

# Shared airspace, shared liability?

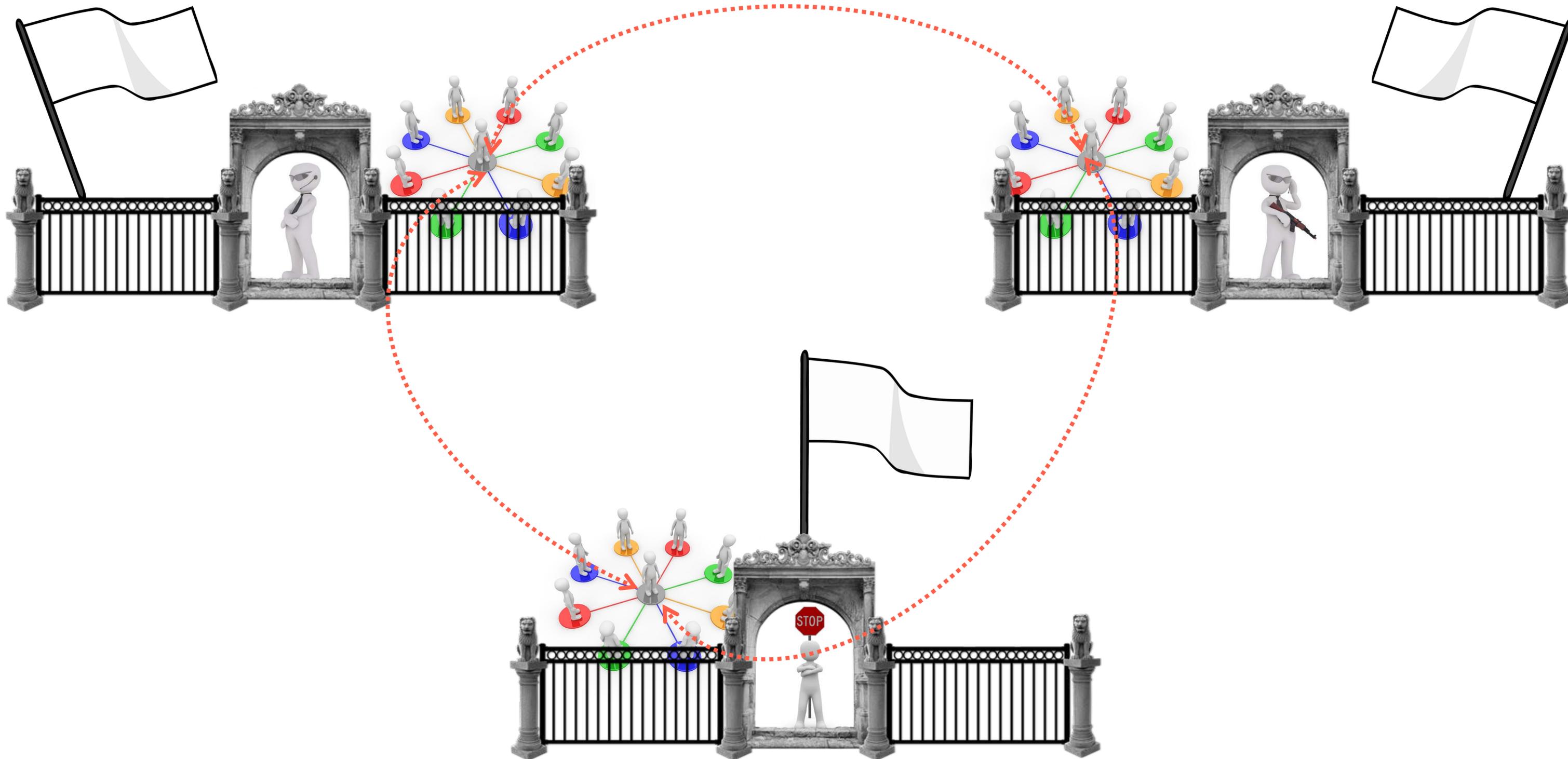
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SESAR Innovation Days 2018

“Before the law”



# “Before the law”





# ATM/UTM: the role of the State (1)

## Article 28

### *Air navigation facilities and standard systems*

Each contracting State undertakes, so far as it may find practicable, to:

a) Provide, in its territory, airports, radio services,

## Article 1

### *Sovereignty*

The contracting States recognize that every State has complete and exclusive sovereignty over the airspace above its territory.

and rules which may be recommended or established from time to time, pursuant to this Convention;

c) Collaborate in international measures to secure the publication of aeronautical maps and charts in accordance with standards which may be recommended or established from time to time, pursuant to this Convention.

