



Brazilian-Czech joint R&D call for proposals 2021 webinar (EMBRAPPII/SENAI/TA CR)

29. 3. 2021

Tana Halova Perglova - The Technology Agency of the Czech Republic (TA CR)

Katerina Feiglova - The Technology Agency of the Czech Republic (TA CR)

Denise Neddermeyer - The Brazilian Agency for Research and Industrial Innovation (EMBRAPPII)

Aline Viotti Bäuerle - National Service for Industrial Training (SENAI)

Agenda

- Welcome and introduction (5 min)
- Presentation of specific requirements for 3rd call for proposals (20 min)
- Presentation of a matchmaking tool (5 min)
- Presentation of a running project - example of good practice (10 min)
- Pitch presentations (20 min)
- Questions & answers (30 min)



BRAZILIAN-CZECH JOINT CALL FOR PROPOSAL

overview



Priority areas of research



Priority areas of cooperation:

- ▶ **Hydrogen**
- ▶ **Recycling & Waste Management**
- ▶ **Mobility and Logistics**
- ▶ **Artificial Intelligence**

Projects proposals from other areas are also welcome!

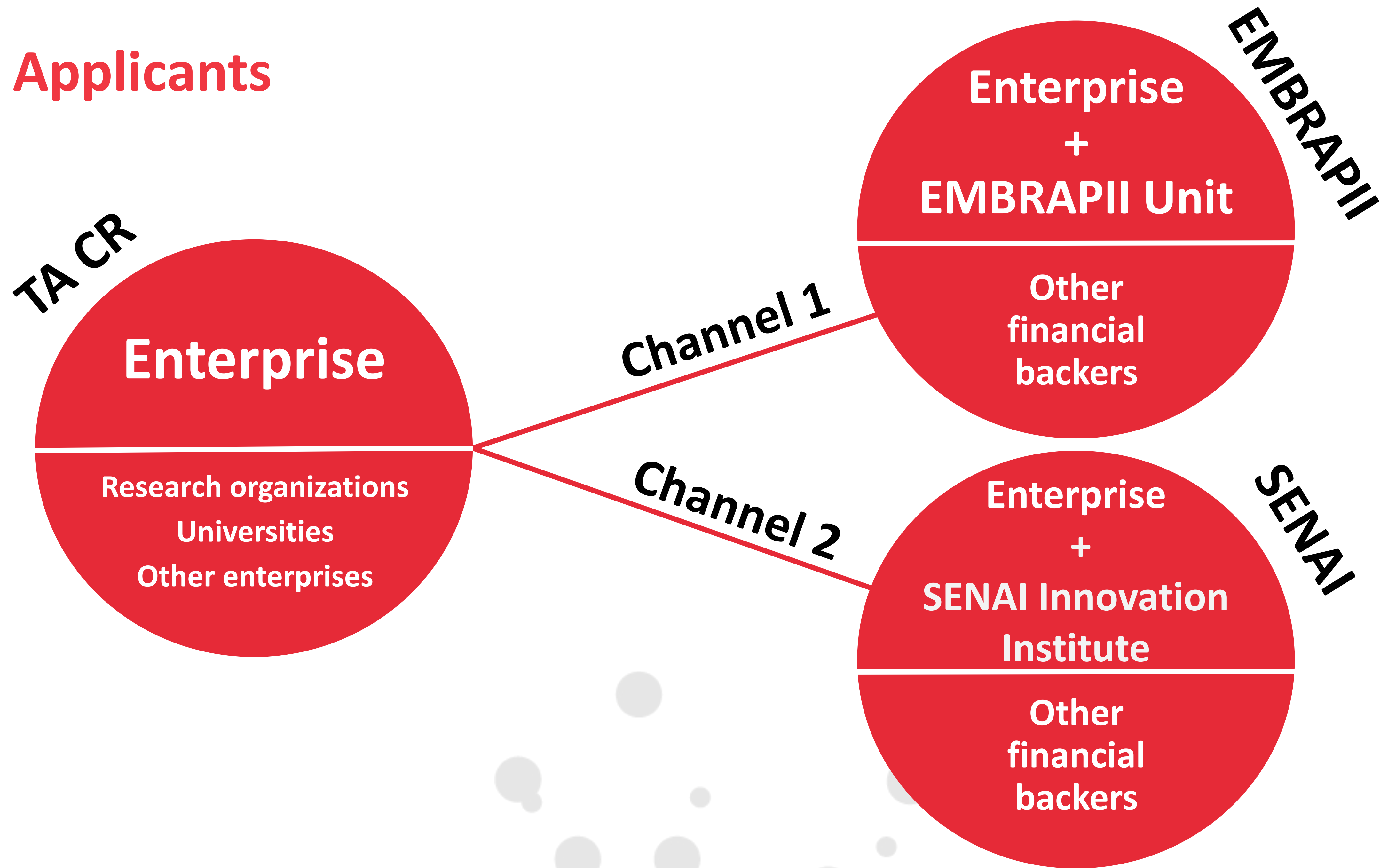
TA CR does not support defence and medical research!



Preliminary schedule

3rd Joint Call for Proposals	
Launch of the call	12 May
Project submission	13 May - 14 July
Evaluation period	15 July - 29 November
Results' announcement	30 November
Obligatory start of projects	January 2022 - March 2022
Project length	12 - 36 months

