

# Tecnalia's FLYFREE technology: Sustainable Urban Air Mobility





**FLYFREE** technology: An innovative multirotor aircraft architecture aimed at a passenger transport service or air taxi to move around cities autonomously



<u>RTO – Industry collaboration</u>: Born from the collaboration between Tecnalia and Crisalion Mobility (former UMILES Next), this groundbreaking air taxi concept, **initially designed and patented by Tecnalia**, is now the proprietary technology that **has positioned Crisalion Mobility as a pioneer in the field of electric air mobility** 



Towards new mobility models: Urban air mobility addresses urban congestion and pollution by expanding transport into the vertical dimension. The air taxi market is projected to reach €32 billion by 2035 and \$90 billion annually by 2050, revolutionizing urban transport



Flyfree is a technology for electric VTOL urban air taxis based on an over actuated multicopter innovative architecture. It represents Spain's first air taxi and one of the pioneers in Europe

The key innovation lies in its architecture, which allows the cabin to maintain its own orientation independently of speed, a clear advantage over conventional drones and current air taxi applications. This feature improves the flight experience, offering a sensation similar to a car or a bus. From the dynamic point of view CRISALION Mobility recently received an investment of more than €15M



An RTO – Industry Collaboration

FLYFREE
The technology for
the next generation
of urban mobility



# Tecnalia's FLYFREE technology: **Sustainable Urban Air Mobility**



#### **Tech Development & Partner Search**

- Technical feasibility analysis
- First small-scale prototype
- European patent application in
- Search for industrial partner



#### **Tech Development** & EU Projects

3 EU SESAR projects performed by Tecnalia for the validation of the concept in different environments: **Esperce** (Toulouse), ATLAS (Jaén), CIAR (Lugo)

#### Alliance with an **Industry Partner for Tech Development**

In partnership with UMILEX Next, tech development of the concept, increasing the attractiveness of capital investment for achievement of the following steps



#### **Crisalion acquired FLYFREE**

CRISALION acquired 100% ownership of the patent and technology from TECNALIA.

Tecnalia also acquired a stake in CRISALION, joining forces with new investors to drive innovation and growth

2025



**Market** Launch

2032

2018-20

2020-23

2022-24

2024

# **Idea Start**

2017

Tecnalia starts to work on an electric VTOL urban taxi concepts supported by Basque Government Programme for Fundamental Research High Industrial Potential



#### **Tecnalia and UMILES Next agreement in** 2021

The agreement reinforces the viability of the architecture and its potential and demonstrates the interest of the market through the injection of investment capital





### **UMILES Next becomes** Crisalion Mobility,

with an investment of €15M

**CRISALION** Mobility pioneer in the field of electric mobility, presented at the Dubai Airshow 2023 their new eVTOL vehicle, INTEGRITY, and highlighted their **FlyFree** technology



# **Crisalion's road map:**

- 2028 Unmaned flight 1:1 > 2031 - Pilot-on-board
  - testing phase

Urban air mobility constitutes a new mobility model by expanding the possibility of transport in the third vertical dimension of space. It is based on the concept of mobility through environmentally sustainable propulsion methods and applying the advances made in the transport sector in terms of autonomous driving and flight that forms one of the pillars of innovation in the field of sustainable mobility