- States are ultimately responsible for the provision of air navigation facilities under public international air law (*primary international obligation*)
- Complete and exclusive sovereignty of the airspace above a State's territory as a central principle in international air law

# ATM/UTM: the role of the State (2)

## Article 1

### Objective and scope

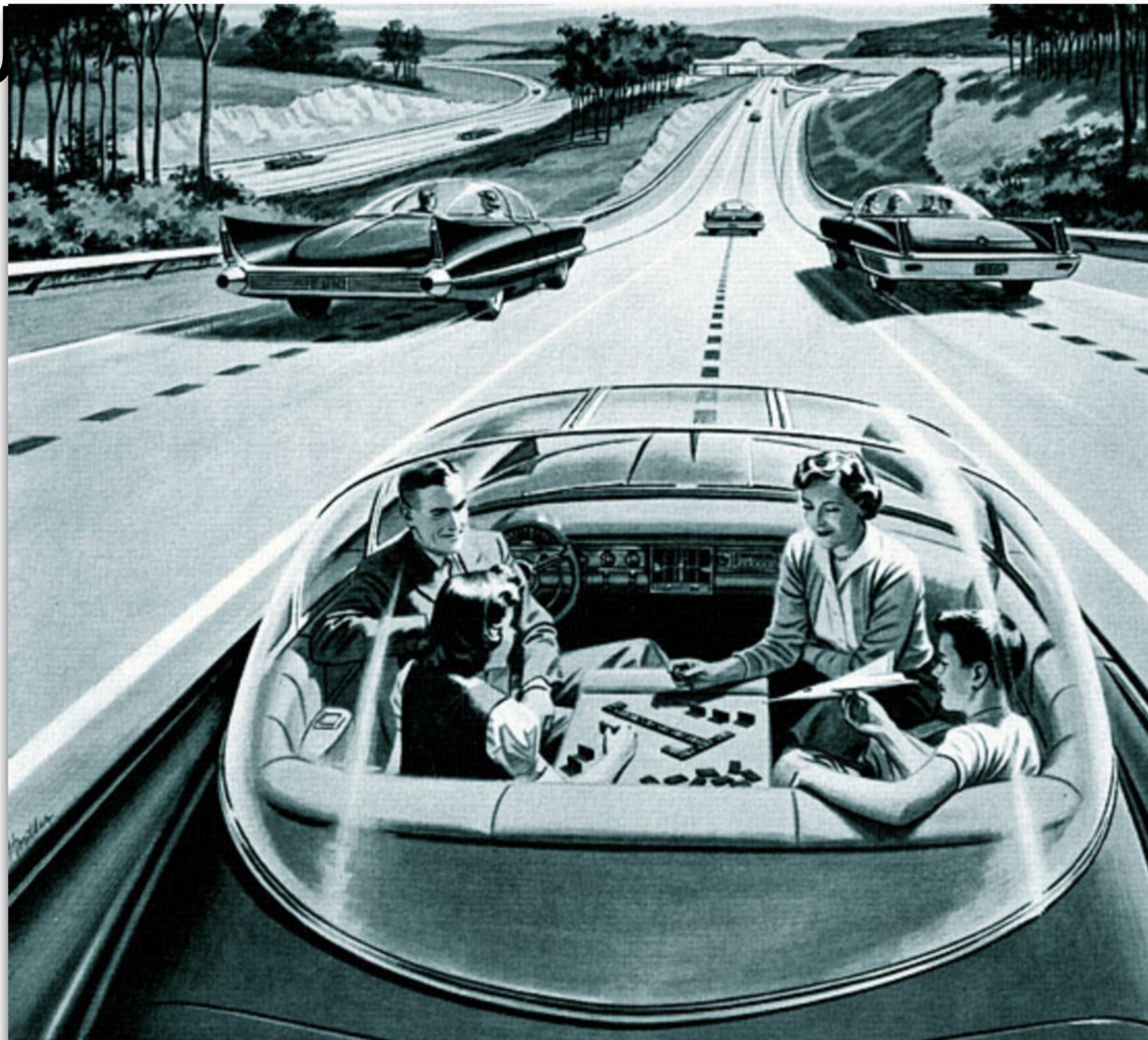
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1. The objective of the single European sky initiative is to enhance current air traffic safety standards, to contribute to the sustainable development of the air transport system and to improve the overall performance of air traffic management (ATM) and air navigation services (ANS) for general air traffic in Europe, with a view to meeting the requirements of all airspace users. This single European sky shall comprise a coherent pan-European network of routes, network management and air traffic management systems based only on safety, efficiency and technical considerations, for the benefit of all airspace users. In pursuit of this objective, this Regulation establishes a harmonised regulatory framework for the creation of the single European sky.
  2. The application of this Regulation and of the measures referred to in Article 3 shall be without prejudice to Member States' sovereignty over their airspace and to the requirements of the Member States relating to public order, public security and defence matters, as set out in Article 13. This Regulation and the measures referred to in Article 3 do not cover military operations and training.
  3. The application of this Regulation and of the measures referred to in Article 3 shall be without prejudice to the rights and duties of Member States under the 1944 Chicago Convention on International Civil Aviation (the Chicago Convention). In this context, an additional objective of this Regulation is, in the fields it covers, to assist Member States in fulfilling their obligations under the Chicago Convention, by providing a basis for a common interpretation and uniform implementation of its provisions, and by ensuring that these provisions are duly taken into account in this Regulation and in the rules drawn up for its implementation.
  4. The application of this Regulation to the airport of Gibraltar is understood to be without prejudice to the respective legal positions of the Kingdom of Spain and the United Kingdom of Great Britain and Northern Ireland with regard to the dispute over sovereignty over the territory in which the airport is situated.