Applicants

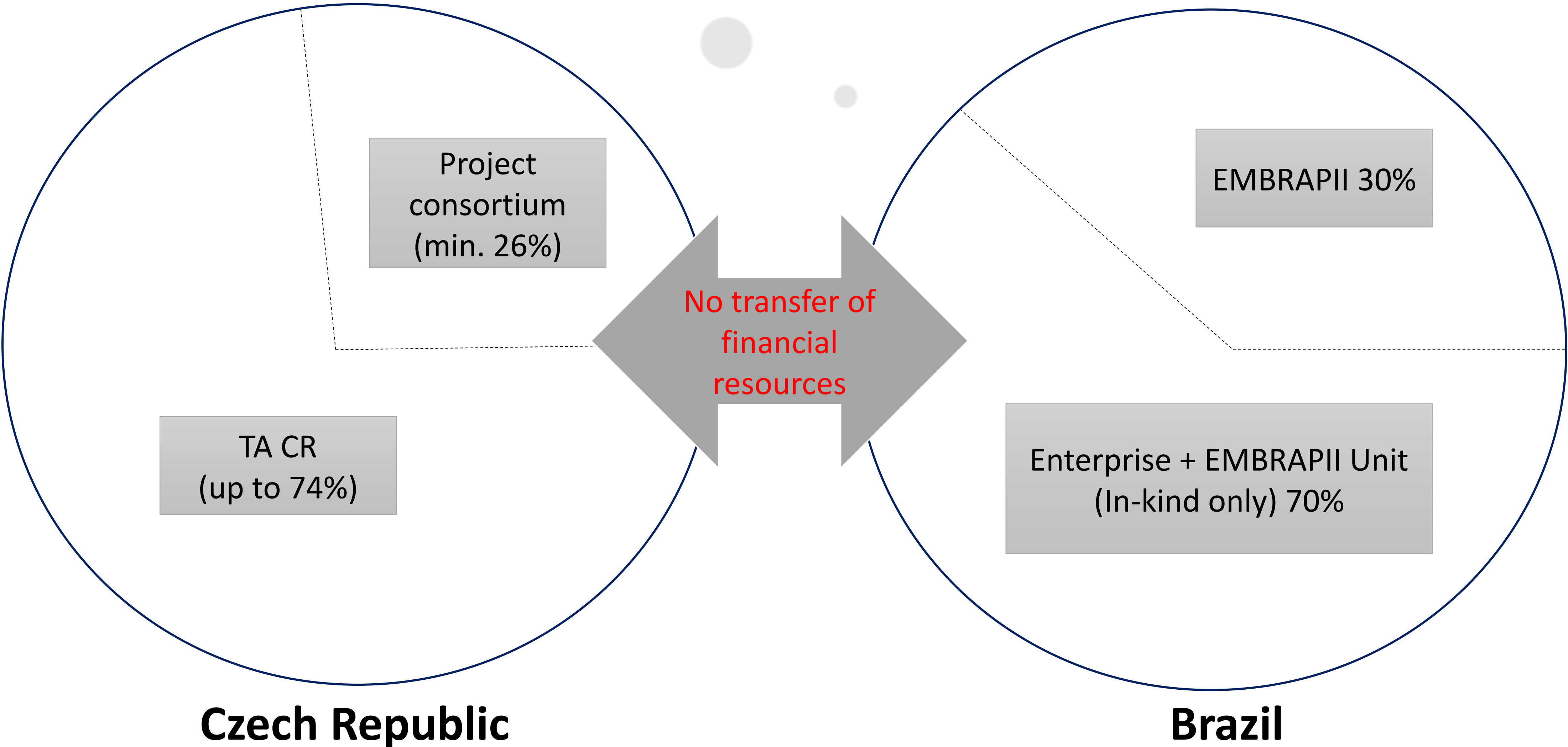




FUNDING SCHEME

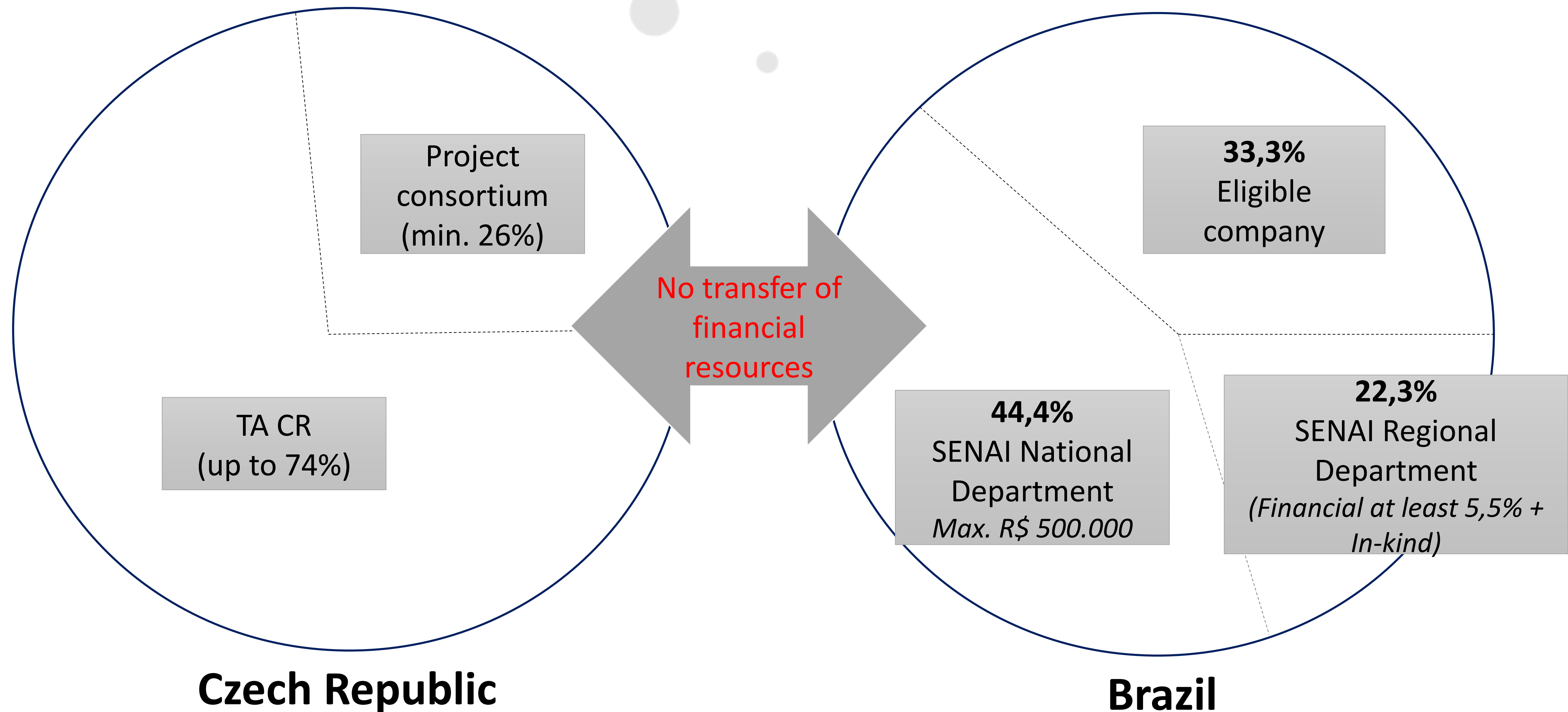


Funding scheme: TACR - EMBRAP II



TA CR & EMBRAP II will fund the respective nationals in the selected consortia in accordance with their national funding rules.

Funding scheme: TACR - SENAI



TA CR & SENAI will fund the respective nationals in the selected consortia
in accordance with their national funding rules.

Funding scheme - TA CR (Delta 2 Programme)

- Total expenditure: 300 mil. CZK (13,4 mil. USD)
- Maximum amount of funding per project: not set
- Maximum funding intensity per project: up to 74%

	Industrial research		Experimental development	
Type of applicant	Max. allowable aid intensity	Max. allowable aid intensity with demonstrated effective collaboration with a research org.	Max. allowable aid intensity	Max. allowable aid intensity with demonstrated effective collaboration with a research org.
Small enterprises	70%	80%	45%	60%
Medium enterprises	60%	75%	35%	50%
Large enterprises	50%	65%	25%	40%
Research org.	100%	-	100%	-

* The aid intensity (%) of a project is the ratio of funding amount to the total eligible project costs.

* The aid intensity (%) of an applicant or project partner is the ratio of the amount of its funding to its total eligible costs.

Funding scheme - EMBRAP II

- Eligible for this channel: all 61 EMBRAP II Units + 15 EMBRAP II Units that are also SENAI Innovation Institutes
- Total expenditure: There is not a fixed amount for this call. However a balance among the participants' share is recommended.

Funding scheme - SENAI

- Eligible for this channel: all 27 SENAI Innovation Institutes among them 15 SENAI Innovation Institutes that are classified EMBRAPPII Units
- Total funding amount SENAI National Department for this channel: R\$ 2 000 000 (360 960 USD)
- Maximum allocation per project from SENAI National Department: R\$ 500 000 (90 239 USD)
- Maximum funding intensity per project: 44,4%
- Will be complemented by funding through SENAI Regional Department by at least 22,3% for each project (funding is in-kind and financial)



APPLICATION & EVALUATION PROCESS



Submission process

TA CR

Submission of the project proposal via ISTA (electronic system)

Compulsory annexes:

- Sworn statement of the applicant
 - Common proposal
- Annexes connected to project results

Deadline: 14. 7. 2021

EMBRAPII (Channel 1)

EMBRAPII Units that are **SENAI**: the application should be submitted in accordance with the SENAI application system;

EMBRAPII Units that are **not SENAI**: There is no form or application to be submitted. The negotiation of the project must be done directly with the EMBRAPII Unit that will develop the project. Then EMBRAPII Unit will insert the information into SRINFO System of EMBRAPII.

Deadline: 14. 7. 2021

SENAI (Channel 2)

Submission of the project proposal via Innovation Platform (on the SENAI site) preferably in English by Innovation Interlocutor from SENAI Regional Department

Compulsory annexes:

- Confirmation of the intl. partner
- Letter of intent for each company or other participating funding backer

Deadline: 14. 7. 2021

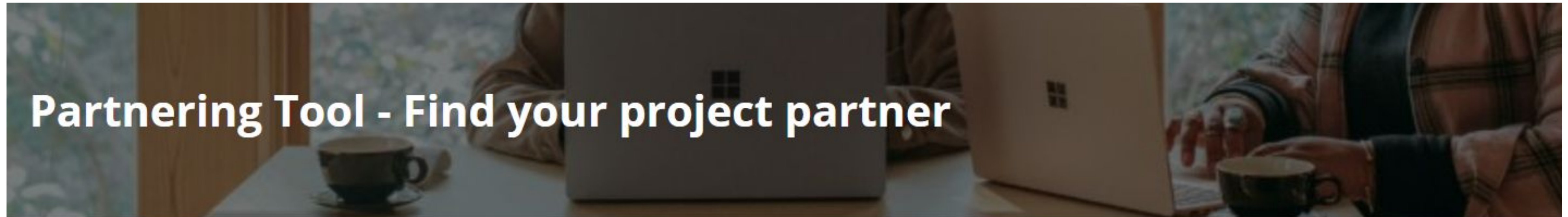
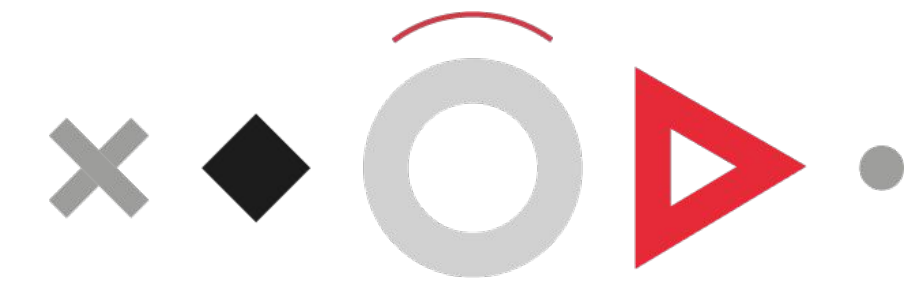
The application must be approved both by TA CR and EMBRAPII/SENAI to receive funding!



HOW TO FIND YOUR MATCH?



TACR Partnering Tool



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

Post a Partner Request

Post a Partner Offer

I am developing/have developed a project idea and I am looking for a partner.

I wish to offer my services to a project team in specific areas of research and development.

