Czech-Israeli joint R&D call for proposals 2023 webinar (TA CR-IIA)

June 12, 2023

Agenda

- Opening remarks by TA CR
- IIA – introduction and presentation of the Israeli conditions for the call for proposals
- TA CR – introduction and presentation of the Czech conditions for the call for proposals
- Pitch presentations
- TA CR Partnering tool
- Questions & Answers
- Closing remarks

Opening remarks

Ms. Tana Halova Perglova - Cross-cutting and International Activities Section Director, Technology Agency of the Czech Republic

Israel Innovation Authority (IIA) – introduction and presentation of the Israeli conditions for the call for proposals

Mr. Uzi Bar-Sadeh, Bilateral Programs Manager

The Israeli High-tech and the role of *Israel Innovation Authority*

רשות החדשנות
Israel Innovation Authority

innovationisrael.org.il

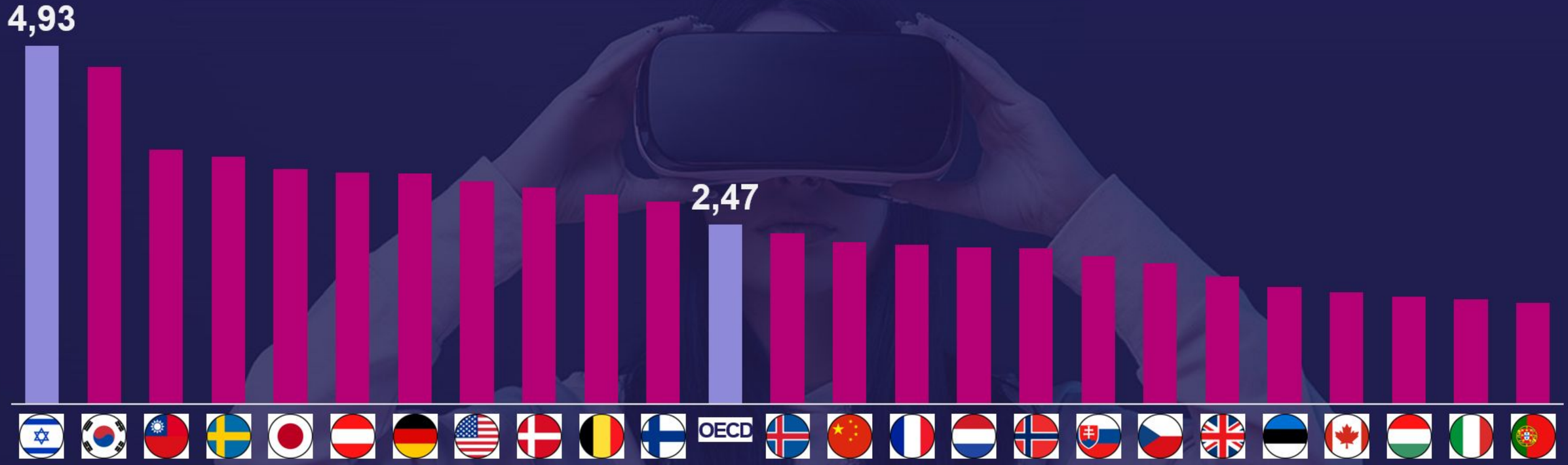
Overview:

- Facts, figures, theory about innovation in IL
- Who is the *Israel Innovation Authority (IIA)*?
- Innovation policy in the IIA
- Structure of the IIA
- International R&D collaboration

רשות החדשנות
Israel Innovation Authority

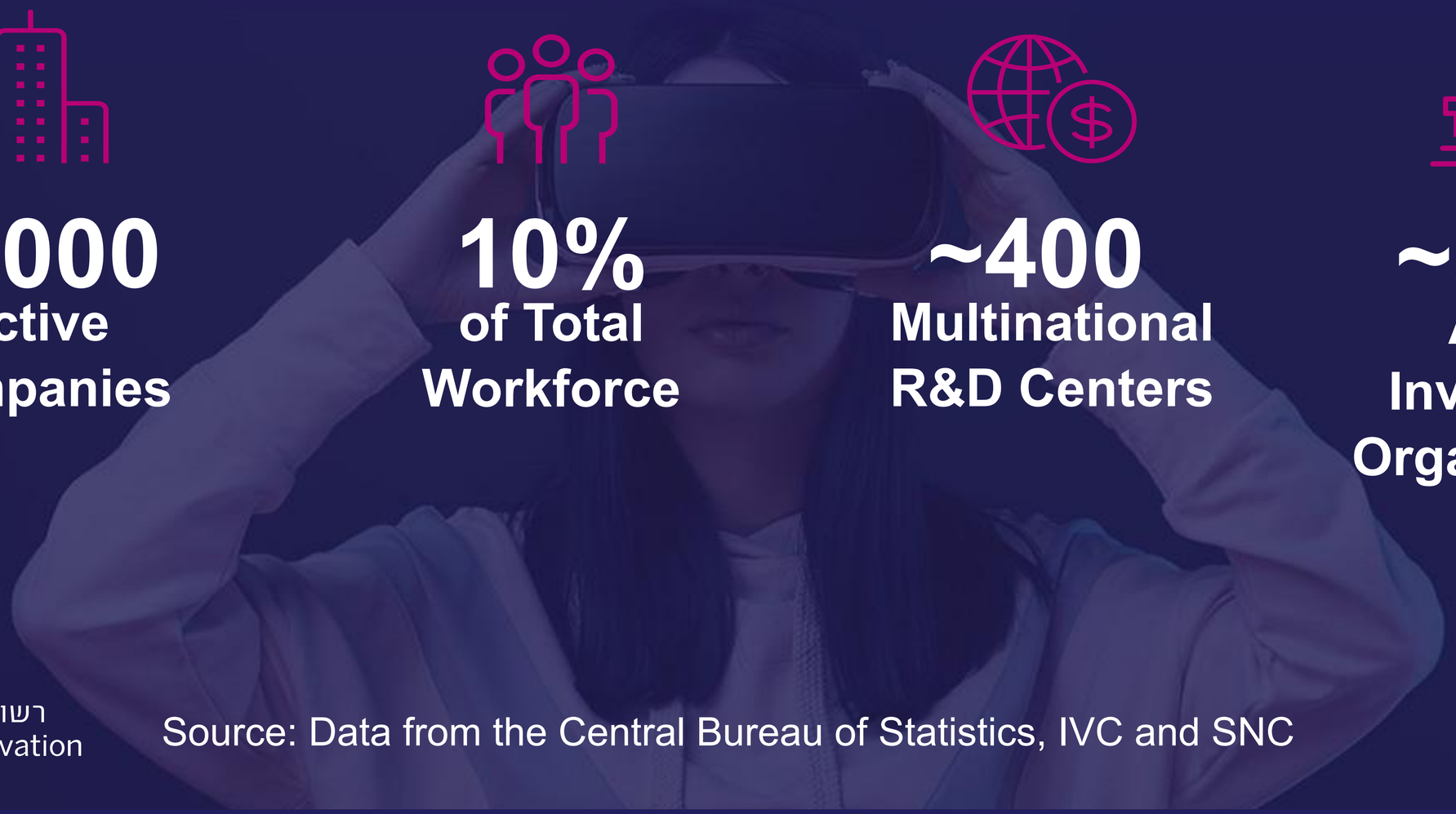
Leading the World in Research & Development

