

Regulatory Framework for Unmanned Aircraft Systems

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Airspace Classification – Categories of airspace (A, B, C, D, E, G) that determine the rules for unmanned aircraft system (UAS) operations. Related terms: controlled airspace, uncontrolled airspace. Example: A UAS flying in Class B airspace must obtain explicit permission from the air traffic control (ATC) authority.

Airworthiness Certificate – Official document confirming that a UAS meets the applicable safety standards. Related terms: type certification, maintenance release. Challenge: Small drones often lack a formal airworthiness process, requiring operators to rely on manufacturer compliance statements.

Altitude Limitation – Maximum height a UAS may fly, typically set by national regulations (e.g., 120 M AGL in many jurisdictions). Related terms: maximum operating altitude, restricted altitude zones. Example: In a densely populated city, the altitude limitation may be reduced to 50 m to mitigate risk to people and property.

Amendment to Regulation – Formal change to an existing rule, often introduced to address emerging technology or safety concerns. Related terms: regulatory update, regulatory notice. Example: An amendment may introduce a new requirement for remote identification of drones.

Automated Flight Control System (AFCS) – Integrated hardware and software that manages a UAS's flight path without continuous human input. Related terms: autopilot, flight management system. Practical application: AFCS enables 'beyond visual line of sight' (BVLOS) missions, but regulators may require additional risk assessments.

Authorization – Formal permission granted by a competent authority allowing a specific UAS operation that would otherwise be prohibited. Related terms: permit, license. Example: An operator may receive an authorization to conduct night flights after demonstrating compliance with lighting requirements.

Air Traffic Management (ATM) Integration – Process of incorporating UAS operations into the existing ATM framework to ensure safe coexistence with manned aircraft. Related terms: UAS Traffic Management (UTM), conflict detection. Challenge: Developing real-time data exchange protocols that meet both safety and privacy standards.

Aircraft Registration – Mandatory entry of a UAS in a national registry, assigning a unique identifier. Related terms: UAS registration number, owner record. Example: In the United States, the FAA requires registration of drones weighing ≥ 250 g, and the registration number must be displayed on the aircraft.

Airspace Notification – Formal submission of planned UAS flight details to the appropriate authority for

review and de-confliction. Related terms: flight plan filing, NOTAM. Practical application: Operators conducting operations near airports must file an airspace notification to avoid conflicts with scheduled commercial traffic.

Altitude Reference System (ARS) – Instrument that provides accurate altitude data, often required for compliance with altitude limitation rules. Related terms: barometric altimeter, GNSS altitude. Challenge: Small UAS may lack certified ARS, necessitating alternative compliance methods such as ground-based geofencing.

Airspace Segmentation – Division of the national airspace into zones with specific operational requirements for UAS. Related terms: geofencing, restricted zones. Example: A “no-fly” segment may be established around a stadium during an event, prohibiting any drone activity within a 5-km radius.

Aviation Safety Reporting System (ASRS) – Voluntary reporting platform for safety incidents, including near-misses involving UAS. Related terms: confidential reporting, risk analysis. Practical use: Data from ASRS assists regulators in identifying trends and updating safety standards.

Airspace User Fee – Charge levied on operators for the use of certain airspace categories, typically to fund ATC services. Related terms: navigation fee, surveillance fee. Example: In some European states, BVLOS operators pay a fee proportional to the distance flown in controlled airspace.

Artificial Intelligence (AI) in UAS – Use of machine-learning algorithms for perception, decision-making, or autonomous navigation. Related terms: computer vision, deep learning. Challenge: Regulators must assess the reliability of AI-based safety functions and define verification criteria.

Airspace Management System (AMS) – Software platform used by authorities to monitor, allocate, and enforce airspace usage for both manned and unmanned aircraft. Related terms: UTM platform, conflict resolution engine. Example: An AMS may automatically deny a UAS flight request that would intersect a temporary restricted area.

Airspace Violation – Unauthorized entry into a protected or restricted airspace segment. Related terms: incursion, breach. Practical consequence: Violations can trigger fines, suspension of registration, or criminal prosecution.

