

Terms of participation



Air Traffic Management acceleration program

Call open until June 30, 2023



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1. The Organization

ENAIRe is the company of the Ministry of Transport, Mobility and Urban Agenda that manages air navigation in Spain. It provides aerodrome control services at 21 airports, including those with the highest traffic, and en-route and approach control through five control centers: Barcelona, Madrid, Gran Canaria, Palma and Seville. In addition, 45 air traffic control towers receive communication, navigation and surveillance services from ENAIRe.

CRIDA (a Spanish acronym referring to the Research, Development and Innovation Reference Center ATM A.I.E.) has the mission of improving the efficiency and performance of the Spanish air traffic management system through the development of ideas and R&D&I projects that provide measurable solutions through system performance indicators, all considering the Spanish system as an integral part of a global system.

CRIDA is a fundamental support for ENAIRe's R&D&I activities and one of the activities it has delegated is to promote open innovation as a means of solving the future challenges posed by the evolution of the ATM (Air Traffic Management) system. CRIDA and ENAIRe are committed to open innovation as a fundamental lever to maintain its position as an international benchmark.

Being aware that the business of providing air navigation and air transport services is not known by the general public, it is necessary to manage different initiatives including this ideas contest.

For the execution of this ideas contest, CRIDA has the support of Peninsula Corporate Innovation, SL, a company specialized in carrying out entrepreneurship programs¹.

¹ Peninsula Corporate Innovation SL is the company awarded the "Open Innovation Support Technical and Administrative Specifications" published on the Public Sector Contracting Platform on March 6 2022 with File Number 2022-01.

2. The Contest

ENAIRe launches this year the 1st edition of the **Air Traffic Management acceleration program**.

The objective of this contest is to accelerate startups. The initiative is aimed at technological companies newly created (maximum five years in the market) in the areas of interest of ENAIRe/CRIDA.

Ideas that take advantage of business opportunities in any sector of activity are admitted, as long as they focus on the provision of air traffic/air transport services.

This acceleration program will award cash prizes, as well as training and access to networks of interest to participating companies.

3. Conditions of participation

Participation is open to all those who meet the following requirements:

- Be a legally constituted company.
- Have been in existence for a maximum of 5 years at the time of submitting the application.
- Duly fill in the information required in the registration form, within the period established in these rules.
- Submit an original project that does not violate the industrial or intellectual property rights of third parties and that does not transmit or disseminate illegal, defamatory, offensive content or content that violates the values and dignity of people.
- Not being an employee of CRIDA or ENAIRe.

Each company will be responsible for the veracity of the data provided and will be legally responsible for any dispute that may arise due to non-compliance of law regarding intellectual and/or industrial property rights.

Companies grant the necessary rights to film, photograph the presentations, use the images of the participants and the presentations for communication purposes. They also authorize the use of the material presented and obtained during the contest for the preparation and

dissemination of newsletters, press releases, social networks, blogs, etc., for promotional and communication purposes.

The organization of the Air Traffic Management acceleration program reserves the right to exclude from the contest any company that do not comply with the requirements established in these rules, provide false or incomplete data, or without the corresponding authorization, in particular, discarding those companies that have no potential application in the field of air traffic/air transport service provisions.

4. Documentation to be submitted

Each company must complete the form available on the contest website, where they will be asked questions about their company, their business model and the fit with any of the challenges of this contest.

5. Challenges

Challenges within the framework of open innovation in ATM are defined as those challenges that can be solved **with solutions coming from other fields** different from ATM. Therefore, the challenges defined in this contest have a **transversal nature** and seek to take advantage of the knowledge and experience acquired in other business areas for their use in the air traffic management environment.

We are looking for total or partial solutions to any of the following 5 challenges.

CHALLENGE #1. HOW COULD WE IMPROVE THE MANAGEMENT AND PRIORITIZATION OF THE VAST AMOUNT OF INFORMATION HANDLED BY AIRLINES BEFORE FLYING?

