Drones, Air Mobility, and the Law

The Race to Regulate the New Airspace Economy

Canada's Part IX Reform vs. U.S. FAA Part 108

Katherine Ayre | CAYRES Inc. | Canadian Bar Association - Vancouver 2026

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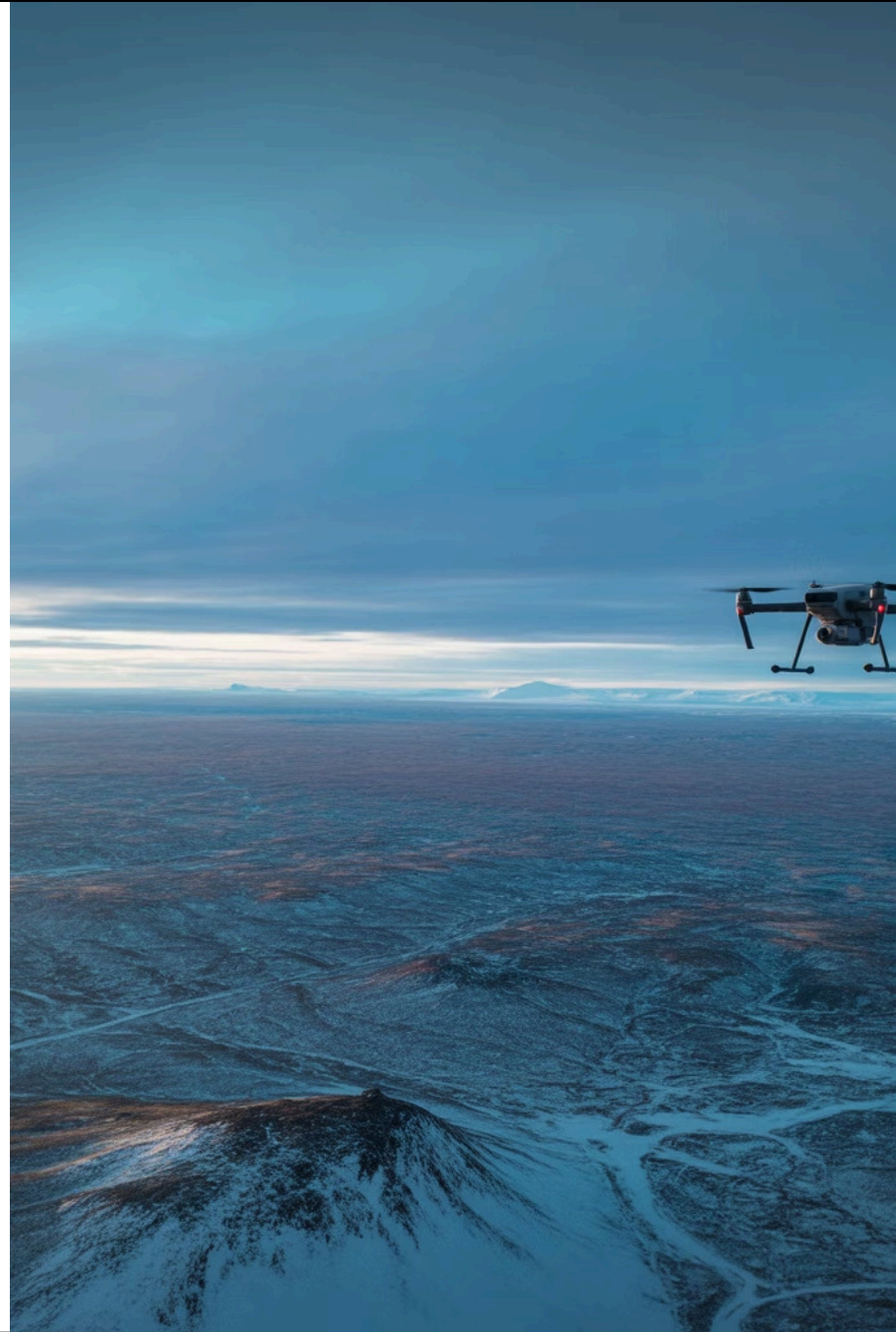