Airspace Use Authorization (AUA) – Document issued by the aviation authority granting permission for a specific operation in a designated airspace. Related terms: operation permit, flight clearance. Example: A film-production crew obtains an AUA to fly drones over a historic site during off-peak hours.

Aircraft Operator Certificate (AOC) – Certification that an organization meets the regulatory requirements to conduct commercial UAS operations. Related terms: Part-135, operator approval. Challenge: Smaller enterprises may find the AOC process resource-intensive, prompting the development of simplified “light-operator” pathways.

Altitude Enforcement – Mechanism, often technical, that prevents a UAS from exceeding its authorized ceiling. Related terms: geofencing, software limits. Example: A UAV equipped with altitude-limit firmware

will automatically descend if the ceiling is breached.

Airspace Coordination Committee (ACC) – Multi-agency body that reviews and harmonises UAS policies across civil, defense, and security sectors. Related terms: inter-agency working group, policy forum. Practical outcome: ACC recommendations often become the basis for national regulatory amendments.

Aircraft Identification System (AIS) – System that broadcasts a unique identifier for each UAS, facilitating tracking and accountability. Related terms: remote ID, transponder. Challenge: Balancing privacy concerns with the need for real-time identification.

Authorization Matrix – Tabular tool that maps specific UAS activities to the required regulatory approvals. Related terms: compliance checklist, risk matrix. Example: The matrix may indicate that night BVLOS flights require an operational authorization, a special training certificate, and a risk mitigation plan.

Airspace Clearance – Confirmation from ATC that a UAS may enter a particular airspace segment at a specified time. Related terms: clearance limit, slot allocation. Practical note: Clearance is often required for operations near airports, heliports, or military zones.

Altitude Data Recorder (ADR) – Device that logs altitude information during flight, used for post-flight analysis and regulatory compliance. Related terms: flight data recorder, black box. Challenge: Miniaturising ADRs for small UAS while maintaining data integrity.

Airworthiness Directive (AD) – Mandatory instruction issued by the regulator to correct an unsafe condition in a UAS model. Related terms: service bulletin, mandatory compliance. Example: An AD may require a software patch to address a known GPS spoofing vulnerability.

Attitude Control – Management of a UAS's orientation (pitch, roll, yaw) to maintain stable flight. Related terms: stabilisation system, flight controller. Practical relevance: Precise attitude control is essential for high-resolution mapping missions and for complying with flight-path restrictions.

Airspace Encroachment – Situation where a UAS approaches or penetrates a protected safety buffer around critical infrastructure. Related terms: buffer zone, exclusion area. Example: A drone flying within 500 m of a nuclear power plant without permission constitutes encroachment.

Automation Level – Degree to which flight tasks are performed without human intervention, ranging from manual to fully autonomous. Related terms: LOA (Level of Automation), human-in-the-loop. Regulatory impact: Higher automation levels often demand more rigorous safety cases.

Aviation Law – Body of statutes, regulations, and case law governing all aspects of flight, including UAS activities. Related terms: civil aviation authority, international conventions. Example: The Chicago Convention forms the basis for many national UAS regulations.

Airspace Deconfliction – Process of ensuring that multiple UAS operations do not interfere with each other or with manned traffic. Related terms: conflict detection, traffic separation. Practical method: Use of a central UTM platform that assigns time-slot windows to each operator.

Airspace Access Rights – Legal entitlement to operate in a specific airspace, often tied to licensing or permits. Related terms: flight privileges, operational authority. Example: Commercial operators may have broader access rights than hobbyists.

Airspace Restrictions – Limitations placed on flight activities due to security, safety, or environmental concerns. Related terms: temporary flight restriction (TFR), permanent no-fly zone. Example: A TFR may be issued during a wildfire to keep drones away from firefighting aircraft.

Airspace Monitoring – Continuous observation of UAS activity using radar, ADS-B, or UTM data feeds. Related terms: surveillance, real-time tracking. Challenge: Detecting low-altitude, low-RCS drones requires specialized sensors.

