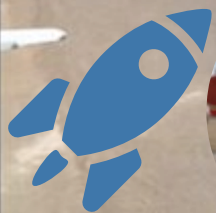


TERUEL AIRPORT, THE DOOR TO THE STRATOSPHERE AND SPACE DEVELOPMENT

HAPS4ESA 2024

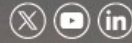
12 - 14 February 2024 | Scheltema Leiden | The Netherlands



Operation Solutions
Dr. Alejandro Ibrahim Perera
General Manager of Teruel Airport
President Aeronautical, Space and Defence cluster of Aragon

GOBIERNO DE ARAGON

Teruel AYUNTAMIENTO



AIRBUS



ENAIRES



FLYSPACE



Teruel

AIRPORT

LEADERS IN EUROPE

Europe's largest aircraft storage and MRO platform



Teruel Airport Platform (PLATA for its Spanish initials) is a 550 hectares centre for the aerospace industry that offers a new, unique and exclusive space that is fully equipped for aircraft maintenance, recycling and long-term storage.

PLATA is a Consortium formed by the Government of Aragon and Teruel City Council.

TERUEL AIRPORT CONSORTIUM

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Aragon, Spain
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TERUEL AIRPORT NEW INFRASTRUCTURES

AIRCRAFT LONG-STAY
PARKING PHASE V

PLD SPACE ZONE

FENCING AND ROAD
AEROSPACE AREA

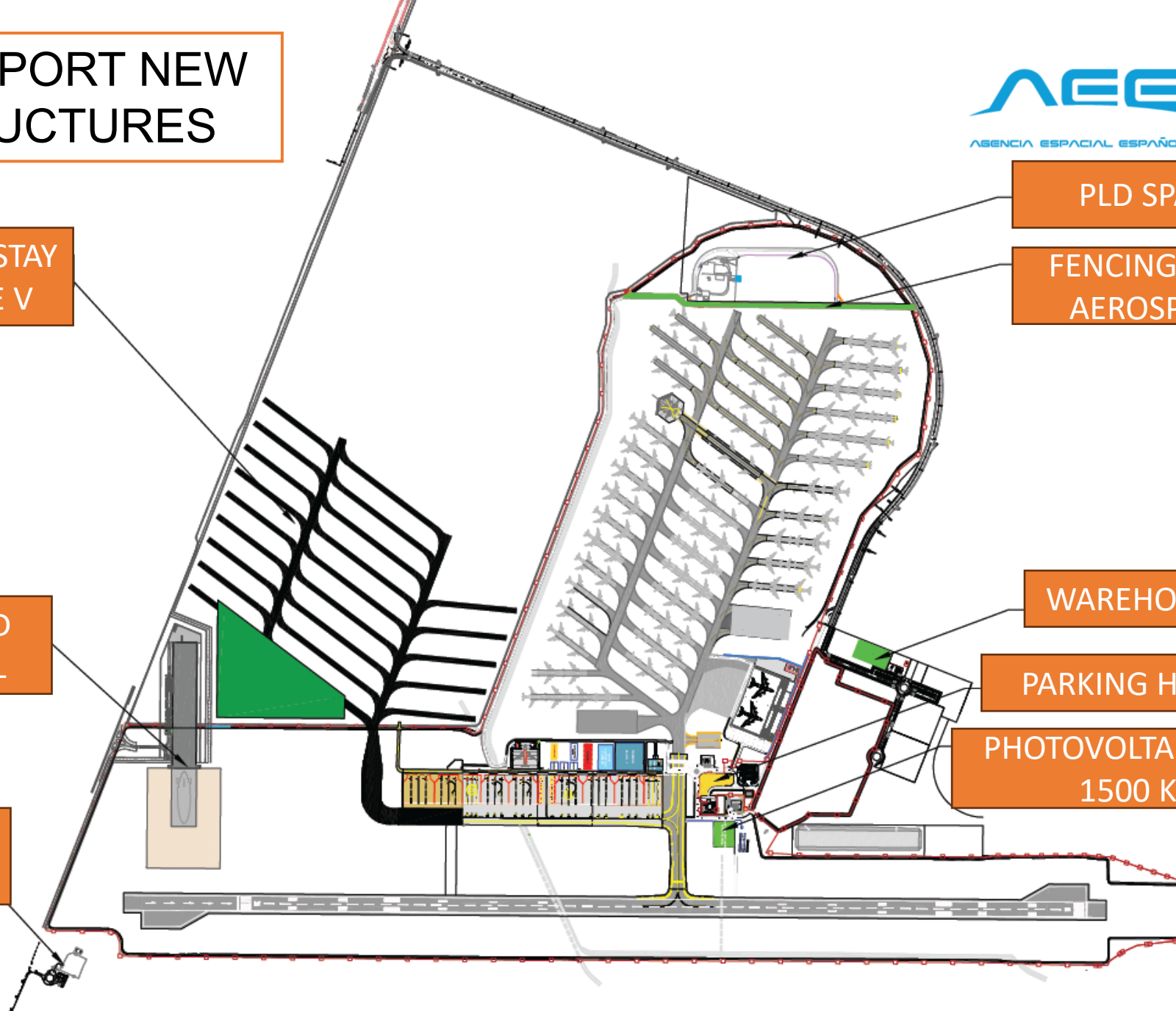
HAPS HANGAR AND
PRODUCTION HALL

WAREHOUSE 5000 M2

PARKING HANGAR

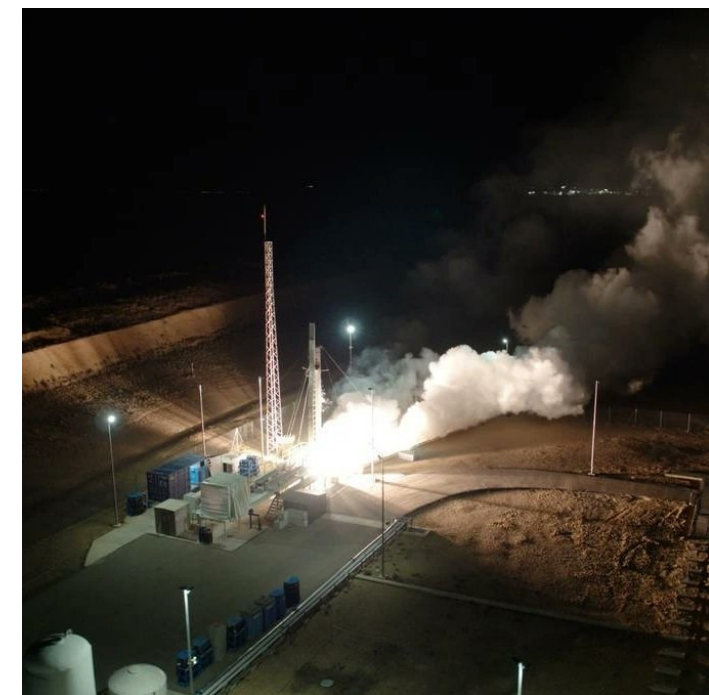
PHOTOVOLTAIC PLANT
1500 KW

WAREHOUSE 1500 M2
ELSON SPACE HAPS





TERUEL AIRPORT ROCKET
ENGINE TEST AREA





Apply ligninase To Resolve End-of-Life Issues of Thermoset Composite Fibres

www.bizente.eu · info@bizente.eu



BIZENTE project presents a biocatalytic model of enzymatic degradation as a novel alternative to the end-of-life of thermoset composites.