National expenditure on civilian R&D as a percentage of GDP



Source: OECD, 2019

The Israeli High-Tech Ecosystem



~9,000
Active Companies

10%
of Total Workforce

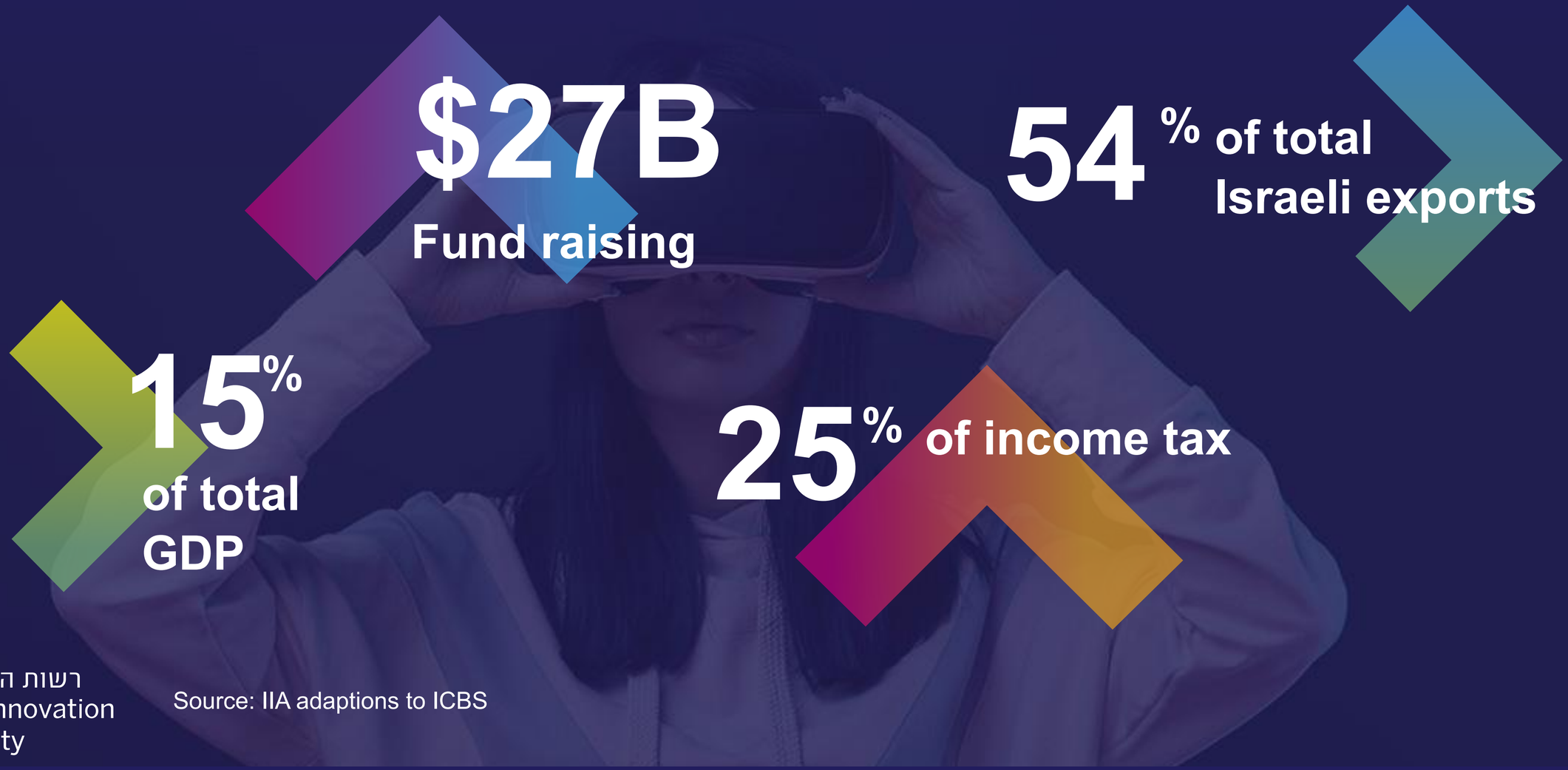
~400
Multinational R&D Centers

~500
Active Investment Organizations

Source: Data from the Central Bureau of Statistics, IVC and SNC

רשות החדשנות
Israel Innovation Authority

Israeli High-tech Breaks Records In 2021



$27B
Fund raising

54% of total Israeli exports

15% of total GDP

25% of income tax

רשות החדשנות
Israel Innovation Authority

Source: IIA adaptions to ICBS

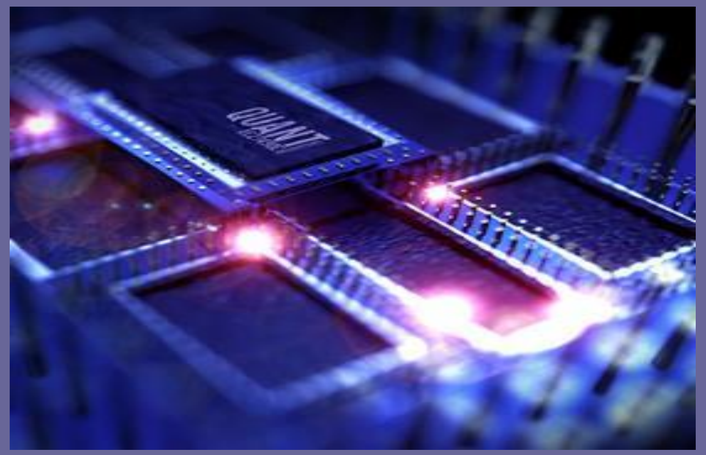
Israel Innovation Authority

Investing in innovation to promote sustainable and inclusive growth

- **Strengthening innovation ecosystem**
- **Enhancing economic impact**
- **Enabling emerging disruptive technologies**

Gearing up for Emerging Technologies

Quantum Computing



Artificial Intelligence

Climate-Tech

Bio-Convergence

Israel Innovation Authority – In Brief

4500 Submissions per year, ~50% approved

1.5 Billion NIS annual budget

Mission:
Promote innovation as a leverage to inclusive & sustainable financial growth

Bottom-up
Approach & support of all technologies

About **140** employees

180 technology evaluators

Supporting
Single entrepreneur up to large corp.

Conditional **Loan**
Repaying royalties

July 2022

Innovation Divisions

- Technological Infrastructure
- Startup
- Growth
- Societal Challenges
- Advanced Manufacturing
- International Collaborations

The different Needs of Israeli Hi-tech Firms Require Different Policies and Tools

Research infrastructure, disruptive technologies

Maintaining a sufficient deal flow of tech startups and helping them reach fundable milestone

Helping tech firms grow in Israel

Supporting tech solutions for societal and public goals

Pushing the manufacturing industries to a sustainable competitive path

Enabling Israeli technology industry to find its path in the global arena

רשות החדשנות
Israel Innovation Authority

International Collaborations

CIIRDF (Foundation)
Ontario
Quebec

BIRD (Foundation)
DOE, COMMERCE
California
Florida
Pennsylvania
South Carolina
New York
Massachusetts
Maryland
Virginia
Wisconsin
Oregon
Colorado
Nevada
Illinois
Michigan
Texas

Latin America

Inter-American
Development Bank
Brazil: Federal +Sao Paulo
Argentina
Uruguay
Mexico
Colombia
Chile

Europe

Horizon Europe

EUREKA
France
Russia
Italy
Germany
Greece
Denmark
Hungary
Turkey
Portugal

Finland
Sweden
The Netherlands
Czech Republic
Spain
Belgium
Poland
Romania
Slovakia
Cyprus
Lithuania
United Kingdom

China
Jiangsu
MOST
Shanghai
Shenzhen
Shandong
Guangdong
Zhejiang
Szechuan
Hong Kong

India
I4F
i4RD (Federal)
KIRD (Karnataka)

Korea
KORIL-RDF
(Foundation)

Japan

Singapore
SIIRD (Foundation)

Australia
Victoria
New South Wales

Strings attached

Funding (20%-50%) is matched with private money

Financing is done through grants (no equity) – but these become loans upon success

Funding for industrial company.
Academia-just as a subcontractor!

Evaluation Process

Through an online system

1. **Evaluation process**
   - Nominating an evaluator
   - On-site evaluation
   - Final report
2. **Decision made by the Research Committee:**
   - Approval/disapproval, budget and % support
3. **Payment:**
   - Company gets immediately partial advance money.
   - EoQ: writes final technical and financial report to receive next installment.

Evaluation Criteria

1. The **technology** aspect (innovation, originality, risk, technological assets, IP)
2. The **commercial** aspect (potential, markets, marketing, customers, sales, margins, manufacturing, economic benefits)
3. The **capabilities and competence** of the company
4. In case of international cooperation: **the synergy**

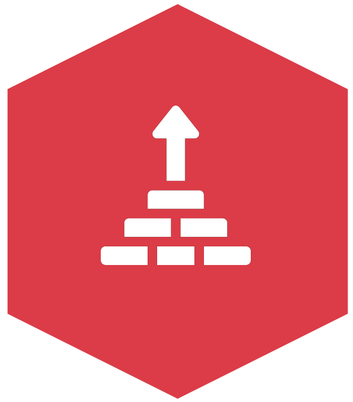
Thank You Uzi.BarSadeh@innovationisrael.org.il

Technology Agency of the Czech Republic (TA CR) – introduction and presentation of the Czech conditions for the call for proposals

Ms. Radana Díťová, International Cooperation Coordinator

Technology Agency of the Czech Republic

We are the **main provider** of state funding for applied research and innovation **in the Czech Republic**



Established in **2009**

Budget in 2023: **€ 269.2 MILLION**

Number of employees: **181**

TA CR in numbers

2.33
bil. EUR
has been invested by the state in applied research through TA CR

4 364
SUPPORTED PROJECTS

4 803
BUSINESS PROJECT PARTICIPANTS SUPPORTED

5 339
RESEARCH ORGANIZATION PROJECT PARTICIPANTS SUPPORTED

70 %
AVERAGE FUNDING INTENSITY

19
CURRENT PROGRAMMES

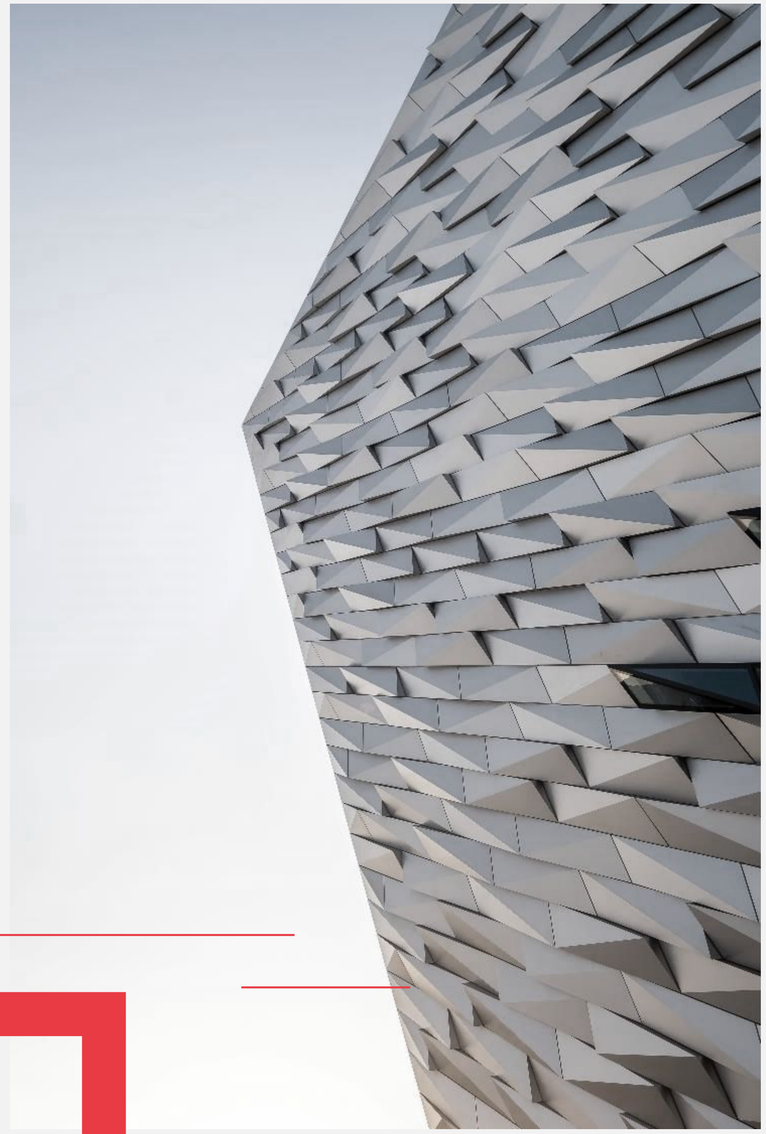
Data as of 1 February 2023

DELTA 2

Programme

PROGRAMME DURATION

2020 – 2025



The DELTA 2 Programme focuses on **bilateral international cooperation in applied research of Czech enterprises and research organizations and their foreign partners** mainly from outside of the European Economic Area (EEA).

