# The EU drone regulation – main principles

**Risk based**

**Performance based**

The EU drone regulation

**Flexibility**

**Prescriptivenes only when no authorisation is required**
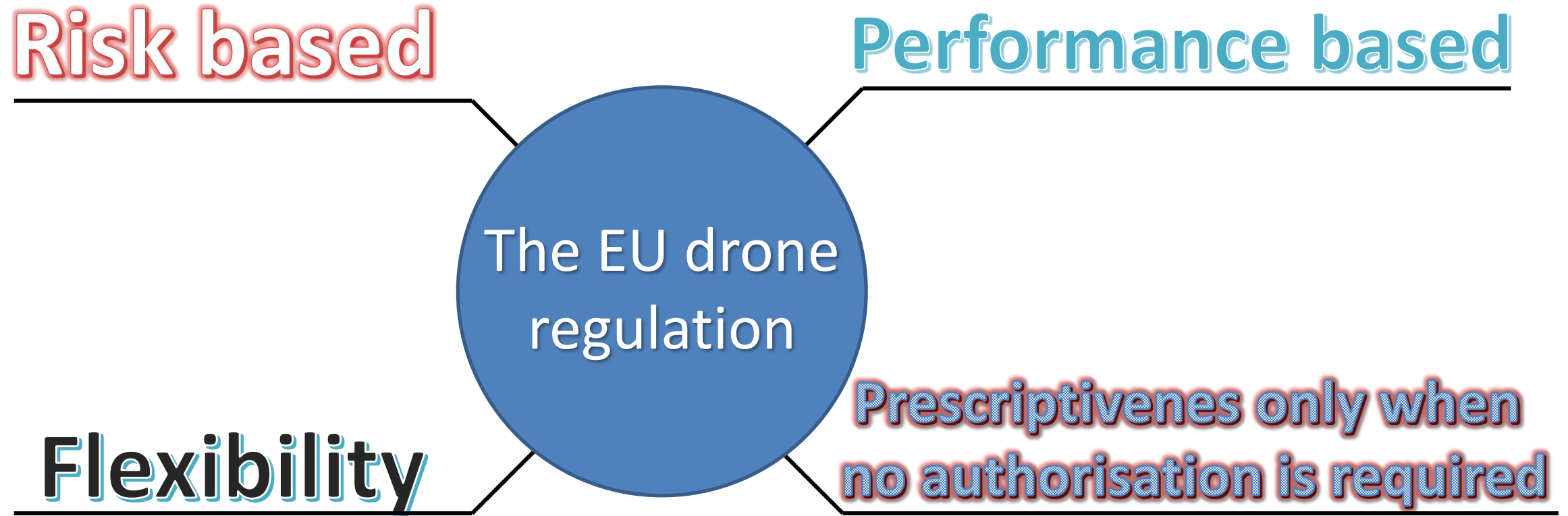
**Fundamental change compared to classical manned aviation: a drone may crash if operated in areas with low risk**

# UAS categories

| Open | Specific | Certified |
|------|----------|-----------|



PRESCRIPTIVE APPROACH

SORA

UNDER CONSTRUCTION

[Regulation (EU) 2019/945](#) (technical requirements and third country operations)

[Regulation (EU) 2019/947](#) (registration and operational requirements)

[NPA 2022-06](#) in consultation until 30/09/2022

# EU drone regulation applies since 31 December 2020

→ EASA states: EU States + Switzerland, Iceland, Lichtenstein and Norway

→ Operator registration valid in all EASA states (operators must register in MS of residence/main place of business and cannot register twice)

→ Operational authorisation issued by EASA state of registration is valid in all other states (cross border procedures applies)

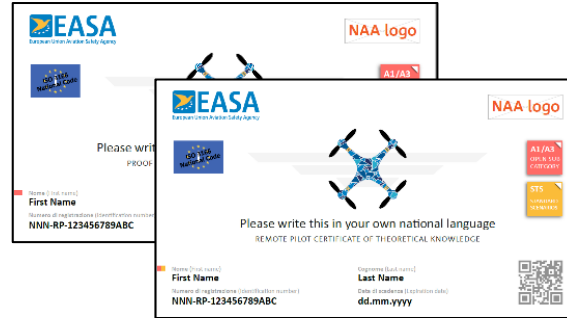→ Remote pilots may train and get a certificate in any EASA states