Outcomes

- Contribute to decrease in at least a 40% the amount of nonbiodegradable polymers currently discharged to the environment or sent to landfill and incineration.
- Develop the first biocatalytic technology based on ligninase enzymes to efficiently and sustainably solve problems posed by thermoset composites once they have reached their end-of-life.
- Open up new markets and business opportunities for the treatment of plastic waste while establishing a new value chain for the products obtained after biodegradation.



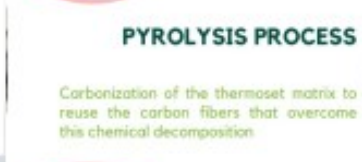
Transforming the dismantling process of the aircrafts of the future
Novel robotics to recycle composite materials of large components

Clean Sky 2



WATER CUTTING SYSTEM

Applying high water pressure that will allow the thermoset pieces to be selectively chopped into a suitable dimension for recycling



PYROLYSIS PROCESS

Carbonization of the thermoset matrix to reuse the carbon fibers that overcome this chemical decomposition



RESISTIVE WELDING TECHNOLOGY

Thermoplastic composite's reprocessing process, to detach the panels and reuse them, as they can melt again once consolidated



SMART ROBOTICS

Optimization of technological processes through the use of intelligent technologies. A robot is mounted on a land AGV system, being easily operated with a dummy tool.



GREENER AVIATION

Increasing the recycling capacity of aircraft components by 40% and, therefore, reducing the CO2 emissions in aviation

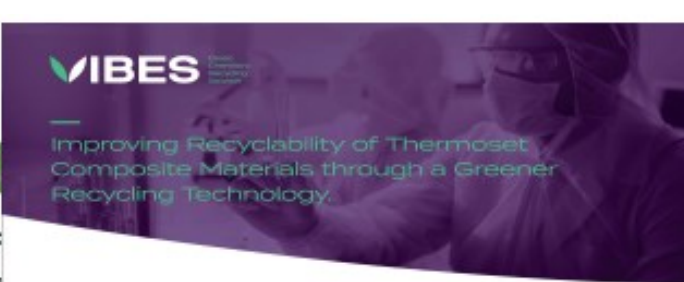


European project EoLO-HUBs will develop innovative solutions to recycle high value materials from wind turbine blades



EoLO-HUBs' solution will provide an answer to the three main areas involved in the decommissioning and recycling of end-of-life wind turbines:

1. Decommissioning and pre-treatment of wind turbine blades, including handling, non-destructive inspection tools, cutting, shredding, and sorting
2. Sustainable fibre reclamation processes addressing two alternative technologies: Low carbon pyrolysis and green chemistry solvolysis.
3. Upgrade processes to recover and include glass and carbon



Improving Recyclability of Thermoset Composite Materials through a Greener Recycling Technology

Thermoset Composite Characteristics

High Demand for Advanced Engineering Applications

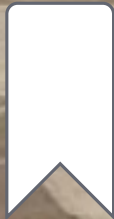
<p>High Performance High mechanical strength Good chemical resistance Long durability Lightness Corrosion resistance</p>	<p>Plastic Waste 42.6% incinerated 24.9% diverted to landfill</p>
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Our Approach



13 Consortium Partners from 7 EU Member States





Teruel Airport will host the first stratoport in Spain and one of the first in the entire European Union.

- ✓ Reduced air traffic operations.
- ✓ Favourable weather conditions.
- ✓ Existence of a robust aviation ecosystem.
- ✓ Availability of ground.

Makes Teruel Airport an ideal place to build a world-class stratoport.