Since 2018, **bilateral cooperation between TA CR and IIA** in supporting joint R&D projects.

DELTA 2 Programme, 2020-2025

Scope of the call

- ***Joint R&D projects*** *to be focused on specific outcomes in the field of applied research.*

- ***Specific outcomes*** *that will lead to achieving new findings and skills for development of new or significantly improved products, processes or services, and new product, process or service.*

- ***Beneficiaries*** *are expected to develop applied results.*

DELTA 2 Programme, 5th Call for Proposals

Schedule at TA CR

Launch of the call	17 May 2023
Project submission	18 May - 19 July 2023
Evaluation period	20 July - 16 November 2023
Results' announcement	30 November 2023
Obligatory start of projects	January - February 2024

DELTA 2 Programme, 5th Call for Proposals

Basic criteria

Leader of the Czech part of the project consortium: enterprise

Other participants: research organizations, universities, other enterprises
+ at least one Israeli eligible applicant

The linked and partner enterprises are not allowed to participate.

Maximum project length: 2 years (24 months)

Areas of research: all technology areas of application are accepted
*All **Czech projects** must also be in compliance with the National Priorities of Oriented Research, Experimental Development and Innovation.*

Eligible project results: patent, pilot plant, proven technology, utility and industrial design, prototype, functional sample, software, certified methodologies, processes and specialized maps, databases and other relevant results

DELTA 2 Programme, 5th Call for Proposals

Funding scheme

- Expected amount allocated to the call: 160 mil. CZK (approx 7.2 mil. USD)
- Maximum amount of support per project: **16 mil. CZK** (approx 720 000 USD)
- Maximum funding intensity per project: **up to 74 %**
- Maximum funding intensity per applicant: up to 100 % (depending on the type of applicant and type of research/categories of activities; according to the amount of costs actually incurred in the given year)
- **No transfer of financial resources** between countries is allowed.

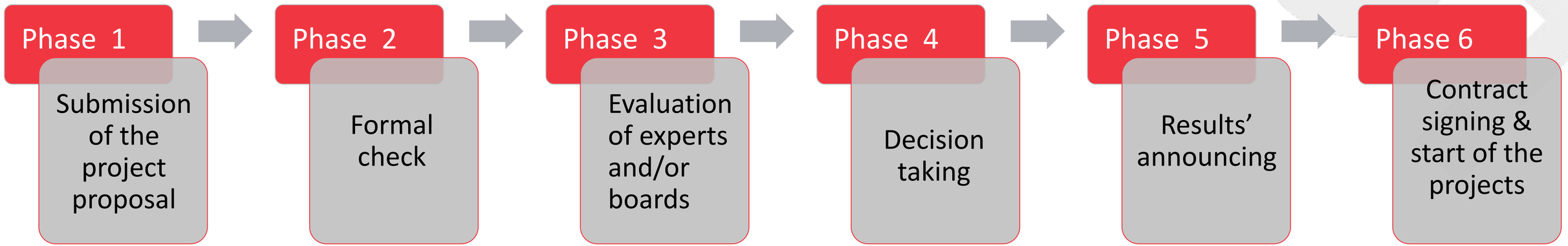
DELTA 2 Programme, 5th Call for Proposals

Submission process

- Czech applicants must submit their project proposal to the electronic system **ISTA** until the deadline stated in the call documentation.
- The project proposal must be completed **in English**.
- The applicant must submit mandatory annexes:
  - Sworn statement of the applicant
  - Common Proposal
  - Market research
  - Other annexes as stated in the call documentation
- The applicant must publish financial statements (last 3 years) in the Public Register.
- The applicants may not be firms in difficulty.

DELTA 2 Programme, 5th Call for Proposals

Submission & evaluation process



The project proposal must be approved by both TA CR and IIA in order to receive funding!
The TA CR and IIA will fund the respective nationals in the selected consortia in accordance with their national funding rules.

Reach out to us for more information

www.tacr.cz/en

For information about the 5th call in DELTA 2 Programme
(for Czech applicants):
https://www.tacr.cz/en/5th-call-for-proposal/

For questions regarding the 5th call of the DELTA 2 Programme
(for Czech applicants):
https://helpdesk.tacr.cz/

Contact email:
radana.ditova@tacr.cz

PITCH PRESENTATIONS

ISRAELI pitch presentations:

- Metaphor Vision
- Plas-Free
- TripleP Cyber Security Experts
- CopterPIX

Metaphor Vision Ltd.

Description of your organization

Metaphor is a small Israeli start-up, professional in Model Based System Engineering (MBSE) and Digital Engineering (DE).

Research areas

Model Based System Engineering – Development Process, Conceptual Design, Reliability Analysis, Digital-Twin

Specify your cooperation interest / Description of your partner of interest

Metaphor is looking for investment in product development – Model Based environment with Model Based Simulation & Digital-Twin

Keywords

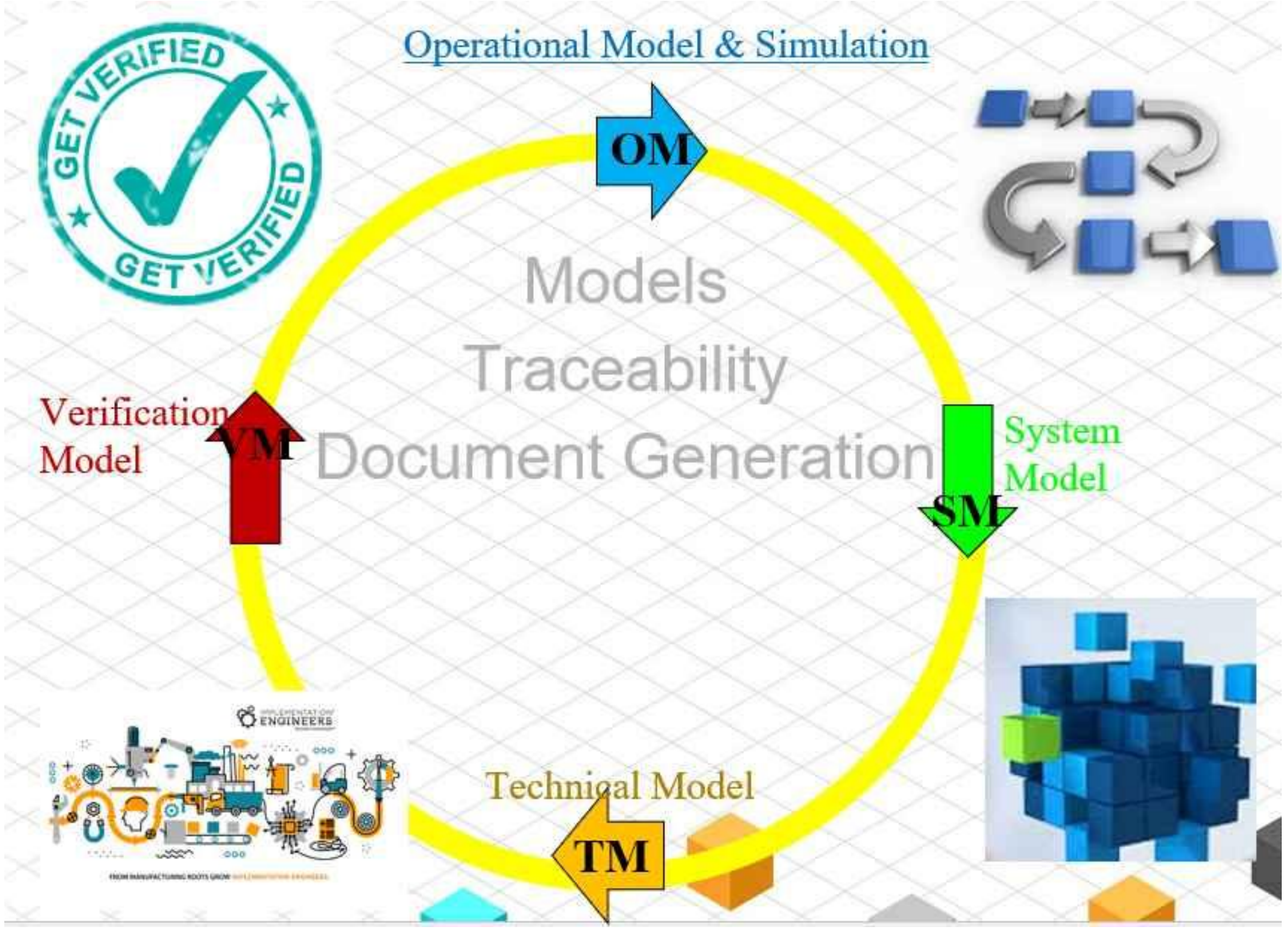
MBSE, DE, Simulation, Digital-Twin

Contact info

- Company:
  Metaphor Vision Ltd
- Country:
  Israel
- www.metaphor.co.il
- Contact:
  Eran Peleg,
  +972545346060,
  epeleg@metaphor.co.il;
  Eiad Bader
  +972506540434

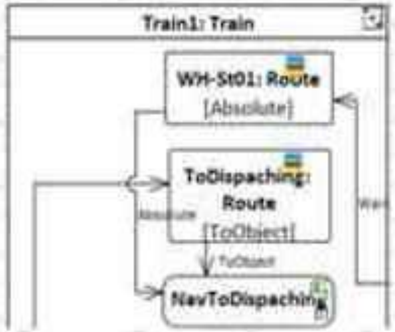
The US Department of Defense (DoD)
Concept

Metaphor Vision Concept



Vision – Model Based Digital-Twin

Modeling (MBSE)



Easy UML (MBSE) modeling environment with fast learning curve and automation

Simulation

Automatically convert MBSE into graphical simulation where all UML state are been represented and tested

Analytical & RT Engine

Optimization

Physical Object

Plas-Free LTD

Description of your organization

Plas-Free Ltd is a clinical stage HealthTech company specialized in the development and commercialization of vital fluid absorbent devices for blood purification.