THE OPPORTUNITY

Why Lawyers Should Care About AAM

The airspace below 10,000 ft is becoming one of the most economically valuable and legally complex environments. **Low-altitude airspace is emerging as a new domain of dual use economic activity and digital infrastructure.**

Why Lawyers Should Care About AAM

Drone Logistics & Delivery

Delivery networks operating at commercial scale

Infrastructure Inspection

Pipelines, power lines, bridges — persistent aerial monitoring

Medical Delivery

Time-critical cargo including blood, organs, and pharmaceuticals

Urban Air Mobility (eVTOL)

Passenger aircraft operating in urban corridors

Public Safety Operations

Emergency response, search and rescue, law enforcement

Legal Implications

Airspace Rights: Who owns and controls low-altitude corridors?

Liability: Operator, manufacturer, and AI decision-making exposure

Privacy: Persistent aerial sensing

Insurance: Evolving risk models for autonomous operations

Infrastructure Regulation: Network access, data obligations, carrier-like duties

The legal framework for low-altitude airspace is being rewritten globally — and lawyers who understand it will help define the rules.

DEFINITIONS

What is Advanced Air Mobility?

Advanced Air Mobility (AAM) refers to an emerging aviation ecosystem that uses new aircraft technologies and digital infrastructure to move people and goods through low-altitude airspace — safely, efficiently, and at scale.

Key Components

Remotely Piloted Aircraft Systems (RPAS / UAS)

Drones operated remotely or autonomously for commercial, industrial, and public safety purposes

eVTOL Passenger Aircraft

Electric vertical take-off and landing vehicles designed for urban passenger transport

Autonomous Logistics Aircraft

Cargo drones operating without direct human control, guided by digital traffic systems

UAS Traffic Management (UTM)

The digital infrastructure layer that coordinates, separates, and monitors aircraft in low-altitude airspace

The AAM ecosystem = Aircraft + Digital Infrastructure + Regulation. All three must evolve together.

The Next Digital Infrastructure

Low-altitude airspace is becoming **programmable infrastructure**. This is as consequential as the internet, telecommunications networks, and satellite constellations before it.

Telecommunications

Spectrum allocation, carrier licensing, regulated access

The Internet

ISP regulation, data governance, platform law

Satellite Constellations

Orbital rights, international treaties, spectrum coordination

Advanced Air Mobility

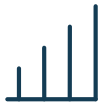
A new digital layer — not just aircraft, but managed infrastructure

The "Internet of Airspace"

Airspace is evolving into a **networked platform**. This is an integrated ecosystem of aircraft, data, and connectivity operating in real time.

Aircraft

Drones, cargo UAS, VTOL & eVTOL urban air taxis



Connectivity

Cellular networks, satellite links, dedicated aviation spectrum

Traffic Management

UAS Traffic Management (UTM) — the "air traffic control" for drones

Data Systems

Remote ID, geofencing, real-time airspace authorizations

THE CONSTRAINT

The Historical Regulatory Barrier: Visual Line of Sight

For decades, a single regulatory constraint defined the limits of commercial drone operations: Visual Line of Sight (VLOS). Operators were required to maintain direct, unaided visual contact with their aircraft at all times.

Limited Range

Operations confined to a few hundred metres from the operator

High Operational Cost

Each flight required dedicated personnel on-site

Not Scalable

No pathway to network-level or autonomous operations

Waiver-Dependent

BVLOS required individual approvals. Slow, expensive, uncertain

Before New Regulations

- Operators needed special approvals or waivers for every BVLOS operation
- No standardized framework for routine beyond-visual-line-of-sight flights
- Commercial AAM was effectively impossible at scale
- Regulatory uncertainty deterred investment

BVLOS regulation is the unlock for commercial AAM. Without it, the entire ecosystem stalls.

THE HISTORICAL CONSTRAINT

The Regulatory Bottleneck: Visual Line of Sight

For years, drone operations were restricted to **Visual Line of Sight (VLOS)**. The operator had to see the aircraft at all times. The legal consequences were severe:

- No scalable delivery networks
- Limited infrastructure inspection capability
- Minimal automation potential
- BVLOS approvals issued only as case-by-case exemptions

Innovation was constrained not by technology, but by **regulatory bandwidth**.