- The facilities will include: a hangar and production hall, as well as a launch operations platform.
- New facilities will house specialized engineering, manufacturing and flight operations necessary to provide: business services in Mediterranean Europe, Middle East and Africa.



elson
SPACE ENGINEERING

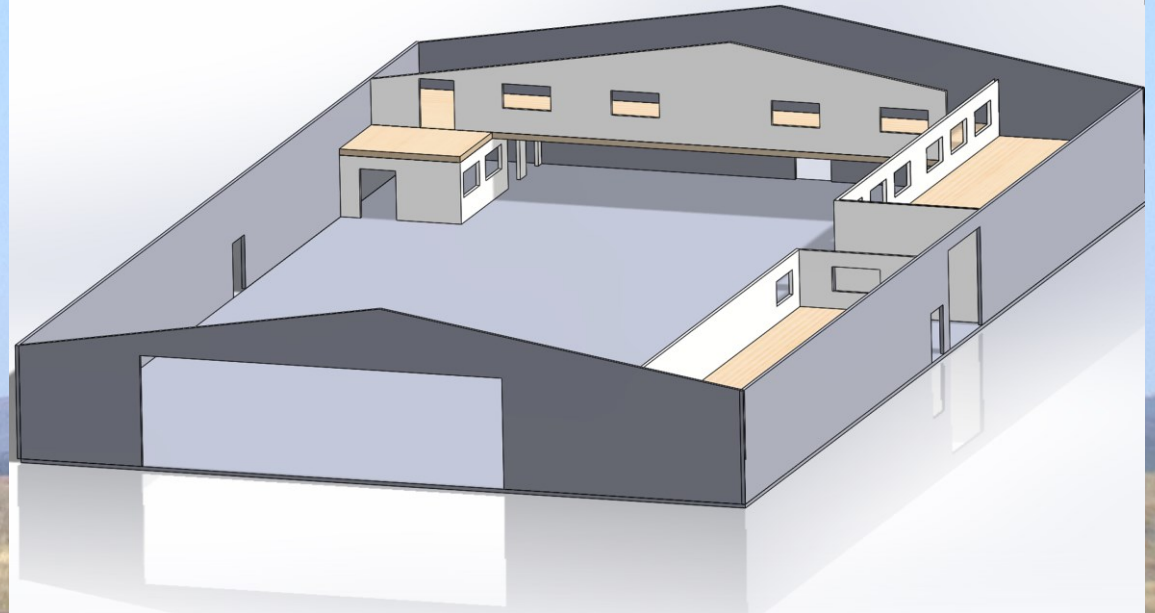
AE
AGENCIA ESPACIAL ESPAÑOLA

PLATA
Plataforma
Aeroportuaria - Teruel



Warehouse for fixed-wing HAPS and communications system in the southern area of Teruel Airport.