TA CR

DELTA 2 PROGRAMME CONTACT POINT

Ms. Kateřina Feiglová

International Cooperation
Coordinator

katerina.feiglova@tacr.cz

Website:

<https://www.tacr.cz/>

DELTA 2 Programme:

<https://www.tacr.cz/en/delta-2-programme/>

For your questions:

<https://helpdesk.tacr.cz/>

EMBRAPII

EMBRAPII CONTACT POINT

Ms. Denise Neddermeyer

coop.czech@embrapii.org.br

Website:

www.embrapii.org.br

SENAI

SENAI INNOVATION PLATFORM CONTACT POINT

**Ms. Juliana Velasques de Melo
Oyama**

Technical Advisor

juliana.oyama@senaicni.com.br

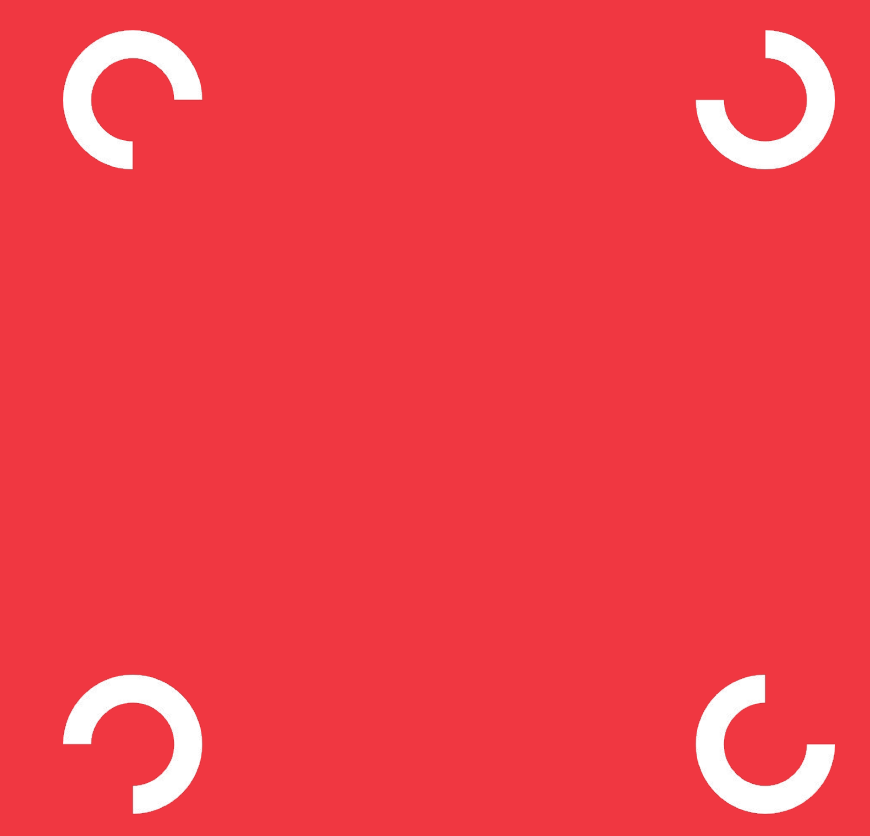
Ms. Aline Viotti Bäuerle

International Cooperation
Coordinator

aline.bauerle@sesicni.com.br

Website:

www.plataformainovacao.com.br



PRESENTATION OF A RUNNING PROJECT

Development and Optimisation of Laser-Based Additive, Subtractive and Transformative Platforms for the Tooling Industry

Speaker: Jan Brajer



Delta 2 - DOLASTOOL

Jan Brajer
HiLASE Center

Delta 2 - DOLASTOOL



1



4



2



5



3



6



INSTITUTE OF THERMOMECHANICS
OF THE CAS, V. V. I.



Delta 2 - DOLASTOOL

- Development and Optimization of Laser-Based Additive, Subtractive and Transformative Platforms for the Tooling Industry (DOLASTOOL)
- CZE 1.1.2020 – 31.12.2022
- CZE – 870 000 USD

- BRA 1.7.2020 – 30.6.2023
- BRA – 360 000 USD

Subtractive and Transformative Laser Manufacturing

LST



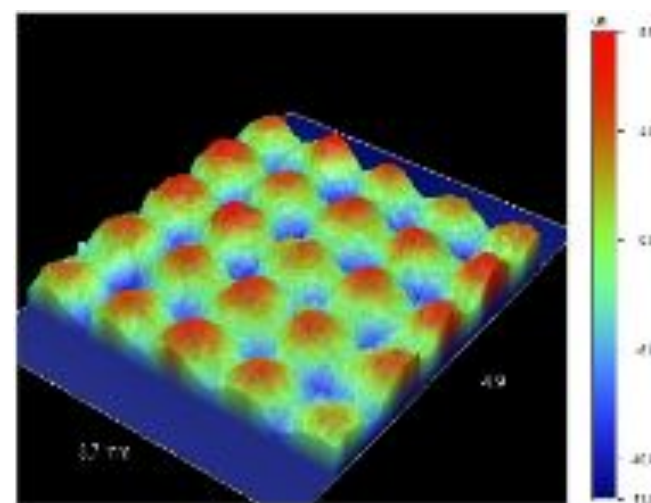
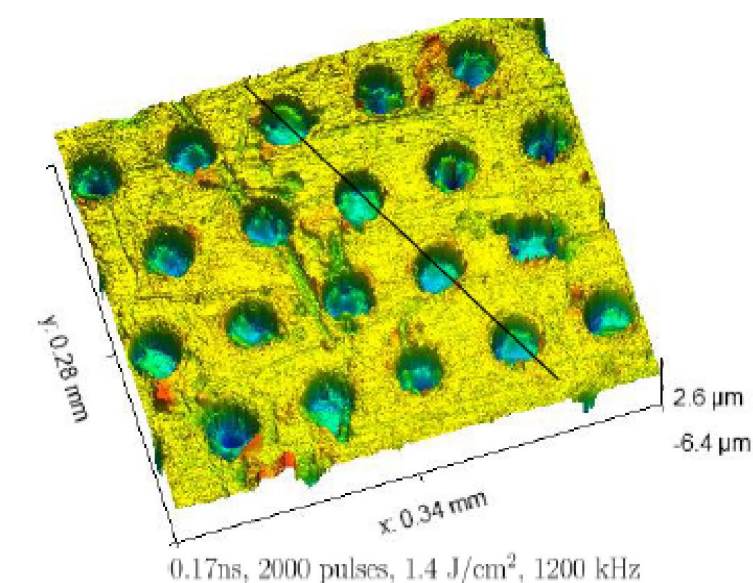
Metallic materials

Controlling friction forces

Controlling wettability

Controlling adhesion forces

Controlling optical properties



LSP

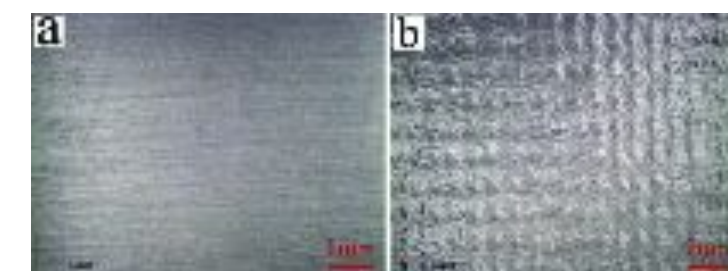
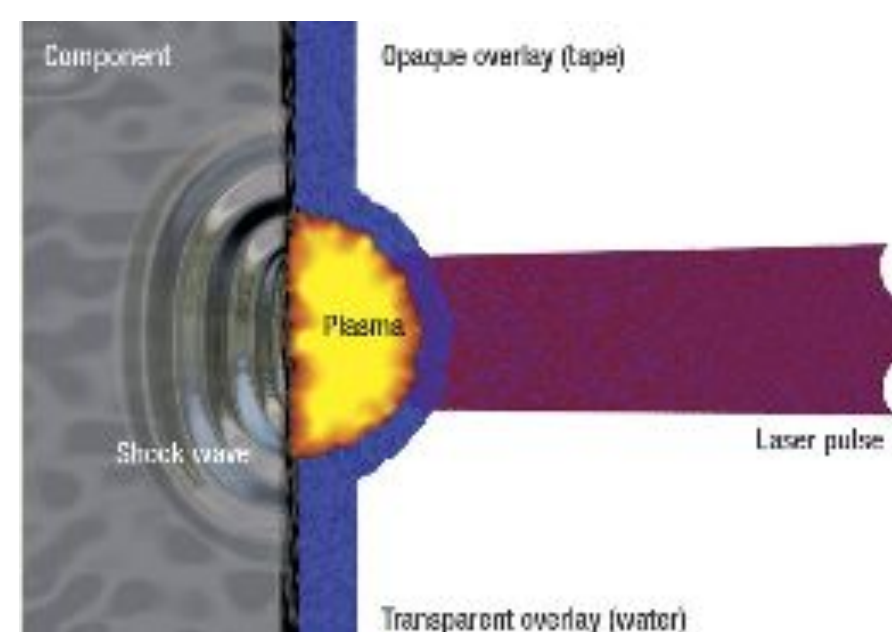
Metallic materials

Compressive residual stress

Controlling Corrosion resistance

Controlling fatigue resistance

Controlling mechanical properties



End-effector

Industrial class closed machines

Robotic arms



Q & A

- How was the partnership established?
- How did you choose the project partners?
- Why did you decide to work with Brazil?
- How does an international partnership work for you (even with regard to the current situation)?
- How do you have tasks divided with your partners and how do you communicate their fulfillment together?
- What does international cooperation bring you?
- What is the most difficult part of international cooperation?

"lessons learned"

- Brazilian partners and especially SENAI is very well developed.
- Brazilian industry needs are very similar to Czech.

Conclusion

- Great opportunity to work on international project
- Complementary in research and no competition in production

THANK
YOU!

Jan Brajer

Industrial laser applications



Jan.brajer@hilase.cz



<https://www.linkedin.com/in/jan-brajer-ab337450>



+420 736 288 646



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 739573 (HiLASE CoE)



EUROPEAN UNION
European Structural and Investment Funds
OP Research,
Development and Education



Science and
Technology
Facilities Council

PITCH PRESENTATIONS



PrimeCell Bioscience Inc.

SENAI Innovation Institute in Electrochemistry

**University of West Bohemia - Regional Technological
Institute**

ISI for Advanced Materials

Červenka Consulting s.r.o.



SENAI Institute of Embedded Systems

SENAI Institute of Innovation in Polymer Engineering

Gauss Algorithmic

**SENAI Innovation Institute for Information and
Communication Technologies**

Czech University of Life Sciences

PrimeCell Bioscience Inc.

Description of your organisation

PrimeCell is the biotech company focusing on discovering and clinical testing of biological drugs and medicinal technologies, which are changing genes' and cells' parameters to support regeneration of human tissues and organs. A separate direction is the development of innovative methods, materials and procedures enabling preclinical and clinical testing of modern technologies.

