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Czech Aerospace Research Centre - Prague Science and Technology Park

Beranových 130

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WWW: https://www.vzlu.cz/vtp/

Park location on the map: here

Reg.nr.: 00010669

Director: JUDr. Petr Matoušek (petr.matousek@vzlu.cz)

Operating data of the park

Membership in STPA: YES State of the park: accredited Partner in project SPINNET: NO

Launch day: 10.3. 2010

Founder(s): Czech Aerospace Research Centre Owner(s): Czech Aerospace Research Centre Operator(s): Czech Aerospace Research Centre

Type of entity: Joint stock company (JSC)

Criteria for acceptance of innovation firm: individual

Description of the park

Introduction

Science and Technology Park VZLÚ Prague is placed in Prague - Accredited Science and Technology Park VZLÚ Prague is placed in Prague - Letnany near Metro station named Letnany (C line) and near PVA - Prague Exhibition Centre. Founder, owner and operator of the Park is Výzkumný a zkušební letecký ústav, a.s. (Czech Aerospace Research Centre, VZLÚ). The Park is a part of regional inovative infrastructures and plays active role in development of knowledge economy and industry with main focus on Aerospace, Defence and Security. Innovative neighborhood is also suitable for automotive industry, railway industry, power engineering and civil engineering. In the Park there are available several spaces for wide range of activities - offices, laboratories, workshops and stores. The Park offers a lot of services which are needed by innovative companies, e.g. consulting in R&D, consulting in industrial property rights, support of R&D results transfer, education, information technology as well as consulting in law or economics, etc. Available are also conference and meeting rooms with capacity up to 60 seats, completely equipped with presentation technology. Inovative business is supported also in form of science and technical workshops (e.g. aerodynamics, composites, strength and durabiloty of structures) which are focused on transfer of knowledge. The Park accomplished number of a successful transfers of technology, e.g. infusion technology for manufaturing of composite structures (multiply), technology of friction stir welding, algorithms for aerodynamics calculations etc. On the occasion of the celebration of the centenary of the founding, the Research and Experimental Aviation Institute opened a new building called "C3T - Czech Center

for Competitive Technologies." The building will serve both the Research and Experimental Aviation Institute (VZLÚ), which will thus replace some laboratories and other experimental workplaces in the already inadequate spaces, as well as innovative companies that have special infrastructure requirements, especially in fields focused on space technology.

Description of technology transfer

VZLUSAT-1 a Czech nanosatellite of a CubeSat
Application of composite technology for aircraft propellers manufactures
A true innovation in batteries – efficient energy storage
Bonding technology of PTFE sealing into suction pipeline of aerial engine
Technology of preparation and application of paint systems containing MWCNT

Innovative entrepreneurship training

Organization of excursions and opponency of projects

Advisory services

technological advisory, patent advisory, certification advisory, financing advisory, legal advisory, education (courses for enterpreneurs), secretarial services, telephone exchange, telephone, fax, text processing, reception, conference space, computer for technical usage, workshops, laboratories

Innovation infrastructure

The Park is a part of regional inovative infrastructures and plays active role in development of knowledge economy and industry with main focus on Aerospace, Defence and Security. Innovative neighborhood is also suitable for automotive industry, railway industry, power engineering and civil engineering.

Cooperation with universities

The Czech Technical University in Prague Brno university of technology University of Chemistry and Technology Prague

Services provided to innovation companies

by STP external Consultancy



business plans



technological advisory



patent advisory



certification advisory



financing advisory



equity credits subsidies other forms
Service expenses
STP service costs
only according to actual costs
only fixed payment tariff
fixed payment and additional charge for use \Box
in lumps: rent, security, cleaning, phone, post
Oher costs (p.a.) acc. to usage fixed CZK/m2
heating
electricity
others ✓
total
Rent (p.a.) CZK/m2
office space 3300
production space 1650
others 1000

Statistical data

innovation

other

institutions

TOTAL

Companies

5

48

6

59

Employees

70

165

20

255

Rented area m2

4880

22140

1100

28120

STP

Land area

232981 m2

Built up park area

84130 m2

Utility area

31051 m2

- Rented area

28120 m2

= Remains for rent

2931 m2

Innovation companies

HE3DA s.r.o.

