15 October 2025

Shri Manoj Kumar Yadav
Under Secretary to the Government of India
Ministry of Civil Aviation
Rajiv Gandhi Bhavan, New Delhi
New Delhi – 110003

Subject: Comments on Draft Civil Drone (Promotion and Regulation) Bill, 2025

Dear Sir,

I write to you on behalf of Ikigai Law. We are an award-winning law firm with a sharp focus on technology and innovation. Ikigai Law has been closely involved with the evolution of India's drone regulatory framework — from the initial ban on drones in 2014 to the Drone Rules, 2021 — and has advised start-ups, investors, and global companies on compliance, innovation, and market entry.

While we welcome the Ministry's efforts to provide a standalone statute for unmanned aircraft systems (UAS) and to strengthen the legal foundation of this sector, we are concerned that this should not dilute the facilitative approach that has enabled innovation and growth under the existing Drone Rules, 2021. We are attaching our detailed comments and suggestions to the draft Bill for your kind consideration.

In general, we respectfully submit that certain provisions of the draft Bill risk undermining the enabling framework established by the Drone Rules, 2021, which has allowed the industry to grow over the past four years. In particular, the Bill introduces (i) excessive criminalisation and punitive enforcement mechanisms, (ii) onerous type certification requirements with no exemptions for R&D or prototypes and (iii) broad delegated legislation powers leaving critical aspects to future rules.

Given the importance of this bill and the impact they will have on the Indian drone industry, we strongly advise that another short consultation period be opened after revisions to the proposed law are made in light of the comments received from all stakeholders.

We are available for any questions that you may have or any clarifications that you may require.

Best regards,
Aman Taneja
Partner
Ikigai Law

I. Executive Summary

A summary of our major comments is provided below:

1. **Uncertainty through Delegated Legislation:** Section 45 empowers the government to regulate almost every operational aspect — from classification and training to traffic management and economic terms of service — through delegated legislation. This creates unpredictability until rules are framed. We suggest publishing draft rules alongside the Bill to allow meaningful consultation.

2. **Excessive Criminalization:** Several violations are punishable with penalties and imprisonment. The Bill empowers authorities to detain drones on suspicion and extends liability to abettors. In practice, this creates the risk of arbitrary disruption of legitimate drone operations — for instance, drones engaged in healthcare logistics or industrial surveys could be grounded based on suspicion alone. Such powers, without clear thresholds or safeguards, not only heighten compliance risks but also breed uncertainty and fear across the industry. We recommend decriminalizing procedural violations, remove imprisonment penalties, and limit cognizable offences to serious safety breaches and those which pose a serious threat to public order.

3. **Onerous Type Certification Framework:** No drone can be manufactured, sold, transferred, or operated without DGCA-issued type certification. Exemptions for model RPAS, nano drones, and prototypes under the 2021 Rules are absent. This creates a regulatory barrier and slows down innovation. We recommend excluding manufacturing (without sale/operation) from mandatory certification, and add exemptions for model RPAS, nano drones, and R&D prototypes within the bill.

4. **Loss of R&D Carve-outs:** The 2021 Rules contained specific exemptions for R&D, testing, and model drones. These are absent in the Bill. While "prototype UAS" is defined, there is no operational clarity, risking a chilling effect on innovation. We recommend introducing explicit carve-outs for R&D, testing, and training, including temporary UINs.

5. **Security and Emergency Powers:** Broad powers allow the government to suspend operations, requisition drones, or prohibit flights on sovereignty, security, or public order grounds, with limited safeguards. We recommend clarifying proportionality requirements, and ensuring that written reasons, and review mechanisms for the exercise of such powers are also specified in the Bill.

6. **BVLOS Operations:** The Bill references Visual Line of Sight (**VLOS**) and Beyond Visual Line of Sight (**BVLOS**) operations in its rule-making powers but provides no enabling framework or roadmap. Given that BVLOS is essential for scaling high-value use cases such as

healthcare delivery, logistics, surveys etc., we recommend introducing enabling provisions for BVLOS in the primary law. As detailed in Annexure I, we propose a regulatory sandbox approach — a phased, risk-calibrated pathway where operators progress from pilot projects to commercial BVLOS deployment based on demonstrated safety data.

7. **Transition Provisions:** The Bill provides that the Drone Rules, 2021 remain in force until new rules are notified. This avoids a regulatory vacuum but prolongs uncertainty for businesses awaiting clarity on obligations. We recommend publishing a clear transition roadmap to guide how existing certificates and approvals will migrate smoothly to the new regime.