Aircraft Separation Standard – Minimum distance required between aircraft to maintain safety, applied by ATC to UAS in controlled airspace. Related terms: minimum safe distance, conflict buffer. Example: A 5 km horizontal separation may be mandated for BVLOS operations near airports.

Airspace Usage Report – Periodic submission detailing the number, type, and purpose of UAS flights within a jurisdiction. Related terms: operational statistics, usage analytics. Practical benefit: Helps regulators assess capacity and adjust policy.

Aeronautical Information Publication (AIP) – Official document that provides essential information on airspace, navigation, and procedures. Related terms: ENR, NOTAM. Example: UAS operators consult the AIP to verify the status of restricted zones before planning a mission.

Airspace Characteristics – Physical and operational attributes of a sector, including altitude limits, traffic density, and communication requirements. Related terms: airspace class, flight rules. Understanding these characteristics is vital for risk assessment.

Aircraft Certification – Formal approval that a specific UAS model complies with applicable standards for design, performance, and safety. Related terms: type approval, production certificate. Challenge: Rapidly evolving drone designs often outpace the certification process.

Altitude Constraint – Specific limit imposed on a flight's vertical envelope, possibly varying by location or time. Related terms: flight ceiling, altitude corridor. Example: A drone delivering medical supplies may be limited to 80 m over residential areas.

Airspace Integration Strategy – Comprehensive plan outlining how UAS will be incorporated into the national airspace, addressing technology, policy, and stakeholder roles. Related terms: UTM roadmap, capacity planning. Practical outcome: Defines milestones for BVLOS roll-out and remote ID compliance.

Aviation Safety Management System (SMS) – Structured approach to managing safety risks, including hazard identification, risk assessment, and mitigation for UAS operations. Related terms: risk management, continuous improvement. Example: An operator's SMS must document the safety case for each new flight operation.

Airspace Reservation – Allocation of a specific volume of airspace for a planned UAS activity, often through

a booking system. Related terms: slot reservation, time-based access. Challenge: High demand in urban areas may lead to limited reservation availability.

Aircraft Noise Regulation – Standards that limit the acoustic impact of UAS, especially in noise-sensitive zones. Related terms: sound exposure level (SEL), quiet zones. Example: Drones operating near hospitals may be required to maintain noise below a defined threshold.

Airspace Compatibility Analysis – Study that evaluates how a proposed UAS operation fits within existing air traffic patterns and constraints. Related terms: interference assessment, capacity analysis. Practical use: Determines whether a new delivery corridor can coexist with existing flight routes.

Airspace Management Authority (AMA) – Government body responsible for designating, monitoring, and enforcing airspace use. Related terms: civil aviation authority, national airspace system. Example: In Canada, NAV CANADA acts as the AMA for most controlled airspace.

Aircraft Operating Limitations – Specific constraints placed on a UAS, such as weight, speed, or weather minima. Related terms: operational envelope, performance restrictions. Example: A small quadcopter may be limited to winds below 15 kt to ensure controllability.

Altitude Accuracy Requirement – Precision level that altitude data must meet for regulatory compliance, often expressed in meters. Related terms: vertical error budget, GNSS vertical accuracy. Challenge: Urban canyon environments can degrade GNSS accuracy, affecting compliance.

Airspace Conflict Resolution – Procedures and tools used to mitigate potential collisions between UAS and other airspace users. Related terms: resolution advisory, avoidance maneuver. Example: A UTM system may automatically reroute a drone when a conflict is detected.

Aircraft Data Link – Communication channel that transmits flight data, commands, and telemetry between the UAS and ground control. Related terms: telemetry, command and control (C2). Regulatory note: Certain airspaces require a certified data link with encryption.

Airspace Use Permit (AUP) – Document granting temporary permission for a specific UAS activity in a defined area. Related terms: event permit, special use airspace. Example: A film crew obtains an AUP to fly drones over a city square during a public festival.