Research areas

- Biomaterials
- Innovative medical technologies
- Gene manipulation
- Protein based research
- Cell manipulations
- Tissue based research

Specify your cooperation interest / Description of your partner of interest

- Development & transfer of know-how
- Translation of know-how toward product
- Regulatory affairs support
- Investment to IPR
- Clinical research (academic/commercial clinical trials)

Keywords

Cell-based products, R&D, Translational research, Biomaterials, Biotechnology, Regulatory support

Contact info

PrimeCell Bioscience Inc.

The biotechnological company

www.primecell.eu

Czech Republic, Ostrava

Serhiy Forostyak, MD., PhD., CSO

E-mail:
serhiy.forostyak@primecell.eu

4Medical Innovations

- GMP manufacturing
- in-house GMP laboratories
- in-house R&D
- in-house CRO and regulatory
- in-house Cell & Tissue bank

PRIMECELL BIOSCIENCE – Science that becomes medicine



Senai Innovation Institute in Electrochemistry

Description of your organisation

- 2.400 m2 of applied R&D&I Facilities
- More than 70 researchers (PhDs, MScs, Engineers)
- US\$ 5 Million state-of-art research infrastructure
- US\$ 5 Million active project portfolio

Research areas

- Smart Energies
- Smart Material
- Smart Biosensors

Specify your cooperation interest / Description of your partner of interest

- Disruptive solution for energy storage
- Disruptive smart nano-structured materials
- Disruptive solution for human-health sensor kits

Keywords: Applied R&D&I, Smart Energies, Smart Materials, Smart Biosensors

Contact info

Senai Innovation Institute in Electrochemistry

Applied R&D&I Center

Website:

<https://www.senaipr.org.br/tecnologiaeinovacao/nossarede/eletroquimica>

Brazil

Filipe Miguel Cassapo
filipe.cassapo@sistemapiep.org.br
+55 41 999 85 41 78



 **smart materials**

SOLUÇÕES INOVADORAS PARA
NOVOS MATERIAIS E REVESTIMENTOS



 **smart energy**

SOLUÇÕES INOVADORAS PARA
ENERGIAS INTELIGENTES



 **smart bio-sensors**

SOLUÇÕES INOVADORAS PARA
SAÚDE E BIOPROCESSOS



University of West Bohemia - Regional Technological Institute

Description of your organisation

Engineering and technological research centre (over 100 researchers) at the Faculty of Mechanical Engineering of the University of West Bohemia. We participate in the Czech-Brasilian Exchange programe UNIGO.

Research areas

Modern Vehicle Structures and their Driving Systems
Machine Tools and their Modernization
Forming Technologies
Machining Technologies
Additive Technologies

Specify your cooperation interest / Description of your partner of interest

Participating R/D institution or university focused on mentioned topics. We are looking for a partner to joint research projects.

Keywords

Additive technologies, plastic materials, metals, 3D print of plastics-metals-composites-..., CAx technologies, virtual simulations, machining, etc.

Contact info

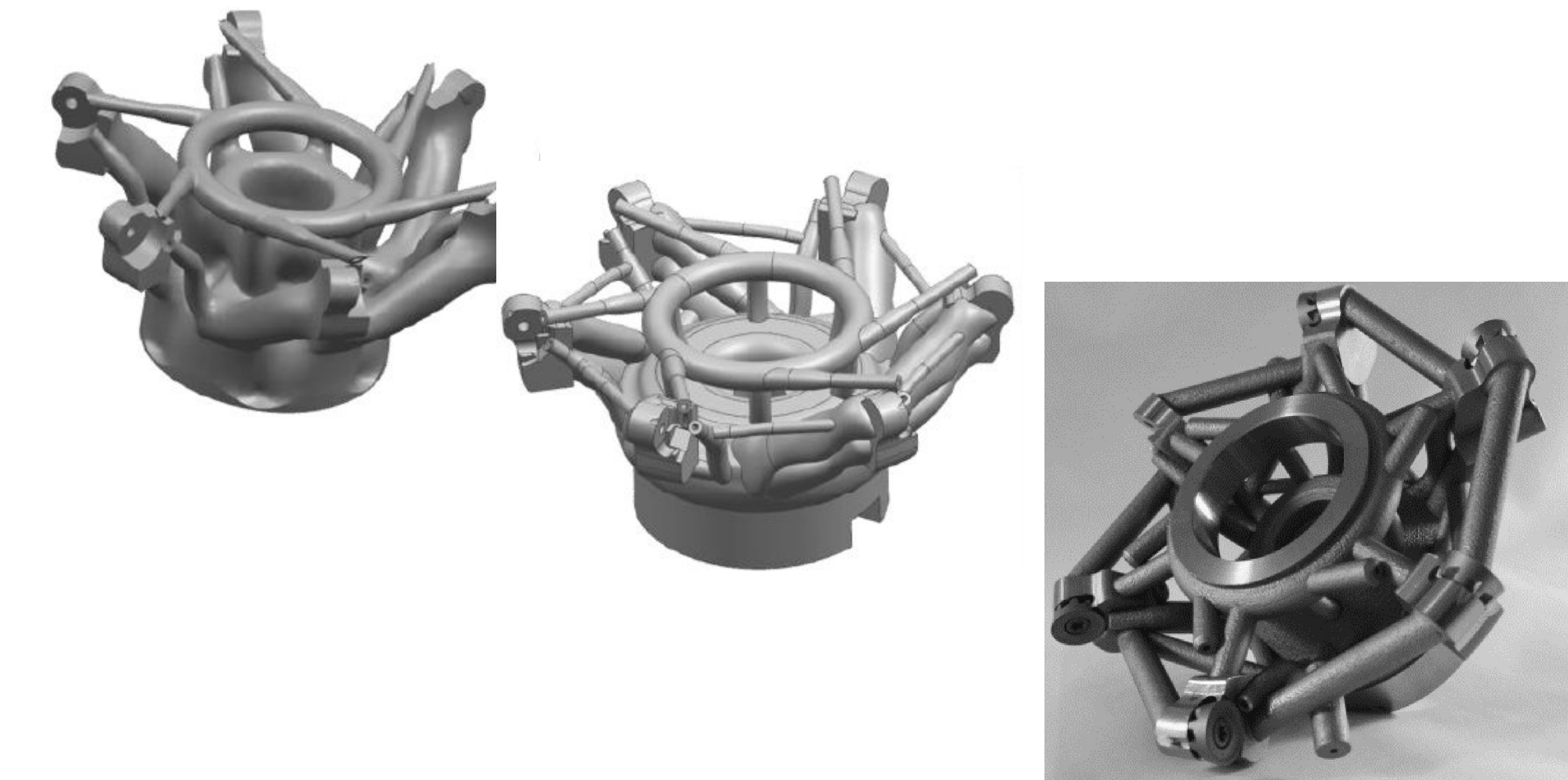
University of West Bohemia-
Regional Technological Institute
R/D institution

<http://rti.zcu.cz/>

Czech Republic - Pilsen

Karel Ráž
kraz@rti.zcu.cz
+420 377 638 751

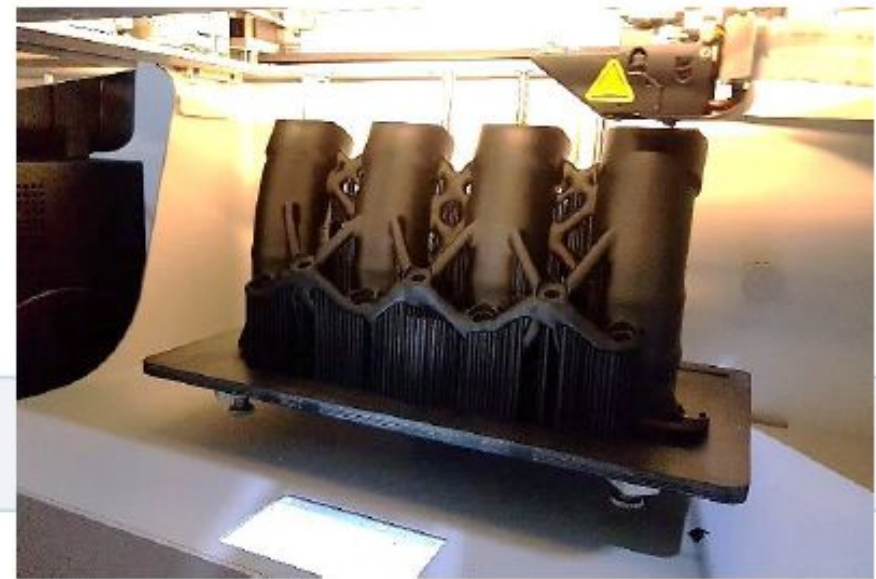
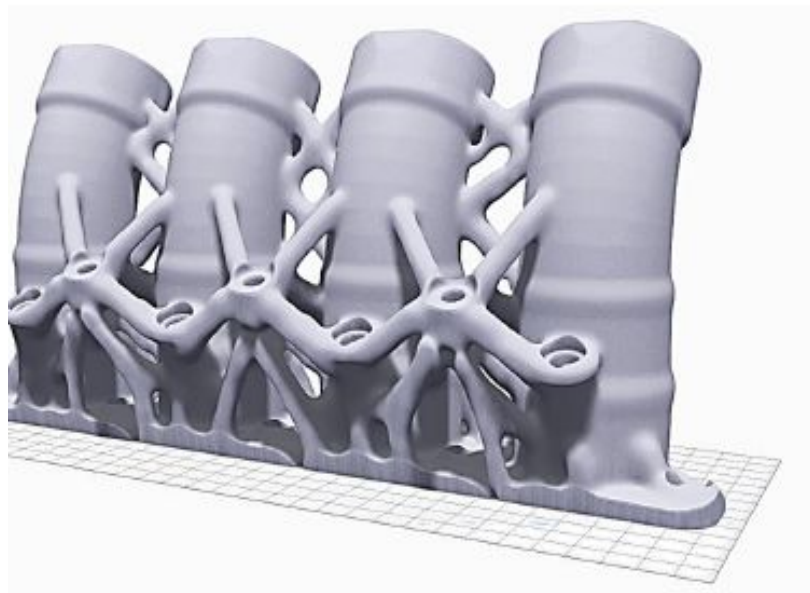
Example of research