CANADIAN AVIATION REGULATIONS

Canada's Regulatory Framework

The Canadian Aviation Regulations (CARs) form the primary legal architecture governing all aviation activity in Canada. For drone operations, three Parts are most relevant.

Part VI – General Operating Rules

Foundational rules applicable to all aircraft operations, including airspace classification, right-of-way, and operational limits

Part VII – Commercial Aviation

Governs commercial air services, operator certification, and safety management obligations

Part IX – Remotely Piloted Aircraft Systems

The primary regulatory foundation for drones in Canada — covering certification, operations, and now BVLOS

Part IX is the primary regulatory foundation for drones in Canada. The 2025 reforms transformed it from a basic licensing regime into a comprehensive operational framework.

2025 REFORM

Canada's Early Move: CARs Part IX Reform

Canada implemented sweeping reforms to **Part IX of the Canadian Aviation Regulations**, positioning itself as an early mover in the global BVLOS race.

RPAS Operator Certificate (RPOC)

Organizations — not just pilots — now bear formal regulatory accountability for drone operations.

New Pilot Certification Levels

Tiered licensing aligned with operational complexity and risk.

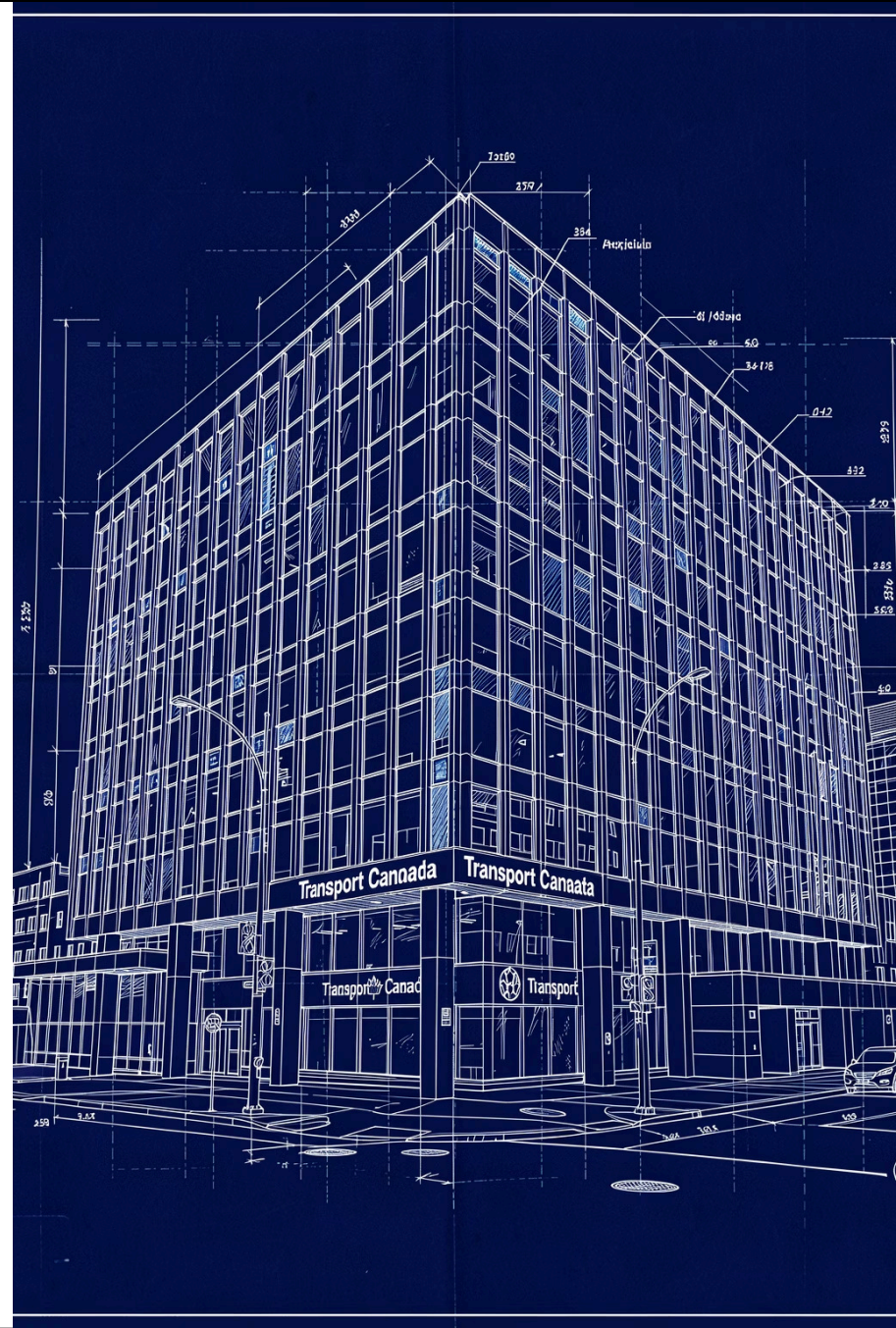
Medium-Sized Drone Operations

Framework extended to larger RPAS, enabling commercial-scale deployments.

Scalable Authorization Pathways

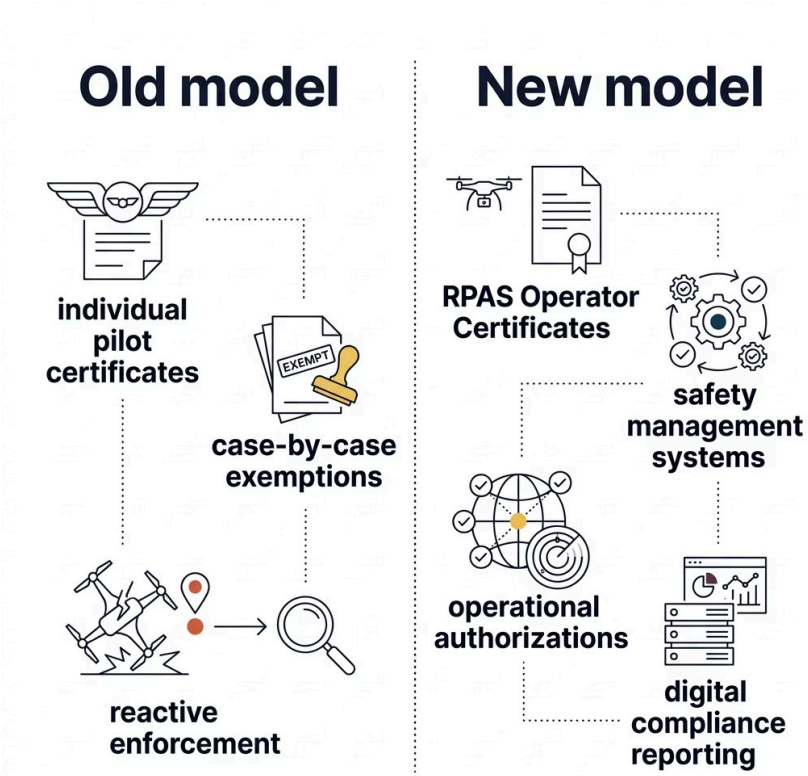
Shift from individual exemptions to systematic, rule-based approvals.

