Applied research in the Czech Republic

Science and Innovation Day Mexico – Czech Republic

Ladislav MLČÁK

28th June 2022

ABOUT TA CR

an organisational unit of the state and the administrator of a budget chapter

prepare and manage state funding programmes whose purpose is to stimulate the interconnection of organisations working on applied research with innovative activities in business and in the state administration

develop new tools to support closer collaboration between academia, the business sector and the state administration

TA CR **in numbers**

Over the past 12 years, we have been able to support over 3,800 Czech ideas that help change the world for the better.

1,68
BIL. EUR
has been invested by the state in applied research through TA CR

3 869
FUNDED PROJECTS*

4 613
RESEARCH ORGANISATION PROJECT PARTICIPANTS SUPPORTED*

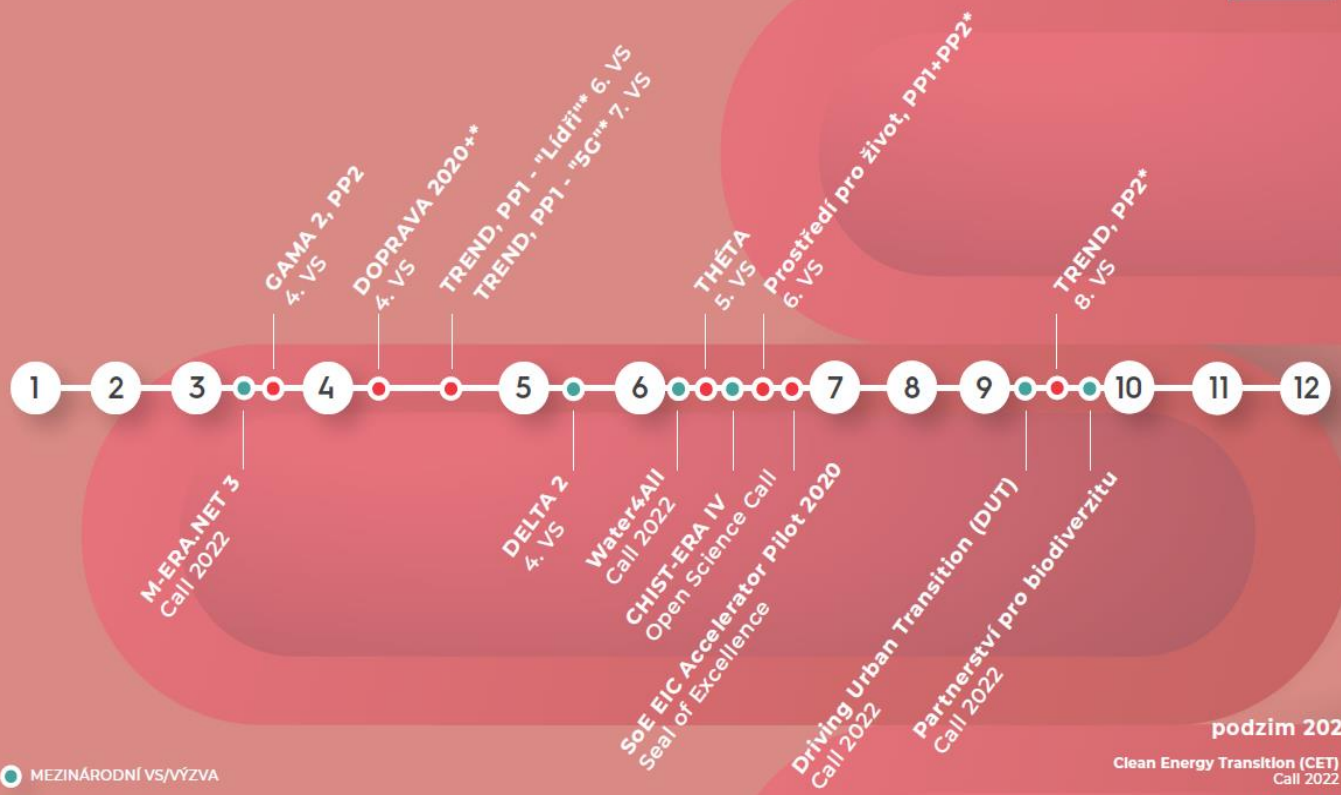
3 980
BUSINESS PROJECT PARTICIPANTS SUPPORTED*

69 %
AVERAGE FUNDING INTENSITY*

18
CURRENT PROGRAMMES

** In TA CR Calls for propsals*

Harmonogram veřejných soutěží a výzev pro rok 2022



MEZINÁRODNÍ VS/VÝZVA

NÁRODNÍ VS/VÝZVA

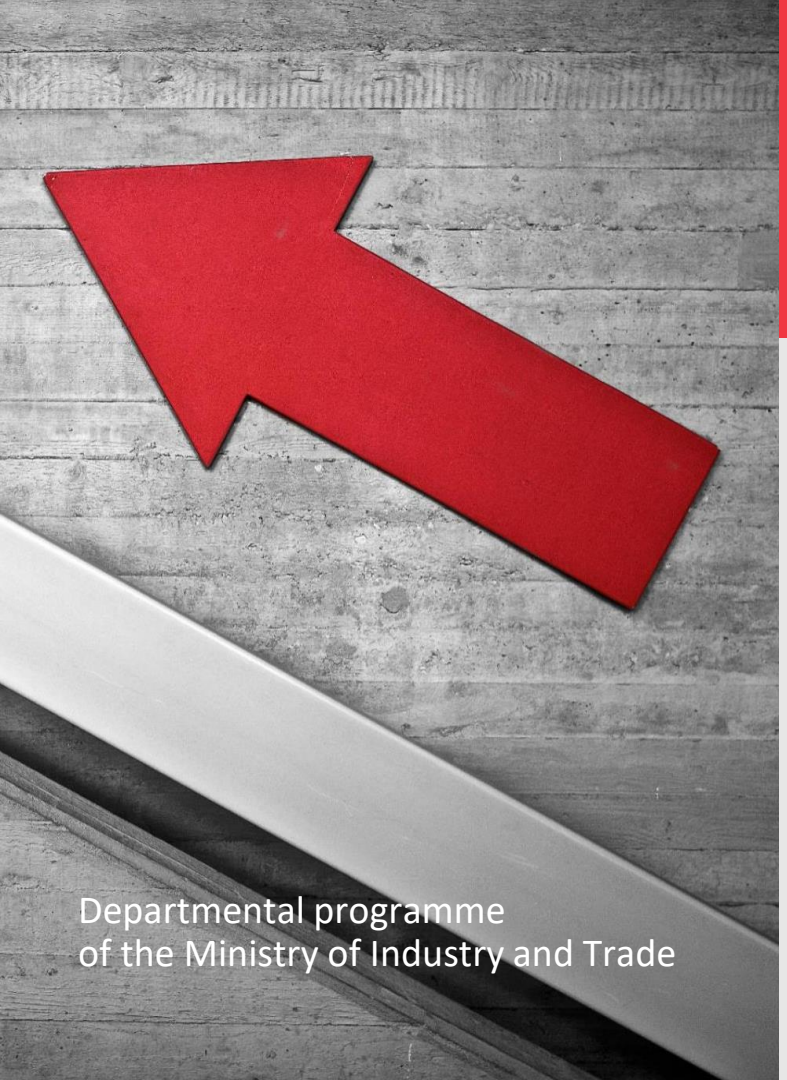
*Rezortní program

podzim 2022

Clean Energy Transition (CET)
Call 2022

CHIST-ERA
Challenge Call

CHIST-ERA
Call 2022



TREND Programme

Increasing international competitiveness of enterprises

Programme duration **2020–2027**

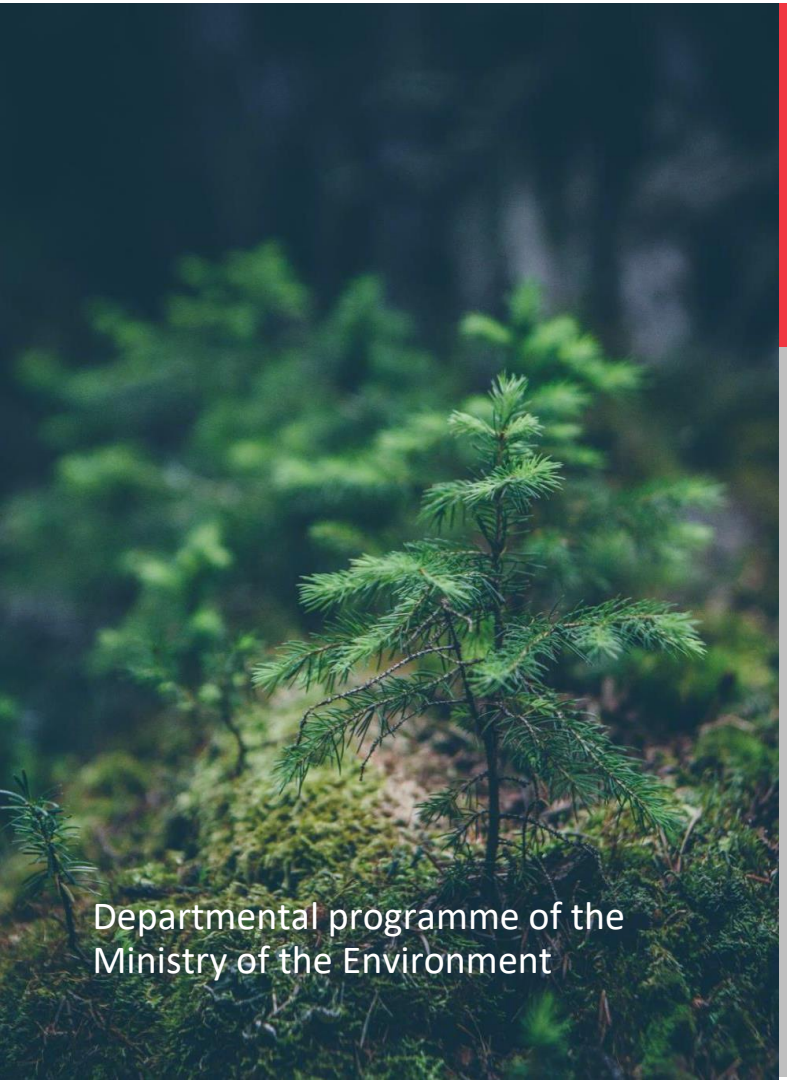
Programme expenditures from state budget: **9 700 mil. Kč**

Average funding intensity: **65 %**

Applicants **enterprises and research organisations**

Subprogrammes

Subprogramme 1: Technology leaders
Subprogramme 2: Newcomers



ENVIRONMENT FOR LIFE Programme

Securing a healthy, high-quality environment and sustainable use of resources

Programme duration **2020–2026**

Programme expenditures from state budget **3,8 mld. Kč**

Maximum funding intensity **100 %**

Applicants **research organisations and enterprises** (other legal entities and natural persons under public and private law)

Subprogrammes

- Subprogramme 1: Operational research in the public interest
- Subprogramme 2: Environmental innovations, technologies and procedures
- Subprogramme 3: Long-term environmental and climate perspectives

TRANSPORT 2020+
Programme

Developing the transport sector in a way that reflects societal needs

Programme duration	**2020–2027**
Programme expenditures from state budget	**1,95 mld. Kč**
Average funding intensity	**80 %**
Applicants	**research organisations and enterprises**