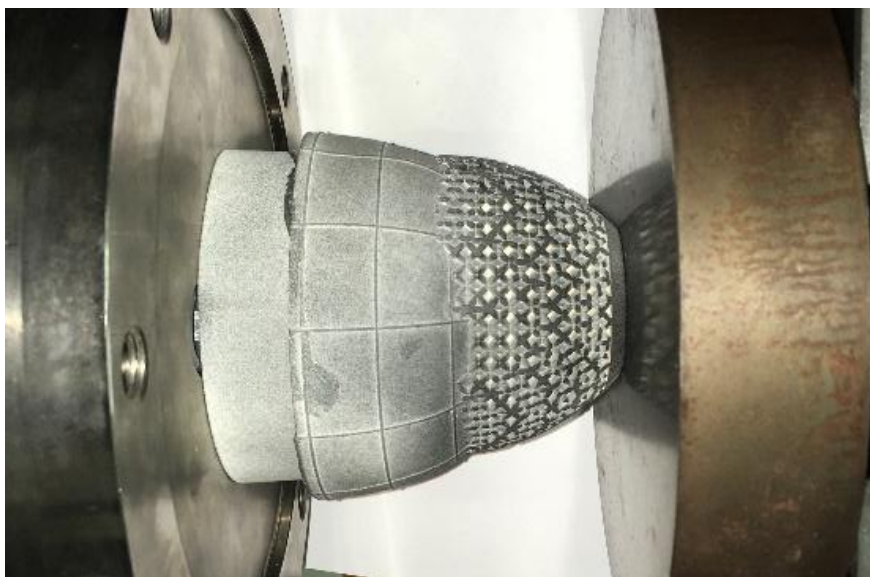
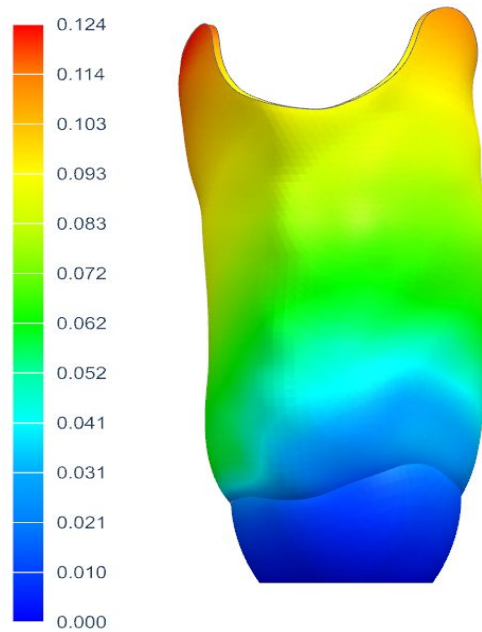
Example of patented metal-printed milling head



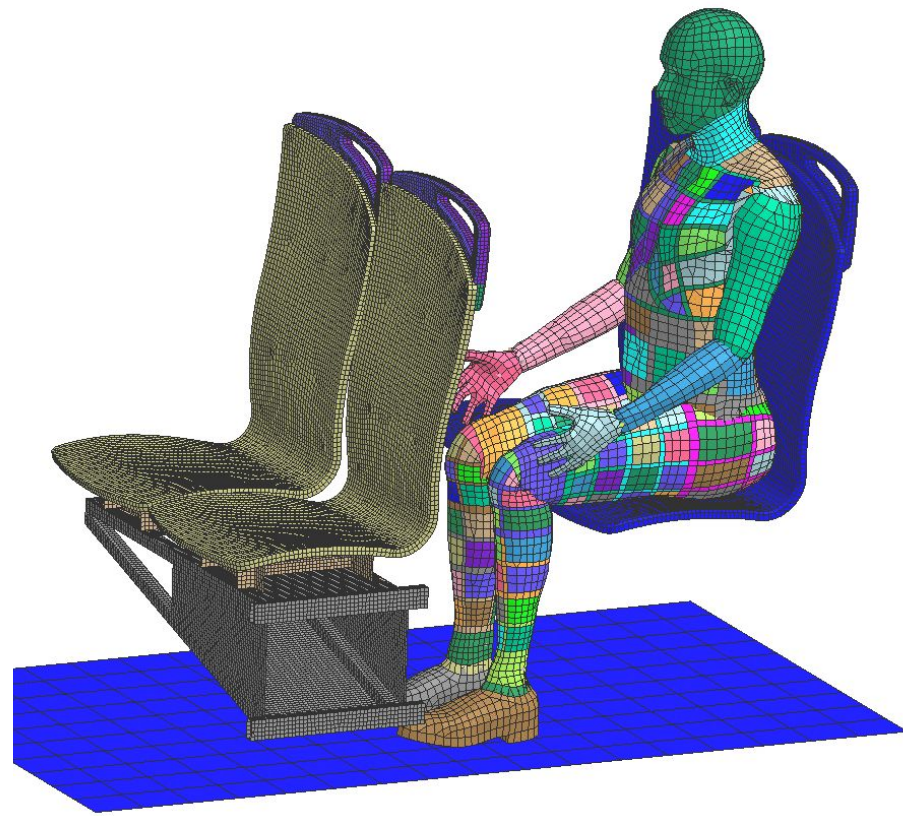
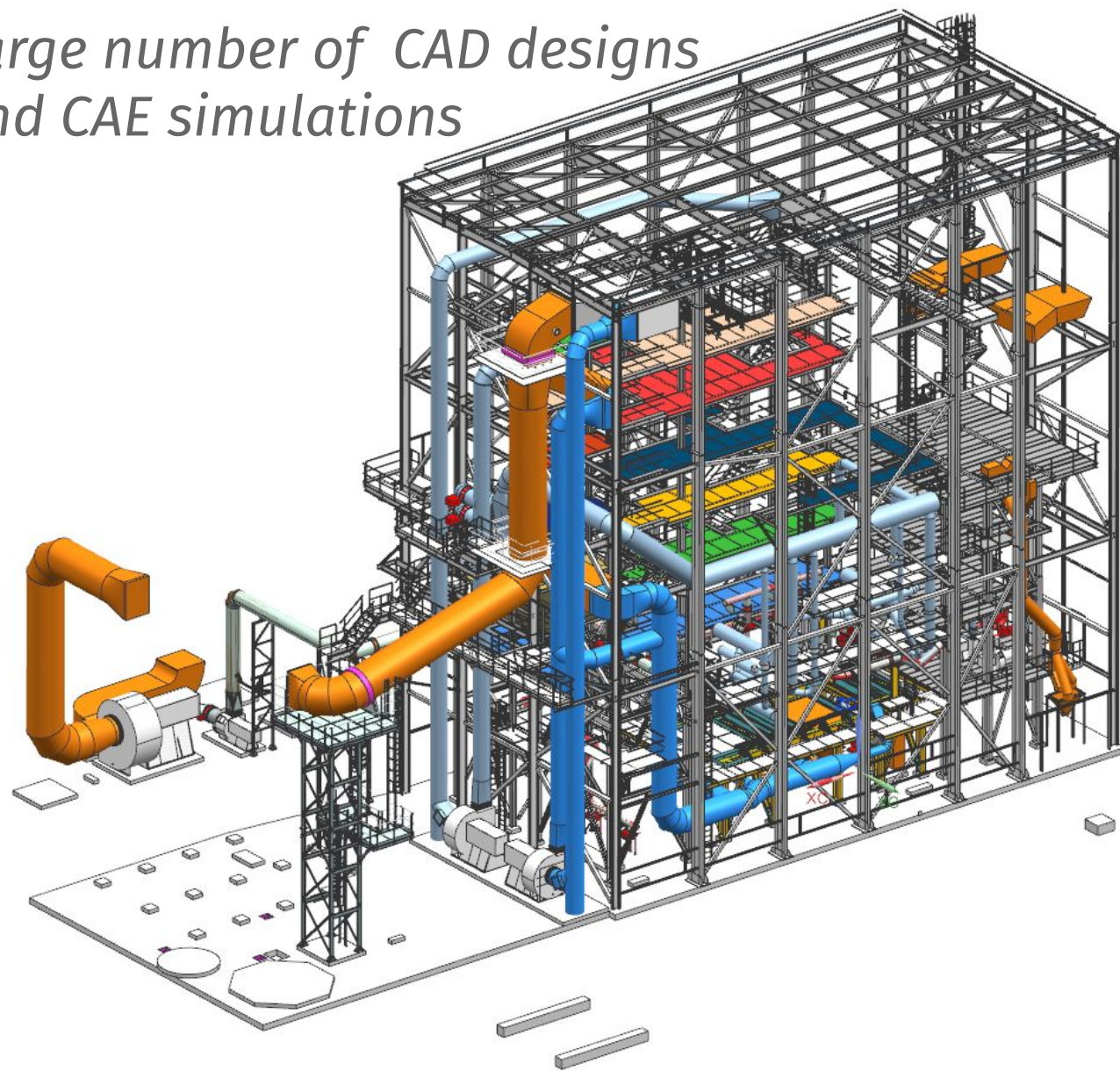
Industrial plastic and metal 3D printers (HP and EOS)