Key Legal Shift: Canada moved from **permission-based aviation** to **system-based aviation**.



What Changed Legally in Canada

The Part IX reforms are not merely operational. These reforms represent a **fundamental restructuring of regulatory accountability** with direct implications for legal advisors.



Why This Matters to Lawyers

Drone operators increasingly resemble **regulated technology companies** with compliance obligations akin to telecom carriers or financial institutions.

- Corporate liability attaches to operators, not just pilots
- **Safety Management Systems** create documented due-diligence obligations
- Digital compliance reporting creates evidentiary trails
- Organizational governance becomes an aviation law issue

PART IX FRAMEWORK

Key Operational Concepts in Canada

The 2025 Part IX reforms introduced a new operational architecture. Understanding these concepts is essential for lawyers advising drone operators.

1

Complex / BVLOS Operations

Beyond visual line of sight. This is the new frontier enabled by the 2025 reforms

2

Level 1 Complex Certification

Pilot qualification enabling BVLOS operations. Tiered licensing aligned with operational complexity and risk profile.

3

Advanced Operations

Higher-risk VLOS operations requiring advanced pilot certification and safety planning

4

Basic Operations

Low-risk operations within visual line of sight, limited weight class, standard airspace

5

RPAS Operator Certificate (RPOC)

Organizational authorization for drone operations. The RPOC shifts accountability from individual pilots to the operating organization — creating corporate-level compliance obligations.

