ICAO Manual on RPAS Doc 10019 (2015)
technical specification	A non-binding technical standard that prescribes technical requirements to be fulfilled by a product or process.	JAR doc 14 – OPS Cat A & B – WG 2
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.	FAA System Safety Handbook, Appendix A: Glossary
tethered aircraft	A UA whose range of movement is limited by a rope, chain or other similar device fastened to a fixed object.	
third party	An individual who does not have a direct connection with a UAS operation but who might be affected by it (e.g., someone other than the flight crew).	RTCA SC-203 WG-4 Safety Definitions
third party	Deriving no economic benefit and no control over risk associated with the UAS operation.	
threat	In the context of the Holistic Risk Model, a threat is defined as an occurrence that in the absence of appropriate threat barriers can potentially result in the hazard.	
threat	Events or errors that occur beyond the influence of the flight crew, increase operational complexity and which must be managed to maintain the margin of safety.	JAR doc 03 – FCL Recommendations – WG1
threat barrier identification	The identification of the mitigations applicable to a specific threat for a defined hazard. Threat barriers affect the likelihood that a threat can cause the hazard.	JAR doc 06 – SORA – WG6

threat category identification	In order to support the applicant/operator to identify the issues that can cause the hazard to occur if not kept under control, the HRM has identified 6 <u>generic</u> categories of threats: a. Technical issue with the RPAS [T1] b. Remote crew error [T2] c. Adverse operating conditions [T3] d. Loss or deterioration of datalink [T4] e. Loss or deterioration of systems external to the RPAS but critical to its safe operation (e.g. GPS) [T5] f. Fire [T6]	SRA_DRAFT_WG6
threat management	It means the process of detecting and responding to the threats with countermeasures that reduce or eliminate the consequences of threats, and mitigate the probability of errors or undesired aircraft.	JAR doc 03 – FCL Recommendations – WG1
toy aircraft	A UA designed or intended, whether or not exclusively, for use in play by children under 14 years of age.	JAR doc 14 – OPS Cat A & B – WG 2
transaction	TRN – symbol used to designate monitored operational performance.	
type certification basis	An agreed set of airworthiness requirements a product must be compliant with in order to obtain a Type Certificate.	EMAD 1 ed. 1.1
type certificate	A document issued by a contracting State to define the design of an aircraft type and to certify that this design meets the appropriate airworthiness requirements of that State	ICAO Manual on RPAS Doc 10019 (2015)
type certificate holder	The organisation responsible for the relevant Type Design and applying for, and then holding, the Type Certificate and accepting the rights and obligations for the product.	EMAD 1 ed. 1.1
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ua operator	Any natural or legal person who operates or intends to operate a UAS for recreational or other than recreational purposes, including commercial purposes.	JAR doc 14 – OPS Cat A & B – WG 2

<i>ua system</i>	The UA and any equipment, apparatus, appurtenance, software or accessory that is necessary for the safe operation of the UA.	JAR doc 14 – OPS Cat A & B – WG 2
<i>ua zones</i>	Airspace volumes in which civil UA operations are permitted, subject to this regulation and related guidelines published by the authority.	
<i>uas traffic management</i>	A system that will develop airspace integration requirements to enabling safe, efficient VLL operations. The system is in the very early stages of development and the full extent of its capabilities remains unknown.	
<i>uncontrolled airspace</i>	For the purposes of this assessment, Uncontrolled Airspace is defined as Class G airspace.	JAR doc 06 – SORA Annex C – WG6
<i>uncontrolled crash</i>	A condition resulting from one or a combination of failure conditions that prevents the flight control system from maintaining the UAV controllable and manoeuvrable until the impact on the ground.	STANAG 4671 ed 3 (draft)
<i>uncontrolled flight</i>	A condition resulting from one or a combination of failure conditions that result in loss of RPA control and / or manoeuvrability (including flight outside of pre-planned or contingency flight profiles/areas).	STANAG 4671 ed 3 (draft)
<i>undesired event likelihood estimation</i>	The likelihood of each undesired event to occur.	SRA_DRAFT_WG6
<i>undesired events identification</i>	Identification of event categories (C1-C3) resulting from the hazard- loss of RPA control a. Fatal injuries to third parties on the ground [C1] b. Fatal injuries to third parties in the air (Catastrophic MAC with a manned aircraft) [C2] c. Damage to critical infrastructure [C3].	Custom WG6 (Taken from SRA_DRAFT_WG6)
<i>unmanned aircraft</i>	An aircraft which is intended to operate with no pilot on board.	ICAO Cir 328 AN/190 JAR doc 04 – AMC RPAS 1309- WG6
<i>unmanned aircraft</i>	An aircraft which is intended to operate with no human pilot on board, as part of an Unmanned Aircraft System	CAP 722