Active Safety System – Technology that detects imminent hazards and initiates corrective actions autonomously. Related terms: detect-and-avoid (DAA), collision avoidance. Practical application: An active safety system can trigger an immediate climb to avoid a manned aircraft.

Airspace Boundary – Geographical limit defining the extent of a particular airspace class or restriction. Related terms: geofence, zone perimeter. Example: The boundary of a temporary restricted area around a presidential motorcade is broadcast to all UAS operators via NOTAM.

Airspace Surveillance System – Network of sensors (radar, ADS-B, optical) that monitors aircraft movements. Related terms: air traffic surveillance, UAS detection. Challenge: Integrating low-altitude UAS data with existing ATC radar feeds.

Airspace Entry Clearance – Formal approval to commence flight into a specific airspace segment. Related terms: entry permission, slot release. Example: Before entering a Class C airspace, a commercial drone operator must receive entry clearance from the controlling ATC.

Airspace Utilisation Forecast – Predictive model estimating future demand for airspace resources by UAS and manned aircraft. Related terms: traffic prediction, capacity planning. Practical benefit: Helps authorities allocate slots and design new corridors.

Altitude Restriction Zone (ARZ) – Designated volume where vertical flight limits are imposed, often to protect sensitive installations. Related terms: vertical exclusion zone, height-limited area. Example: Near an airport's instrument landing system, an ARZ may restrict drones to below 30 m.

Aircraft Maintenance Program – Structured schedule of inspections, repairs, and part replacements to ensure ongoing airworthiness. Related terms: continuing airworthiness, maintenance tracking. Challenge: Small operators may lack dedicated maintenance personnel, requiring reliance on manufacturer service plans.

Airspace Designation – Official naming or coding of a specific airspace segment (e.g., "U-Zone 12"). Related terms: airspace identifier, sector code. Example: A city may designate "U-Zone 5" as a low-altitude corridor for delivery drones.

Airworthiness Standard – Technical criteria that a UAS must satisfy to be considered safe for flight. Related terms: design criteria, compliance test. Example: ISO 21284 outlines functional safety requirements for autonomous drones.

Altitude Clearance – Authorized maximum height for a specific flight, granted by ATC or the regulating authority. Related terms: flight level, vertical clearance. Practical note: The altitude clearance may be lower than the statutory limit due to local constraints.

Airspace Management Plan (AMP) – Document that outlines the allocation, monitoring, and enforcement strategies for a region's airspace. Related terms: airspace strategy, operational plan. Example: An AMP may specify that 30 % of the low-altitude airspace is reserved for emergency services.

Airspace Coordination Procedure – Set of steps for synchronising UAS activities among multiple stakeholders. Related terms: joint operation protocol, inter-agency liaison. Example: Police, fire, and medical services coordinate a joint airspace use plan during a disaster response.

Airspace Risk Assessment (ASRA) – Systematic evaluation of hazards associated with a proposed UAS operation within a particular airspace. Related terms: hazard analysis, risk matrix. Practical tool: ASRA results feed into the operator's safety case.

Airspace Fee Structure – Pricing model for airspace usage, often tiered by altitude, distance, or airspace class. Related terms: user charge, billing scheme. Example: A BVLOS flight that traverses controlled airspace may incur a higher fee than a VLOS operation in Class G.

Airspace Allocation – Assignment of a specific airspace volume to a particular use or operator for a defined

period. Related terms: slot assignment, airspace assignment. Challenge: Balancing commercial demand with public safety and security priorities.

Airspace Monitoring Dashboard – Visual interface presenting real-time data on UAS activity, conflicts, and compliance status. Related terms: situational awareness tool, traffic overview. Practical use: Controllers can quickly identify unauthorized incursions.

Airspace Use Policy – Set of rules governing who may fly, where, and under what conditions. Related terms: operational policy, regulatory framework. Example: A municipal policy may restrict drone flights over schools during school hours.