Reg.nr.: 28949935

HE3DA Ltd. is an innovator in applied research and commercialization of battery technologies. The company's 3D technology and Li-battery production processes are based on three dimensional electrodes using lithium nano-materials (patented HE3DA® technology).

Tel.: + 420 225 115 306

E-mail: info@he3da.cz

WWW: http://www.he3da.cz/

Technologies:

0200 - Power engineering

0202 - Power engineering, power electronics (other)

0204 - Solar engineering

0206 - Storage techniques

1104 - Nanotechnology (other)

Branches:

29 - Manufacture of machinery and equipment n.e.c.

31 - Manufacture of electrical machinery and apparatus n.e.c.

73 - Research and development

NIMDA Co. Ltd. - organizační složka

Reg.nr.: 26718481

Development and manufacturing for military and defence

Josef Havlík

Tel.: +420-225115419 Fax: +420-225115424 E-mail: <u>info@nimda.cz</u>

WWW: http://www.nimda.cz

Technologies:

1404 - Rail- and road-traffic engineering

9000 - Hydraulics and Mechanics

Branches:

29 - Manufacture of machinery and equipment n.e.c.

73 - Research and development

Prusa Research s.r.o.

Reg.nr.: 24213705

The Czech Producer of 3D Printers.

E-mail: info@prusa3d.cz

WWW: http://www.prusa3d.cz

Technologies:

0300 - Production and process engineering

9003 - Design

9007 - Fabrice from Plasticine

9011 - Software development

Branches:

73 - Research and development

SPEEL Praha, s.r.o.

Reg.nr.: 49703374

Research and development of avionics systems

Fax: +420-286923721 E-mail: <u>info@speel.cz</u> WWW: http://www.speel.cz

Technologies:

0801 - Measurement and control

0900 - Microelectronics

0904 - Information storage technology

1000 - Microsystems engineering

1402 - Aviation engineering

1404 - Rail- and road-traffic engineering

9900 - Other

Branches:

31 - Manufacture of electrical machinery and apparatus n.e.c.

62 - Air transport

73 - Research and development

Stratosyst s.r.o.

Reg.nr.: 08135738

There is an unused potential that stratosphere can provide us for exploring our universe because thick bottom atmosphere blocks out most of the infrared wavelengths. Currently the cost for obtaining infrared data is high becouse the only method is observation from satellites. Also, the number of orbital infrared observatories is low so this makes the procedure for obtaining customerspecific data is very time-consumig. The advantage of stratosphere observation by Stratosyst is that space sky can be observed for an extremely long period of time in conditions comparable to space satellites for a fraction of the cost. Moreover, the hardware will be recovered after the end of each mission. The prototype will be a fully functional infrared observatory which will stay in the stratosphere (higher than 20km) and maintain the position over extended period of time. Position of the platform will be feedback-controlled by GNSS data.

Martin Farkač

Tel.: +420776355314

E-mail: info@stratosyst.com

WWW: http://www.stratosyst.com/

Technologies:

0400 - Information and communications technology

9001 - Controlling Systems 9010 - Monitoring Systems

Branches:

72 - Computer and related activities

73 - Research and development

Subject:

Full Fairing for Main Rotor Head of the LifeRCraft demonstrator (LATTE)

Country: France

Type of cooperation: common project

Description:

The project solved within the European program of the joint technology initiative JTI Clean Sky 2 is focused on the development and production of a composite structure of the head cover of the main rotor of a high-speed helicopter for AIRBUS Helicopters. The output of the project will be a flight cover designed for ground and flight tests of the helicopter prototype, which now bears the name RACER. The project is led by the Polish aviation research institute ILOT, VZLÚ participates in the structural design, strength calculations, material and functional tests of the covers and the construction of production fixtures. LA composite provides the production of flight parts.