**EASA**

500 km

stepmap.com
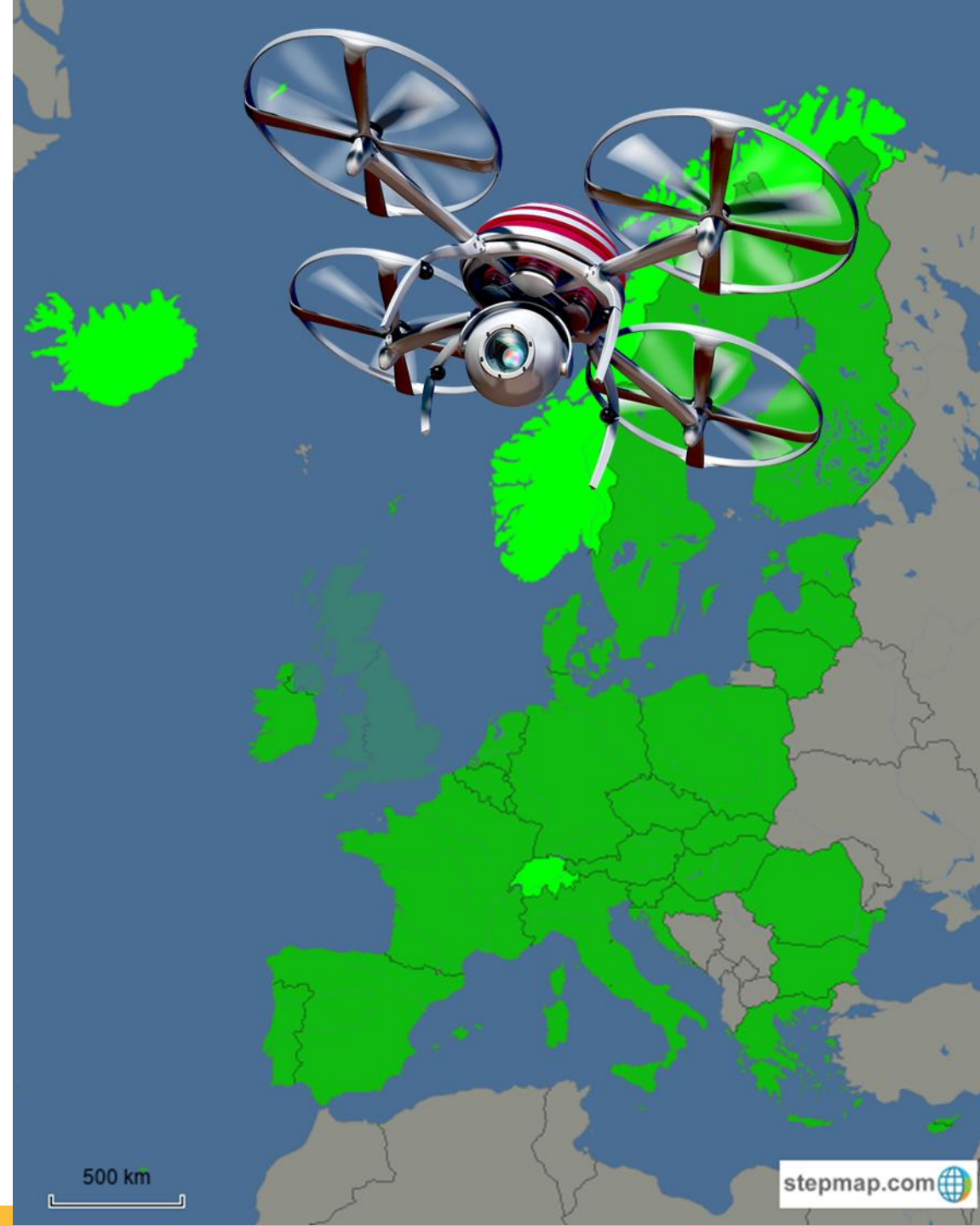
# Statistics as of 30 June 2022



Registered UAS operators:

**975,213**

**LUC**

Light UAS operator Certificates issued

**12**



Remote pilot certificates issued:

**652,848**

**(updated on 31 dec 2021)**



Active operational authorisations issued using SORA:

**2044**

# Specific category

Requirements based on the risk assessment performed by the UAS operator

① SORA RISK ASSESSMENT → Apply for authorisation → Operational authorisation (NAA Authorised)

② Predefined risk assessment (PDRA) → Apply for authorisation

③ Standard scenarios (STS) → Applicable from 1 January 2024 Declaration → Start the operation

④ Light UAS unmanned certificate (LUC) (NAA Approved) → Privileges → Start the operation

