

Unmanned Autonomous Vehicles have profound power to have a transformative impact on the Indian marketplace. Their applications range from military surveillance to commercial, scientific, agricultural, recreational and other areas. Drones can be used for optimizing farming techniques, monitoring infrastructure building and enabling quick emergency responses during disaster management. In the future, UAVs could deliver packages, streamline agriculture management, reinvent human mobility, and even save lives. It is this insightful vision that has led to the drafting of guidelines to regulate the use of drones in India.

The key to widespread adoption of drones will be the ease of process in getting the paperwork around licenses and certification done. We propose a completely digital, paperless, and presenceless process, thus fast-forwarding to a future of on-demand seamless permissions for drones, operators, and pilots. On this technology backbone, drone operators will be able to apply for permissions in almost real-time from their mobile phones and an automated process will grant permission in the form of a digitally signed certificate, if they are clear of all designated no-UAV zones. A proactive approach to enforcement of safety and security guidelines will be done by ensuring that the manufacturer does not allow take-off without a signed digital certificate and logs all flight plans. Further, incident reporting & analytics tools will be available to monitor for potential hazards.

The first step in drafting implementable guidelines for drones mandates a trial program to test the viability of the policy and to enable seamless scaling up of operations. In this regard, we hope to bring together all primary stakeholders to familiarize them with the requirements of the program as well as seek their cooperation for the same. Specifically, we are looking to achieve the following from these stakeholders:

1. **Manufacturers:** Manufacturers will only sell drones approved by the DGCA. This includes building specified onboard software, passing DGCA tests and registering unique identity numbers of the unmanned aircrafts with the DGCA
2. **Operators:** Operators will have to register and complete the e-KYC process before operating an unmanned aircraft. They should also possess an approved permission artifact before any flight can be made
3. **Pilots:** Pilots will need a valid license before operating an unmanned aircraft. They will also have to authenticate before any flight and digitally sign, submit flight logs and incident reports to the DGCA

Compliance from all stakeholders is crucial to the success of this novel policy and will be a true enabler in helping India establish a world class drone policy with state-of-the-art technology allowing seamless execution for all stakeholders. We look forward to a successful implementation of this project.