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UTM initiatives...

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# ATM/UTM: the role of the industry (2)



- What is the legal status of these services under international law and EU law?
- What is the status of private actors exercising (essentially) sovereign functions alongside existing air navigation service providers (ANSPs)?
- Can UTM service providers benefit from the jurisdictional immunities available to traditional ANSPs?

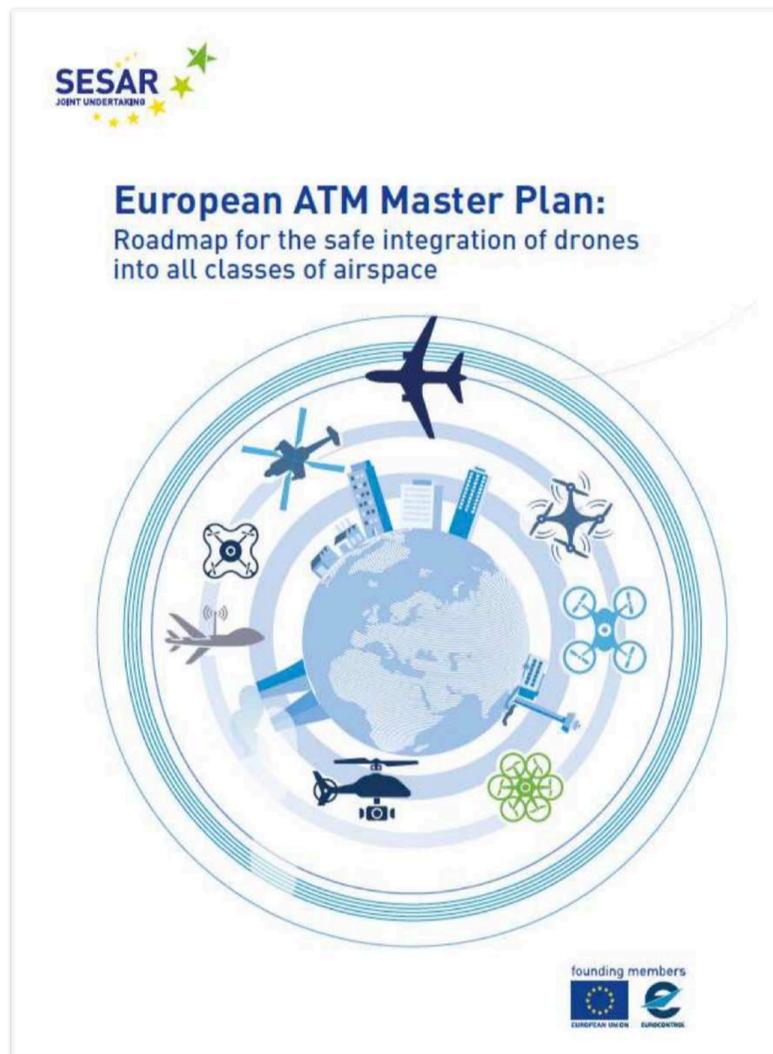
# ATM in international and EU law

- International law: **Chicago Convention:** Article 8 (*Pilotless aircraft*) and Article 28 (*Air navigation facilities and standard systems*)
- International law does not (in principle) discriminate between ANS rendered to manned/unmanned traffic