Canada has moved from case-by-case approvals to a scalable regulatory framework — a fundamental shift in how aviation law operates.

FOR AVIATION LAWYERS

Legal Issues Raised by Part IX

The Part IX reforms are not just operational changes. These reforms generate a new class of legal questions that aviation and technology lawyers must be prepared to address.

Liability

- Operator vs. manufacturer: who bears responsibility when an RPOC-certified operator deploys a defective aircraft?
- Autonomous decision-making: liability when the drone acts without direct human input
- Safety Management Systems create documented due-diligence obligations

Airspace Integration

- Conflict between drone corridors and manned aviation (helicopters, medevac, general aviation) - DAA compliance for "C, D & E" airspace with electronic conspicuity has 2026 as the target year
- Priority rules in shared low-altitude airspace
- Liability when UTM systems fail to deconflict

Privacy

- Persistent aerial sensing over private & public property
- Tension between federal aviation jurisdiction and provincial privacy law (?)
- Municipal restrictions on surveillance operations - community tolerance (?)

Municipal Law

- Local restrictions vs. federal jurisdiction over navigable airspace
- Zoning, noise, and nuisance claims
- Vertiport siting and land use approvals

Insurance is an emerging frontier — risk models for autonomous BVLOS operations are still being developed by the industry.

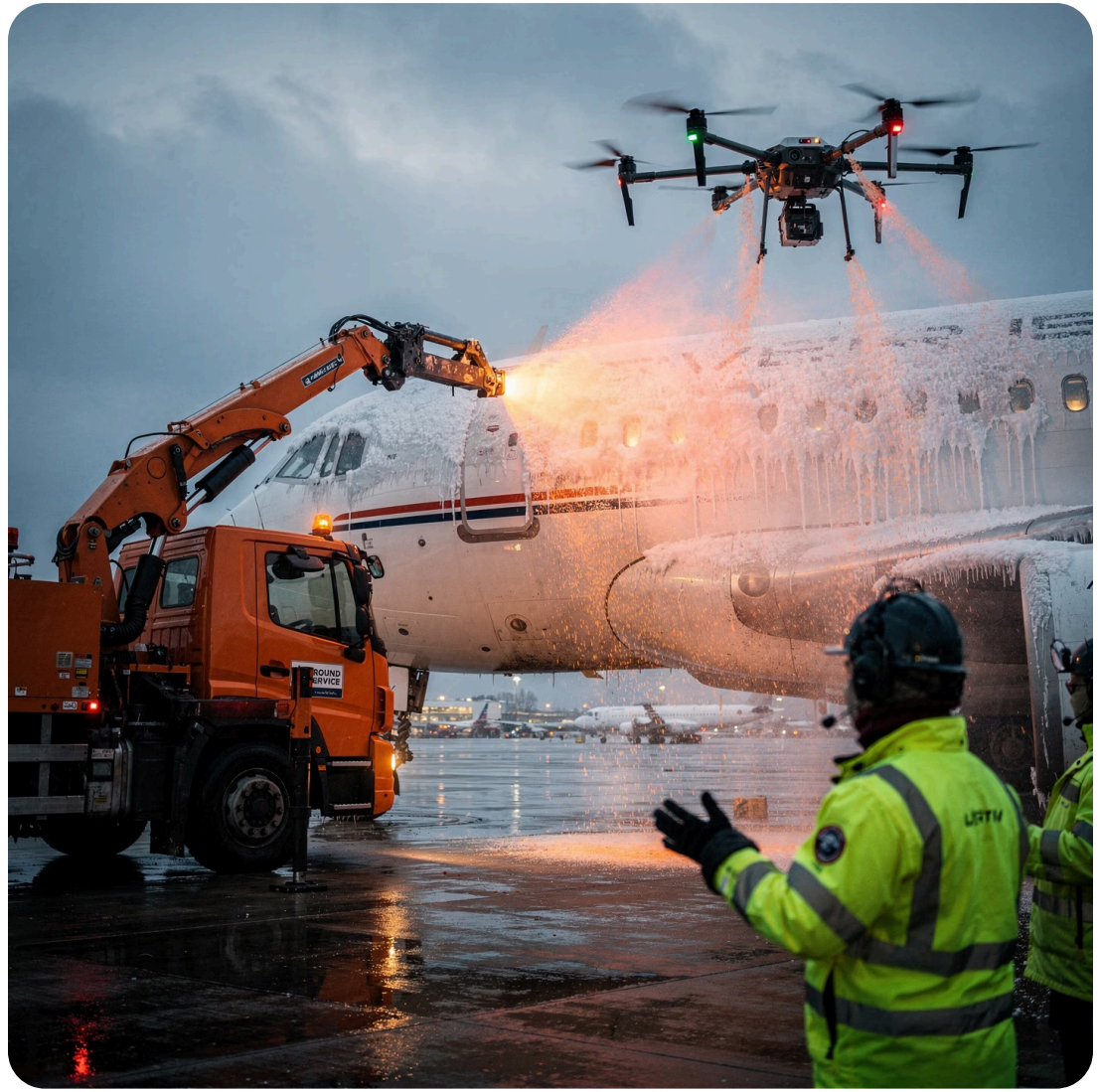
2026 FRAMEWORK

The U.S. Response: FAA Part 108

The FAA's **Part 108** is designed to normalize routine BVLOS operations across the United States. This is a performance-based framework built for scale.

Unlike traditional prescriptive aviation rules, Part 108 sets **outcome standards**, allowing operators to demonstrate compliance through technology and data rather than rigid procedural checklists.

Key Shift: Airspace operations will rely on **digital services and automated compliance systems** — not manual approvals.



A New Regulatory Actor: Data Infrastructure Providers

Part 108 introduces one of the most consequential regulatory innovations: **Automated Data Service Providers (ADSPs)**. A new class of regulated entity that manages the digital layer of airspace.

Real-Time Data Distribution

Distribute live airspace data to operators and traffic systems

Traffic Management

Enable coordinated drone movement across shared airspace

Conflict Detection