1.500 m²



SCEYE®

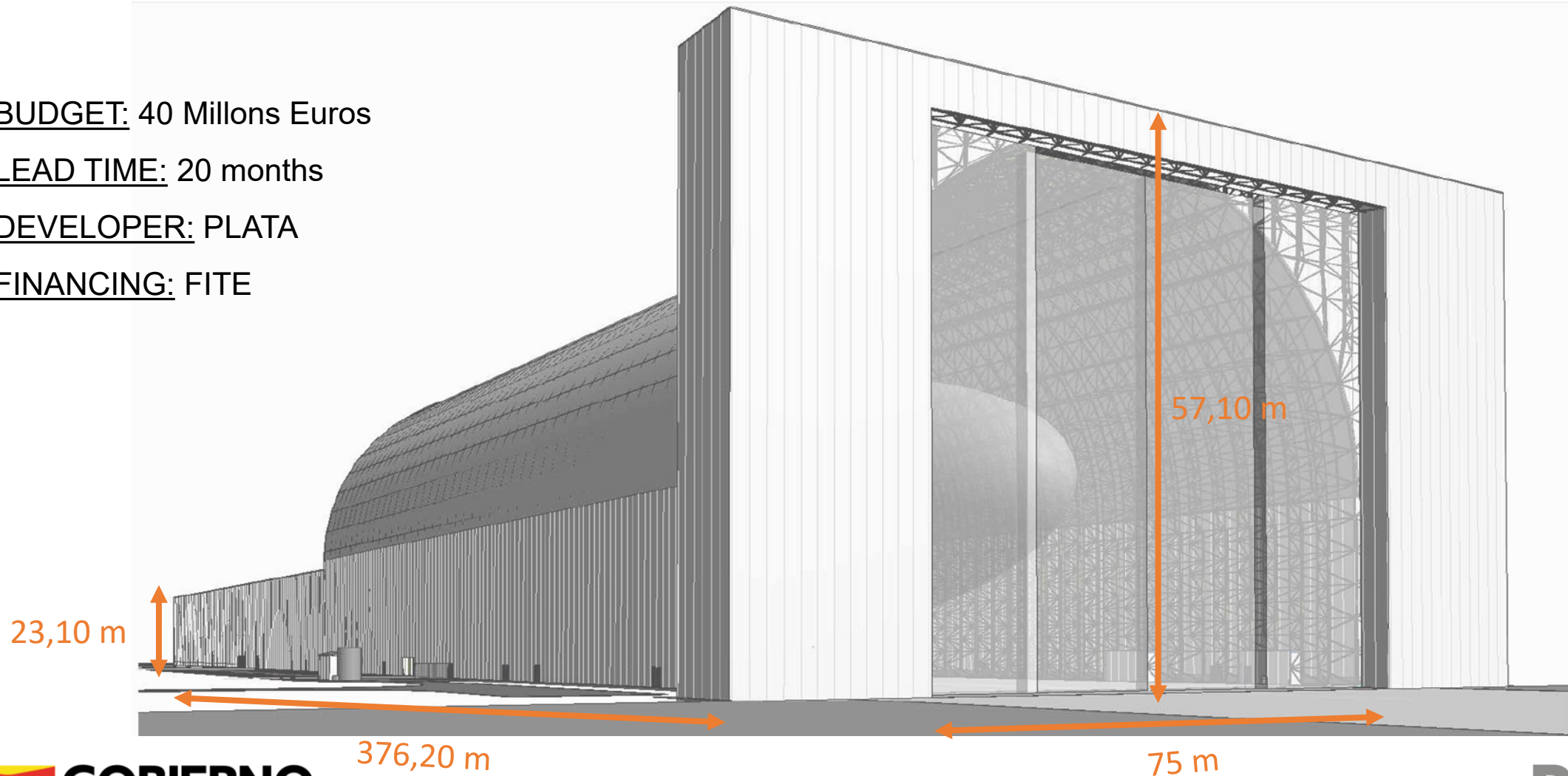
AGE
AGENCIA ESPACIAL ESPAÑOLA

PLATA
Plataforma
Aeroportuaria - Teruel



CONSTRUCTION OF A HANGAR AND PRODUCTION WAREHOUSE AT TERUEL INTERNATIONAL AIRPORT

- BUDGET: 40 Millions Euros
- LEAD TIME: 20 months
- DEVELOPER: PLATA
- FINANCING: FITE



AERONAUTICAL, SPACE Y DEFENCE ARAGÓN CLUSTER

MRO and Recycling



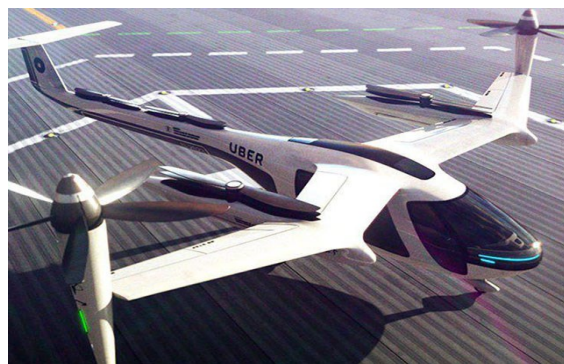
Stratoport and Space



Zero-emission Aircraft and Sustainability



Air Taxis and EVTOL



Dron and technology



Airships and HAPS



AERA: Growing in Aerospace sector (59)



FROM TERUEL TO THE SKY

Thank you for your attention!

