European Alliance Against Coronavirus

Thursday 25th June 2020 at 8:30

Aerospace & Defense Ecosystem: UAV / Drones

Working format is based on "*Gilles Rules*":

1. conceptual framework
2. needs and disruptions
3. solutions

Speaker:

- Christiana Eisenberg, CURPAS Cluster Germany

1. CONCEPTUAL FRAMEWORK

About CURPAS Cluster Germany

Dr. Christiana Eisenberg opened the session with an overview of the CURPAS cluster, which was founded in 2016. During these years, it built a strong international network. In 2018, a meeting between CURPAS and UAS was organised and in 2019, the cluster met with UAS Denmark and AEROSpace Valley in Chicago.

These meetings represented the first steps for the European Drones Cooperation as an international alliance for new initiatives and projects. CURPAS strongly believes in **mutual activity and benchmarking** realised through the exchange of experience and best practices between members of the parties in the frame of European Projects.

Drones in crisis situation

Dr. Christiana Eisenberg cited the example of China during the virus pandemic. People started to **use drones to deliver food and water** and to inform and **check on individuals** on lockdown. This is a good example of the **potentiality of drones** and their possible uses.

CURPAS registered a **lack in raw materials** (as also other sectors) because of the dependency from China.

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2. IDENTIFICATION OF DISRUPTIONS

First disruption: exploitation of drones in pandemic situation

Source: Christiana Eisenberg

Evidence: Drones have a potential beneficial use in the current pandemic situation in order to achieve several objectives. Among the others: (i) places/environment disinfection; (ii) people search; (iii)

creation of simulation (e.g. thanks to images and videos gathered during flights); (iv) supply of water and food; (v) transport of goods, sanitary material and people. Given the numerous applications of this sector, this industry has the potential to re-start stronger after the crisis than it was before.

Geographical impact: Global

Stage of value chain: usage and application

Character of the disruption: benefits of drone application in pandemic situation

Time frame: short term

Recommendation:

- Investment in this sector, including standards among Europe with regards to regulations

Second disruption: raw materials and components supply issues

Source: Krzysztof Krystowski

Evidence: Component manufacturers and raw materials suppliers have suffered timeline disruption and supply issues caused by COVID-19 crisis. Given the potential and useful applications of drones, especially in this pandemic period, there has been no drop in market demand, but several problems in the production and supply phases (especially from China).

Geographical impact: EU

Stage of value chain: supplies and manufacturing

Character of the disruption: delays and supply problems for raw materials and components

Time frame: short term

Recommendation:

- The sector in Europe should work on its interdependencies and become more independent from the Chinese market.

Third disruption: European drones industry fragmentation

Source: Krzysztof Krystowski

Evidence: The drone industry represents one of the most promising sectors and business for the future. Nowadays, the specialisations concern the transport of goods, services and surveillance, but in the very near future, we will have applications for the transport of people. Several enterprises operating in transport and travel sectors are working on drone projects.

At the same time, however, it is a very young industry which is still extremely fragmented in Europe (there are several small high-level companies in many countries). To strengthen European industry, greater cohesion and cooperation between these realities is needed. The supply chain is currently highly dependent from China, especially in terms of the supply of raw materials and components. In fact, China is a large drone manufacturer, which exports all over the world, including Europe. In Europe

there are small companies that produce drones (design, software development), but they buy components from Asian suppliers.

Geographical impact: EU

Stage of value chain: geographical industry configuration

Character of the disruption: fragmentation and lack of competitiveness

Time frame: mid and long term

EU actions needed:

- **Coordination:** foster collaboration and cooperation between European industries
- **Regulation:** Current legal situation is a barrier. Each country has its own regulations and flight permission (autonomous decisions are taken; an example is represented by Central European Drone Demonstrator in Poland). A regulation homogenisation and standardisation at European level is needed. In general, European regulation are stronger than non-European ones (but it depends also from drone type).

Recommendation:

- 90% of the drone cost regards the sensors that are installed, which in most cases come from China. This situation should change. There are many sensor manufacturers in Europe, but they are often for other applications (e.g. automotive). Those for drones are miniaturized and very specific and in this China is very strong.

IDENTIFICATION OF NEEDS

1) Need to homologate and standardise the various regulations adopted by Member States

2) Foster industrial cooperation in Europe

3) Reduce supply chains dependence from China