- EU law: **SES Service Provision Regulation**
- Obligation for Member States (MS) to ensure provision on an exclusive basis within specific airspace blocks

- ANSP = “public/private”, “general air traffic”
- Two distinct legal acts: certification and designation
- ANSP could use services of other service providers certified in the EU (cf. relations in FAB)

# U-Space: the liability challenges

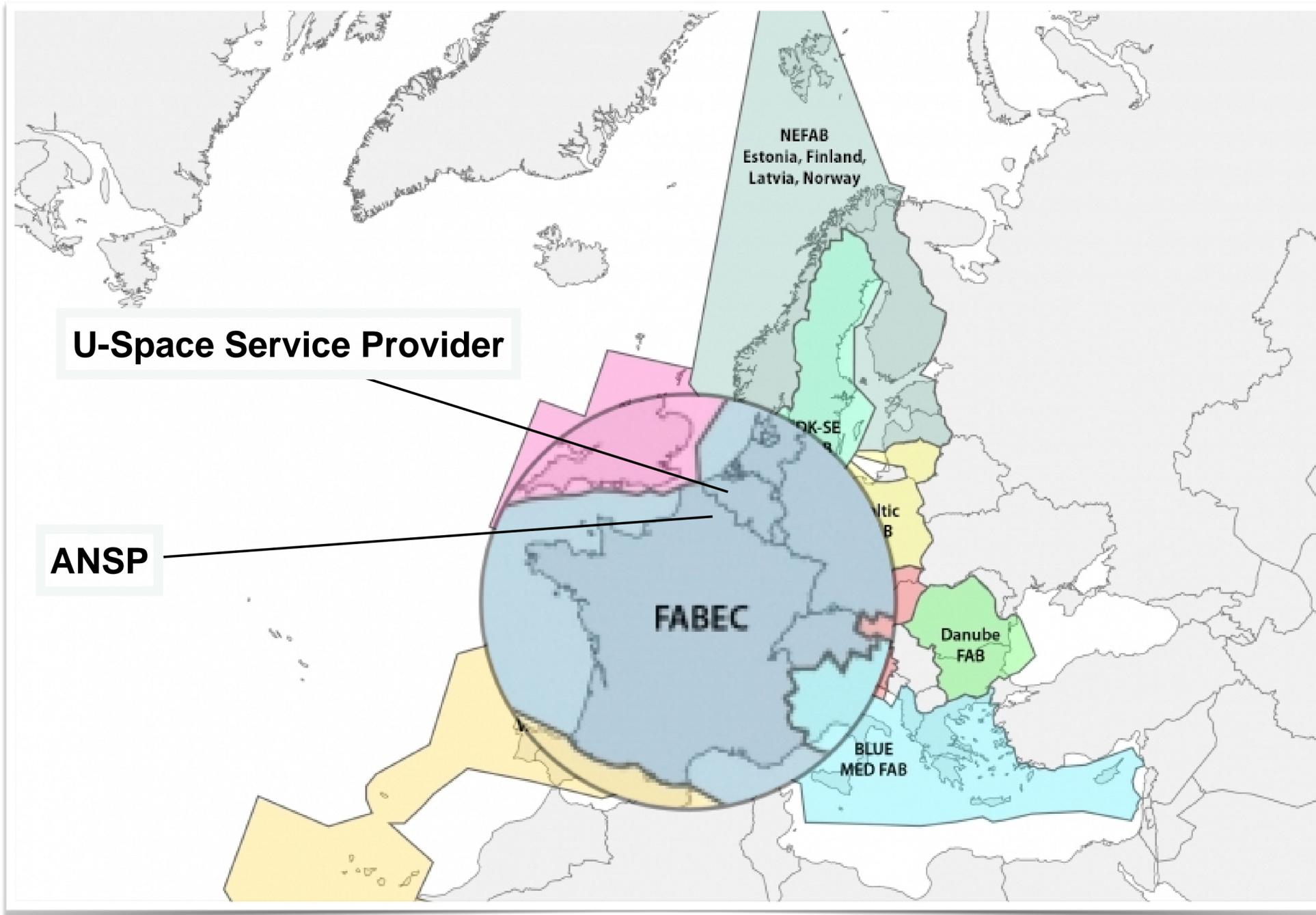


- U-Space is not a defined volume of airspace; it **does not replicate** ATC but aims at interfacing with ATM
- U-Space **architecture**: “federation of U-Space providers to cooperatively manage...”
  - What are their functions and responsibilities?
  - Applying the current regime for ANSP under the SES Framework Regulation?
- Need for a **new legal framework** to answer the questions:
  - If U-Space service providers do not provide ANS, what is the nature of these activities? Are they performed based on delegation by the State?