Research areas

Plas-Free has developed an innovative extracorporeal plasma filtration device, named ClearPlasma, that effectively and specifically extracts plasminogen from plasma units. By doing so, ClearPlasma improves the coagulation properties of the plasma unit.

Specify your cooperation interest / Description of your partner of interest

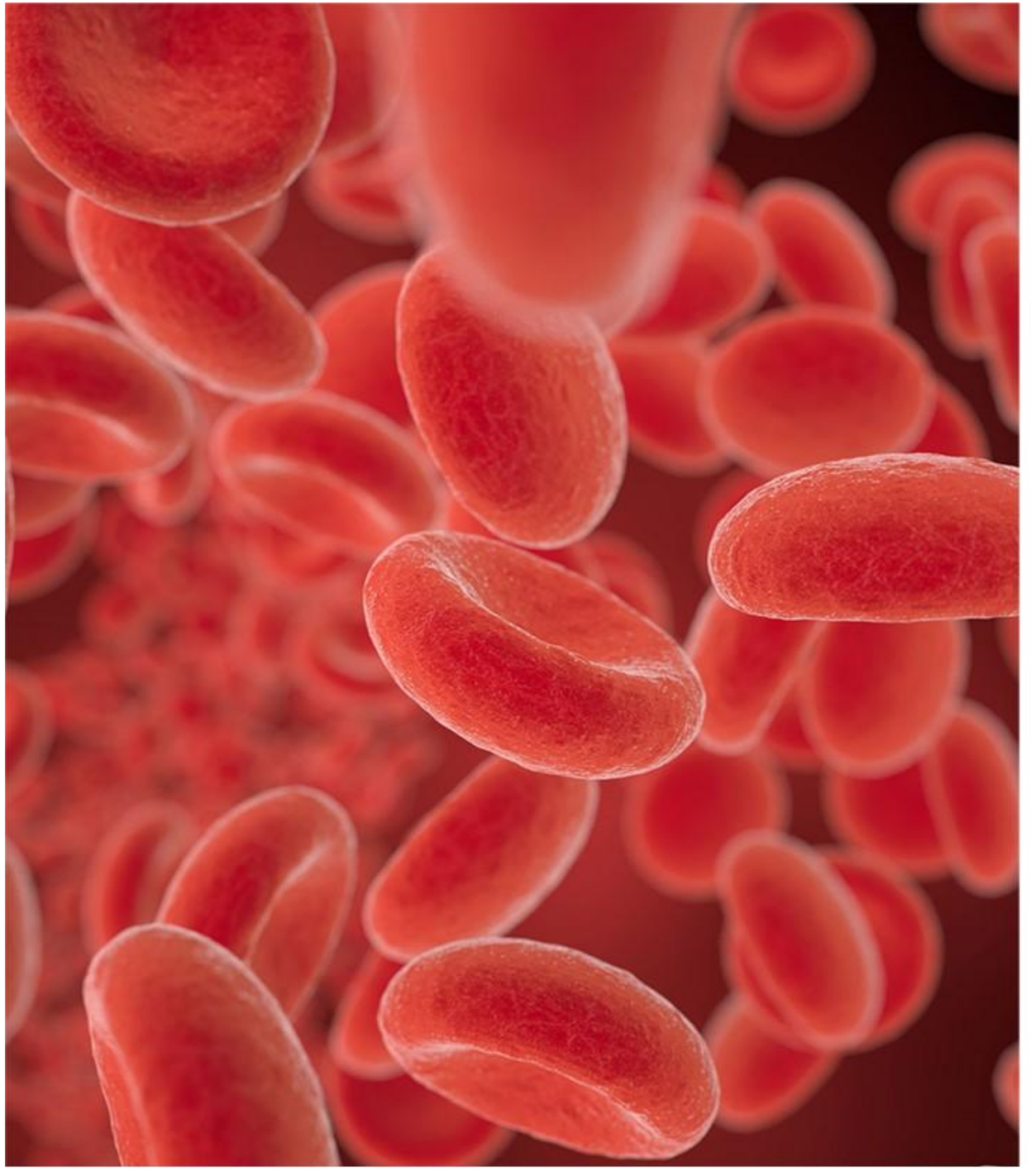
We are doing clinical study in Ostrava, Olomouc and Hradec Kralove in cardiac operation. We would like to submit local grants for additional clinical studies.

Keywords

Trauma, bleeding

Contact info

- Plas-Free LTD
- Israel
  (Startup)
- www.plas-free.com
- zeev@plas-free.com



The problem: Hemorrhage

- Hemorrhage is a loss of blood from damaged blood vessels. It is a life threating condition.
- Approximately 5 million people die every year around the world from accidental and non-accidental trauma.
- After a traumatic injury, hemorrhage is responsible for over 35% of pre-hospital deaths and over 40% of deaths within the first 24 hours.
- In addition to trauma, there are many other cases and conditions where excessive blood loss can occur: surgeries, brain hemorrhage, stomach ulcers, gastrointestinal bleeding and cancer among others.

PLAS-FREE'S solution

ClearPlasma - The new standard of care, innovative solution for patients with massive bleeding

PRODUCT

- Medical device, designed to remove Plasminogen and tPA from plasma to improve coagulation
- Filtration method – transforms blood plasma based on chemical adhesion
- Filtration of both Plasminogen and tPA enables the generate of stable clots and tPA Non-pyrogenic, sterile, single-use, cost effective, safe and easy to use

OUTCOME

- 50% less bleeding in patients with massive bleeding
- Cuts treatment costs in trauma and surgery

Clinical results

- **Upper Gastrointestinal Bleeding (UGIB), Open level phase. Main outcome safety (N=7):** No adverse events or thromboembolic event occurred when using ClearPlasma.

- **Upper Gastrointestinal Bleeding (UGIB) Double blind randomized control study. Primary outcome efficacy (N=50):** ClearPlasma reduced mortality, hospitalization duration, the use of blood products, and re-bleeding events. **Secondary outcome safety :** No adverse events or thromboembolic event occurred when using ClearPlasma.(https://clinicaltrials.gov/ct2/show/NCT04174989?term=clearplasma&draw=2&rank=2)

- **Coronary Artery Bypass or valve replacement surgery, Double blind randomized control study. Primary outcome efficacy (N=250):** Ongoing, already 63 patients enrolled. **Secondary outcome safety :** So far, no adverse events or thromboembolic event occurred when using ClearPlasma. (https://clinicaltrials.gov/ct2/show/NCT05542277?term=clearplasma&draw=2&rank=1)

CYBER READINESS PLATFORM

Description of your organization

TripleP is a leading cybersecurity company, renowned for its innovative **cycube.io** cyber readiness platform.

Aimed at Governments, Universities, banking & financial Institutions, SOCs/MDRs and others ,our platform **increases cyber readiness within organizations and enhances practical upskilling for cybersecurity professionals.**

With **cycube.io**, organizations can **prevent, mitigate, and respond to cyber attacks effectively**. The platform strengthens defenses, identifies vulnerabilities, and implements robust strategies to proactively combat evolving threats. From **onboarding, to workforce development to a better cyber posture**

It also empowers professionals with the skills needed to swiftly detect, mitigate, and respond to cyber incidents.

Research areas

3P: The link between **cyber security, AI & ML and Metaverse**

Specify your cooperation interest / Description of your partner of interest

1. Speed Roadmap development towards Artificial Intelligence
2. Create the link between IA and Cyber Security
3. Design and development of Metaverse Feature
4. Create an European Ecosystem

Contact info

- TripleP Cyber Security Experts
- Israel
- Start-up
- https://www.thetriplep.org/
- https://www.cycube.io
- Eduardo Borrotchin – VP Sales & BIZDEV
- Eduardo@thetriplep.org

TripleP
Practical Proactive Privacy

Being ready makes a difference.