Aircraft Flight Envelope – Range of permissible speeds, altitudes, and attitudes for a UAS. Related terms: performance limits, operational envelope. Understanding the envelope is essential for planning safe missions.

Airspace Safety Margin – Additional distance or buffer incorporated to account for uncertainties in navigation, communication, or sensor performance. Related terms: protective buffer, separation standard. Example: A 500-m safety margin may be applied around a temporary restricted area.

Altitude Deviation Monitoring – System that alerts operators when a UAS exceeds its authorized altitude. Related terms: violation alert, altitude alarm. Practical application: Automated alerts can trigger immediate corrective actions, reducing the risk of penalties.

Airspace Regulation Harmonisation – Effort to align national UAS rules with international standards, facilitating cross-border operations. Related terms: ICAO Annexes, regional agreements. Example: The European Union's "U-Space" framework aims to create a common regulatory environment across member states.

Aviation Incident Reporting System (AIRS) – Platform for reporting safety-relevant events, including near-misses involving drones. Related terms: voluntary reporting, data collection. Use: Aggregated data informs regulatory revisions and safety recommendations.

Airspace Enforcement Agency – Body empowered to detect, investigate, and sanction unauthorized UAS activities. Related terms: law enforcement, regulatory compliance unit. Example: In the United States, the FAA's Office of Enforcement handles drone violations.

Altitude Hold Mode – Flight mode that maintains a constant altitude using onboard sensors. Related terms: altitude lock, auto-hover. Practical note: This mode assists pilots in complying with altitude limitations during inspection flights.

Aircraft Operational Documentation – Collection of manuals, checklists, and certificates required for legal UAS operation. Related terms: operator handbook, maintenance log. Example: An operator must retain the airworthiness certificate and flight logs for a minimum of two years.

Airspace Segmentation Strategy – Approach to dividing airspace into functional zones (e.g., Delivery corridors, emergency lanes). Related terms: zone design, traffic management. Benefit: Segmentation

simplifies deconfliction and improves predictability for all users.

Altitude Contingency Planning – Development of predefined actions if a UAV cannot maintain its authorized altitude (e.G., Loss of GPS). Related terms: emergency descent, fallback procedure. Example: A drone may be programmed to land safely within a 50-m radius if altitude data becomes unreliable.

Aircraft Identification Marking – Physical label displaying the registration number or operator ID on the UAS. Related terms: UAS marking, identification plate. Regulatory requirement: Many jurisdictions mandate visible markings for all aircraft over a certain weight.

Airspace Conflict Alert (ACA) – Automated notification generated when two UAS trajectories intersect within defined safety limits. Related terms: conflict warning, resolution advisory. Practical use: Operators receive the ACA on their ground station and can execute an avoidance maneuver.

Aircraft Performance Certificate – Document confirming that a UAS meets specified performance criteria (e.G., Climb rate, endurance). Related terms: flight test report, performance validation. Example: A delivery drone may need to demonstrate a minimum climb rate of 3 m/s to satisfy BVLOS requirements.

Airspace Usage Statistics – Aggregated data on the number, type, and duration of UAS flights within a region. Related terms: traffic analytics, operational metrics. Regulators use these statistics to assess capacity and plan infrastructure upgrades.

Altitude Restriction Enforcement (ARE) – Technological solution that prevents a drone from exceeding altitude limits, often through firmware constraints. Related terms: geofence enforcement, software limiter. Example: An ARE system can automatically trigger a safe landing if the drone attempts to climb above 120 m.

Airspace Coordination Center (ACC) – Facility that provides real-time coordination of UAS flights, especially in high-density or special-use areas. Related terms: traffic control center, UAS coordination hub. Example: An ACC may manage drone traffic during a large public event, allocating time slots to each operator.

Aircraft Certification Basis – Set of standards and regulations that form the foundation for a UAS type certificate. Related terms: regulatory basis, applicable standards. Example: The certification basis may reference IEC 61508 for functional safety.

Airspace Conflict Management (ACM) – Systematic approach to detect, evaluate, and resolve potential airspace conflicts involving UAS. Related terms: conflict resolution, traffic deconfliction. Practical tool: ACM software can suggest alternative routes or altitudes to maintain separation.