The challenge looks for solutions that allow the handling, management and automatic prioritization of information contained in huge texts and notifications in an environment where aviation safety is the priority.

NOTAMs (Notices to Air Mission) are state-generated notifications to airlines and pilots alerting them of any kind of risk they may encounter en route. For example, they inform about places where air shows or parachute jumps are planned, closed airport runways, inoperative navigation aids, military exercises that impose restrictions on the use of airspace, temporary presence of obstacles near airports, etc.

Navigation service providers or airport managers, among others, access the NOTAM management system and enter the information they consider relevant. When an airline or pilot delivers his flight plan, he checks in the NOTAM management system all the NOTAMs that correspond to the route the aircraft has planned. There are NOTAMs whose knowledge is critical for a safe operation (closure of a runway at the airport of destination) but there are other notifications that are not so relevant, for example that the pavement of an airport taxiway is painted darker or that logging work is being done in the surroundings of the airport.

The management of NOTAMs is very complex for the pilot or airline planning his flight. The excess of information does not make it easy to identify what information is relevant and this involves an almost manual process by the airlines that is time consuming to ensure that the flight will be operated without incident.

The challenge consists in the creation of a digital platform that would provide users (airlines, pilots and drones) with only the most relevant and critical NOTAMs that are of interest for a specific operation, by automating and filtering the NOTAMs issued, while providing the information in a simplified form that reduces its complexity and facilitates interpretation, without undermining air safety.

CHALLENGE #2. HOW COULD WE IMPROVE THE INFORMATION SERVICE WE OFFER TO GENERAL AVIATION?

The challenge seeks solutions to automate and/or digitize information sent through voice communications, in particular, between air traffic controllers and general aviation (light aircraft and helicopters).

In the field of air traffic management, air traffic controllers are the operators responsible for supervising and managing traffic in a given airspace to ensure flight safety. In the same airspace, commercial flights, which encompass most of the flights performed by airlines, and what is called general aviation, such as light aircraft and helicopters, can fly at the same time. Commercial and general aviation usually fly at different altitudes (called "flight levels"). Low flight levels are occupied by light aircraft and high flight levels by commercial aircraft.

In commercial aviation, the pilot flies using instruments and technical equipment following a predefined route, and separation between aircraft is ensured by air traffic controllers. In general aviation, the pilot navigates using his eyesight and other visual navigation instruments such as maps, ground landmarks and the position of the sun (visual flight) and does not necessarily follow a fixed, predefined route and may adjust his trajectory as necessary to avoid obstacles or adverse weather conditions. The air traffic controller is generally not responsible for maintaining visual flight separation, but must provide basic air traffic services, such as weather information, information on nearby air traffic, and warnings of hazards in the flight area. All of this can result in an overload for air traffic controllers that can undermine the information service offered to general aviation.

The challenge is to offer solutions to both aircraft and air traffic controllers to automate and/or digitize some of the air traffic services that general aviation requires without compromising safety.

CHALLENGE #3. HOW COULD WE IMPROVE WEATHER FORECASTING AND ITS USE IN AVIATION?

This challenge seeks solutions to improve weather forecasting both in location and forecast horizon.

Adverse weather is one of the major causes of delays in aviation. Companies plan their flights many hours, days or months in advance without knowing whether there will be storms, ice or low visibility on the day they plan to fly. When these phenomena occur, the capacity of airspace or airports is considerably reduced, making it impossible for all the airplanes that had planned to fly on a certain day and at a certain time to do so without being delayed.

Existing weather models are not very accurate, especially for many days ahead and/or in specific areas (an airport, an area of airspace). If weather forecasts were more accurate, they could be incorporated earlier in the planning of air routes and thus avoid delays.

The challenge is to present solutions that improve weather forecasts for aeronautical use as well as ways to integrate them into air traffic management at any stage of flight planning.

CHALLENGE #4. HOW COULD WE SHOW MORE INFORMATION TO THE PASSENGERS FOR A BETTER PLANNING OF THEIR TIME?