Get Prepared for the Next Cyber Attack

CyCube

AI-Driven, Hands-On Cybersecurity Readiness Platform

Triplep | Cyber Security Experts (thetriplep.org)

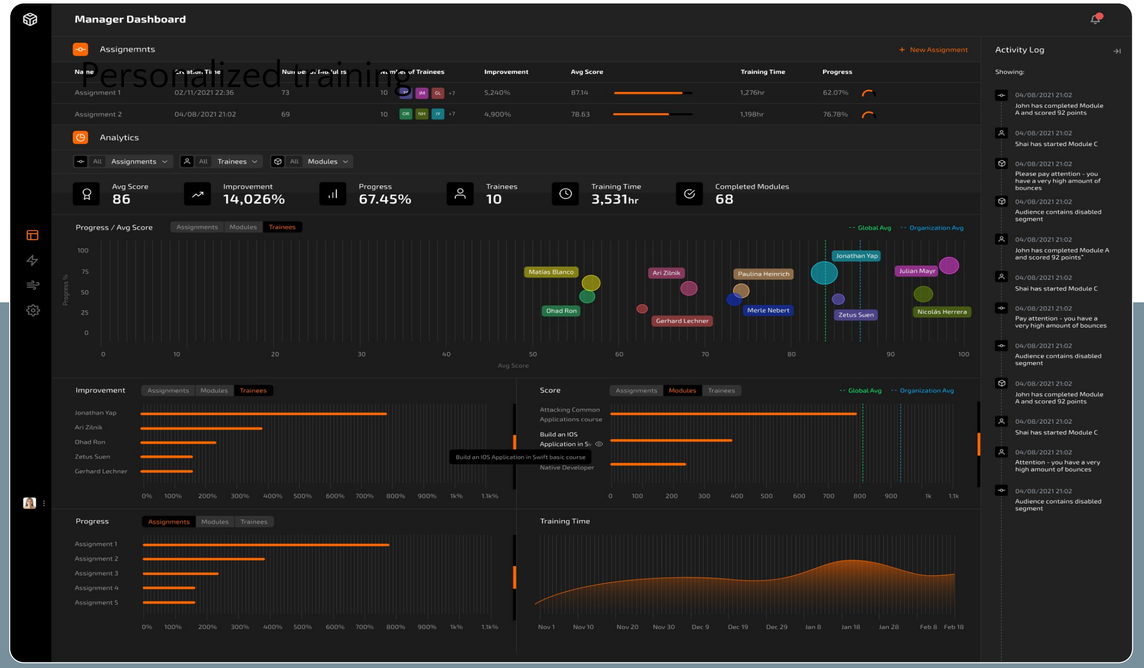
CyCube

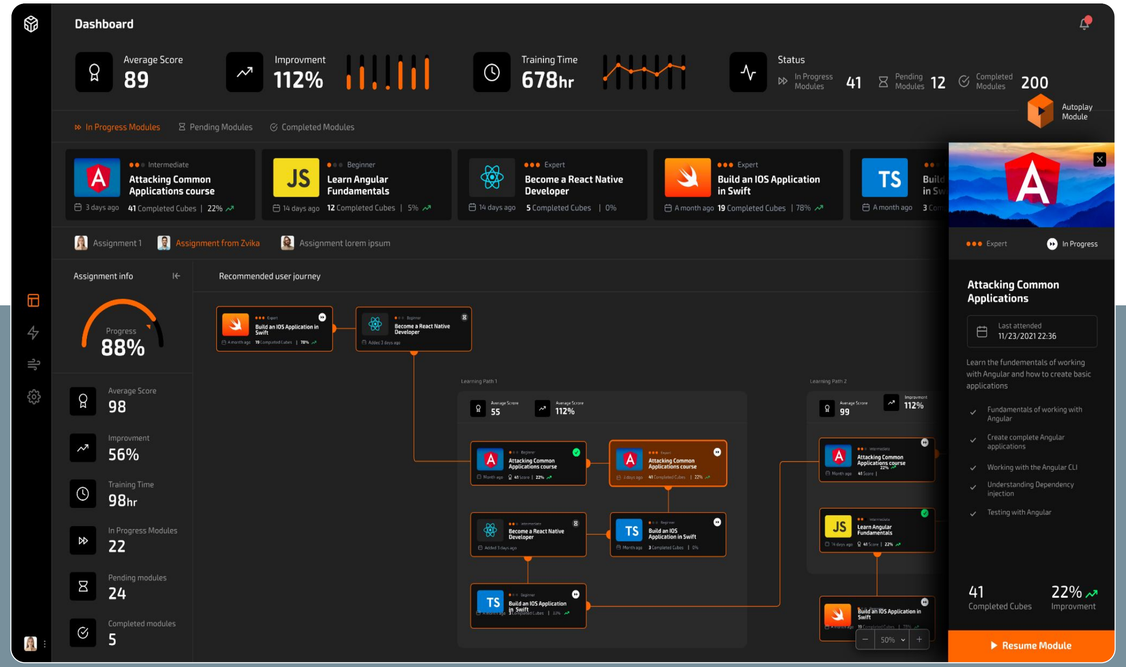
AI-Driven, Hands-On Cybersecurity Training Platform

CyCube

CYBER READINESS PLATFORM – CYCUBE.io

- **Dynamic AI driven cyber readiness platform** – unlock your true team potential skills
- **Personalized learning itinerary:** Cycube's engine adapts to trainees' capabilities in real-time making learning a personalized experience
- **AI Interactive Agent:** Get your cyber security personal assistant!!!!
- **Deep-Learning reinforcement algorithm** – Continuous improvement AI-driven
- **Respond to Incident & crisis quickly** – Be ready for the next Cyber attack
- **Perform Hyper realistic Simulations** remotely: Get your teams together in real drills and scenarios





PRODUCT DEVELOPMENT- ROADMAP

Cyber Readiness Platform

Incident Response

Dynamic playbooks:

Leverage emerging technologies such as AI, ML, and automation to augment crisis management and incident response processes, enhancing efficiency and effectiveness in handling incidents

Interactive Agent

Get assistance only whenever you really need it to ensure high success rate

Closely monitor the trainee performance

Hyper-Realistic Team Simulations

Complex real-world scenarios for the team to defend against

Using real organizational tools

Replicating the real org network structure

Metaverse Interactive Scenarios

Training engine adapts attack/defend strategies to trainee actions

The path to Metaverse

CopterPIX Ltd.

Description of your organization

CopterPIX Ltd. designs, develop and manufacture autonomous cutting-edge BVLOS UAV applications and solutions.

Research areas

Develop of NEW worlds' innovative Drones specified to most compressing customers' needs

Specify your cooperation interest / Description of your partner of interest

We Develop the worlds' first Hybrid Parallel Drone (includes simultaneously combustion & electrical motors (our patent) & will allow carry of 25-100Kg of payload for 1 hour or 50Km distance

Keywords

UAV UAS Drone Hybrid Parallel Payload

Contact info

- CopterPIX Ltd.
- Israel
- Limited Trade Company (LTD)
- www.copterpix.pro
- Igal Yarmolinsky, VP of Sales, igal.y@copterpix.pro, Tel#: +972-54-4646758

COPTER PIX PRO
AUTONOMOUS DRONES ADVANCED SOLUTIONS

CPX Open Framework

- CPX – Hybrid
- CPX – Drone in a BOX
- CPX – Multi-Rotor drones

CopterPIX is IDF's Multi-Rotor Drone provider 2020-2026

(A family of multi-rotor drones up to 25Kg MTOW)

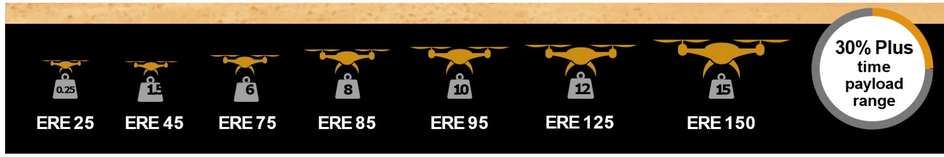
Order Backlog:	$20M
Revenue 2022:	$2.5M
Seed investment:	$6M
Grants:	$10M
Employees:	36
R&D Engineers:	18

$20M Contract for 6 years

MINISTRY OF D

360-Degrees , End-to-End State of the Art Multi-Rotor Drone Solutions

30% Plus time payload range



MTOW 250 gr to 50 kg

CPX

- Open Framework (Hardware and software)
- CPX SDK

Team

- R&D
- Engineering
- Prototypes

Aerial Services

- Licensed aerial operator
- Licensed pilots and UAV's
- Licensing services
- Training

Manufacture

- Licensed company
- Licensed manufacturer

COPTER PIXPRO
AUTONOMOUS DRONES ADVANCED SOLUTIONS

HAARGAZ GROUP 1932

COPTER PIXPRO
AUTONOMOUS DRONES ADVANCED SOLUTIONS

Established in 2018

https://www.youtube.com/watch?v=Wuj-Dg2_Ib8

Products Portfolio

INSPECTION LONG RANGE

Electric

ERE 95 MINI PRO

- Max takeoff: 14 kg
- Max payload: 5 kg
- Flight time: 100 min

HEAVY LIFTERS LONG RANGE

Full Redundancy

Hybrid

ERE 95 Hybrid TS

- Max takeoff: 25 kg
- Max payload: 9 kg
- Flight time: 7.5 hrs

Hybrid Kit

Electric

ERE 95 XL

- Max takeoff: 50 kg
- Max payload: 25 kg
- Flight time: 1 hrs 9 kg

DRONE in a BOX

FULLY AUTONOMOUS BVLOS SYSTEM

Portable Docking

Station APS300:
23 kg | 60x60x60 cm

- Micro-drone
- Dual camera
- Fully autonomous
- Quick-charge portable docking station
- Up to 25 min; 70 km/hrs
- AI & machine learning

COPTER PIX PRO
www.copterpix.pro

HAARGAZ GROUP 1932

TADITEL

HEAVY LIFTERS
LONG RANGE

Full Redundant

Hybrid

ERE 95 Hybrid TS

- Max takeoff: 25 KG
- Max payload: 9 KG
- Flight time: 7.5 Hours

Electric

ERE 95 XL

- Max takeoff: 50 KG
- Max payload: 25 KG
- Flight time: 1 Hour 9 KG

Hybrid Kit

Heavy Lifters

New arrivals

ERE 100 Hybrid Parallel

XL (Heavy lifter)

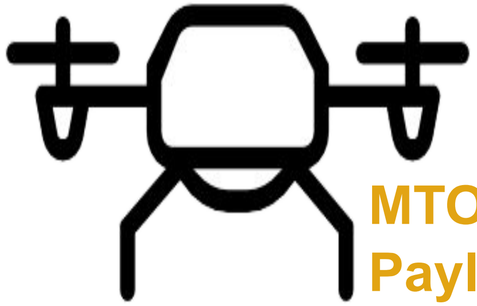
- + 25% payload
- + 25% endurance
- (up to 25KG payload

- Scalable to 100KG payload

GAME CHANGER INNOVATION

•Heavy Lifters

Electric and Hybrid



MTOW > 25 KG

Payload > 20 KG

Thank you

.