Altitude Measurement Uncertainty – Quantified error range associated with altitude sensors, influencing compliance decisions. Related terms: error budget, sensor accuracy. Example: If the uncertainty is ± 3 m, a drone authorized to fly at 120 m must be programmed to limit altitude to 117 m to stay within the legal ceiling.

Aircraft Operational Limitations (AOL) – Specific constraints imposed by the manufacturer or regulator, such as temperature range or wind limits. Related terms: operating envelope, environmental restrictions.

Example: A UAV may be prohibited from operating above 40°C due to battery performance concerns.

Airspace Management System Integration (AMSI) – Process of linking UTM platforms with existing ATM systems to enable seamless data exchange. Related terms: system interoperability, data sharing protocol.

Challenge: Ensuring cybersecurity while transmitting real-time flight data across multiple agencies.

Altitude Violation Penalty – Legal sanction applied when a UAS exceeds its authorized altitude, ranging from fines to license suspension. Related terms: regulatory sanction, enforcement action. Example: In some jurisdictions, each meter above the limit can result in a proportional fine.

Aircraft Operational Safety Case – Structured argument, supported by evidence, demonstrating that a specific UAS operation meets safety requirements. Related terms: risk assessment, mitigation plan. Practical use: The safety case is submitted to the regulator as part of the authorization request.

Airspace Management Framework (AMF) – High-level architecture describing policies, processes, and technologies for controlling UAS traffic. Related terms: governance model, regulatory architecture. Example: The AMF may define roles for the national aviation authority, local municipalities, and private UTM service providers.

Altitude Profile – Planned vertical trajectory of a UAS mission, detailing climb, cruise, and descent phases. Related terms: flight profile, vertical plan. Example: A mapping mission may require a constant altitude of 80m to ensure consistent image resolution.

Aircraft Operational Log – Record of each flight, including date, time, location, altitude, and any deviations. Related terms: flight logbook, digital flight record. Regulators may audit logs to verify compliance with flight plans and altitude limits.

Airspace Use Permit (AUP) – Formal document authorising a temporary UAS operation in a specific airspace segment. Related terms: temporary authorisation, event permit. Example: A concert organizer obtains an AUP to capture aerial footage over the venue during the performance.

Airspace Risk Mitigation Strategies – Techniques employed to reduce the likelihood or impact of airspace conflicts, such as geofencing, redundancy, or real-time monitoring. Related terms: risk reduction, safety measures. Example: Implementing a secondary fail-safe communication link mitigates loss-of-signal risk.

Aircraft Separation Assurance – Ongoing process to maintain required distances between aircraft, supported by ATC or automated systems. Related terms: conflict avoidance, separation standards. Example: In controlled airspace, ATC may issue explicit separation vectors to a drone operator.

Altitude Alert System – Onboard or ground-based mechanism that issues warnings when a UAV approaches its altitude ceiling. Related terms: altitude warning, proximity alert. Practical benefit: Early alerts enable corrective actions before a violation occurs.

Airspace Coordination Protocol (ACP) – Standardised communication and procedural framework for coordinating multiple UAS operators in a shared airspace. Related terms: operational protocol, coordination agreement. Example: The ACP may require operators to broadcast intent messages 5 minutes prior to

entering a congested corridor.

Aircraft Design Standard – Technical specifications that define acceptable design practices for UAS, such as structural integrity or electromagnetic compatibility. Related terms: design criteria, engineering standard. Example: EN 4709-002 specifies safety requirements for small rotorcraft.

Airspace Management Policy (AMP) – Governing document that outlines the strategic objectives, responsibilities, and procedures for airspace use. Related terms: regulatory policy, strategic plan. Example: An AMP may set a target that 60 % of low-altitude airspace be available for commercial delivery by 2030.