Example of plastic printed parts-
exhaust manifold
and protetics



Large number of CAD designs
and CAE simulations



SENAI/SP – ADVANCED MATERIALS

COMPETENCY AREA

Technology of Sustainable Materials

- Materials & Processes
- New materials & additives
- Properties improvement
- New Uses & Applications

Focus

- Performance improvement;
- New functionalities and properties
- Cost Reduction
- Environmental, Economical and Social Sustainability

Composites and Nanomaterials

- New Composite Materials;
- Development of Additives;
- Nanomaterial Dispersion / Scale up.
- Structural Composites
- Nanomaterials applications

Polymeric & Sustainable Materials

- Biodegradable Materials & Additives
- Renewable Sources/Ecofriendly tech
- PCR recycling
- Circular Economy
- Products Design

KEYWORDS: Composites, Nanomaterials, Polymer, Recycling, Renewable, Biodegradation



INSTITUTO
DE INOVAÇÃO



☎ Phone: +55 11 4344-5370/5093

📱 Celular : +55 11 98204-4793 (A)/ +55 11 94234-6457
(G)

Site: marioamato.sp.senai.br

www.linkedin.com/showcase/isi-materiaisavancados



Carlos Coelho

capcoelho@sp.senai.br



Anderson Maia

anderson.maia@sp.senai.br



Gustavo Spina

galmeida@sp.senai.br

Červenka Consulting s.r.o.

Description of your organisation

Engineering company - advanced analysis of **civil engineering** (concrete) **structures**; consulting services, software development, sw products, research, educative courses and seminars

Research areas

Plain and reinforced concrete, masonry, timber - assessment of structural durability and safety;
utilization of novel materials and construction techniques in civil engineering, maintenance

Specify your cooperation interest / Description of your partner of interest

Industrial partner - civil engineering company (SME), designer/operator/owner of: transport infrastructures, offshore, energy (nuclear, wind, ...), smart city, precast production halls

Keywords

Civil engineering, concrete structures, **nonlinear FEM computer simulation**, software, digital twin;
novel materials and construction techniques in civil engineering, maintenance, structural safety

Contact info

Červenka Consulting s.r.o.
SME

Prague, Czech Republic

www.cervenka.cz

Dr. Radomír Pukl
project manager

radomir.pukl@cervenka.cz

+420 604 237 685

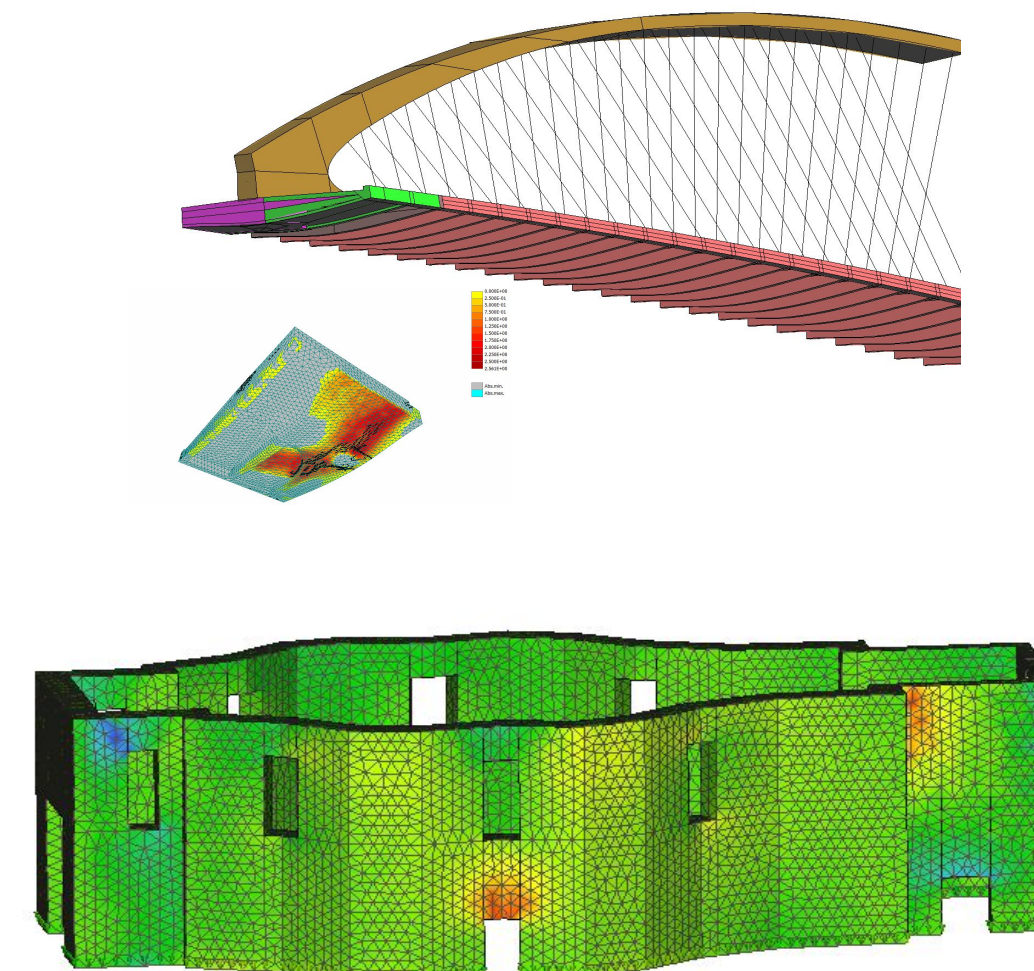
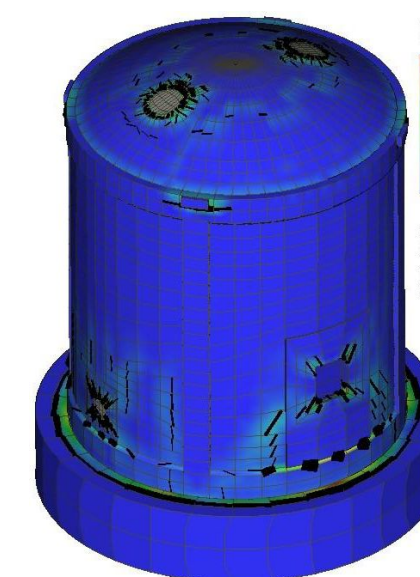
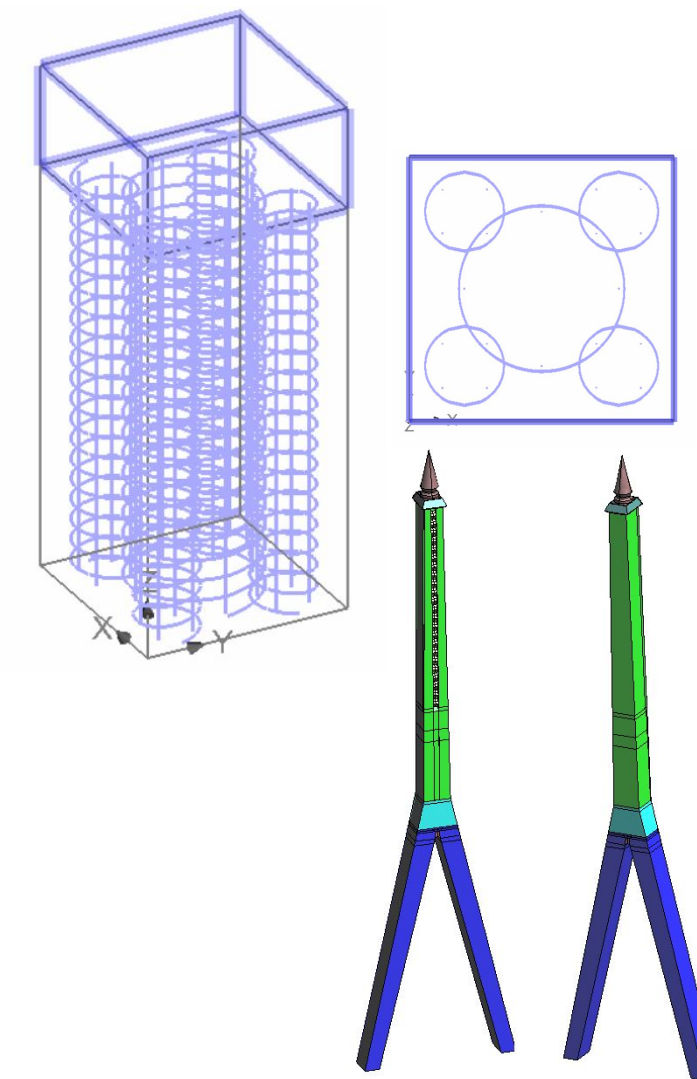
+420 220 610 018

We have strong contact with academy in Brazil:

- Prof. Túlio Bittencourt, University of São Paulo
- Prof. Leandro Trautwein, University of Campinas

Our recent international research projects (with Germany, Japan, Taiwan, Thailand, China, Hungary, Austria, Poland, South Korea) are focused on:

- advanced design and maintenance of civil engineering structures
- optimization of precast structural parts
- high performance cementitious composites, fibre concrete
- 3D printing of concrete, non-metallic reinforcement
- phase changing insulation materials
- bridges, elevated highways, tunnels, retaining walls
- geotechnical constructions, buildings
- safety in nuclear power plant industry
- maintenance of historical heritage



SENAI Institute of Embedded Systems

SENAI Innovation Institute for Embedded Systems (ISI-SE)

is a reference in research and development to make industrial products and processes more efficient and smarter. We're located Brazil, and our unit acts in partnership with enterprises to develop solutions that rely on software, hardware, and artificial intelligence, creating new products or processes that embrace **Digital Transformation, IoT, Industry 4.0, and intelligent machines or equipment.**

The ISI-SE offers applied research with qualified researchers and high-end technology for the industry.

