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Hot Topics in Aviation Regulatory Matters

DRONES: New EU regulatory approach

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DRONES: A DISRUPTIVE INNOVATION

➤ Are drones a **‘disruptive innovation’**?

They help creating a **new market and value network**, displacing earlier technology



DRONES: A DISRUPTIVE INNOVATION

In 2050 **seven million consumer leisure drones are expected to be operating across Europe** and a **fleet of approximately 400.000** is expected to be used for commercial and government missions.

Forecasts for some sectors:

- **Agriculture:** over **100.000 drones** to enable precision agriculture and increase levels of productivity;
- **Energy:** close to **10.000 drones** limit risk of personnel and infrastructure by performing preventative maintenance inspections;
- **Delivery purposes:** nearly **100.000 drones** to provide, for instance, emergency medical supplies and “premium” deliveries;
- **Public safety and security:** approximately **50.000 drones** would provide authorities like police and fire forces.

DRONES: A DISRUPTIVE INNOVATION

- Are the Aviation Stakeholders ready for such a **disruptive technology**?



OPERATIONAL DISRUPTION

THE SAUDI ARABIA ATTACKS

Saudi Arabia has cut oil and gas production following drone attacks on two major oil facilities run by state-owned company Aramco.

Energy Minister Prince Abdulaziz bin Salman said the strikes had reduced crude oil production by 5.7m barrels a day - about half the kingdom's output.



OPERATIONAL DISRUPTION – THE HEATHROW CASE

Five environmental activists have been arrested over **plans to fly drones near Heathrow Airport** on Friday **13 September 2019**.

Climate change activist group Heathrow Pause said it aims to **use devices within the no-fly zone** as part of efforts to halt the airport's planned expansion.



OPERATIONAL DISRUPTION – THE GATWICK CASE

Between 19 and 21 December 2018, hundreds of flights were cancelled at Gatwick Airport following reports of drone sightings close to the runway.

Up till now the responsible of the attack has not been identified.



The estimated costs for the Gatwick Drone incursions:

- 1000 flights affected
- 140,000 passengers affected
- £50-£70M estimated total cost



OPERATIONAL DISRUPTION – THE GATWICK CASE

Liability issues arising from Gatwick example

- The UK CAA affirmed that the event constituted an ‘*extraordinary circumstance*’ relieving airlines from the obligation to pay compensation to passengers.
- In assessing the liability of the carrier for delay or cancellations the severe approach of the EU Court of Justice should be considered
- The EU Court considers the carrier liable for delay or cancellation even when the liability is attributable to third-party negligence (the Court did not consider the defects in aircraft products as extraordinary circumstance).

In this regard, the court reminded that Regulation No 261/2004 allows air carriers’ to exercise the **right of recourse** against anyone who caused the delay, or other damage



So, the question is whether in the future we can consider airport authority liable for damage caused by drone interference.

COUNTERMEASURES FOR AIRPORTS

Measures aiming at reducing the risks of drone's interference:

1. Anti-drones measures for the detection of drone can be adopted (e.g. the Italian "Adrian").
2. European Member States can identify no-fly zones for drones.
3. The Italian CAA prohibits to fly over some areas for safety reasons.



REGULATORY ASPECTS

- From 1 July 2020 drones will fly in the European skies
- How is the EU regulating the use of drones within its territory?



Fundamental principles

The operator is the most important legal actor

- DRONES force aviation authorities to rethink the regulatory framework at least for **safety**; it is important to highlight that **no certificate of airworthiness** is required for **open** and **specific categories**.
- The regulatory framework provide an operational-centric approach instead of an aircraft-centric one: the drone's operator is the entity responsible for the safety of the operations.
- The future use of drones requires to reconsider **Air Traffic Management (ATM): drones belonging to open and specific categories will be allowed to fly below 500 feet** (i.e. 150 m) upon the condition that the drone is used within the **pilot's line of sight**.

The *operation centric approach* did not involve drones which could cause major risks: **certified** → airworthiness certificate is required with the same requirements for manned aircraft.

THE EU NEW APPROACH

The operational-centric approach

This is **a revolution** considering that **Article 31 of the Chicago Convention** requires the airworthiness certificate in order to allow aircraft to perform services:

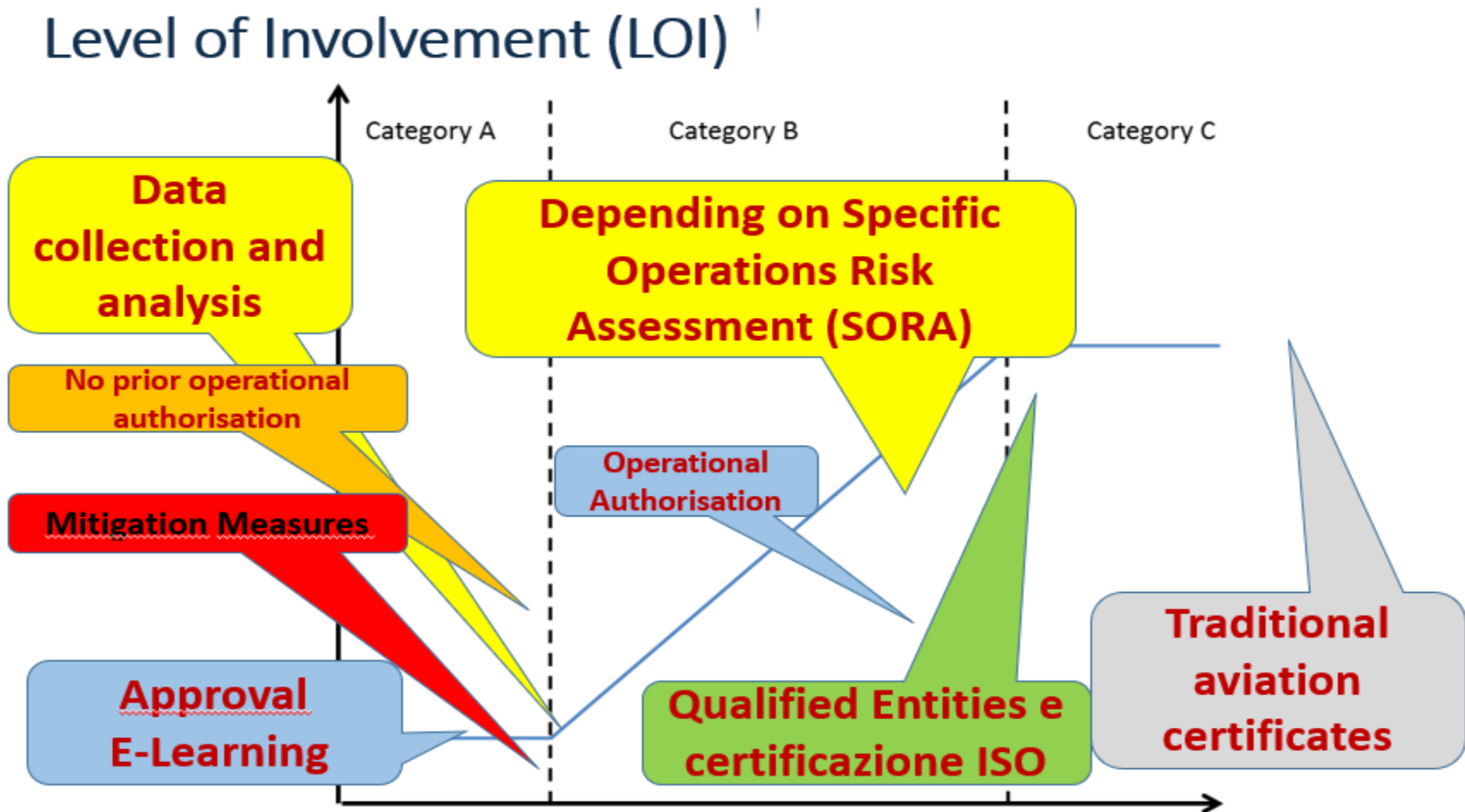
*“Every aircraft engaged in international navigation shall be provided **with a certificate of airworthiness** issued or rendered valid by the State in which it is registered.”*

NEW EUROPEAN REGULATION

The EU Implementing Regulation provides that:

- **Operator has to register itself:** for **open and specific categories** requires the **operator registration** but not the drone's registration → **a very risky provision ... it would be difficult to identify** who is the operator, if it owns several drones.
- Operator has to provide the **risks assessment procedures**.
- The CAA shall be ready **to support, inspect and provide them with guidelines** to promote safety standards.
- **Other national authorities** have to support them in the event infringement of national rules, for damage to third parties (**police, national authorities for privacy data protection etc.**).

THE RISK OF DRONES OPERATION



Category A: **Open**; Category B: **Specific**; Category C: **Certified**

THE RISK OF DRONES OPERATION

Open category encompasses drones with a maximum **take-off mass** of **less than 25 kg.**





The Bilateral/Multilateral Agreements

- Para. 3.2.2 ICAO RPAS Manual (DOC 10019) specifies:

*“In order to facilitate the practical implementation and execution of the special authorization process, States **may agree mutually upon simpler procedures through bilateral or multilateral agreements or arrangements** for the operation of specific RPA or categories of RPA. This will reduce the workload on RPAS operators and the State authorities. The same objective may be reached through regulatory measures at regional levels.”*

EASA REGULATION 1139/2018

The EASA Regulation 1139/2018 **allows drones to fly within the EU** if they are:

- **registered in a MS;**
- registered in a third country and operated by an aircraft operator established, residing or **with a principal place of business in a MS;**
- Registered neither in a Member State nor in a third country **but operated within the EU territory by an operator established, residing or with a principal place of business within EU.**



