

TECHNOLOGY AGENCY
OF THE CZECH REPUBLIC

T A
C R

ANNUAL REPORT
2024

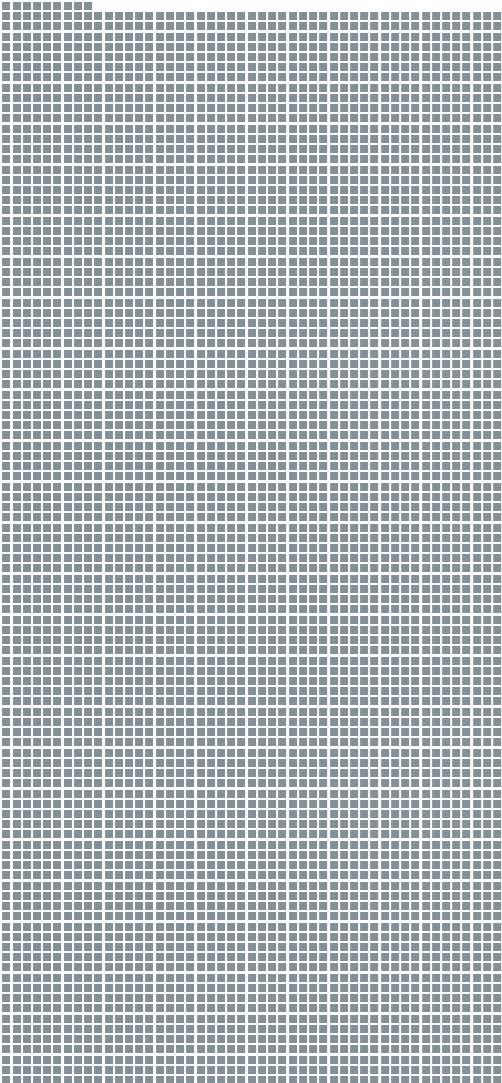
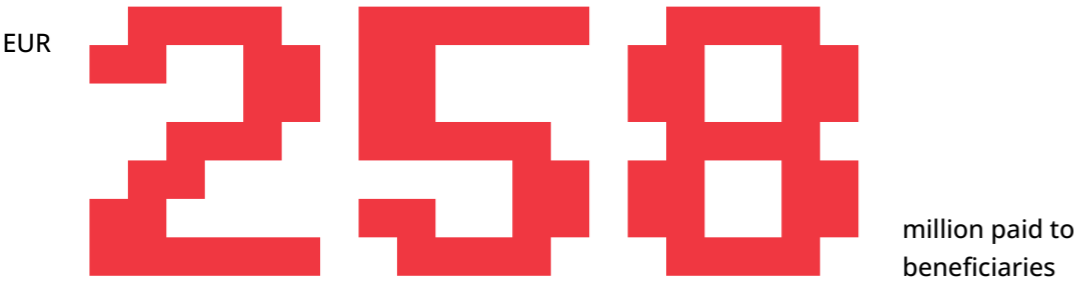


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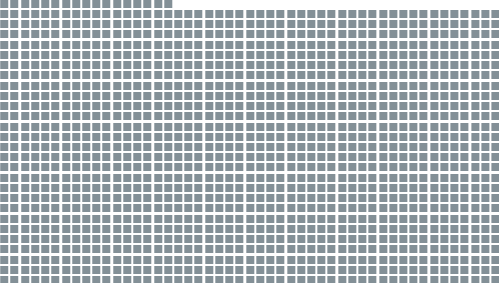
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1.
THE YEAR 2024 IN NUMBERS



5 158
administered projects



1 366
projects in progress



19
administered programmes

10
calls for proposals launched

6
international calls announced
(including one national call to support
internationally awarded projects)