Research areas

Embedded Systems including AI, Computer Vision, Machine Learning, HPC, Embedded Software, Hardware Development, Mechanical Design, Bioinformatics, and Software Development.

Specify your cooperation interest / Description of your partner of interest

To make applied research **with enterprises** on challenging topics related to the research areas.

Keywords

Embedded Systems, applied research, AI, HPC, digital transformation, IoT, industry 4.0, inteligente systems, Embrapii Unit.

Contact info

SENAI Institute of Embedded
Systems

Applied Research Institute

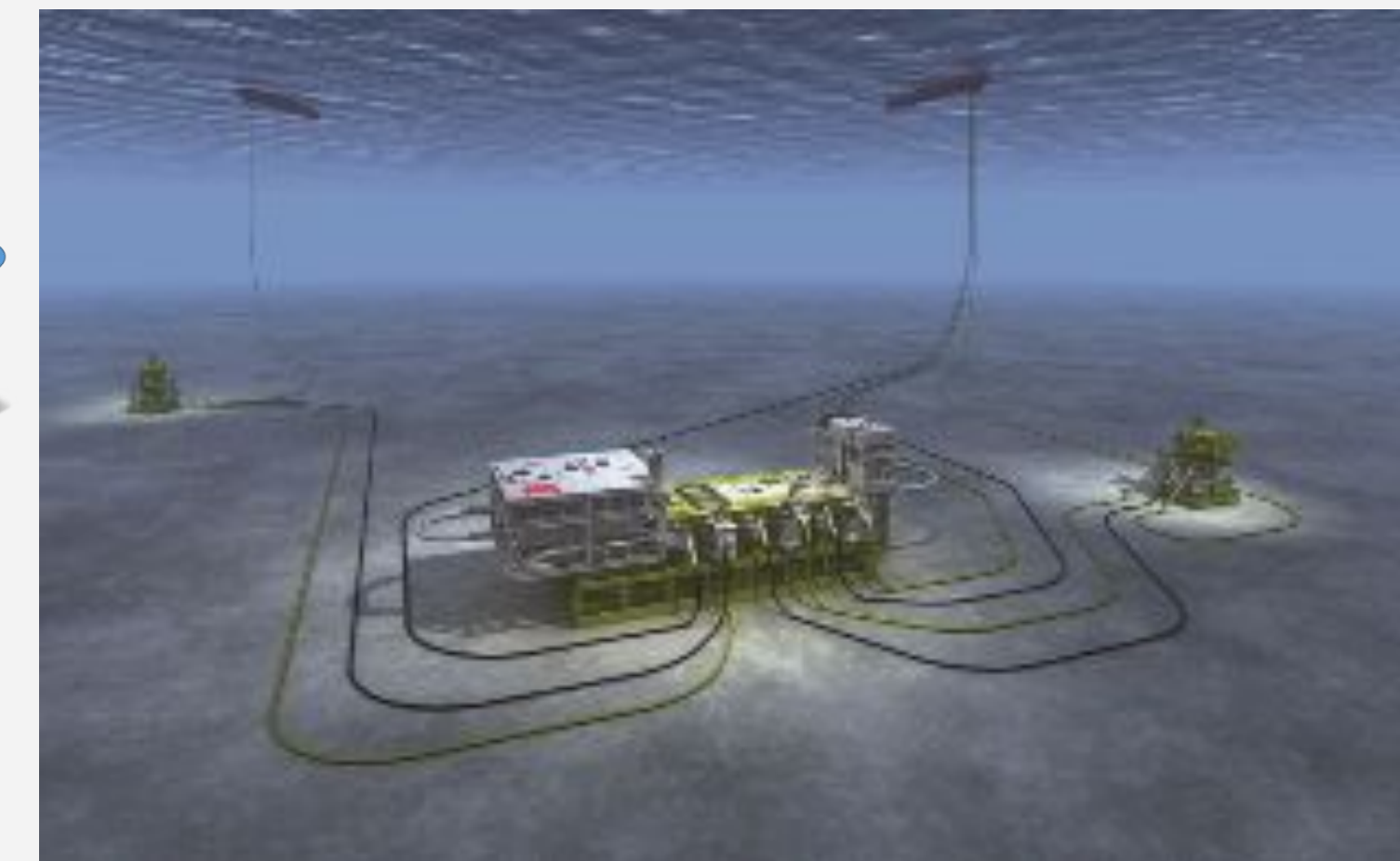
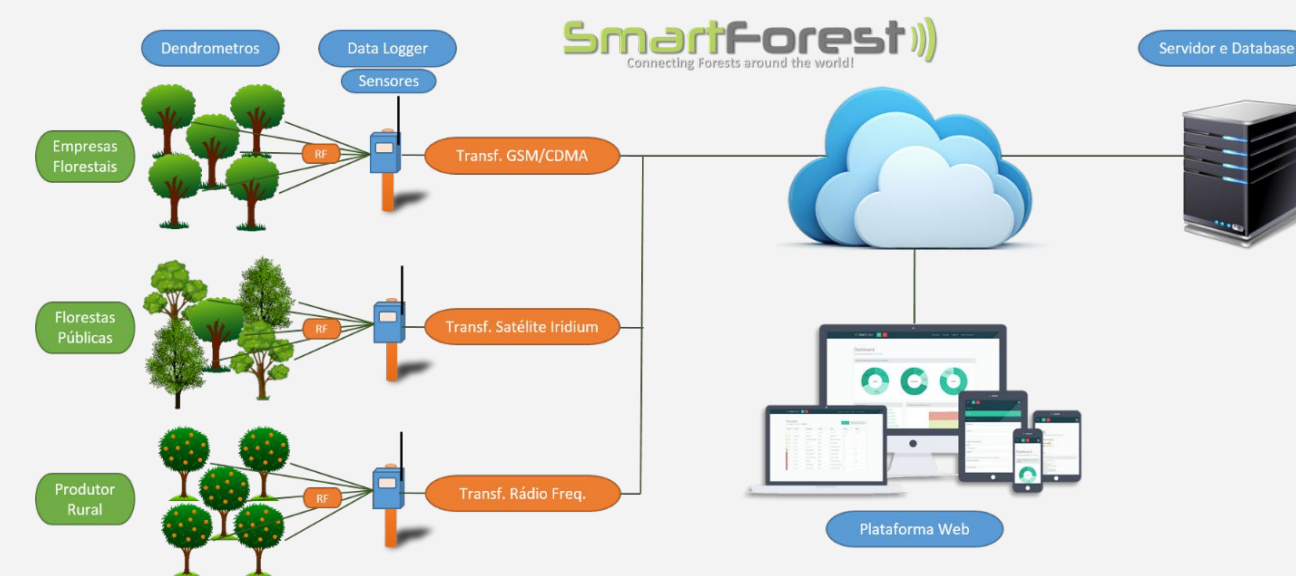
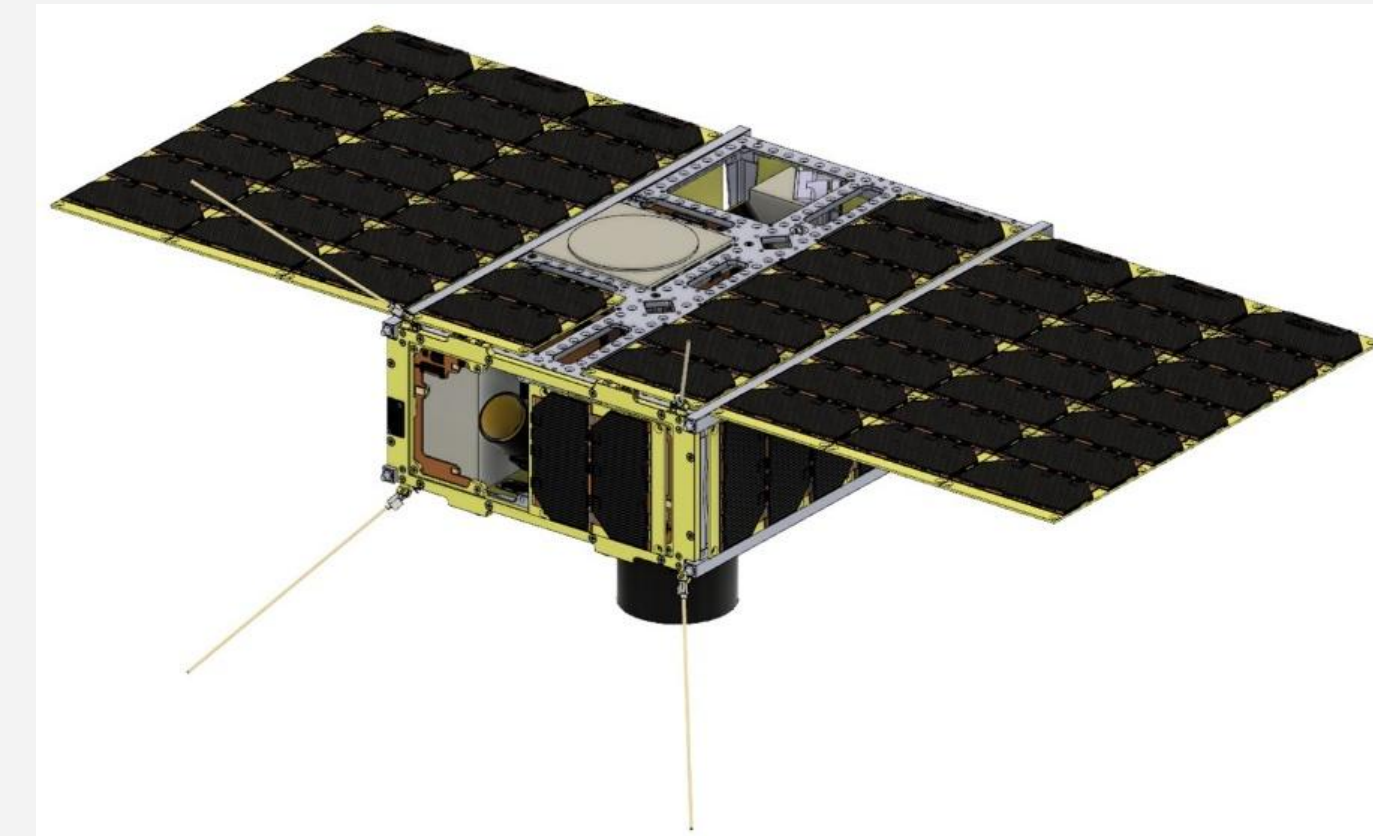
<https://sc.senai.br/institutos-senai-de-inovacao/sistemas-embarcados>