NATIONAL CENTRES OF COMPETENCE Programme

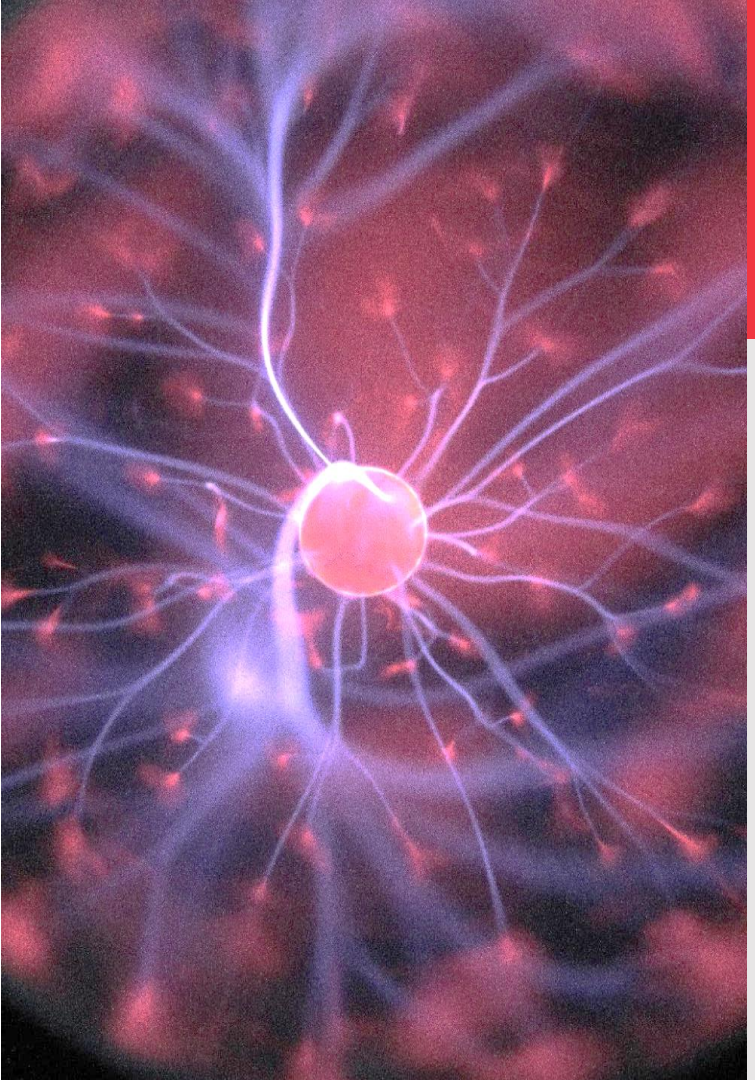
Supporting long-term cooperation between the research and the application spheres and strengthening the institutional basis of applied research

Programme duration **2018–2026**

Programme expenditures from state budget **7 184 mil. Kč**

Maximum funding intensity **80 %**

Applicants: **research organisations, enterprises and other contributory organisations**



THETA Programme

Support for the transformation and modernisation of the energy sector in accordance with approved strategic documents

Programme duration **2018–2025**

Programme expenditures from state budget **4 000 mil. Kč**

Average funding intensity **70 %**

Applicants **research organisations and enterprises**

Subprogrammes

Subprogramme 1: Research in the public interest
Subprogramme 2: Strategic energy technologies
Subprogramme 3: Long-term technological perspectives

ERA-NET COFUNDS & European Partnerships

TA CR financially supports Czech researchers in multilateral projects through joint calls in selected ERA-NET Cofunds and Partnerships

- **M.ERA-NET**
  materials research and innovation
- **BiodivClim**
  biodiversity and climate change
- **BiodivRestore**
  conservation and restoration of degraded ecosystems and their biodiversity
- **AquaticPollutants**
  pollutants and pathogens present in water resources
- **CHIST-ERA**
  information and communication technologies (ICT)
- **QUANT-ERA**
  quantum technologies
- **ERA-MIN**
  raw materials research
- **EnerDigit**
  digital transformation for green energy transition
- **EuroNanoMed3**
  nanomedicine research
- **GENDER-NET Plus**
  gender equality and gender mainstreaming in research and innovation
- **Biodiversity Partnership**
  supporting the protection of biodiversity and ecosystems

KAPPA Programme

The programme, funded under the EEA and Norway Grants, is aimed at supporting the international field of applied research among Czech entities and partners from Norway, Iceland and Liechtenstein.