Support automated separation and collision avoidance

Operator Interface

Serve as the regulatory middleware between airspace and operators

Legal analogy: ADSPs resemble internet service providers, telecom spectrum managers, and cloud infrastructure platforms — airspace becomes a regulated data ecosystem.

PART 108 DEEP DIVE

Key Elements of FAA Part 108

Part 108 moves beyond the prescriptive rules of Part 107 toward a performance-based framework. Like Canada, the United States is placing responsibility on operators to demonstrate safety rather than comply with fixed operational limits.

Operator-Based Oversight

Companies — not individual pilots — bear primary responsibility for operational compliance. Mirrors the RPOC model in Canada but with greater emphasis on documented safety cases.

Operational Roles

- Operations Supervisor: Responsible for overall mission safety and compliance
- Flight Coordinator: Manages real-time airspace coordination and traffic deconfliction

Technology Requirements

- Remote ID: Broadcast identification for all BVLOS aircraft
- Detect-and-Avoid (DAA): Onboard or ground-based systems to prevent collisions
- Data Connectivity: Real-time communication with UTM infrastructure

UAS Traffic Management Integration

Operators must integrate with Automated Data Service Providers (ADSPs) for airspace awareness, traffic deconfliction, and operational authorization.

The design philosophy of Part 108: operational risk management instead of rigid rules — a significant departure from traditional aviation regulation.

Canada vs. the U.S.: A Regulatory Comparison

Two jurisdictions, two approaches — but a shared trajectory toward **network-managed airspace**.

Category	Canada (Part IX)	U.S. (Part 108)
Regulatory Style	Prescriptive with structured pathways	Performance-based, outcome-driven
BVLOS Status	Authorized framework in force (2025)	Formalized rule in progress (2026)
Operator Regulation	RPAS Operator Certificate (RPOC)	Operator designation system
Digital Infrastructure	Emerging integration	Central to regulatory architecture
Data Providers	Limited formal role	Formal regulatory status (ADSPs)

Takeaway: Both countries are converging toward **airspace as managed digital infrastructure**. The legal frameworks are diverging in method, not destination.

Where Technology Law Meets Aviation Law

Advanced Air Mobility creates **entirely new legal domains** at the intersection of aviation, technology, and telecommunications law.

