START-UP WITH SPACE!

www.esa-bic.cz
Are you a start-up with less than 5 years on the back? Are you an entrepreneur with a great new idea for an app or a space spin-off?

The ESA Business Incubation Centre (ESA BIC) offers an extensive support package to entrepreneurs and young start-ups with innovative ideas for downstream and upstream applications. With branches in Prague and Brno, the ESA BIC targets companies using space technology for general non-space industrial, scientific and commercial uses or using non-space technology in products and services for the space sector.

CzechInvest operates the programme with support from the City of Prague, South Moravian Region, South Moravian Innovation Centre, Ministry of Industry and Trade, Ministry of Transport and European Space Agency. The incubation package contains consultancy services in technology and business areas, as well as marketing support and assistance with finding suitable partners and potential investors.

There are currently 19 ESA Business Incubation Centres located in more than 15 countries across Europe. Together, they work regionally to inspire entrepreneurs to turn space-related business ideas into commercial enterprises. More than 600 start-ups have been supported to date.

**WHAT WE OFFER**

- Business development support and advice
- Unique ESA technical support and expertise
- Office space and shared facilities
- €50,000 in funding
- Opening doors to international investors
- Networking for start-ups
- Hands-on tailored assistance

Our partners:

- CzechInvest
- City of Prague
- South Moravian Region
- Ministry of Industry and Trade
- Ministry of Transport
- European Space Agency

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Big Terra

Sector: Agriculture

Customers: Farmers, agriculture sector service providers, governments and policy makers

Product: Climate reports, agriculture - specific weather services, crop yield assessment and scenarios, climate and weather based food and water security assessment

ESA BIC Prague incubation goal: To achieve better technical utilisation of satellite data and to build initial revenue streams.

Unique selling points:
- Extensive information about climate and farming conditions for places with a lack of local data
- State-of-the-art data science applied to fine resolution satellite data and climate data
- Customised service for farming in developing regions

About the company
Big Terra brings missing elements to agriculture management in Africa. African farmers generally have extremely low yields compared to those in the developed world. The world of African farming is disconnected and ineffective. The company combines data from satellites, weather stations and numerical weather models to offer farmers and related services providers a one-stop shop for data supporting their farm management decisions—from suggestions on when to plant crop growth estimates and advice on how they can best support their crops, to suggestion of optimal harvest times.

Pavel Juruš, CEO
pavel.jurus@bigterra.com

www.bigterra.com
FESTKA

Sector:
Cycling

Customers:
Cyclists, athletes, collectors

Product:
Road race and track bicycle frames

ESA BIC Prague incubation goal:
To develop a new road race and track bicycle frame called Spectre, which is intended for use by professional cyclists from the Czech Track National Cycling Team, and to achieve at least a 100% increase of production output from the current approximately 500 frames per year by, ideally by 2017

Unique selling points:
- Products of the highest quality and top-notch design
- Tailored production, focus on customers
- Highly skilled team of experts, centralisation of the know-how
- Unique brand with worldwide recognition
- Technologically advanced and smart materials
- Intensive collaboration and interaction with respected research institutes

About the company
Festka is a unique combination of Flexibility, Exclusivity, Science, Technology, Know-how and Accuracy. Based in the Czech Republic, Festka is a manufacturer of state-of-the-art, handcrafted bicycles that focuses on technological innovation and customer satisfaction. The company’s ambition is to grow into a technological leader and trendsetter in the cycling industry through partnerships with leading scientific research institutes and technological innovators. Festka’s technological leadership and the impeccable quality of its products derive from cooperation with prominent technical universities, leading technology providers and acclaimed testing laboratories. This allows Festka to build bicycle frames using cutting-edge technological solutions that are unique in the cycling industry.

Michael Mouřeček and Ondřej Novotný
Co-Founders
ondrej@festka.com
www.festka.com
Sector: Gaming, simulation software
Customers: Gamers and customers in the industrial sector
Product: Simulation software – space simulator
ESA BIC Prague incubation goal: To finalise development of the space simulator, develop a go-to-market strategy and find relevant partners and customers.

Unique selling points:
- Comprehensive real-time internal systems and motion dynamics simulation
- Photorealistic graphics and assets created with engineering precision
- Tailoring of simulations to the customer’s needs
- Upgrading or augmenting of existing simulation setups with new software

Foxworks Aerospace
About the company
Foxworks Aerospace specialises in highly in-depth simulations of aerospace and land vehicles with focus on the internal vehicle systems and precise dynamics of motion. The company’s mission is to bring the physical world to computer screens, allowing anyone to experience the ordinary and not-so-ordinary situations that they may never be able to encounter otherwise. The software is thus interesting for the gaming sector, as well as also for industrial companies that want to simulate the performance of their products. The people at Foxworks Aerospace are passionate about what they do and they hope they can make users feel the same way about their simulators.