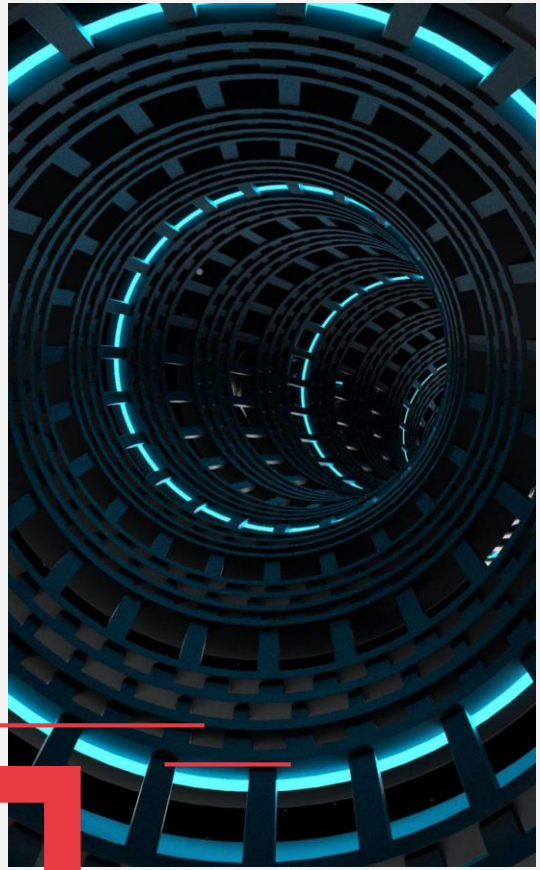
TAFTIE

TAFTIE chair 2017

DELTA 2 Programme

The programme is focused on funding bilateral projects between Czech researchers and their foreign partners, mainly from countries outside the European Economic Area.

DELTA 2
Programme



PROGRAMME DURATION

2020–2025

EXPECTED PROGRAMME EXPENDITURES
FROM THE STATE BUDGET

1 225 mil. CZK
(approx. 57 mil. USD)

CALLS FOR PROPOSALS

on a yearly basis until 2023

LENGTH OF PROJECTS

1- 3 years

For more information about the Call visit
https://www.tacr.cz/en/4th-call-for-proposal/

M-ERA.NET 3 Call 2022

Material research and innovation

Call is open until June 15, 2022

TOPICS

1. **Materials for energy**
2. **Innovative surfaces, coatings and interfaces**
3. **High performance composites**
4. **Functional materials**
5. **New strategies for advanced material-based technologies in health applications** *(TA CR can't fund projects connected to Regenerative medicine)*
6. **Materials for electronics**

Funded projects by TA CR

Programme TRANSPORT 2020+

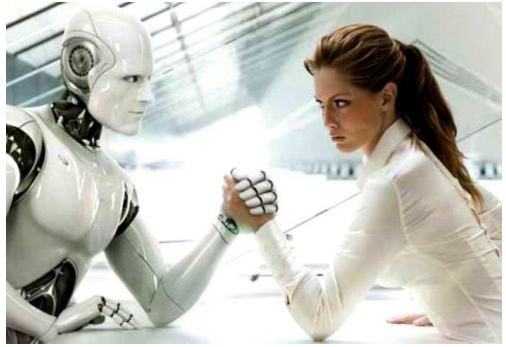
Research and development of a hydrogen bus

Main participant: SOR Libchavy spol. s r.o.
Partners: České vysoké učení technické v Praze / Fakulta strojní, RAIL ELECTRONICS CZ s.r.o., Ústav termomechaniky AV ČR, v. v. i. .

The aim of the project is to develop and build a prototype hydrogen bus with a fuel cell with power in range 30 - 70kW, which would suitably complement the future fleet of locally emission-free vehicles. The project will deal with the application of hydrogen technology to existing electric bus solutions, will also address the modernization of other vehicle groups, such as a heat pump, in order to minimize their impact on the environment and the choice of fuel cell, traction batteries and control system and inverter to optimize operating costs. The bus parameters will be able to compete on foreign markers. The result will reduce emissions in cities.

Programme DELTA 2

The research and realization of prototype of the AI-Assisted healthcare Multirobot



Main participant: De & Co Hranice s.r.o.
Partners: Industrial Technology Research Institute (ITRI), ROBOTSYSTEM, s.r.o., Tunghai University, WASHINA engineering s.r.o.