Data Governance

Who owns operational airspace data? Who has rights to flight telemetry, origin/destination data, and traffic patterns?

Platform Regulation

Should UTM traffic management systems be treated as public utilities or private platforms?

AI Decision-Making

Autonomous collision avoidance raises questions of algorithmic accountability and tort liability.

Telecom & Cybersecurity

5G and satellite control links expose aircraft to new cybersecurity vulnerabilities with life-safety implications.

Liability in Autonomous Airspace

When an autonomous aircraft causes harm, the traditional liability question — *who is responsible?* — becomes extraordinarily complex.

Key distinction from autonomous vehicles: Aircraft operate in **shared national airspace** — a regulated commons with constitutional and treaty dimensions that road networks do not have.

Aircraft Manufacturer

Hardware defects, airworthiness certification

Software Developer

Flight control algorithms, autonomy logic

Operator (RPOC Holder)

Operational decisions, safety management obligations

Connectivity Provider

Network failure, latency, cyber interference

Traffic Management Service

ADSP data errors, separation failures

Cross-Border Legal Challenges

Drone networks and BVLOS corridors will not stop at the 49th parallel — but the law largely does. For Canadian counsel, **transboundary operations present the most immediate complexity**.

Cross-Border BVLOS Corridors

No harmonized framework yet exists for cross-border drone routes between Canada and the U.S.

Regulatory Harmonization

Part IX and Part 108 diverge on key technical standards, creating compliance gaps for operators in both jurisdictions.

International Liability Regimes

Existing aviation liability treaties (Warsaw, Montreal Convention) were not designed for autonomous UAS operations.

Aviation Treaty Implications

Bilateral air transport agreements may need to be renegotiated to accommodate routine BVLOS commercial operations.

The Economic Stakes

This is not a niche regulatory exercise. The low-altitude airspace economy represents one of the largest emerging infrastructure markets in history.

$1T+

Global AAM Market

Projected value by 2040 (Morgan Stanley)

2025

Canada's Head Start

Part IX reform positions Canada as an early regulatory mover

5+

New Legal Domains

Data, AI, liability, telecom, and treaty law all converge

Growth sectors include **drone delivery, energy infrastructure inspection, cargo UAS, urban air mobility, and emergency medical logistics**. Airspace is becoming economically productive infrastructure — and lawyers will be essential to structuring it.

THE BIGGER PICTURE

Lawyers Will Shape the Architecture of Autonomous Infrastructure

Society has regulated roads, railways, telecommunications networks, and satellites. Now we are writing the rules for **autonomous infrastructure in the sky**.

Governance Models

Who controls the UTM platform? Public body or regulated private utility?

Liability Regimes

Allocating risk across multi-party autonomous systems

Data Rights

Ownership, access, and monetization of airspace data

Airspace Economics

Property rights, leasing, and market access in shared airspace

THE ROAD AHEAD

Legal Challenges Ahead

BVLOS regulation is the first step. As autonomous aviation scales, a new generation of legal challenges will define the practice of aviation and technology law for the next decade.

Certification of Autonomous Aircraft

How do we certify aircraft that make operational decisions without human input? Traditional airworthiness frameworks assume a pilot. New standards are needed for AI-driven flight systems.

Airspace Property Rights

Who owns low-altitude airspace? The boundary between private property rights and navigable airspace is unsettled — and commercially critical for vertiport development and drone corridor licensing.

