

#stratosphere

On July 19, 2026



Presentation document for mission M001, concerning the first test flight of the Heliblade demonstrator, scheduled for July 24, 2026, in Nouvelle-Aquitaine, subject to favorable weather conditions.

1/ Introduction to x721 and x721 France.

Founded in Dubai by Pierre-Eric Lys, **x721** is a company specializing in the design and development of a range of ultralight flying machines known as **Heliblade**.

x721 possesses recognized expertise in the design of ultralight aircraft and in conducting tests - both in simulators and under real-world conditions. With its "**Heliblade**" invention, the company aims to meet an ambitious challenge:

reaching Very High Altitude (VHA) by 2028.

The name **x721** refers to the performance achieved in March 2025 by a Heliblade prototype, which reached an altitude of **72,100 feet** during a historic simulator test.

Ten years of design, sizing, and experimental validation have confirmed the overall stability of the Heliblade aircraft, as well as its aerodynamic and energy performance. Initial real-world testing campaigns were launched in Dubai and subsequently rolled out in France in early 2026.

In April 2026, the company x721 established its French subsidiary, **x721 France**.

This presence in France gives it access to high-altitude airspace in the **Nouvelle-Aquitaine region**.

Successful tests were conducted in Nouvelle-Aquitaine during the week of July 6–11, 2026.

x721 France plans to collaborate with national and regional industries - such as mid-sized enterprises specializing in solar power systems, electronic systems, AI, composites and materials, and high-speed data transmission.

A recruitment campaign targeting both civilian and military candidates will be launched in France starting in August 2026.

The vision of x721 :
To rapidly expand across the globe
to observe, listen, and communicate.



2/ Why Heliblade.

After ten years of R&D, the Heliblade is an experimental HALE/HAPS-class drone designed to operate in the upper atmosphere and stratosphere. Unlike conventional stratospheric platforms, the Heliblade relies on an ultralight rotary-wing architecture, with stability and structural rigidity ensured by the use of **centrifugal forces**. **Its design prioritizes simplicity, agility, and lightness**; ultralight sparless wings, **centrifugal force, and solar-electric propulsion** powered by high-tech batteries deliver structural rigidity, stability, and high maneuverability.

Here, there is no need for massive infrastructure or hyper-growth to make large-scale operations profitable; the approach is one of sustainable, sensible economics.

Portable and weighing less than 70 kilograms, the Heliblade aims to become an ultralight flying machine that can be deployed anywhere in the world within a few days. It will be capable of carrying up to 10 kilograms of payload (cameras, sensors, or telecommunications equipment).

Powered by green electric propulsion, the **Heliblade** positions itself as an innovative, sustainable alternative to conventional aerial and space systems.

The **Heliblade** is designed for reuse across multiple missions, minimizing both waste and logistical constraints. Thanks to an optimized design and specialized materials, it aims to become one of the most competitive solutions in the pseudo-satellite market.

By 2030, x721 plans to develop a range of Heliblade units in France capable of reaching the upper atmosphere and stratosphere, and subsequently to manufacture and market them globally.

3/ Test flight M001 is scheduled for July 24, 2026, in Nouvelle-Aquitaine.

Description of Test Flight M001:

X721 will fly the “Model 11” demonstrator, named after the Blériot XI, one of Louis Blériot’s legendary early aircraft. **This demonstrator consists of two wings with a total wingspan of 18 meters and a mass of less than 4 kilograms.** These figures represent an exceptionally low wing loading and mass-to-wingspan ratio, characteristics typical of next-generation ultralight aircraft designs.



Description of Test Flight M001 (continued).

This demonstrator is designed to evolve over the course of two years into an ultralight aircraft capable of reaching and maintaining flight at Very High Altitude (VHA) for extended periods.

This test flight is being conducted on behalf of and with the support of the French Air and Space Force and the Directorate General of Armaments (DGA).