Brazil

Alexandre.mello@sc.senai.br

+55 48 988318132

Cases



EDITAL DE INOVAÇÃO PARA A INDÚSTRIA.

Institute SENAI of Innovation in Polymers Engineering

Description of your organisation

Our main focus is to deliver RD&I projects, besides technological consultancy, tests and calibration.

Research areas

- Elastomers
- Plastics
- Composites
- Paints
- Adhesives

Smart materials for industry 4.0

- Smart polymers;
- Nanotechnology;
- Graphene.

Specify your cooperation interest / Description of your partner of interest

Cooperation in pre competitive projects (usually TRL within 3 to 6.)

Keywords

Smart materials, polymers, plastic, elastomer, composite, paint, adhesive

Contact info

Institute SENAI of Innovation in
Polymers Engineering
R&D Institute

www.senairs.org.br/institutos/engenharia-de-polimeros

Brazil

Jordão Gheller

jordao.gheller@senairs.org.br



Infrastructure



Area

- Build area: 7.000 m² (2 buildings)

Laboratories

- Thermoplastics, elastomers and composites processing;
- Thermoplastics and elastomers recycling;
- Accelerated aging;
- Rheology;
- Physical-mechanical;
- Dynamic-mechanical;
- Chromatographic characterization;
- Chemical and compositional characterization;
- Thermal characterization;
- Microscopy and morphology;
- Biodegradation and composting;
- Packaging;
- Paints and adhesives

Research area personnel

- 63 Employees (10 PhD e 17 MSc)

Gauss Algorithmic

Description of your organisation

Gauss Algorithmic helps companies quickly adopt AI technologies, without building a team and making massive investments. We set ourselves a goal to get customers to solve a problem with AI within 3 months.

Research areas

Quality control with computer vision, Complex anomaly detection methods, Processing of unstructured documents, Natural language processing, Data quality and governance

Specify your cooperation interest / Description of your partner of interest

We are looking for partners who are considering exploring the benefits of technologies we call Artificial Intelligence. We would like to have a discussion with companies who have ideas in the area and are looking for expert validation and implementation.

Keywords

Artificial Intelligence, Predictive Algorithms, Computer Vision, Intelligent Automation

Contact info

Gauss Algorithmic
AI development and services

<https://gaussalgo.com>

Czech Republic

Johnson Darkwah, CEO
info@gaussalgo.com
+420 733 166 919



Gauss is the **fastest growing** AI development company in CZ



Clients



Awards



Laureate of the 2020 Deloitte Czech Republic Fast 50 ranking





SENAI Innovation Institute for Information and Communication Technologies



“Promote the competitiveness of industry through knowledge transfer, applied research and innovation”



- One of the 27 SENAI's thematic industry research institutes: the one for ICTs
- Initiatives to accelerate Digital Transformation in all-sized Brazilian industries
- Since 2015 using software innovation as the main driver to leverage industries' productivity
- Embarked at 'Porto Digital', and acknowledged Brazilian innovation ecosystem



Research areas



Artificial Intelligence, Machine Learning, Big data and Analytics, Software Platforms, Internet of Things, Blockchain and Digital Security, 'Phygital' oriented design, Computer Vision



Cooperation interest

Co-development of software intensive solutions; building of new business models for industrial value chain; joint projects based on Industry 4.0 enabling technologies; roadmaps for seamless digital transformation; multi-part construction of secure and trusted solutions



Keywords

SENAI; innovation; information and communication Technologies; software; platforms; Brazil

Contact info

SENAI Innovation Institute
for **Information and
Communication
Technologies**

Non-profit Institute for
Research and Development

isitics.com

isi.tics@pe.senai.br

Brazil

Ernani Azevedo
[ernani.azevedo@
sistemapiepe.org.br](mailto:ernani.azevedo@sistemapiepe.org.br)
+55 81 997222077

SENAI Innovation Institute for ICTs

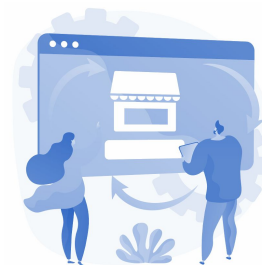
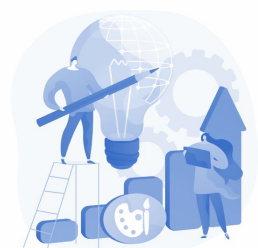
Recife – Pernambuco - Brazil

Infrastructure

- 11.000m² building (official inauguration in April 15th)
- Software Development environment (capacity: 150 people)
- 5 meeting rooms
- 3 conference rooms (reversible to an auditorium)
- Multimode (chameleon) laboratory
- *Creative prototyping, Maker room, IoT, Processing Room, Data Privacy, Electronics*
- Company spin-in boulevard
- Decompression spaces
- *Green rooftop, coffee, vídeo games, snack bar, relaxation lounges (indoor and outdoor)*

Actuation

- Demand pull open innovation
- Structuring solutions through platforms
- Technological push and Roadmaps
- Innovation habitats



Czech University of Life Sciences

Description of your organisation

The only faculty in EU focused primarily on tropical agriculture, rural development and the sustainable management of natural resources in the tropics.

Research areas

Tropical agriculture and development

In field detection of animal and plant pathogens

Specify your cooperation interest

Research institutions in Brazil, providers of veterinary care

Keywords

Tropical agriculture, veterinary diagnostics, mobile laboratory

Contact info

Faculty of Tropical AgriSciences,
Czech University of Life Sciences
public university

www.ftz.czu.cz

Czechia, EU

Jiří Černý, PhD
jiricerny@ftz.czu.cz

Hynek Roubík, PhD
roubik@ftz.czu.cz



- **box portable highly mobile laboratory for various analyses (microbiology, immunology, genetics)**
- **can be transported in SUV or by load bearers**
- **off grid operable**
- **suitable for use in remote areas or in areas damaged by war or natural disaster**
- **basic setup available for use (Zambia, Ethiopia), advanced setups under development**
- **www.mobilab.czu.cz**



SENAI Innovation Institute for Biosynthetic and Fibers

Applied Research Institute focused on developing sustainable solutions through chemistry and industrial biotechnology using renewable and non-renewable resources for new products and processes for the industry.

Research areas

- **Biotechnology** – Renewable chemicals, Enzymes, C1 as raw materials, Agrochemicals, Synthetic Biology, etc.
- **Process Engineering & Chemical Synthesis** – Biomass conversion, CO2 conversion, Hydrogenation, Process Intensification, Biorefining, etc.
- **Fiber Technologies** – Surface modification, High Performance Fibers, Smart textiles, etc.

Cooperation interest

General: Waste valorization | Biomass conversion | CO2 conversion | Hydrogen

Biotechnology

Single cell protein
Marine bioeconomy Technologies
Biosurfactants
New fragrances

Process Engineering & Chemical Synthesis

Lignin and sugars transformation
Glycerin transformation
Process Intensification

Fiber Technologies

Natural dyes
Graphene-based fibers
New cellulosic fibers
Nanofunctionalization
Nanofibers

Keywords

Bioeconomy, Biotechnology, Chemical Synthesis, Residues valorization, Natural fibers and dyes, Circular Economy

Contact info

SENAI Innovation Institute for Biosynthetic and Fibers

Website:

<https://senaicetiqt.com/inovacao/>

Contact persons:

Paulo Coutinho

Manager

pcoutinho@cetiqt.senai.br

Victoria Santos

Competitive Intelligence

vesantos@cetiqt.senai.br

+55-21-980517278

Advantages

- ✓ Self sustainability Vision
- ✓ Capillarity
- ✓ Intellectual Property Policy:
IP belongs to the companies
- ✓ Project Management applied to R&D
- ✓ Milestones & Stage-gates
- ✓ Co-Creation Company-Institute
- ✓ Researchers with Industry background
- ✓ Distinctive Competences
- ✓ Distinctive Infrastructure

Market segments

**Chemical, Textile, Oil and Gas,
Personal Hygiene, Perfumery and
Cosmetics, Lubricants, Paper and
Cellulose, Pesticides,
Transportation, Construction, Food e
Health.**