Contact web:

 $\underline{https://www.airbus.com/en/innovation/disruptive-concepts/disruptive-design/racer}$

Contact e-mail:

cedric.latanski@airbus.com

Subject:

ESTEC

Country: Netherlands

Type of cooperation: common project

Description: Project AMBIC - The aim of the proposed mission is to build a

constellation of microsatellites for the observation of the Earth for government purposes, demonstrating the real capabilities of the Czech

Republic.

Contact web:

http://https://www.esa.int/About Us/ESTEC

Contact e-mail:

stephane.combes@esa.int

Subject:

ESTEC

Country:
Netherlands

Type of cooperation:

common project

Description:

"CubeSat and Small Satellite Position Control System

The goal of the project is to develop an attitude control system (3U or larger) with an overlay study for small satellites (10-100kg). In this project, an implemented ACS CubeSat system will be developed and verified with an ACS computer with a real-time operating system (RTOS) with ACS algorithms using magnetotorques and reaction wheels as actuators and a Star Tracker (STR) for positioning up to

TRL5."

Contact web:

https://www.esa.int/About_Us/ESTECttp://

Contact e-mail:

adrey.kornienko@esa.int

Subject:

OFELIE

Country: France

Type of cooperation: common project

Description:

The aim of the project is to develop a revolutionary, environmentally friendly open-fan propulsion technology for the SMR class of aircraft, which could reduce engine CO2 emissions by 20% and contribute to a 30% reduction in aircraft-level CO2 emissions. Define and demonstrate at TRL5 level an open fan architecture that achieves 20% CO2 savings and noise reduction. VZLÚ participates in the creation of the so-called open fan in the form of measuring and calculating the aerodynamic characteristics of the propeller and measuring the

stability of the swirling flutter.

Subject:

AMBER

Country:

Italia

Type of cooperation: common project

Description:

The project deals with the development of new propulsion systems, specifically the development of a hybrid-electric propulsion system for regional aircraft with the aim of decarbonizing them. VZLÚ participates in the delivery of a modified test stand (pylon) for hybrid electric units, including strength analysis, design and manufacture of the adapter and beam structure supporting the drive unit.

Subject:

AI4HYDROP

Country:

Norway Type of cooperation: common project

Description:

The goal of the project is to create a holistic dynamic AI-based framework for the safe operation of UAVs in urban and restricted areas by defining the procedures and required technologies. In the project, the VZLÚ addresses current issues of ATM in the field of technical specifications of drones, the effects of the surrounding environment (cities, controlled spaces and legislation) and the philosophy of automatic selection and approval of flight plans in operation based on knowledge from national projects VERTIMOVE and MiYa.

Subject:
AREANA
Country:
Belgium
Type of cooperation:
common project

Description:

The project responds to the call for "synergies in aerospace research between Horizon Europe, AZE and national programmes" by providing advanced new approaches to support the European aerospace research ecosystem. It includes three interconnected but thematically distinct parts – synergies between European, national and regional research and innovation programs in the field of aviation, preparation for the upcoming Aerodays 2025 and, last but not least, VZLU activities within the AZEA alliance (Alliance for Zero Emissions Aviation), and this by carrying out mapping and analyses, including the identification of potential technological and administrative gaps in research, innovation and standardization.

Subject: **ESTEC**Country:
Netherlands
Type of cooperation:
common project

Description:

The goal of the QUVIK (Quick Ultra-Violet Kilonovae surveyor) satellite project is to prepare the first Czech space telescope to monitor neutron star collisions, or neutron stars and black holes. Among other things, the observations can tell a lot about the formation of elements heavier than iron that are formed during collisions. These include, for example, gold or platinum. The telescope will also enable the observation of exoplanets, i.e. planets that orbit stars other than the Sun. Combined with other observations from other observatories, scientists can thus find out exactly how these planets lose their atmospheres. It will also be possible to observe very hot stars, supernovae, star clusters, radiation from the cores of galaxies, when a supermassive black hole rips apart a star at the center of a galaxy.

Contact web: https://www.esa.int/About_Us/ESTEC Contact e-mail: stephane.combes@esa.int

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