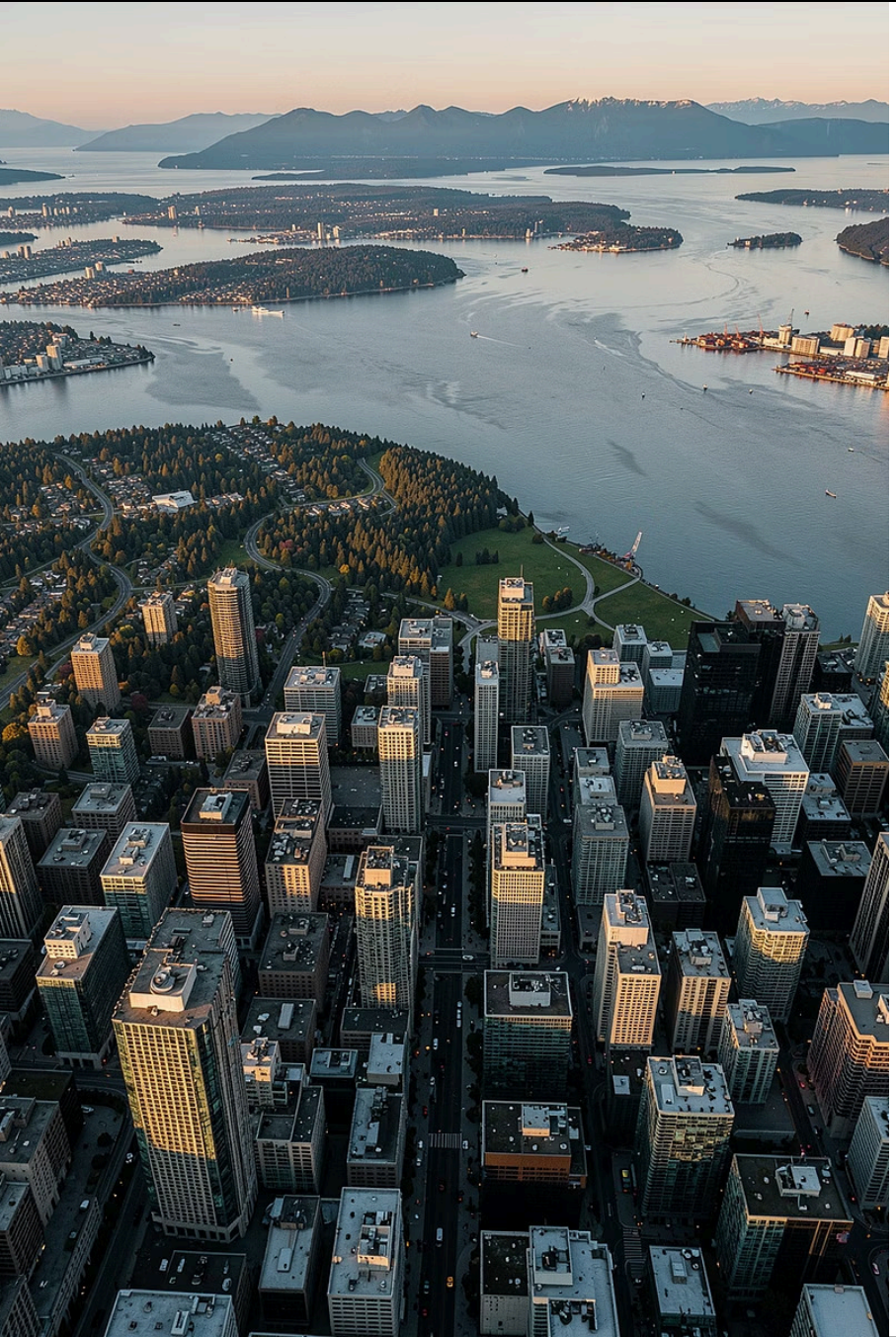
Liability When AI Decides

When an autonomous system makes an operational decision that causes harm, existing tort frameworks struggle. Product liability, negligence, and regulatory compliance intersect in novel ways.

Cross-Border Regulatory Harmonization

Canada–US operations require alignment between CARs Part IX and FAA Part 108. Divergent standards create compliance complexity for operators, insurers, and legal advisors on both sides of the border.

These are not future problems. They are live legal issues arising today — in boardrooms, courtrooms, and regulatory proceedings.



The Legal Framework for Autonomous Airspace Is Being Written Now.

Advanced Air Mobility is not aviation innovation alone — it is the creation of a **new digital layer of regulated infrastructure**. Canada and the United States are currently authoring the foundational legal architecture. The lawyers in this room will advise the companies, regulators, and institutions that build it.

Questions for Technology and Aviation Lawyers

These are not hypothetical questions. They are the live legal issues that will define practice in this space over the next decade.

> Should **airspace traffic management** be structured as a public utility or a regulated private platform?

> Who **owns low-altitude airspace data** — the operator, the ADSP, the state, or the landowner below?

> How should **liability be allocated** when an AI system makes the flight decision that causes harm?

> Will Canada and the U.S. need **new bilateral treaties** to govern transboundary drone corridor operations?

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