The main objective is research, development and realisation of assistive multirobot prototype with artificial inteligence elements using several parts of Czech robot SMART WALKER structural solution with extension of new breakthrough robotic concept for rehabilitation of lower limbs by controlled gait in combination with ride in standing position in outdoor and indoor environment and Taiwanese objective – implementation of telemedicine, fall detection, support of transport processes spatial planning, with result of world new assistive multirobot for utilisation in institutional and home enviroment with target of shortening and partial replacement of institutional care and for support of assistiveless life of handicapped persons and seniors with possiblity of remote supervision as well.

INKAviz | PRESENTATION OF DATA FROM MAPPING THE INNOVATION POTENTIAL OF THE CZECH REPUBLIC

Objective:

- To enable repeated description of the innovation system of the Czech Republic and its changes in connection with the development of the economy.
- To identify and describe the characteristics of existing and potential target groups and their changes.
- Thanks to mapping the innovation environment in the Czech Republic, the TA CR will obtain indicators that will help determine the choice of appropriate interventions tools for the subsidy policy.

991
INVOLVED COMPANIES

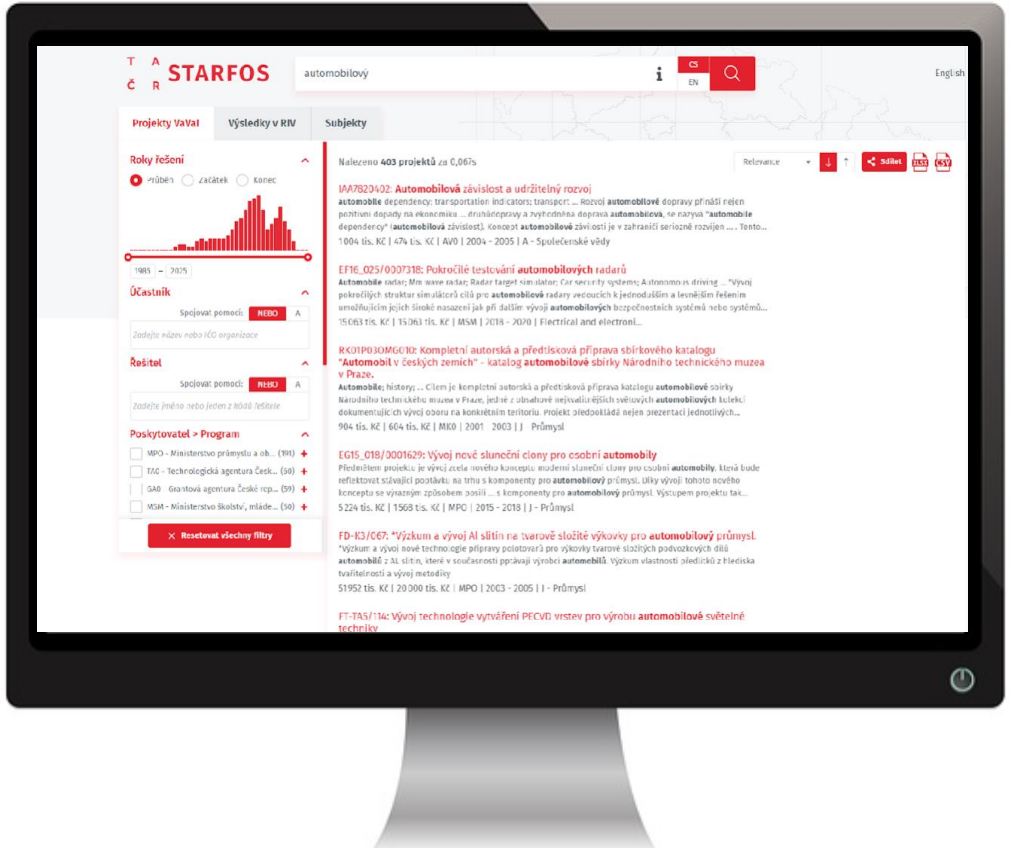
1 163
COMPLETED QUESTIONNAIRES

47
REGISTERED USERS

508 411
QUESTIONS ASKED

TA ČR STARFOS – full-text search engine R&D projects

starfos.tacr.cz



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