Marian Šuch, Founder/CEO
marian.such@foxworks.cz

www.foxworks.cz
Let’s EARTH

Sector:
Renewable Energy

Customers:
Property owners (individuals, commercial entities, government) in need of utility cost optimisation

Product:
Online platform providing:
• Remote analysis of the most viable renewable energy sources with respect to the characteristics of the given property and its location
• Analysis of financial support from local government
• Comparison of different types of renewable energy equipment (cost-benefit analysis)
• Possibility to procure relevant renewable energy equipment,
• Possibility to obtain financing for selected renewable energy equipment

Unique selling points:
• Comprehensive solution (tailored analysis of individual properties for all available renewable sources combined with green equipment comparison, acquisition and financing services)
• Connection of renewable energy customers with suppliers (with the added value of precise and highly detailed analytics)
• Very accurate, fast and price-competitive services
• Competitors (green equipment supplier) are to be turned into partners
• Strong know-how in the design, production and implementation of renewable (energy/water) sources

ESA BIC Prague incubation goal:
To finalize the development of Let’s EARTH’s Beta Version platform and to effectively promote the company among potential customers and partners.

About the company
Let’s EARTH brings globally unique cutting-edge analytical and acquisition services to utility (energy/water) consumers for the purpose of instant utility cost optimisation by exploiting renewable sources. Through Let’s EARTH’s analytical services, consumers are provided with detailed, personalised recommendations on the economically most viable utility-saving options. Through Let’s EARTH’s acquisition services, consumers are provided with the most suitable green equipment with the desired cost-efficiency-payback time ratio. In summary, Let’s EARTH’s mission is to help reduce the financial burden faced by utility consumers while increasing global energy production from renewable sources, decreasing greenhouse gas emissions and aiding in reducing the global effects of climate change.

Adrián Babiš, Founder/CEO
adrian.babis@letsearth.com

www.letsearth.com
Sector: Travel
Customers: Motorcyclists
Product: Mobile platform
ESA BIC Prague incubation goal: To finalise implementation of the platform, connect to Galileo

Unique selling points:
- Turn-by-turn navigation tailored to motorcyclists
- Crash detection and distress calls
- Road hazard alerts
- Route tracking and sharing

About the company
Motorcycling is a passion and part of an adventurous lifestyle. However, it is not the safest form of transportation and motorcyclists face a number of risk factors that do not affect car drivers and others. It is difficult to stay oriented while riding a motorcycle and navigating to the destination can be complicated. Thus, based on in-depth market research and as active riders, we have decided to develop a new connected platform for bikers including navigation, social networking and safety features.
NG Aviation

Sector: Aviation

Customers: Airports, air navigation service providers, airlines, public users

Product: Digitisation of aeronautical data that adheres to A-CDM (Airport Collaboration Decision-Making) and AIM (Aeronautical Information Management) concepts

ESA BIC Prague incubation goal: To create a hardware concept for vehicle navigation at airports, integration of the Galileo GNSS chip, establishment of a communication layer with professionals from ESA to develop a concept for highly precise navigation of drones (using Galileo-based geodetic survey equipment), promotion of the company and product

Unique selling points:
• Mastery of technology
• Extensive product portfolio
• Unique setup (people, time, market)
• Experienced team from the air navigation environment and Aeronautical Information Management field
• Flexibility (people, technology)
• Large scale collaboration and data analysis

About the company
NG Aviation focuses on bringing new, state-of-the-art solutions into the field of digitisation of aeronautical data. Because the transition from aeronautical information services to aeronautical information management is a very expensive and time-consuming matter for the majority of airports, customizable software solutions are needed. The company’s goal is to create solutions that generate, verify and distribute aeronautical data in the required quality for monitoring airport traffic, thus making it easier to navigate in terms of obstacles and closed parts of the service and aerodrome movement areas. The concept involves vehicles using AIME BOX, which will consist of a GNSS Galileo signal receiver and responder sending data to a cloud system that is connected directly to a digital map of the given airport.