Operational authorisation → Start the operation

Buy → Register yourself → Carry out risk assessment → Receive authorisation → Fly

# U-space

- to enable fair and efficient sharing and use of the airspace
- to enable dense drones operations
- to enable complex and long distance UAS operations (BVLOS)
- to enable operations in urban environment
- **to ensure safe separation between manned aircraft and drones**
- **to ensure safe flights and operations of drones in the airspace**

## Volume of airspace

**U-space airspace**

## A set of services

UAS flight authorisation

Geo awareness

Network e-identification

Traffic info

Weather info

Conformance monitoring

## Information exchange

DIGITAL distribution of information and data relying on conventional internet services
Automated exchanges with limited human involvement

**Geographical zone designated by the Member State on the basis of a risk assessment and considering safety, security, environment and privacy**

**e-conspicuity**

EASA

7

# Industrial developments

**Specific category**
Medium risk

*BVLOS in corridors*



(EU)2019/945
(EU)2019/947

**Manned IAM**
Type#3 operations



NPA#1
2022/06

NPA#2

**Certified category**
Type#1 IFR cargo



NPA#2

2020

2025

2030

2035

*BVLOS free routing in a network*



**Specific category**
High risk

NPA#1
2022/06



**Certified category**
Type#2 operations
Unmanned IAM

NPA#3

# EASA roadmap to Innovative Air Mobility



**2023**
UAS & VTOL operator certification

**2024**
Vertiport authorization

**2024**
Airspace design

**2022**
U-space AMC/GM

**2022**
Prototype Technical Specifications on vertiports' design

**2023**
EASA Opinion UAM & Drones business services in cities

**2023**
UAS & VTOL aircraft certification

**2024**
Regulations adoption

**2024**
Implementation support to Member States
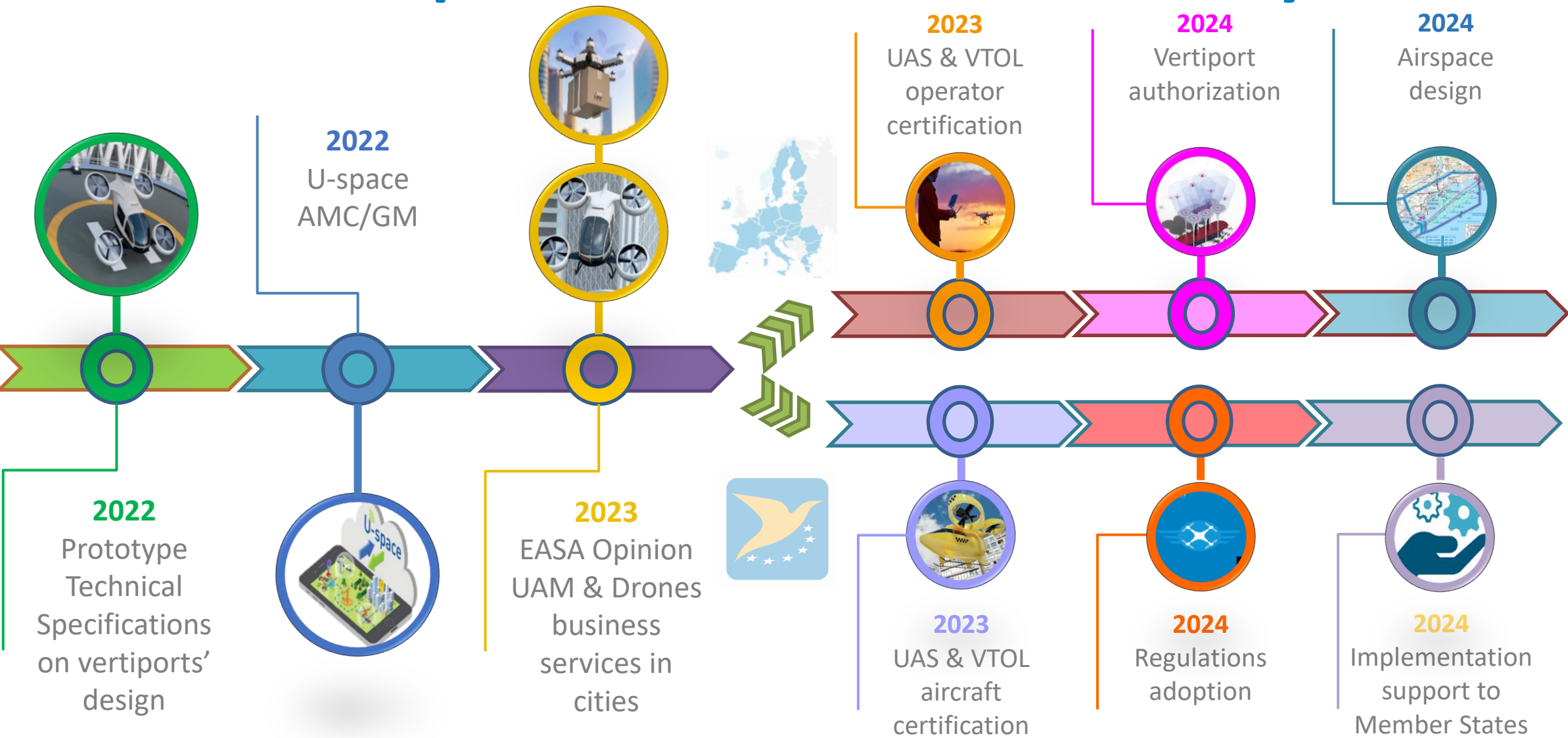
# A proposal at European level

**A**erial

**I**nnovative **A**erial **S**ervices

The set of *opera*
and to the avia

**I**nnovative **A**ir **M**obility

The safe, secure and sustainable *air mobility of passengers and*
*cargo enabled by new generation technologies integrated into a*
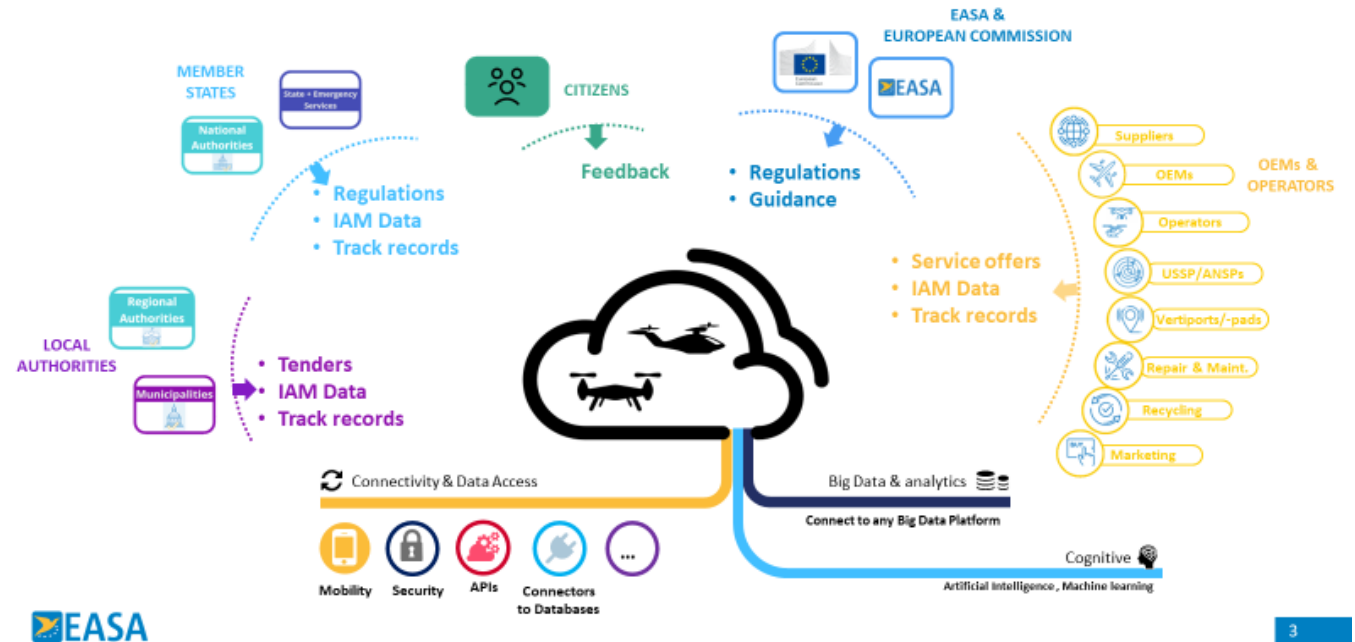
**U**rban **A**ir **M**obility

The subset of IAM operations conducted *into, within or out of urban*
*environments*