unmanned aircraft	A device used or intended to be used for flight in the air that has no on-board pilot. The device can be any type of airplane, helicopter, airship, glider (powered or unpowered), powered-lift aircraft, or tethered aircraft without an on-board pilot. Unmanned free balloons and unmanned rockets discussed in 14 CFR part 101 are not considered UA.	FAA Order 8130.34C
unmanned aircraft system	Unmanned Aircraft System (UAS). An unmanned aircraft and its associated elements related to safe operation, which may include control stations, data links, support equipment, payloads, flight termination systems, and launch/recovery equipment.	FAA Order 8130.34C
unmanned aircraft system	An unmanned aircraft and its associated elements required for operation.	DO-304 & DO-320 OSD
unmanned aircraft system	An Unmanned Aircraft System comprises individual 'System Elements' consisting of the Unmanned Aircraft (UA) and any other System Elements necessary to enable flight, such as a Remote Pilot Station, Communication Link and Launch and Recovery Element. There may be multiple UAs, RPS or Launch and Recovery Elements within a UAS.	CAP 722
unmanned aircraft system	A UAS is the unmanned aircraft (UA) and all of the associated support equipment, control station, data links, telemetry, communications and navigation equipment, etc., necessary to operate the unmanned aircraft.	FAA AFS-80
unmanned aircraft system	An aircraft and its associated elements which are operated with no pilot on board.	ICAO Cir 328 AN/190 JAR doc 04 – AMC RPAS 1309 – WG6
unmanned free balloons	A non-power-driven, unmanned, lighter-than air aircraft in free flight.	JAR doc 14 – OPS Cat A & B – WG 2
unsafe	Condition or situation that is likely to cause a Hazardous or more serious event.	STANAG 4738 AEP89
urban population	It is a town, outer suburban, suburban, residential area, urban, metro, city, and/or open-air assembly of people. The Competent Authority may, at their own discretion, apply a different definition of an Urban area.	JAR doc 06 – SORA Annex C – WG6

urban population	½ nm (3038ft.) buffer around all Urbanized Areas / Urbanized Areas are defined as an area containing an average population of 500 people per square mile (1295 people per square kilometre).	US Science and Research Panel
<p style="text-align: center;">V back</p>		
validated	A term used to describe controls/safety requirements that are unambiguous, correct, complete, and verifiable.	FAA ATO SMS Manual
verified	A term used to describe controls/safety requirements that are objectively determined to have been met by the design solution.	FAA ATO SMS Manual
vertical take-off and landing	An aircraft that uses powered lift to ascend or descend vertically or near vertically and does not require forward flight to generate continuous lift by a fixed non-moving lifting surface to remain airborne. Light VTOL aircraft may exhibit forward, rearward and side to side flight or hover in place.	STANAG 4738 AEP89
very high level airspace	For the purposes of this assessment, VHL airspace is considered FL600 and above. The altitude of FL600 is not hard value, but 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 VHL airspace may have to comply with operating rules, procedures, and equipage not yet identified. VHL is airspace where manned aircraft operations are very in-frequent.	
very low level (VLL)	A UA operation below the height of 500 ft above ground level (AGL) or other current local minimum flight height.	
very low level airspace (VLL)	For the purposes of this assessment, VLL airspace is considered 500 ft. AGL and below. The altitude of 500 ft. AGL is not hard value, but 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 equipage not yet identified. VLL is airspace where manned aircraft operations are very in-frequent. VLL airspace excludes Class A, B, C, D, E, and F airspaces, and airport environments.	

