

# ESA BIC HUNGARY CASE STUDY

## SUMMARY

The European Space Agency together with its Member States supports entrepreneurs with the ambition to exploit space technology. To achieve this ambition, the Agency has established a common approach to business incubation in several EU countries. This business incubation activity is conducted in so called ESA BICs (Business Incubation Centers) with the aim to support promising space-related startups to get off the ground and become successful ventures.

The 22 ESA BICs have been operating since 2003 and together with ESA they provide technical and business development support for the startups.

Hungary has been a full member of ESA since 2015. The organization has been working actively for six years, together with Hungary, on the development of Hungarian space activities. We are very proud that in 2021 Design Terminal took over the domestic representation of ESA's space activities and now leads the ESA Business Incubation Center Hungary Program.

## PROGRAM DESCRIPTION

The main objective of ESA BIC Hungary is to strengthen the community of successful space-related startups in Hungary and upscale local initiatives by forging a civil space competence center.

The incubation program is operated by Design Terminal and co-financed with ESA and the Ministry of Foreign Affairs in Hungary.

Started in 2021 with scouting, the program is focusing on entrepreneurs, startupper, students, scientists and any space enthusiasts, who are keen to develop their ideas connected to the space industry.

The incubation starts in February 2022 and will include intensive workshop sessions, 1-on-1 mentoring sessions, speed mentoring as well as plenty of teambuilding and networking events.

### **The program consists of 3 pillars:**

- **INCUBATE** pillar, in which startups will be provided business workshops, personalized technical and legal mentoring sessions and the opportunity to use our partner institutions' lab facilities for validation, product development and prototyping activities.
- **IDEATE** pillar, which is designed for space enthusiasts who are at the very first stage of their entrepreneurial journey aiming to find out whether their idea has a problem-solution fit. Programs offered under the IDEATE pillar help participants to define a clear idea of the problem they are trying to solve, and a clear vision of how the business/product will solve that problem.
- **LEARN and INSPIRE** pillar supports the achievement of the above mission and build and inspire a community of space-place enthusiasts. Inspirational events will be open to the public including entrepreneurs, startups, SMEs, public institutions, corporations, universities and research institutions with the aim to inform them about the potential of the space industry and the opportunities they can connect with the space sector.

## **The program provides furthermore:**

- 50 hours business coaching in the form of workshops
- a total of 80h personalized technical mentoring and 10h legal support for each incubated team
- 1.5 hours monthly Objective Key Results sessions every month to each team with business experts
- use of partner organization's (company, university) lab environment
- plenty of team-bonding, community and networking events (morning madness, MP alumni arena – provide a chance to meet and learn from the DT alumni, networking nights, Friday space jamming)
- investor and corporate/SME speedmentoring
- in-house coworking facility
- access to financing: equity free incentive funding (up to 50.000 €)

The duration of the incubation program is 12-24 months.

## **PARTNERS**

The implementation of the program takes place with the involvement of our partners and mentor base, who provide professional assistance in both business and space domains. We are closely working together with academia and space companies, who act as technical partners in the program.

## **STARTUPS**

### **Spaceapps**

BeeBox is a Smart Beehive solution that helps beekeepers make the right decisions based on measurements in the hive, and satellite data from the surrounding vegetation.

Beekeepers do not know the status of their hives often for days. BeeBox is helping them to get timely information about the status of the hives and the status of the surroundings, using space data and IoT devices. Spaceapps's hive-scale solution is designed to work every day, there is no need to recharge, as they are using solar panels, and energy management – just like satellites – to keep the system up and send as much measurement as possible. The internal data collector monitors the health of the hive to know in advance whether any bee activity is approaching. Their hive exit cam monitors the movements of the bees, while AI scripts analyze the photos and videos arriving to their servers. They help the beekeepers with a bee-keeping map where they can monitor the plants and surroundings around their hives coming from Sentinel satellites. Also, they receive the latest national bee-health information and quarantine zones on their map.

### **Spectrafold**

Team of dedicated professionals, who work tirelessly to invent and create affordable, cutting-edge solutions

They are a team of dedicated professionals, who work tirelessly to invent and create affordable, cutting solutions. Together they have decades of hands-on experience delivering working solutions to the toughest missions and environments. Their customers include academic, government, and military organizations as well. The company offers some of the smartest technology available, based on their knowledge base they deliver higher-value intelligence through innovative engineering, solid and continuous research and development, superior service and steadfast reliability. They have a long-term vision for providing advanced communication technology.

Their team members already developed and successfully marketed an internationally recognized product line. The company is already set up and ready to kick off a development project. It is registered by Hungarian chamber of commerce as Ltd. (Kft.) and has its registered office in Budapest.

## Aquanauta

Aquanauta Center for Exploration aims to study the human factors relevant in space and underwater exploration. They intend to research and develop equipment, protocols, solutions and technologies integral in these extreme and unusual environments. By exploring the unknown, they intend to expand their known world.

To this end, in their first project, they develop a series of 3-30 days long missions, where a team of cave divers or „aquanautas“ will live isolated in an underground station that is connected to an extensive network of a natural water-tunnel system.

Low-fidelity space mission simulations do not mimic space exploration reliably and thus the data obtained from these simulations may be invalid too. Given their terrestrial opportunities, cave diving missions show high-fidelity to manned space exploration in terms of complexity as well as the risks involved, providing a suitable context to the scientific study of human factors.

## D3 Seeron

They have established their business intending to apply thier knowledge and professional experience in the space industry, the development of medical solutions, and the automotive industry, among others.

Their team consists of experienced engineers and IT professionals. In recent decades, they have gained extensive experience in software development and systems integration. In several industries, especially for large companies, they have developed applications that have provided a solution to the company's unique needs and particular challenges, from large-scale data processing to image processing to the application of artificial intelligence.

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They believe that the engine of development is innovation, which we use to bring our knowledge to our partners and customers through our solutions.

They are committed to exploring different space technologies in the Earth environment and to researching and developing innovative software solutions that incorporate them. Their goal is to introduce high-tech solutions into everyday life as much as possible, thus simplifying, facilitating, and making everyone's lives more efficient.