  - (How) should existing FAB treaties be amended? What is the degree of oversight required by the State?
  - What is the legal qualification of these functions for liability purposes - public or private?

# U-Space: liability allocation

- No harmonised international legal framework for ATM liability and no competence for EU to take harmonisation measures
- Two approaches to liability in ATM context:
  - Primary State liability doctrine (eg, Germany)
  - Effective service provider liability doctrine (eg, Switzerland)
- Primary question in cross-border scenarios: what is the legal nature of the function of a U-Space service provider?

# U-Space liability: one airspace, multiple guardians... (1)



- U-Space service provider designated in part of the airspace alongside the ANSP
- Who is liable in case of damages?
- U-Space service provision: commercial activity or delegated public duties?

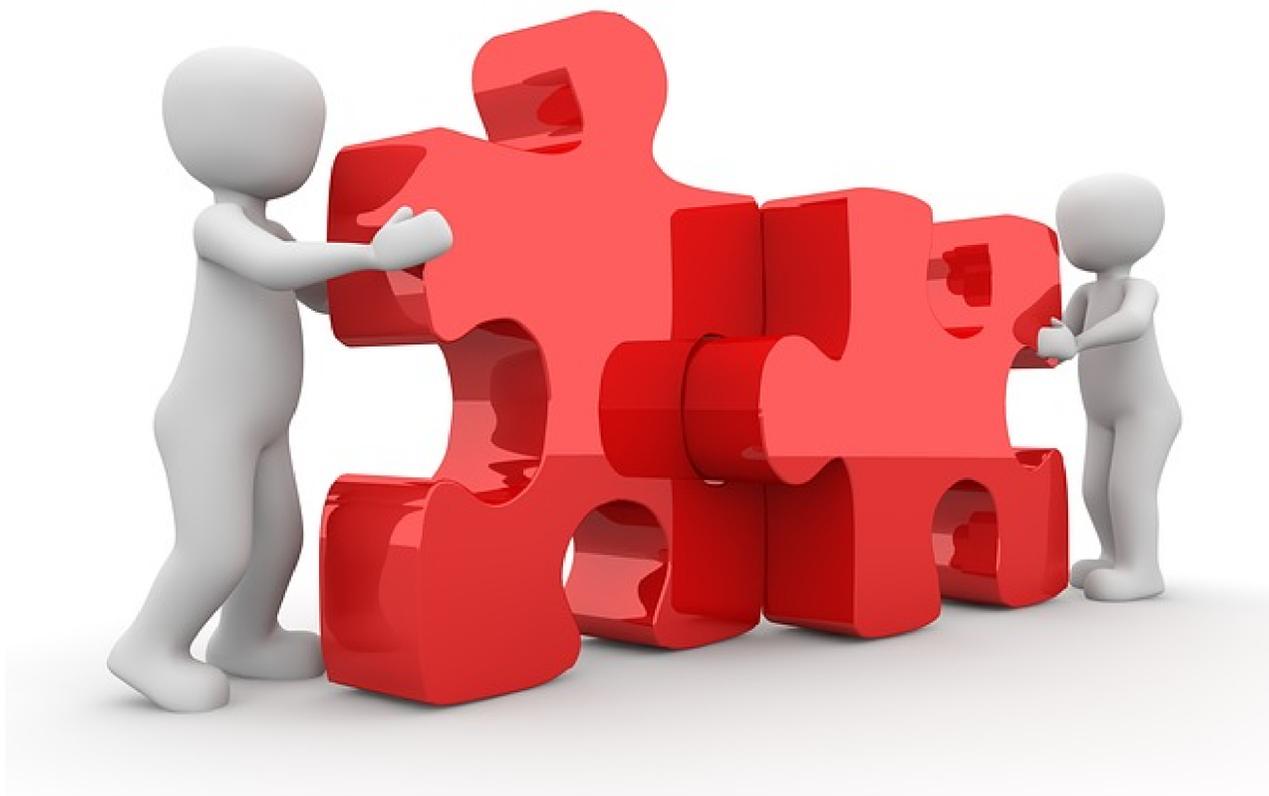
# U-Space liability: one airspace, multiple guardians...