Altitude Clearance Request (ACR) – Formal petition by a UAS operator seeking permission to exceed standard altitude limits for a specific flight. Related terms: clearance application, exception request. Example: A cinematography crew may submit an ACR to fly at 150 m to capture aerial shots of a skyscraper.

Aircraft Operational Risk Register – Living document that records identified hazards, their likelihood, impact, and mitigation measures for UAS operations. Related terms: risk register, hazard log. Practical use: The register informs the safety case and is reviewed during audits.

Airspace Management Technology (AMT) – Suite of tools, including UTM platforms, surveillance sensors, and data analytics, used to control UAS traffic. Related terms: digital air traffic management, technology stack. Example: AMT may incorporate AI-driven conflict prediction to enhance safety.

Altitude Management Procedure – Step-by-step process for planning, monitoring, and adjusting a drone's vertical trajectory to remain compliant. Related terms: flight planning, altitude control protocol. Example: The procedure includes pre-flight verification of sensor calibration, in-flight altitude monitoring, and post-flight analysis.

Aircraft Operational Authorization (AOA) – Comprehensive permit that encompasses all required approvals for a specific UAS operation, including airspace, payload, and environmental considerations. Related terms: flight permit, operation licence. Example: An AOA may be required for a cross-border delivery service, covering customs, airspace, and privacy regulations.

Airspace Conflict Prediction – Use of predictive algorithms to forecast potential airspace conflicts before they materialise. Related terms: conflict forecasting, predictive analytics. Practical benefit: Early prediction enables proactive rerouting, reducing the need for emergency maneuvers.

Altitude Control Loop – Feedback system that continuously adjusts a drone's thrust to maintain a target altitude. Related terms: PID controller, altitude stabilization. Example: The loop processes barometric and GNSS data to keep the drone within ± 1 m of the setpoint.

Aircraft Maintenance Tracking System (AMTS) – Digital platform that records all maintenance actions, inspections, and component life-cycles. Related terms: maintenance logbook, service history. Benefit: Facilitates compliance audits and ensures timely replacement of critical parts.

Airspace Use Harmonisation (AUH) – Process of aligning local airspace rules with national and international standards to enable seamless operations. Related terms: regulatory alignment, standardisation. Example:

AUH efforts support the creation of a common “U-Space” classification across Europe.

Altitude Limiting Software – Application that enforces predefined altitude ceilings by overriding pilot commands if necessary. Related terms: flight restriction software, geofence module. Example: The software can issue an automatic “return-to-home” if the drone attempts to climb above the permitted level.

Aircraft Operational Review (AOR) – Periodic evaluation of an operator’s performance, compliance, and safety outcomes. Related terms: audit, performance assessment. Example: Regulators may conduct an AOR annually to verify adherence to the safety case and maintenance records.

Airspace Conflict Resolution Protocol (ACRP) – Defined set of actions to be taken when a conflict is detected, including communication, maneuvering, and reporting. Related terms: conflict handling, resolution guidelines. Example: The ACRP may require the lower-altitude drone to descend while the higher-altitude aircraft maintains its trajectory.

Altitude Monitoring Device (AMD) – Hardware component that continuously measures and logs altitude, often integrated with telemetry. Related terms: altitude sensor, flight recorder. Example: An AMD can trigger an alarm if altitude data deviates from the flight plan.

Aircraft Operational Safety Audit (AOSA) – Formal inspection of an operator’s processes, documentation, and flight data to verify safety compliance. Related terms: compliance audit, safety inspection. Example: An AOSA may focus on how the operator manages altitude violations and corrective actions.

Airspace Management Directive (AMD) – Official instruction issued by the authority to modify airspace usage, such as opening a new corridor or imposing temporary restrictions. Related terms: regulatory notice, airspace amendment. Example: An AMD may declare a temporary no-fly zone around a disaster site for a period of 48 hours.

Altitude Constraint Management (ACM) – Ongoing process of ensuring that all flights respect altitude limits through planning, monitoring, and enforcement. Related terms: vertical compliance, altitude governance. Example: ACM may involve integrating geofence data into the operator’s mission planning software.