This challenge seeks solutions to exploit relevant information, present it to a user, who is the passenger of a flight, and build loyalty through the added value that this information offers.

There are many aspects of a passenger's experience from the time they plan a flight until they arrive at their destination that could be improved. For example: travelling to the airport in advance, making a correct forecast of the time spent at the security controls, looking for boarding gates, calculating waiting times, queuing, etc.

ENAIRe provides real time information about the flights that are delayed and, therefore, we know if they are going to be late to their destination airports. This information can be valuable for passengers, because if they knew it in advance, they could save time waiting at the airport until their flight departs.

We are looking for a solution that helps the user to have more control over the time and actions to do in real time at an airport in order to plan better and avoid periods of uncertainty. This challenge involves providing information to users and making recommendations for a better experience.

CHALLENGE #5. HOW COULD WE PROVIDE MORE INFORMATION TO AIRLINES AND PILOTS TO REDUCE NOISE AND WASTE LESS FUEL?

This challenge looks for solutions to exploit relevant information that air traffic control systems have and send it to pilots.

There is information that pilots and airlines can find very useful to reduce fuel consumption during the flight. For example, when aircraft are approaching an airport, knowing the distance to the runway threshold where they must begin their descent to land, or knowing in advance if they will have to circle in the air to wait to land if there is heavy congestion, or knowing the landing order number, or what speed will be required for their final approach, would allow the pilot to calculate the appropriate altitude and speed to carry out a more efficient descent, reducing the impact on noise or fuel consumption.

Air traffic controllers and the systems they use could provide this information, but it is not information that is provided in a procedural way or calculated directly. In addition, at times of high congestion, providing this information would overload the controllers and therefore lead to safety problems.

The challenge is to develop a solution that provides this information that can be presented to the pilot without increasing the controllers' workload.

6. Evaluation criteria

The companies that apply will be evaluated based on the information provided in the application form according to the following criteria:

- **Feasibility:**
 - Market: that a suitable market and target customer audience is identified for the solution/product/service/technology....
 - Competitive advantage: consisting of differentiating elements with respect to other existing business proposals.
 - Adaptability: that the company has a product or service that can be adapted to one of the challenges of this contest.
- **Soundness:**
 - Team: business project with a compensated and balanced team made up of people with different profiles.
 - Opportunity: business proposal that the market currently accepts and that can generate value.

In order to provide maximum transparency to the participants, the following questions will act as a guide for the evaluation carried out by the Selection Committee.

Information about the product / service

Description of the product/service offered by your company (15 points)

What problem or need does your product / service solve?

What are the characteristics of your product / service?

What is your competitive advantage?

Adaptability to the challenge (20 points)

How can your product / service solve the chosen challenge?

Technical feasibility (25 points)

How viable is it to apply your product/service to the ENAIRe's ecosystem?

Entrepreneurial team (10 points)

Who is behind your company?

Business opportunity (10 points)

What revenue generation opportunities do you think you can generate for ENAIRe with your product / service?

Financial information about the company

Revenue per client (5 points)

What turnover have you generated annually for each customer?

EBITDA (5 points)

What is the earnings before interest, taxes, depreciation and amortization per year?

Number of employees (5 points)

How many employees do you have?

Funding raised (5 points)

What is the total funding raised, including private investors and public funding?

The score for each company will be obtained from the sum of the points obtained in each block and may range between 0 and 100 points. Once all the companies have been evaluated, they will be ranked from highest to lowest score to choose the winning companies.

The organization may consider the disqualification of a company if it obtains a null grade in any of the blocks or a total score of less than 50 points.

The evaluation will be confidential and will not be shared with the participants.

7. Selection Committee and Jury Selection

Selection Committee: is made up of a group of innovation consultants from the Peninsula Corporate Innovation SL team, who have extensive experience carrying out programs to promote entrepreneurship and who integrate profiles from the areas of strategy, business, innovation and technology.