1
strategy approved by the Government

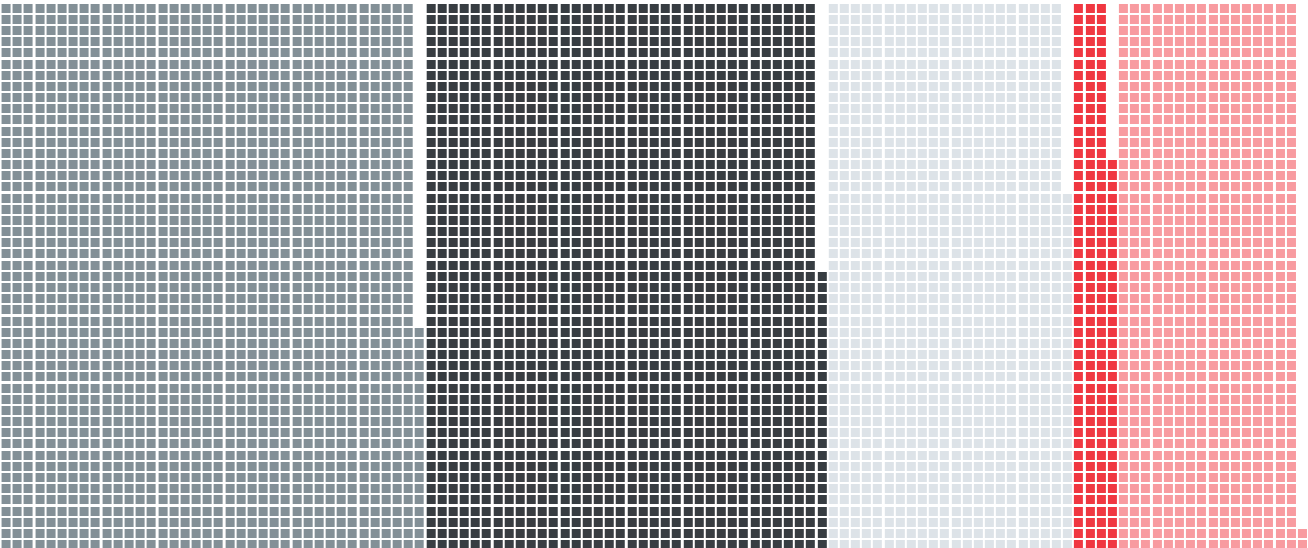
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1 871 requests handled by the ICT Department
1 676 requests handled by the Cabinet Department
802 requests handled by the Communication and Marketing Department
186 requests handled by the Legal Department
1 083 requests handled by the Economic Department

2. FOREWORD BY THE CHAIRMAN

I am pleased that you are holding in your hands the fifteenth Annual Report of TA CR summarising the past year. It was an exceptional year, as the Technology Agency of the Czech Republic celebrated 15 years since its establishment, the year full of challenges, hard work as well as positive changes, inspiration and successes, which I would like to recap in a short roundup.

To begin with, let me mention two important milestones achieved by our Agency in 2024. The first milestone is the completion of the new **Strategy for the Development of the Technology Agency of the Czech Republic 2035**. Not only the representatives of the TA CR bodies and employees of the TA CR Office, but also a number of external experts participated in its elaboration. Its focus was consulted with the Minister for Science, Research and Innovation as well as other stakeholders. Following the internal and external approval process, the strategy was submitted to the Government of the Czech Republic and approved on 30 October 2024. I very much appreciate that this strategic document pivotal for the Agency has been finalized, since it will help TA CR continuously improve the fulfilling of its mission.

Secondly, I would like to highlight the significant progress in developing **SISTA, the new shared information system**. The development of the system has been gradual, it does not rely on a single supplier, licensing models or operational environment, as there are several suppliers developing the functional components of the system. The year 2024 marked the launch of operation of key services such as Citizen Identity to simplify the verification, Logging in via the means of identification, or Organisation Management. At the same time, a number of cross-cutting and system services have been developed. Thanks to that, we are once again one step closer to the announcement of the first call for proposals in SISTA in 2025.