Igal Yarmolinsky ; VP of Sales

Mobile : +972 54 4646758

E-mail : igal.y@copterpix.pro

www.copterpix.pro

https://www.youtube.com/watch?v=Wuj-Dg2_Ib8

CZECH pitch presentations:

- Inference Technologies
- Icontio
- Merebit
- Lightigo

Inference Technologies

Description of your organisation

Our company is a provider of predictive manufacturing systems with the highest security standards. We have developed the DeepFab technology that combines several predictive systems to leverage historical data as much as possible and to prevent issues before they become detected.

Research areas

We focus on research and development of systems based on AI/ML for manufacturing processes. The systems focus on automated prediction of semiconductor functionality using process and quality control data.

Specify your cooperation interest / Description of your partner of interest

We are currently seeking partnerships on a project that involves the development of an AI/ML system for classifying defects in Silicon Carbide (SiC) epitaxial wafers. Our goal is to accurately predict which defects may result in immediate failure (killer defects) or could potentially cause failure in field application under certain conditions (latent defects), improving overall yield and reliability.

The project outline is on the following slides.

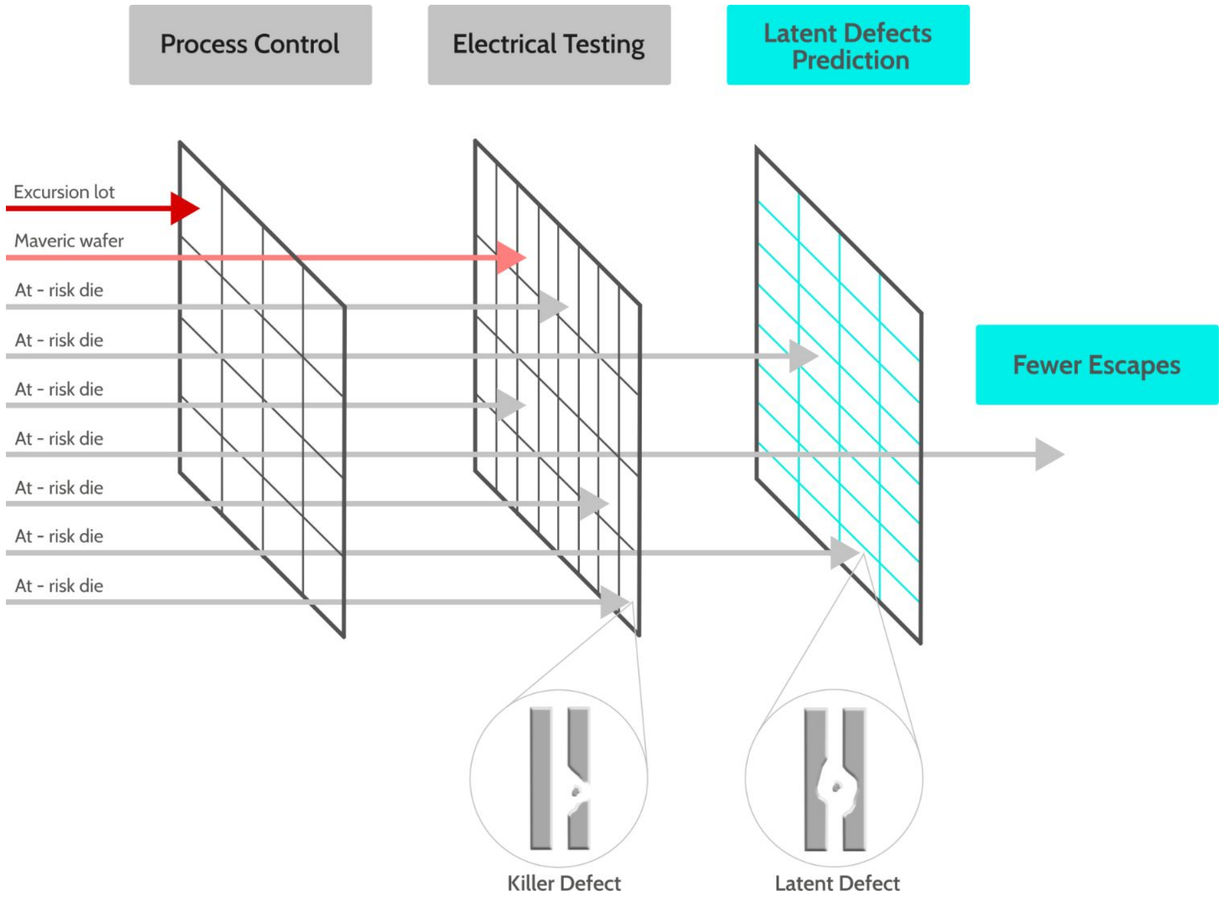
Keywords

Artificial Intelligence, Machine Learning, Silicon Carbide, epitaxial wafers, defect classification, latent defects, killer defects, semiconductor device reliability.

Contact info

- Inference Technologies
- The Czech Republic
- LLC
- http://www.inferencetech.com
- Petr Lenhard
  petr.lenhard@inferencetech.com
  Tel. +420 702 066 383

Defects with Risk to Reliability



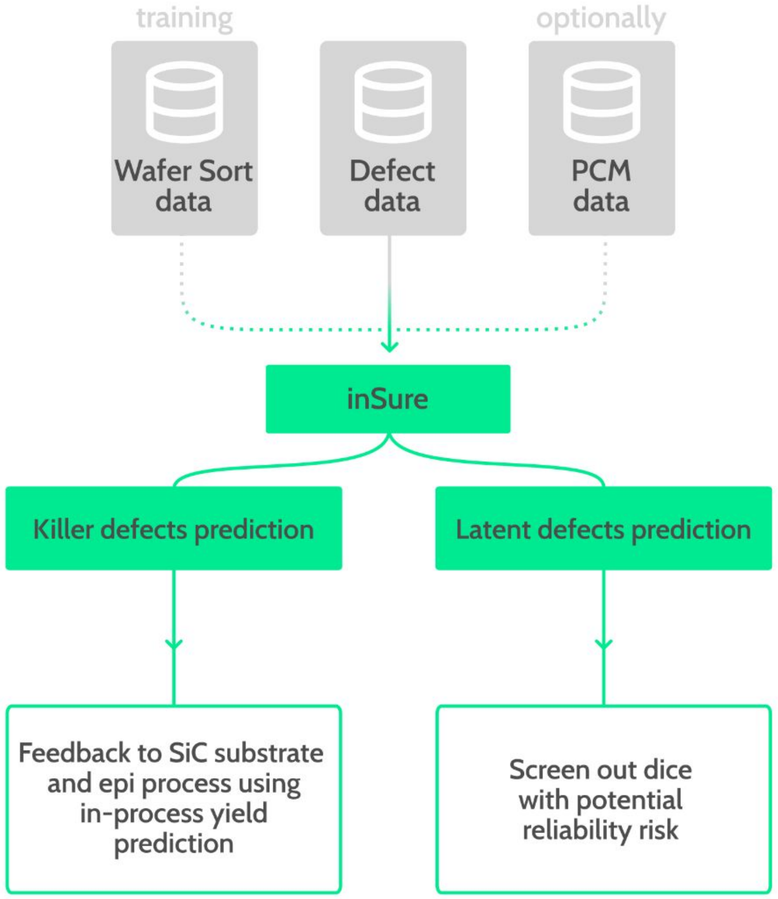
The Business problem

- Increasing semiconductor content per electronic system.
- Higher expectations from customers.
- Tightening requirements (<10DPPB)

The Technical problem

- Manufacturing defects categorized as “killer” if detected at WS or latent if activated after WS during field operations.

SiC Substrates and Epi Quality Prediction



The Project Scope

- The Machine Learning model designed to optimize the quality objective function.
- Model is trained on SICA/CANDELA data to identify killer and latent defects using Wafer Bin Maps as response.
- The system can provide feedback for process improvement of bare wafers and/or epi wafers immediately after defect inspection.
- Using killer and latent defects prediction, to screen out parts with higher reliability risk after Wafers Sort and to reduce Burn-in costs without affecting product reliability.

ICONTIO

Description of your organization

ICONTIO is an innovative Czech company founded in 2006.
Develops information technology for greater efficiency, security, and digitalization.

Research areas

E-Health, Telemedicine, Telecare, Digital home care, information security

Specify your cooperation interest / Description of your partner of interest

Cooperate with researchers and businesses

Keywords

- ICT, digitalization, cyber security, innovations
- Mobile and web applications for greater productivity and security
- Software solutions for management of strategic goals and projects, services, processes, documents, audit and risk management, lean management, continuous improvement
- Innovative products in telemedicine, telecare, ergonomics, information security and IoT
- SensCare.eu – the unique caregiving solution for home, social and hospital care

Contact info

- Icontio
- Czech Republic
- SME
- Icontio.com
- Emil Vařeka, CEO
- Emil.vareka@icontio.com

Portfolio

Our R&D partners

TaiDoc

CE DIGITAL & ENVIRO GROUPING

Progress | Flowmon

PHONEXIA

STORMWARE POHODA Ekonomický software

T-Mobile

Univerzita Palackého v Olomouci

Univerzita Tomáše Bati ve Zlíně

VŠB TECHNICKÁ UNIVERZITA OSTRAVA

VYSOKÁ ŠKOLA CHEMICKO-TECHNOLOGICKÁ V PRAZE

VYSOKÉ UČENÍ TECHNICKÉ V BRNĚ

ČVUT ČESKÉ VYSOKÉ UČENÍ TECHNICKÉ V PRAZE

MUNI Masaryk University

MEREBIT

Description of your organization

The team behind Merebit s.r.o. has more than 16 years of experience in the implementation of automation, development and production of customer and own products in the field of robotics, control and measurement.

Research areas

We can solve complex automation in the field of laboratory operations, biotechnology, pharmaceutical production, food industry as well as other industries. We are an integrator of robotic manipulators from the Swiss company Stäubli and the Japanese company Omron, supplying not only robots but also a wide portfolio of parts for robotics and automation.