II. Detailed Comments

Provision / Theme	Issue	Concerns	Recommendation
Section 45 – Rules *(Delegated legislation)*	Overbroad delegation of powers	Section 45 empowers the government to frame rules for nearly every aspect of drone regulation, including classification, type certification, licensing, safety/security features, economic regulation (tariffs and charges), and beyond visual line of sight operations. This leaves core regulatory content unspecified in the statute, creating uncertainty until rules are framed. Excessive reliance on delegated legislation reduces predictability for businesses and investors. It could negatively affect the operations of drone businesses.	We recommend limiting the scope of delegated legislation to operational/technical matters. Core elements — such as liability, insurance thresholds, exemptions for R&D, and certification — should be specified in the statute. We also suggest publishing draft rules alongside the Bill to enable meaningful consultation.
Sections 27, Section 31, 35–39, Section 40 *Criminalisation and Enforcement*	Excessive criminal penalties and broad enforcement powers	The Bill introduces imprisonment for several violations, including operational breaches (Section 27(8)), registration and certification failures (Section 35(1)), and broad "abetment" liability (Section 40). Section 35(2) also empowers police or DGCA-authorised officers to investigate and confiscate drones or related devices merely upon suspicion of a contravention. This framework shifts drone regulation from a civil-administrative	We suggest aligning the Bill's enforcement framework with the government's decriminalisation vision. Specifically, we recommend removing imprisonment as a penalty for regulatory or procedural violations such as those under Section 27(8) and Section 35(1). We recommend limiting cognizable offences to cases involving proven intentional misuse with

		compliance regime (as envisaged under the Drone Rules, 2021) to one that is punitive and criminal in nature. This approach sits in contrast with the Government of India's broader policy of decriminalisation of business laws, most notably reflected in the Jan Vishwas (Amendment of Provisions) Act, 2023, which amended over 40 central laws to replace imprisonment with monetary penalties for minor, technical, or procedural violations.[1]	significant safety, security, or national security consequences.
Section 35(3) and Section 35(4) *Detention and Seizure of Drones*	Broad seizure powers with limited safeguards	The Bill empowers DGCA-authorised officers or local police to detain drones, documents, and electronic devices for up to 3 days, extendable to 7 days with approval. Provisional release requires a bond, and further detention requires a court order. While intended to strengthen enforcement, this power is triggered on a low threshold — "reason to believe" or even "any complaint" — without the need for demonstrable evidence of a serious violation.	We suggest that seizure powers not be triggered solely on "reason to believe" or "any complaint". A higher threshold can be required — such as evidence of a serious intentional violation affecting safety, security, or public order. Seizure should be used only in exceptional cases. Additional guardrails must also be established to exercise such powers. These guardrails should include requiring reasons in writing for

[1] Jan Vishwas (Amendment of Provisions) Bill, 2025 introduced in Lok Sabha, Press Information Bureau, https://www.pib.gov.in/PressReleasePage.aspx?PRID=2157460 and Atmanirbhar Bharat: Business Edition, Press Information Bureau, https://www.pib.gov.in/FactsheetDetails.aspx?Id=149260

		This opens the door to arbitrary or excessive enforcement actions. Importantly, such powers did not exist under the Drone Rules, 2021, which relied instead on penalties and administrative action.	using such power and a judicial review of seizure orders within 48 hours. This balances enforcement with protection against arbitrary disruption of legitimate operations.
Sections 7–8, 25 *Type Certification Framework*	Universal certification requirement	The Bill requires type certification before any manufacture, sale, transfer, or operation of drones. This is more stringent than the 2021 Rules, which allowed manufacturing without type certification and exempted model RPAS, nano drones, and prototypes, from such a requirement. In practice, this means that a company cannot even build a prototype or assemble a drone for internal testing unless it has first undergone the full certification process. That process is expensive and lengthy, which places a heavy compliance burden upfront – even before a drone's commercial viability is known. The absence of these carve-outs creates a bottleneck, raising costs and delaying market entry for innovators and small manufacturers. The innovation process in this sector is iterative — building, testing, refining — but the current	We recommend excluding manufacturing (without sale/operation) from certification requirements. We also suggest including enabling provisions for exemptions for nano drones, model RPAS, and prototypes, similar to the 2021 Rules, to maintain proportionality.