Jury: It is made up of professionals from the fields of entrepreneurship and innovation in the air navigation sector, both from Peninsula Corporate Innovation SL and CRIDA.

8. Phases of the contest

8.1 Application

Companies must submit their applications through the form available on the website of the contest aceleradora.enaireopeninnovation.com.

The deadline to complete the form is **June 30, 2023 at 11:59 pm CET (UTC+1)** (the organization reserves the right to extend the deadline).

8.2 Winning startups selection

The Selection Committee will analyze all the applications and will rank them from the highest to the lowest score so that the Jury can choose which will be the two (2) companies that will participate in the acceleration program and that will be awarded with the cash prizes.

They will be announced in **September 2023**.

8.3 Acceleration

The two (2) selected companies will receive personalized support in order to validate their solutions within ENAIRe during the acceleration program.

The acceleration will take place between October 2023 and March 2024, where the following activities will be carried out:

- Accelerator presentation day.
- Creation of a roadmap to launch a proof of concept, pilot or prototype at ENAIRe.
- Weekly teamwork meetings by videoconference.
- Access to ENAIRe's facilities and staff to validate the startup's technology.
- Access to the virtual campus with 24 modules of content on entrepreneurship.

8.4 Presentation of results

At the end of the acceleration phase, a Demo Day will be held, a presentation session in which the two accelerated teams will present to ENAIRe the results obtained by the two (2) finalist companies.

It will be held in **April 2024** at ENAIRe's offices in Madrid.

9. Awards

This contest will offer a financial award to the two best startups:

- Winning startup 1: 40,000 €.
- Winning startup 2: 40,000 €.

All prizes will be awarded by Peninsula Corporate Innovation SL by bank transfer, on behalf of CRIDA, and their amounts will be subject to the legally established withholding. It will be subject to the legally established withholding. A timetable and milestones will be established for the disposition of the resources..

If any company rejects its award, it may be offered to the company that has been ranked directly below it in each evaluation phase.

The awards may be void if the Jury so decides.

10. Abandonment of the winner

In the event that, once the acceleration process has begun, a winning startup decides to abandon the program, it will be obliged to reimburse all amounts received up to that moment. All this without prejudice to the right reserved by the organization to claim damages arising from such withdrawal.

11. Acceptance of the terms

The contestants, by their mere participation, declare that they are aware of and fully accept these terms. All contestants expressly waive any right of challenging any of the decisions of the Selection Committee and the Jury.

Any participant may be excluded from the contest for violating any of the rules contained in these rules.

12. Intellectual Property

Contestants will be responsible for their proposal and will maintain the intellectual or industrial property of their submitted proposal at all times.

13. Duty of information: data protection

In accordance with the RGPD and the LOPDGDD, Peninsula Corporate Innovation SL will process the data provided in order to be able to manage the registration and participation in the Contest. Your data will only be used by Peninsula Corporate Innovation SL and will not be passed on to third parties, except for the fulfillment of legally established obligations. However, the identification of the finalists and also the winners will be published on the website of the Competition, Peninsula and CRIDA and its subsidiaries or partners, and on their respective social networks in accordance with transparency legislation. Your image and voice may also be published with your consent. Your data will be retained for the duration of the competition and for as long as any legal liabilities may arise from it.

The consent of the concerned person may be withdrawn at any time. In any case, the interested parties may exercise their rights of access, rectification, deletion and others recognized by law, by sending their request in writing to the email address info@peninsula.co, or by post to the address Pier01, Tech Barcelona – Office SA1 Plaça de Pau Vila, 1 – 08003 Barcelona.

In case of requests for rights, the data controller will carry out the appropriate and necessary inquiries to verify and ensure your identity.

If you believe your privacy rights have been violated regarding the use of your personal data, you can file a complaint with the competent Data Protection Control Authority (Spanish Data Protection Agency), through its website: www.aepd.es. You can request more information about the procedures of your personal data, to the email info@peninsula.co. For more information, access the privacy policy available on the Contest website.