Specify your cooperation interest / Description of your partner of interest

We search the partners for our project of automatic deacidification line for antique books and historical documents (see the slides below).

We can also propose any kind of automatization of medical instruments, measuring devices and instruments, sensors, and technological lines.

Keywords

Automatization, sensors, measuring devices, technological lines, robotics, book restauration, book deacidification

Contact info

- MEREBIT
- Czech Republic
- SME
- https://www.merebit.com/about-us
- **Robert Kadlec M.Sc.**
  kadlecr@gmail.com
- **Jan Zidek Ph.D.**
  jan.zidek@ceitec.vutbr.cz
  +420-737-880-887

Project 1: Automatic Deacidification Line for Books and Historical Documents

Czech consortium

MEREBIT ROBOTICS AND MEASUREMENT IN MEDICINE, RESEARCH AND BIOTECHNOLOGY
SME, Automatization

CEITEC VYSOKÉ UČENÍ TECHNICKÉ V BRNĚ
Research center, Brno Univ. of Tech.

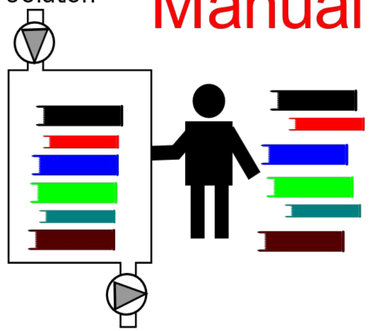
VIAALTA
SME, Engineering

National Library of the Czech Republic
National authority for archiving of books

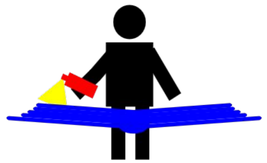
Acid hydrolysis of books >>> Decreased durability >>> Difficult to archive
In Czech republic over 30 mil. of books need to be deacidified.

Currently

Mass deacidification
solution
Manual

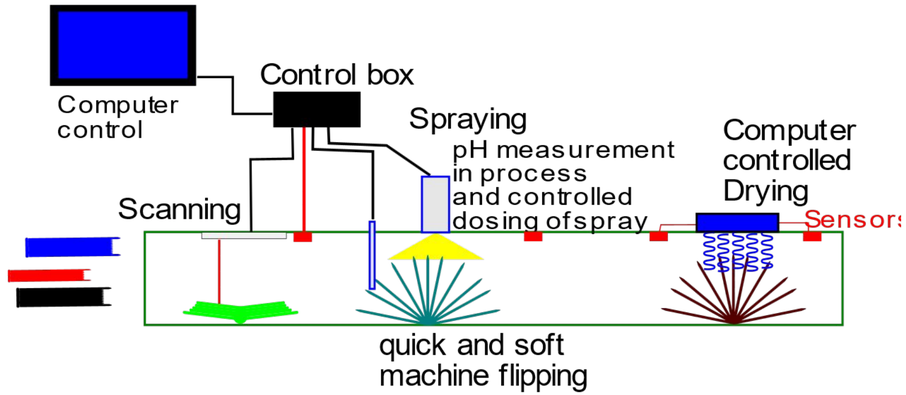


Soft handling of book
Manual



Our proposal

Automatic line



Project 2: Automated Industrial Insect Farming

Consortium

MEREBIT ROBOTICS AND MEASUREMENT IN MEDICINE, RESEARCH AND BIOTECHNOLOGY

CEITEC VYSOKÉ UČENÍ TECHNICKÉ V BRNĚ

VIAALTA

Benefits

1. Waste Management Kitchen Waste Utilization
2. Protein Source Nutrient-Rich food high in protein
3. Sustainable Feed
4. Meat Alternative

Process/ Operations

Egg Collection: Using precision robotics for delicate handling and effective collection of eggs.

Larvae Rearing: Automated feeding and environmental control systems for optimal growth conditions.

Separation Process: Utilizing machine learning and imaging technologies to separate larvae at different stages of development.

Waste Management: Automated systems for managing waste and keeping the cultivation environment hygienic.

Type of partner that we search

Company or Institution in field of

- Automatization or mechanical engineering for supply of sub-technologies
- Programming of control software
- Institutions or companies in Israel involved in mass restoration and conservation of antique books
- Chemistry
- Libraries and Archives
- Experts for food and agriculture

Lightigo, s.r.o.

Description of your organization

- SME for commercialization and transfer of LIBS instrumentation
- established in 2019 as a start-up from **CEITEC Brno University of Technology**
- more than 20 years of experience with LIBS and instrumentation development
- long-term focus on industrial utilization and space

Research areas

- analytical chemistry, transfer of Laser-Induced Breakdown Spectroscopy to R&D and industry
- lab-based systems, correlative microscopy/imaging, machine learning
- **Space applications, prospecting of lunar regolith**

Specify your cooperation interest / Description of your partner of interest

- investors, distributors
- R&D cooperation – development of analytical devices (laser, spectrometers)
- industrial partners – transfer of LIBS technology, on-line implementation

Keywords

- analytical chemistry, elemental analysis, surface mapping
- laser, ablation, spectroscopy, machine learning
- Industry 4.0, geology and mining, civil engineering, fourndy, polymer industry
- Space applications, prospecting, In-Situ Resource Utilization

Contact info

- Lightigo, s.r.o.
- Czech Republic
- SME
- www.lightigo.com
- Marek Rozehnal, CEO

  Pavel Pořízka, CSO

Lightigo

Product line and distribution

Lab-based analytical systems (LIBS)

LIBS FireFly – main product

- solution for rapid elemental imaging
- universal solution (from biology to industry)
- SyncRay – digital dealy/pulse generator
- 3-axes motorized stage

BRNO UNIVERSITY OF TECHNOLOGY

Under development (LIBS)

LIBS DragonFly – advanicng state-of-the art LIBS instrumentation

- vacuum chamber – simulating atmospheres (Lunar, Martian)
- enhanced safety measures - detection of toxic metals
- correlative microscopy/imaging – ext. to ICP-MS/OES and Raman
- advanced machine learning and data libraries

Laser sources

- ns laser source (10 ns pulse duration, 50 Hz, > 50 mJ @ 1064 nm)
- fs laser source (< 300 fs pulse duration, 1 kHz, > 1 mJ @ 1064 nm)

T A
Č R
Technology Agency of the Czech Republic

IP assets and protection

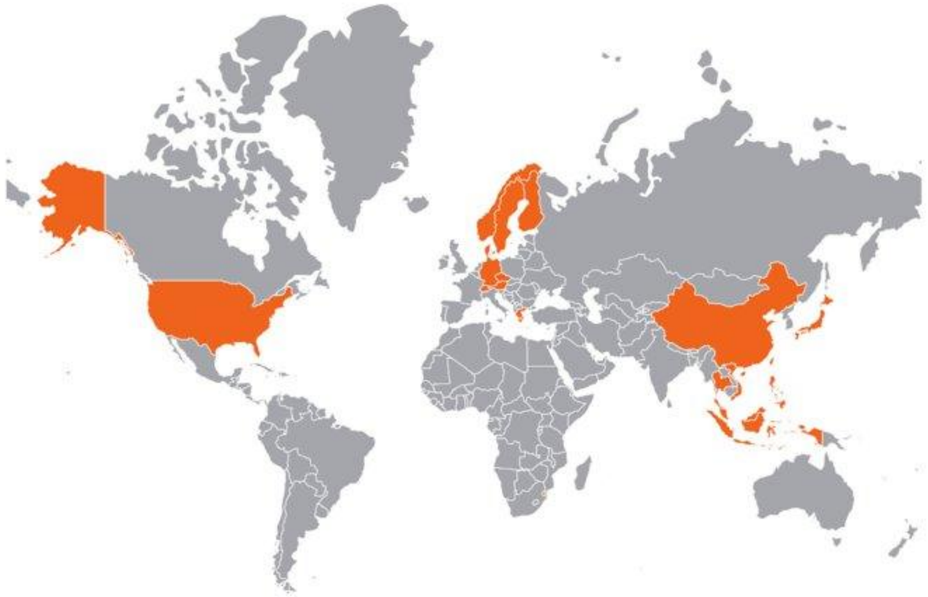
Licenses

- The vacuum chamber (Central European Institute of Technology - CEITEC)
- LIBS equipment for chemical analysis in plastics (Czech Plastic cluster)

Proven technology

- LIBS for metalurgical applications

Current distribution network of Lightigo, s.r.o.