visibility	<p>Visibility for aeronautical purposes is the greater of:</p> <p>a) the greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognized when observed against a bright background;</p> <p>b) the greatest distance at which lights in the vicinity of 1 000 candelas can be seen and identified against an unlit background.</p> <p><i>Note 1 to entry: The two distances have different values in air of a given extinction coefficient, and the latter b) varies with the background illumination. The former a) is represented by the meteorological optical range (MOR).</i></p> <p><i>Note 2 to entry: The definition applies to the observations of visibility in local routine and special reports, to the observations of prevailing and minimum visibility reported in the aerodrome routine meteorological report (METAR) and aerodrome special meteorological report (SPECI) and to the observations of ground visibility.</i></p>	ICAO Manual on RPAS Doc 10019 (2015)
visual control	Method of control and meeting separation and collision avoidance responsibilities that refers to the remote pilot or observer having an uninterrupted view with human eyesight of the remotely piloted aircraft and the airspace around it in order to avoid collision. Note: Corrective lenses (spectacles or contact lenses) may be used by the remote pilot or remotely piloted aircraft observer. Aids to vision, such as binoculars, field glasses, or telephoto television may be employed as long as their field of view does not adversely affect the surveillance task, such that control is achieved.	ICAO
visual line-of-sight (operation)	An operation in which the remote pilot or RPA observer maintains direct unaided visual contact with the remotely-piloted aircraft.	CAP 722
visual line-of-sight (operation)	An operation in which the remote crew maintains direct visual contact with the aircraft to manage its flight and meet separation and collision avoidance responsibilities.	ICAO Cir 328 AN/190
visual line-of-sight (operation)	An operation in which the remote pilot or RPA observer maintained direct unaided visual contact with the remotely piloted aircraft.	ICAO RPAS Manual
visual line-of-sight (VLOS)	A type of operation in which the remote pilot maintains continuous unobstructed and unaided visual contact with the UA, allowing the remote pilot to monitor the flight path of the UA in relation to other aircraft, persons, and obstacles, for the purpose of maintaining separation from them and avoiding	JAR doc 14 – OPS Cat A & B

	collisions.	
visual line-of-sight (VLOS)	For the purposes of this assessment, VLOS is the pilot in command and the person manipulating the flight controls, keeping the UAS close enough to be capable of seeing the aircraft with vision unaided by any device other than corrective lenses, and seeing and avoiding all threats and hazards.	
visual line-of-sight (VLOS) operations	An operation in which the remote pilot or RPA observer maintains direct unaided visual contact with the remotely piloted aircraft	ICAO Manual on RPAS Doc 10019 (2015)
visual meteorological conditions (VMC)	Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima	
visual observer	A trained person acting as a flight-crew member who assists the UA remote pilot in command (PIC) and the person manipulating the controls to see and avoid other air traffic or objects aloft or on the ground.	ICAO Manual on RPAS Doc 10019 (2015)
visual observer	A natural person who, by visual observation of the UA, assists the remote pilot in safely conducting the flight.	JAR doc 14 – OPS Cat A & B – WG 2
visual range	Distance that unaided (except for normal prescription eyewear) human vision can provide de-confliction during a UAS operation, and can effectively monitor the UAS.	ASTM International: F2395 -07
W back		
withdrawal	Any measure aimed at preventing a product in the supply chain from being placed on the market.	
workstation	A computer interface between an individual RPAS crew member and the RPAS to perform the functions of mission planning, flight control and monitoring and for display and evaluation of the downloaded image and data (where applicable).	STANAG 4671 ed 3 (draft)