		language of the Bill would slow or even prevent this cycle.	
Section 45(z) *BVLOS Operations*	No enabling framework for BVLOS	The Bill references Visual Line of Sight (**VLOS**) and Beyond Visual Line of Sight (**BVLOS**) operations in rule-making but provides no clear statutory framework or roadmap. BVLOS is essential for unlocking high-value use cases such as large-scale logistics, e-commerce delivery, emergency healthcare supply, disaster management, and infrastructure inspection Without explicit legislative support, BVLOS could remain in a regulatory limbo, indefinitely deferred to delegated legislation and ad-hoc permissions. The Bill provides an opportune moment to revisit and create an enabling framework for BVLOS operations.	We suggest embedding an enabling provision for BVLOS operations directly in the Act, rather than leaving it entirely to delegated rules. This could include a phased, sandbox-based roadmap where operators progress from controlled VLOS trials to full-scale BVLOS deployment based on demonstrated safety data, with DGCA oversight. Such an approach would align with international best practice and provide a predictable pathway for scaling BVLOS in India. This would also generate real world data that can feed into the development of a an appropriate type certification framework for BVLOS. We have provided more details pertaining to this sandbox model in **Annexure I** below. This proposal is based on a collaborative effort with industry players.
R&D and Prototypes	Lack of exemptions for research, testing, and training	Under the Drone Rules, 2021, Rule 42 explicitly exempted drones used for R&D and testing from several compliance requirements. This flexibility allowed industry and academia to innovate without being saddled with full commercial	We suggest that the Bill expressly incorporate research & development as an exception in the Bill, rather than leaving it to delegated rules which are uncertain

		compliance obligations. The draft Bill, while introducing the concept of a "prototype UAS," does not provide any corresponding operational carve-out. As drafted, prototypes would be subject to the same certification, registration, and insurance requirements as fully commercialized drones. This omission risks chilling innovation, by raising costs and administrative barriers for early-stage testing, innovative development, and academic work. It also introduces uncertainty for ongoing R&D projects that were structured under the 2021 carve-outs.	This could involve (a) treating R&D, testing, and training as a distinct category of drone activity; (b) relaxed compliance standards that are proportionate to the risk, and (c) providing clarity on obligations that can apply at different stages of UAS deployment.
Sections 32–33 *Security and Emergency Powers*	Broad discretionary powers without safeguards	Under the Bill, Section 32 empowers the Central Government, designated authorities, or other authorised bodies to issue binding directions to any UAS operator if "satisfied" that security or safety requires it. Section 33 further allows the Central Government to suspend certificates, prohibit operations across all or part of India, or requisition drones for government use. These powers are framed broadly, without procedural conditions such as reasons in writing, proportionality assessments, or review mechanisms.	We suggest introducing procedural safeguards within the Bill. These could include a requirement for written reasons when issuing such orders, and time limits for temporary prohibitions. We also recommend including provisions that allow for independent review of emergency orders.

		This creates risks of arbitrary exercise of power, disruption of legitimate operations, and heightened uncertainty for operators and investors.	
Section 51 *Transition Provisions*	Uncertain migration from Drone Rules	Section 51 repeals the Drone Rules only upon notification of new rules under the Bill. This avoids a regulatory vacuum but creates prolonged uncertainty. The Bill does not explain how existing approvals, training organisations, and certificates will migrate to the new regime. Without clarity, operators may face duplication of compliance, uncertainty over the validity of existing certifications, and difficulty in planning investments. In a comparable transition, for example the European Union's shift to 2019/947, certain categories of drones were allowed flexibility to align with the new regulation.[2]	We suggest publishing a clear transition roadmap alongside the Bill. This will help operators, businesses and organizations to navigate the new Bill and the rules that may be published alongside it.
Section 27(6)	Risk of overbroad liability	The Bill introduces liability for "abetment" of offences under Section 27(6). However, the scope of "abetment" is not defined or qualified,	We suggest narrowing the scope of abetment liability to intentional facilitation of unlawful operations. The Bill could clarify that

[2] Article 22, Cover Regulation to Implementing Regulation (EU) 2019/947, https://www.easa.europa.eu/en/document-library/easy-access-rules/online-publications/easy-access-rules-unmanned-aircraft-systems?page=4#_DxCrossRefBm153270072

Abetment Liability		which risks sweeping in parties whose role is incidental or purely commercial. This could include financiers providing loans for drone procurement, insurers underwriting operations, leasing companies, software vendors supplying navigation systems, or even training institutions. Without clear limits, these ecosystem actors could be exposed to criminal or civil liability for offences committed by operators, even where they had no knowledge or intent to facilitate unlawful activity. The scope is vague and risks discouraging partnerships in the drone ecosystem.	financiers, insurers, lessors, and software providers acting in the ordinary course of business are excluded from liability. This would align the law with principles of proportionality, safeguard the broader ecosystem from unintended deterrence, and focus enforcement on genuine violators.
Section 45(x) *Economic Regulation*	Risk of tariff and price control in a nascent industry	Section 45 empowers the government to regulate "fares, fees, tariffs, and charges" for UAS services. This is a departure from the 2021 Rules, which left commercial terms to market forces. Introducing tariff-setting powers in an industry that is still developing could distort the market at a sensitive stage. The threat of price controls may deter investment, reduce competitive dynamics, and slow innovation.	We suggest that any rules around tariffs or economic regulation be developed in consultation with industry stakeholders, ensuring transparency and alignment with market realities.