Marek Franko, CEO and Co-Founder
marek.franko@ngaviation.eu
www.ngaviation.eu
SMUP-UQ

Sector:
Industry/IT

Customers:
Industrial and engineering companies

Product:
Simulation add-on tool

ESA BIC Prague incubation goal:
To finalise development of the add-on software, formulate a viable business plan and go-to-market strategy, and find SMUP-UQ’s initial customers

Unique selling points:
• Unique insight into the statistical influence of each parameter
• Helps design products of the highest quality that are resistant to production uncertainties
• Pairing with commonly used optimisation methods

About the company
SMUP-UQ is the developer of a software add-on providing uncertainty quantification and sensitivity analysis with unprecedented efficiency and robustness. This solution brings reliable results with respect to problems where other methods fail. And with a level of efficiency that is much higher than that of any currently available tool on market. This is possible due to a fundamentally different approach to non-intrusive uncertainty propagation. The tool’s efficiency and robustness can bring engineering simulation and analysis much closer to reality and help businesses to accelerate the design process.

Martin Kubíček, Founder/CEO
martin.kubicke@smup-uq.com

www.smup-uq.com
InsightART

Sector: Art industry

Customers: Galleries, art investors, investment funds, private collectors, insurance companies

Product: "Color" X-ray imaging for art

How ESA BIC Prague helped the business: InsightArt finalised the hardware of its X-ray scanner and developed improved software tools implementing advanced data analysis. It also found relevant mentors in the field of business development and strategy. ESA BIC promoted the company to customers, partners and general public.

Unique selling points:
- Comprehensive technological method for art authentication process
- Unparalleled data source for improvement of art restoration and preservation (information about pigments and chemical elements within all the painting layers)
- The 3D XRF system extension is covered by a patent owned by InsightArt
- Unprecedented data density from scanned layers
- Market entry barrier – patented technologies exclusively licensed from Advacam (no other competitor can work with the ADVACAM’s technology in the art authentication)
- Strong know-how in both the art authentication and physics

About the company
InsightART brings globally unique cutting-edge spectral X-ray imaging to the field of art inspection and authentication. InsightART provides information about pigment composition in paintings, thus giving unprecedentedly detailed data about the scanned painting. Simply stated, InsightART provides a way of discovering whether a painting is fake or authentic, while also providing a unique and highly detailed look behind the upper layer of paint, thus enabling restorers to work with high precision. InsightART’s mission is to help art collectors, museums and galleries undertake safer investments in art and in preserving our valuable cultural heritage.

Josef Uher, CTO
josef.uher@insightart.eu
www.insightart.eu
Triphood

About the company

Triphood is a mobile app that makes tourism fun and helps travellers stay motivated. Triphood offers an innovative solution comprising an interactive mobile application that contains trips and narrates stories to customers. Triphood is a ready-made core of a mobile application. Thanks to that, it takes only a short time to create mobile apps for customers. Applications make it possible to present cities and their surroundings to tourists and previously unknown places to local residents. Stories narrated during a trip can present the history of the given area. This kind of app therefore supports regional tourism. Trips can serve for environmental education not only for children but for all visitors of national parks and zoos. The application can also be used for organisation of team-building events and outdoor games. GPS navigation allows users to keep an eye on their position, records their route and can provide advanced metrics and statistics during their walks. Users can create their own trips.

Josef Pindák, Project Manager
info@triphood.cz

www.triphood.cz
TuddyTuddy

Sector:
Tourism

Customers:
Tourists, travellers

Product:
Online platform

How ESA BIC Prague helped the business:
TuddyTuddy finalised new features of its product using GPS navigation.

The company redefined its business model and focused more on the experience/adventure market.

Unique selling points:
- Selected Tour operators and Activity operators. Controlled content quality and product structure.
- Different product approach focused on local authenticity and new experiences rather than “standard tourist attractions”.
- Target group: Millennials. This group is becoming the largest generation worldwide and requires a different approach than any generation before.
- Platform accessible through a mobile app and web portal. A fast and easy booking process is required by millennials, who are used to shopping online.

TuddyTuddy

About the company
TuddyTuddy was created in response to changing travel trends. The team behind the project is composed of a group of young people who are an integral part of this change and are aware of its impacts.

The online platform, which we are continuing to improve, serves as a place where travellers and local experience providers can meet. Travellers can easily search through a wide range of unique and authentic experiences and interact with local providers. The platform also includes several features that provide information to users and facilitate their stay in Prague.

The whole concept is based on personal partnerships with local experience providers, thanks to which TuddyTuddy is building an exclusive market position and guarantees quality for travellers.

Jana Přibylová, CEO
jana@tuddytuddy.com

www.tuddytuddy.com
Our Specialist

Marek Aldorf
Program Manager ESA BIC Prague
Marek.Aldorf@czechinvest.org

Investment and Business Development Agency CzechInvest
Stepanska 15, 120 00 Praha 2
Phone: +420 721 375 143
E-mail: esabicprague@czechinvest.org
www.czechinvest.org