

AIRBUS

Airbus Amber

Search for alternative chemical propulsion system

- Use case for Aerospace Valley Challenge -

Business Requirement Dossier

Context:

Airbus Defence & Space (D&S) is looking for alternative, more sustainable chemical propulsion systems for satellites.

We are particularly interested in thrusters using alternative propellants, such as water, nitrous oxide, hydrogen peroxide and ammonium dinitramide (ADN). In addition, we are keenly interested in finding and exploring a French-based solution in order to obtain the support of an initiative by the CNES, the French space agency. This initiative called **Comet** aims to support and promote French companies that develop innovative solutions for space technologies. The collaboration with technology startups is crucial for addressing this technical challenge and ensuring the successful development and implementation of alternative propellant thrusters for satellites.

Challenge presentation

The propulsion systems onboard satellites use chemical propellants that may cause a negative impact on the environment. As per specific European legislation -The Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) , Airbus D&S will need to deploy non-toxic propellants for their satellite thrusters in the future.

Overall, D&S is seeking innovative solutions from startups or companies that can provide thrusters using green propellants that are in line with regulatory requirements.

Technology/solution requirements

- thrust of 1-20 newton
- thrusters using green propellants, non toxic for human (such as water, nitrous oxide, hydrogen peroxide, and Ammonium dinitramide (ADN))
- Space qualified
- A develop prototype (min TRL2)

Other requirements

- Startup 100% French-owned - preferred

Selection criteria

Assessment of the solution regarding the business/technical requirements -

- full/partial or no fulfilment of each criteria

Assessment of the startup regarding founding and ability to scale:

- Ability to have a "testable" solution
- Ability of the startup to go at scale if the solution is relevant
- *A solution already tested by customers/ in other industry areas - optional*

Planning

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Activities	Planning
Challenge opening: Startups that want to candidate should send a company presentation and a product deck with specification description to challenges-airbus@aerospace-valley.com	To 15th october 2024
Internal Airbus review of the dossier	From 10 to 22th October 2024
Integration of the selected startups into the overall sourcing of the project	From 22 to 29th october 2024
Feedback regarding the startups selected for a demo <ul style="list-style-type: none">- The startup selected will have to sign a bilateral NDA before any further discussion	November 4th 2024
Organization of one demo with the business owner to be able to present the solution <ul style="list-style-type: none">• A precall session to prepare the demo and give some context with the Airbus Startup focal point• 1 to 1h30 demo session with the following agenda Agenda: <ul style="list-style-type: none">• Introduction (All, 5min)• Introduction of the use case (Airbus, 5min)• Startup company and product presentation (30min)• Q&A (All, 20min)• Short feedback of the startup (15mins)	from 5 th November to 25th November
If selected, realisation a proof of concept (PoC) contract to test the solution and assess the business value	March/april 2025
If successful, integration of the Startup for the potential RFP process	Starting from May 2025

Please be aware that all the documents and presentations should be in english.