Flight Mode M001 :

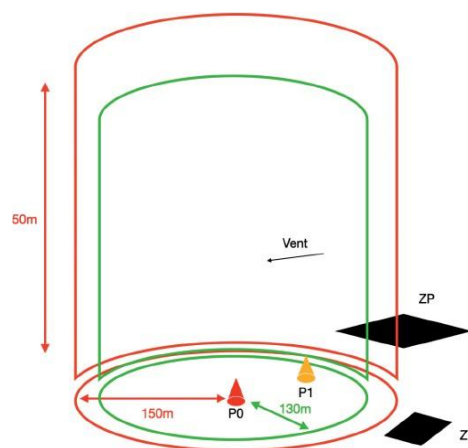
Weather conditions: an average wind speed of less than 4 knots, measured on site; no precipitation (rain, drizzle); no fog; and sufficient visibility over the maneuvering area.

Fly within an aerial cylinder 50 m high and with a radius of 150 m.

Ascend, perform lateral movements, hover, and then descend.

Flight time: about 10 minutes.

No payload, no solar battery.



P0 : Geographic location of the center of the teste cylinder

P1 : Launch Site

ZT : Technical area

ZP : Public area

Red circle : Emergency procedures

Green circle : Contingency procedures

The test flight crew M001 :

Pierre-Eric Lys, Director of Operations (DDO),

Victor Helies, Remote pilot Heliblade,

Philippe Mazel, Remote pilot Palangrier,

Hervé Chopin, Operator Heliblade

Marie-Paule Lys, Operator Heliblade

Jacques Denavaut, Director of Communications and Development, X721

Céline Burger, Generale Director, x721 France.

4/ Working Together to Achieve Technological Maturity and Reach the Stratosphere.

The partnership between the French Air and Space Force, the DGA, and x721 France aims to support the development of the technological maturity required to reach very high altitudes by 2028.

Following mission M001, several test flights will be conducted in France to validate and progressively improve the system's performance. The data collected will be used to optimize the aircraft and its maneuverability, as well as flight procedures. Onboard systems will also undergo continuous upgrades to enhance control, navigation, and pilot assistance capabilities. This approach is part of a progressive development program based on increasing test complexity, ranging from low-altitude flights to operations in increasingly demanding environments.

The X721 team will evaluate various flight configurations - including failure scenarios - as well as several structural, electronic, and power system architectures. Testing will also cover communication systems, thermal management, and the aircraft's adaptability to different weather conditions. The goal is to ensure safe, reliable, and controlled operations across the entire flight envelope, from climb to descent, regardless of atmospheric conditions.

The Nouvelle-Aquitaine region and its industries will be key partners.

Following the success of the last inaugural high-altitude mission - scheduled for mid-2028 – the **Heliblade** will establish itself as **a premier strategic capability for France**.

5/ Economically speaking.

By combining experience, innovation, and technological expertise, **x721** will provide observation and measurement capabilities where current solutions fall short. It bridges the gap between the upper atmosphere and very low Earth orbit, delivering reliable data - at the right place and the right time – to foster better understanding and enable effective action. The x721 team also aims to become a key player in a digital revolution that is more sustainable, green, and debris-free.

Operating at Very High Altitude (VHA) offers numerous advantages: on-demand coverage, stable observation conditions, superior image quality, and rapid response capability. It is a multi-mission platform (for observation, signal interception, or communication) that complements existing solutions by providing greater flexibility, faster data access, and a more precise operational picture when every minute counts.

Maximum responsiveness and rapid deployment: a Heliblade can be easily transported anywhere in the world and be operational within 72 hours.

Commercial launch is scheduled for late 2028, enabling users to observe, listen, and communicate anywhere in the world. X721 meets the need to connect the various aerial and ground-based platforms used by modern civilizations.

« One year after its debut at the Paris Air Show, the Heliblade has become a reality, ready for its first test flight (M001), offering a portable, quick-to-deploy, and eco-friendly alternative to traditional aerial and space systems. This innovative solution will then enter a phase of gradual development to quickly provide our customers with a unique tool for high-altitude observation and communication ».

Pierre-Eric Lys, CEO & Chief Engineer, **x721**

« By combining experience and ingenuity, technology and practical application, x721 is well positioned to bridge the gap between the upper atmosphere and very low Earth orbit - wherever and whenever there is a need to understand reality ».

Jean-Jacques Dordain, Chairman of the board, **x721**



For more information:
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