Annexure I – Regulatory Sandbox for scaling BVLOS drone operations in India- a pathway to full scale regulation and certification

A. Overview

The Bill presents an opportune moment for the government to create the regulatory framework to enable BVLOS drone operations. Section 45(z) empowers the government to frame rules on Beyond Visual Line of Sight (**BVLOS**) operations. However, the Bill does not provide any enabling provision or roadmap for BVLOS.

In the absence of a clear policy, the system defaults to principles borrowed from conventional manned aviation, particularly type certification as a proxy for safety. Type certification today can cost upwards of INR 50 lakh to 1 crore and require 6–12 months of effort. Yet, certification alone is not a reliable factor for real-world safety in dynamic BVLOS environments. UAS are fundamentally different in development cost, use-case agility, and acceptable testing tolerance. Manned aircraft require rigorous ex-ante testing because failures are unaffordable. However, drone operators routinely build, test, crash, and rebuild as part of their research and development **(R&D)** lifecycle. Real-world flight data is a more appropriate measure of drone safety than theoretical modelling alone. The aviation model presumes aircraft cannot be risk-tested through failure, but drones allow exactly that.

We suggest establishing a regulatory sandbox that is not confined to only testing zones but is designed to allow drone operators to scale BVLOS operations through real-world flight data and staged safety validations.

B. Global Precedents

Global aviation regulators have already integrated sandbox models for BVLOS:

- ***United Kingdom (CAA - Civil Aviation Authority):*** The CAA, the UK's statutory aviation regulator, operates a sandbox that permits trial-based BVLOS operations without type certification.[3] Operators demonstrate safety through phased, real-world trials, sharing operational data for regulatory learning.[4]

[3] UK CAA, *CAP 1827: BVLOS Operations in Unsegregated Airspace – Sandbox Brief*, August 2019. Available at: https://www.caa.co.uk/publication/download/17424.
[4] UK CAA, *CAP 2616: Regulatory Sandbox for Integration of UAS in Unsegregated Airspace*, December 2023. Available at: https://www.caa.co.uk/publication/download/20949.

- ***Hong Kong (CAD - Civil Aviation Department):*** Under the Low-Altitude Economy Sandbox led by Hong Kong's CAD (the city's aviation regulator), BVLOS operators must submit data logs to a central working group for validation. Trials are allowed in designated zones without type certification, provided real-time oversight is enabled.[5]
- ***Singapore (CAAS - Civil Aviation Authority of Singapore):*** CAAS, Singapore's national aviation authority, permits approved sandbox participants to conduct BVLOS operations under risk-based frameworks, emphasizing detect-and-avoid capabilities, command and control (C2) link resilience, and navigation robustness.[6]

C. Proposal for an Indian sandbox under the Bill

We propose a sandbox that is structured as a phased, risk-calibrated pathway for scaling BVLOS drone operations in India. The framework shifts from a reliance on pre-approvals, such as type certification, to real-world operational data as the basis for regulatory oversight. This sandbox creates six operational levels—beginning with simple flights in low-risk "green zones" and progressing to full BVLOS operations in complex airspaces. At each stage, operators must demonstrate safety performance before moving forward.

A dedicated dashboard will capture telemetry, safety incidents, and operator performance data in real time. This gives regulators close oversight, while generating the high-quality operational data needed to design evidence-based BVLOS regulations. This data can also be relied on to create a more dynamic type certification framework and even inform certification decisions. The pathway could even serve as an alternative compliance pathway for certain categories of drones.

This model is fundamentally different from ad hoc permissions or static rules: it creates a controlled learning environment where government and industry jointly evolve standards. By embedding a sandbox mechanism within the Bill, India can move away from a one-size-fits-all, certification-first approach and toward a more evidence-driven, adaptive regulatory system. This will accelerate the safe adoption of drone technology.

We would be pleased to engage with the Ministry to further detail how such a sandbox could be structured and integrated into the new legal framework.

---

[5] Hong Kong CAD, *Advisory Circular AC-013: Sandbox for Low-Altitude Economy BVLOS Trials*, April 2025. Available at: https://www.cad.gov.hk/documents/AC-013.pdf.
[6] Singapore CAAS, *Advisory Circular AC 101-2-2(0): Assessment of BVLOS Operations for Unmanned Aircraft*, December 2019. Available at: https://www.caas.gov.sg/docs/default-source/default-document-library/ac-anr101-2-2-bvlos-operations-for-ua_301219.pdf.