Lightigo

Industry 4.0 and Space applications

esric powered by LSA, ESA & LIST

esa

LSN

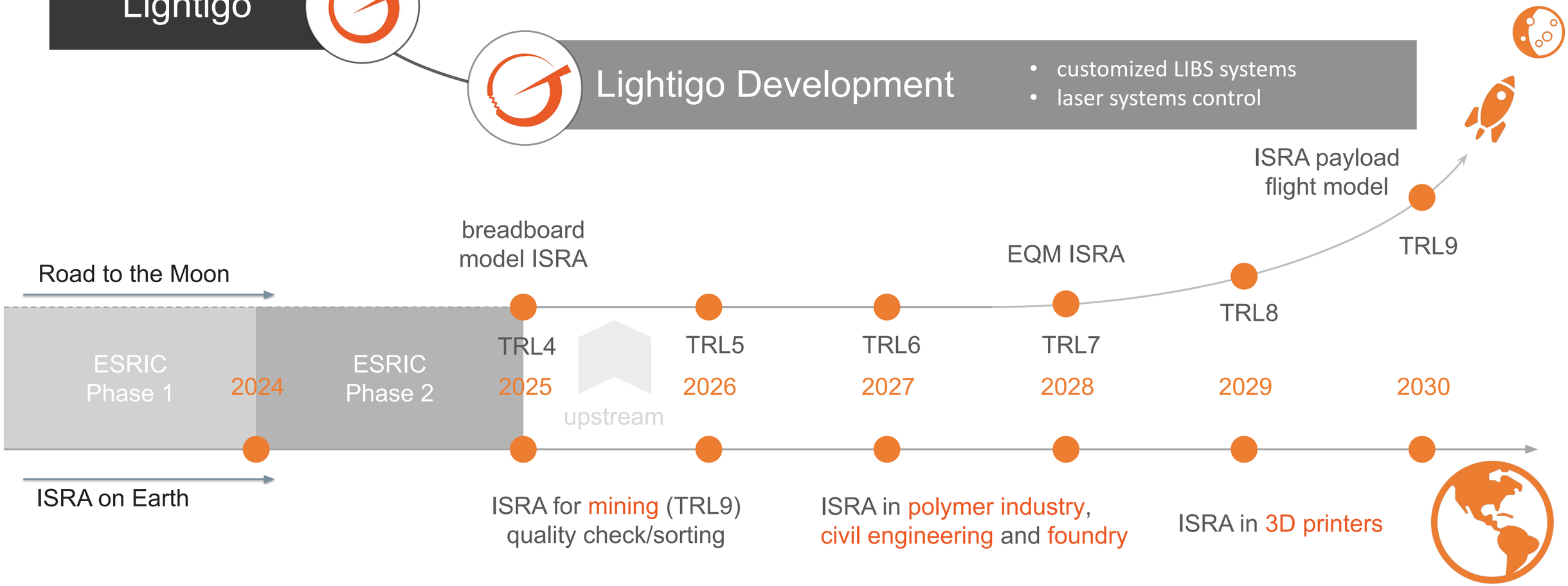
Lightigo

Lightigo Space

- LIBS for prospecting of Lunar/Martian regolith
- unique optical and spectroscopic solutions

Lightigo Development

- customized LIBS systems
- laser systems control



TA CR Partnering tool – Find your project partner

TA CR Partnering Tool

Partnering Tool - Find your project partner

If you are interested in finding a suitable foreign partner or you would like to offer your cooperation, use the button bellow for registration.

POST A PARTNER REQUEST

The Technology Agency of the Czech Republic helps Czech enterprises and research organizations to establish cooperation in the area of applied research and innovations.

TACR Partnering Tool

Partnering tool: Partner Request

The Technology Agency of the Czech Republic helps both Czech and foreign enterprises and research organizations to establish cooperation in the area of applied research and innovations. If you are interested in finding a suitable partner for research cooperation, please, fill in this form, which serves as a basis for bilateral cooperation under the DELTA 2 Programme.
For more information about our programmes visit our website: www.tacr.cz or www.tacr.cz/en

Přihlaste se do Googlu, abyste mohli uložit dosavadní postup. Další informace

* Označuje povinnou otázku

Contact Name *

Vaše odpověď

Contact Surname *

Vaše odpověď

Email Address *

Vaše odpověď

Phone Number

Vaše odpověď

Name of Organisation/Institution/Company *

Vaše odpověď

Country *

Vyberte

Type of organisation *

- research organisation
- small enterprise
- medium enterprise
- large enterprise
- public administration

Project

Research area *

The selection below is based on the classification and distribution by Fields of Research and Development (FORD) avaliable here: https://read.oecd-ilibrary.org/science-and-technology/frascati-manual-2015_9789264239012-en#page1

- 1. Natural Sciences
- 1.1. Mathematics
- 1.2. Computer and information sciences
- 1.3. Physical sciences
- 1.4. Chemical sciences
- 1.5. Earth and related Environmental sciences
- 1.6. Biological sciences
- 1.7. Other natural sciences
- 2. Engineering and Technology
- 2.1. Civil engineering
- 2.2. Electrical engineering, Electronic engineering, Information engineering
- 2.3. Mechanical engineering

Keywords *

Vaše odpověď

Please specify your cooperation interest *

Describe your project idea here

Vaše odpověď

Description of your organisation *

Vaše odpověď

Description of your partner of interest *

Please describe the type of partner you are looking for and the tasks they would perform in your project

Vaše odpověď

Programme of interest

- DELTA 2 (bilateral international R&D cooperation)

Localities of interest *

This is the preliminary list of the localities. If you are a foreign enterprise/research organization, please note that you are expected to choose your own locality and/or the Czech Republic only.

- Czech Republic
- Federal Republic of Nigeria
- Federative Republic of Brazil
- Jiangsu
- Republic of Korea
- Saxony, Federal Republic of Germany
- State of Israel
- Taiwan
- Zhejiang

Request expiration date *

Please, specify day/month/year, when this request expires. DELTA 2 Programme is expected to run until December 2025.

Datum

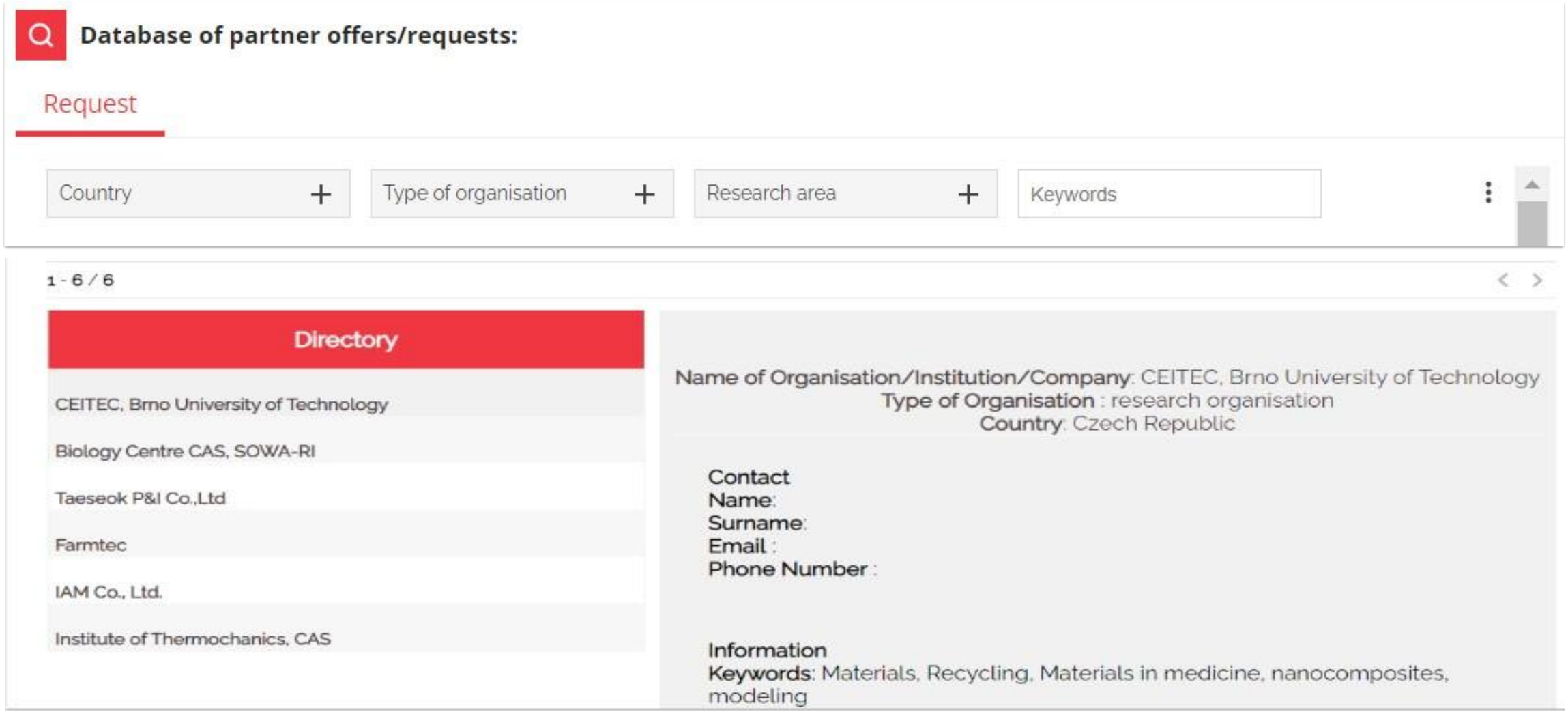
dd.mm.rrrr

By filling in the data in the form and by sending it, I give my consent to the Technology Agency of the Czech Republic with its registered office at Evropská 1692/37, Praha 6, 160 00, established pursuant to § 36a of Act No. 130/2002 Coll. on support of research, experimental development and innovation from public funds and on the amendment of some related acts, to the processing of the indicated personal data for the purpose of their publication on the website (www.tacr.cz/en/partnering-tool-2/) in order to enable establishment of cooperation with other entities and to inform the data subject about possibilities of international cooperation. This consent to the processing of personal data is becoming the legal basis for the processing of personal data of the data subject. The principles of processing of your personal data are described in document below: https://www.tacr.cz/dokumenty/consent-to-the-processing-of-personal-data_encz-version

- Yes

TACR Partnering Tool

https://www.tacr.cz/en/partnering-tool-2/



Questions & Answers

Basic National Conditions - Call for Proposals 2023

	TA CR (Czech)	**IIA** (Israeli)
Submission deadline	July 19, 2023	September 11, 2023 till 12:00!!!
Applicants (consortia)	enterprise (lead), other participants (research organization, university, other enterprise)	enterprise (lead), other participants (research institute, university or others) as subcontractors
Areas of R&D	Project proposals in all technological areas of application are accepted. TA CR can not support solely defence projects and medical research projects with a predominance of clinical studies activities.	
Funding intensity at max. (per project)	up to 74 %	50 % (+ regional incentives for companies located in "development zone")
Project length	24 months max.	

For more information visit:

DELTA 2 Programme
https://www.tacr.cz/en/5th-call-for-proposal/
In Czech:
https://www.tacr.cz/soutez/program-delta-2/pata-verejna-soutez-5/

Bilateral R&D Incentive Programme
https://innovationisrael.org.il/en/program/bilateral-programs-parallel-support
In Hebrew:
https://innovationisrael.org.il/kol-kore/6666

Closing remarks

Thank you
for attending our webinar!