The **legal and regulatory framework** for operating drone light displays in Northern Ireland and Ireland involves multiple layers of compliance, focusing on **airspace regulations**, **environmental protections**, **safety standards**, **and event-specific permits**.

## 1. Airspace and Aviation Regulations

#### A. Civil Aviation Authority (CAA) - UK / Northern Ireland

- **Permission for Commercial Operations (PfCO)**: Operators must obtain authorization from the UK's Civil Aviation Authority (CAA) for commercial drone use. This includes compliance with operational limitations and safe distances from people and property.
- **Airspace Permissions**: For events held near restricted airspaces, airports, or populated areas, operators may need additional CAA permissions. In Northern Ireland, you must follow specific altitude restrictions (generally limited to 400 feet) and stay clear of no-fly zones.
- **Visual Line of Sight (VLOS)**: Drone operators are required to maintain a visual line of sight with drones during flight, typically within 500 meters. SkyLume's team would need to ensure all drones comply with this rule unless granted a waiver by the CAA.

### B. Irish Aviation Authority (IAA) - Ireland

- **Specific Operations Permission (SOP)**: For commercial operations, Ireland's IAA mandates an SOP, which outlines operational boundaries, safety measures, and airspace compliance.
- **Flight Path and Airspace Restrictions**: Similar to the CAA, the IAA enforces a 400-foot altitude restriction and mandates permission for flights near restricted airspace. Applications must be submitted in advance, detailing the flight plan and event specifics.
- **Insurance Requirements**: Operators must have adequate insurance coverage, typically including liability insurance to cover potential damage or injury.

# 2. Health and Safety Compliance

#### A. Health and Safety Executive (HSE) - Northern Ireland

- **Event Safety Management**: Drone displays are subject to HSE regulations, ensuring that event organizers and operators address crowd safety, site setup, emergency planning, and equipment safety. SkyLume would need to work with event organizers to establish secure zones, ensuring drones maintain a safe distance from attendees.
- **Risk Assessments**: Operators must conduct detailed risk assessments to identify potential hazards and implement preventive measures. This includes drone equipment checks, safe launch and landing zones