## (2)



- Who would be the manager and/or operator of U-Space?
- What governance model should be put in place for U-Space?
- What are the legal and institutional relations with legacy ATM?
  - Collaboration of ANSPs not only with U-Space service providers but also with autonomous systems and data outside of their control
  - Cooperative nature of U-Space: situations of dynamic 'handoff' of functions from ground-based to airborne elements (and vice versa)...
- Can the existing liability frameworks deal with these complexities? What is the role of States?

# What role for the State? (1)



- Public-private collaboration: State is no longer the ultimate and undisputed authority
- Categorisation of State duties in three main groups:
  - Organisational
  - Supervisory
  - Design

# What role for the State? (2)

## Organisational

- Allocation of responsibility and liability through enactment of laws and regulatory acts
- Personalisation of duties on the basis of (safety) data - does it come at the price of greater liability exposure?
- How to safeguard “just culture”?

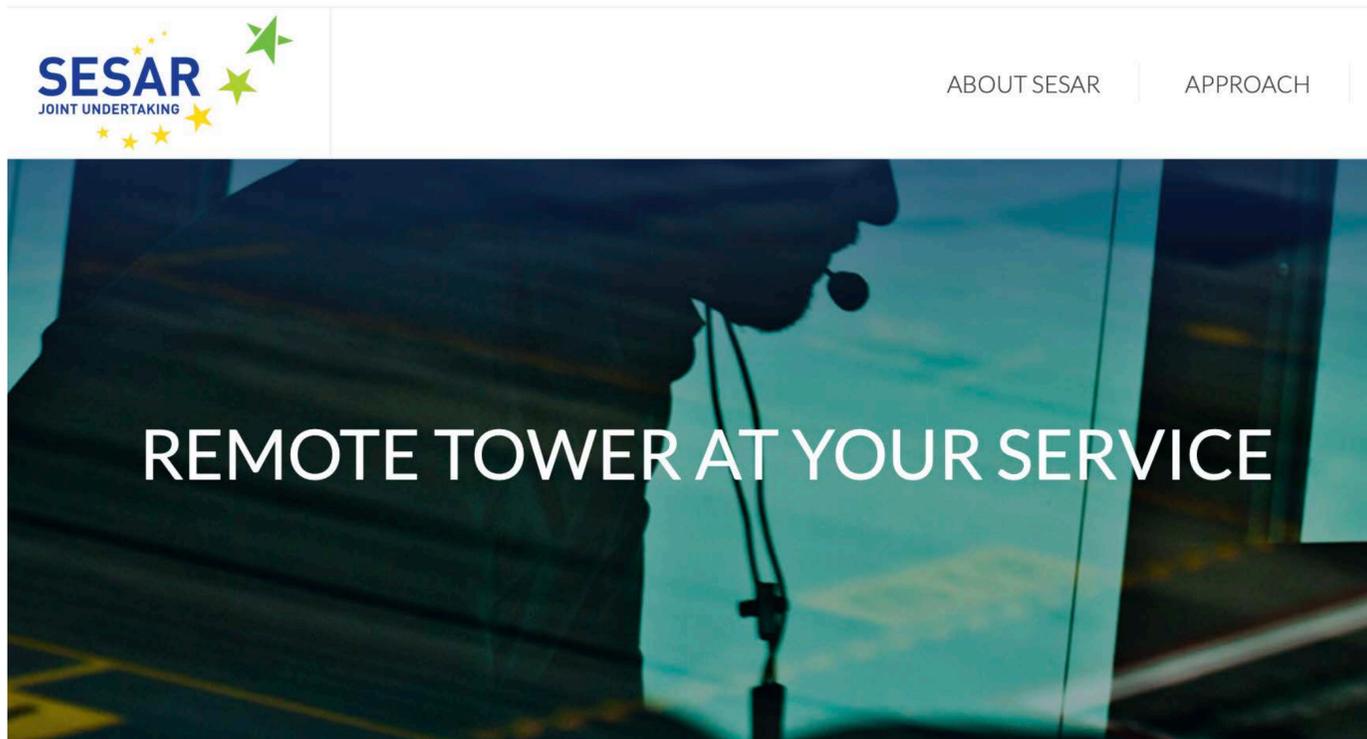
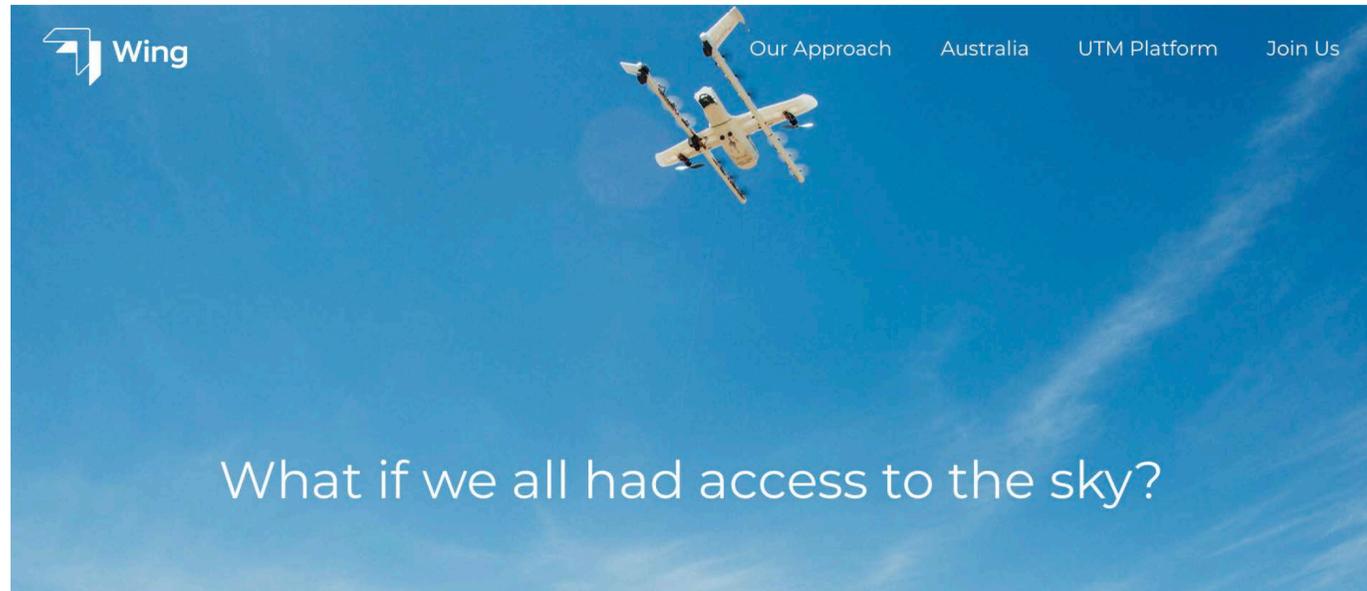
## Supervisory

- States need data to efficiently play their supervisory role
- What incentives are required for private actors to share data?
- How to balance the safety rationale of “just culture” with the commercial interests of private actors?

## Design

- States organise their vertical and horizontal relationships with stakeholders
- Vertical design: collection of data from stakeholders
- Horizontal design: organisation of stakeholders in (cross-border) networks

# ATM/UTM liability: the way forward (1)



- Is international harmonisation still worth pursuing? Why now?
- Emergence of global providers (Wing)
- Decoupling of ATC function from the physical location of the control tower (RTO)
- Cross-border liability risks alongside proliferation of non-State actors

# ATM/UTM liability: the way forward (2)



## Aviation 4.0: The Age of Democratized Aerial Mobility



Pamir Sevincel

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- Towards an ATM as a collaborative... “smart” environment?
- No longer the reserved domain of States... but States are still (ultimately) responsible.
- Can States still effectively discharge their international obligations to ensure the safety of air navigation?
- ATM/UTM initiatives driven by the new “**norm entrepreneurs**” and ideas for ‘**democratisation**’ of airspace...

Thank you for you attention!  
Questions?