# Importance of societal acceptance



Study on the societal acceptance of Urban Air Mobility in Europe

May 2021
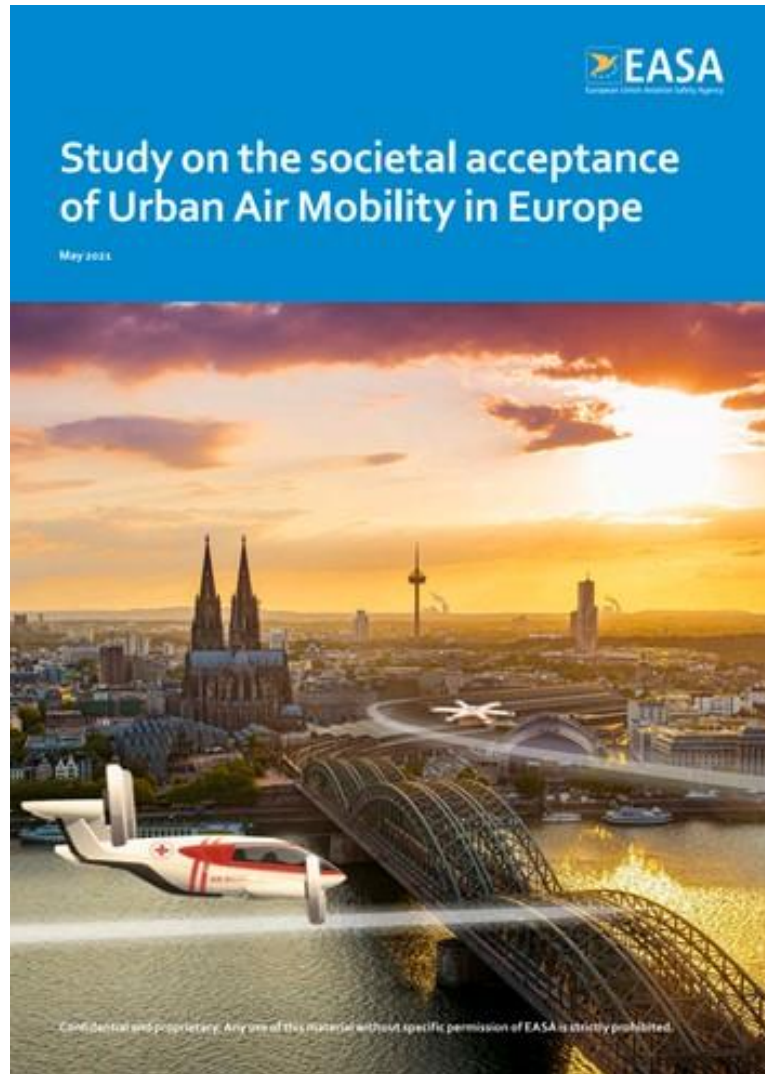
## Sustainable IAM Hub



One platform that connects the entire eco-system

# Critical IAS enablers EASA is working on



**Airworthiness, Aircraft Certification and Maintenance**
eVTOL and UAS

**Support and coordination with Member States**
National initiatives, regulatory sandboxes

**Airspace Architecture and Integration**
U-space, C2-Link, Detect-and-Avoid, iConspicuity

**Uncooperative and malicious Drones**
Counter-UAS Action Plan

**Vertiports**
Technical Specifications and Navigation Aids

**Civil-Military Coordination**
Dual-use Drones, ATM Integration

**Air Operations**
Operating Rules, Operator certification

**Training and Simulation**
Virtual & Augmented Reality

**Personnel training and licencing**
Operators, eVTOL Pilots, Remote Pilots

**Novel Technologies**
Flight Controls, Avionics, Propulsion, Energy

**Fostering collaboration and societal acceptance**
Sustainable IAM Hub

**Digitalisation**
Artificial Intelligence, Autonomy, Cybersecurity

**Support to implementation of regulations**
Standardization activities, Task Forces

**International Cooperation**
Harmonised Technical Standards, Research, Demonstrations

# Europe & Innovative Aerial Services

- Europe - EASA, European Member States together with the European Industry - has been developing IAS and IAM for several years

- This effort has led to develop a **realistic** and **implementable concept of operations** encompassing all the various aspects, including the social acceptance

- The concept comes with an existing set of regulations and guidance that will enable IAS and IAM implementation in the years to come

- EASA is eager to share all this information for consideration for the development of the deliverables of the ICAO and other States Civil Aviation Authorities

**EASA**
European Union Aviation Safety Agency

# Thank You!

**Your safety is our mission.**