Last year, we successfully launched 10 calls for proposals under the national programmes and 6 international calls, including one national call, to support projects awarded at the international level. The administration of ministerial programmes and cooperation with other ministries continued smoothly on multiple levels, such as the use of our information system, provision of evaluation activities, assistance in drafting new programmes or the fulfillment of research needs of the respective ministries. I must not forget to mention finalising the preparations of the new Programme to support applied research and innovation in the defense industry PRODEF, which was developed in close cooperation with the Ministry of Defense (in the role of manager) and the General Staff of the Czech Armed Forces. PRODEF is focused on supporting applied research and innovation in the defense industry and aims at international and national support in this area. The programme was approved by the Government of the Czech Republic in May 2024, and in the autumn the first call for proposals was announced in Sub-programme 2.

The following pages show that TA CR once again worked very well and efficiently in 2024. Hereby I would like to thank the great team of all the Agency's employees who did tremendous work of top quality. My thanks also go to our partners in public administration, academia and business, whose support and cooperation are vital for the Agency's performance. Together, we have accomplished many meaningful things that help improve the lives of all of us.

I wish you an enjoyable time reading this report.


Petr Konvalinka

3. INTERNATIONAL COOPERATION (BILATERAL AND MULTILATERAL COOPERATION)

MULTILATERAL COOPERATION

In 2024, TA CR continued to cooperate within the TAFT-IE network of 37 European innovation agencies. TA CR regularly participates in meetings of the TAFTIE Board, Executive Working Group (EWG) and all the working groups (Task Force), especially the Membership Policy Group, Structural Network on Benchmarking, High Potential Community, Diversity & Inclusion and Innovation-driven high potentials, SDGs, IPCEI, State Aid Group. Our Agency also participates in all trainings provided by the TAFTIE Academy (TA). Last year, the TAFTIE members proposed topics for new networking workshops, and two TA CR proposals were later in a vote selected among the three best to be implemented. TA CR organized a workshop on one of the selected topics which became the highest-rated TAFTIE networking workshop of the year. Moreover, the TAFTIE network has expanded with two more members, which indicates that its agenda is still relevant and popular in the European countries. Next year, TA CR intends to review the benefits resulting from our participation in TAFTIE (not only) in 2024 and to achieve a more strategic exploitation thereof.

Apart from the four European Partnerships in which it has already been involved, in the course of 2024, TA CR continued to negotiate its participation in the Partnerships prepared within the Horizon Europe Strategic Plan 2025–2027 (the so-called 3rd wave of European Partnerships). TA CR has expressed its interest in participating in four Partnerships or other schemes thematically linked to the ERA-NET Cofund schemes:

- Materials Research and Innovation (follow-up to ERA-NET Cofund M-ERA.NET) – it will continue in the form of a CSA project, and TA CR expects to be involved.
- Research in the field of raw materials (follow-up to ERA-NET Cofund ERA-MIN) – it will continue in the form of a new co-funded European Partnership “Raw Materials Partnership”. As part of this scheme, the Ministry of Education, Youth and Sports of the Czech Republic has already sent the so-called national commitment, with TA CR acting as the implementing agency (i.e., research funding organisation, RFO) and the Ministry of the Environment as the expert manager and partner.
- Partnership in the field of ICT (follow-up to ERA-NET Cofund CHIST-ERA) – it will probably continue in the form of a CSA project, and TA CR expects to be involved.
- Quantum Technologies (follow-up to QuantERA II) – it will continue as “QuantERA III”, namely in the form of cascade funding (FSTP) of RIA. This will be a pilot project of such a scheme (similar to CSA), in which TA CR expects to be involved (a project proposal has already been approved by the European Commission).

In 2024, the Agency also got involved in the future and brand-new European Partnership of the already mentioned 3rd wave, again thanks to the sent national commitment:

- “Forest and Forestry Partnership” – the Ministry Of Education, Youth And Sports (MEYS) has sent the so-called national commitment on behalf of the Czech Republic, with the Ministry of Agriculture and the Ministry of the Environment acting as expert managers and partners and TA CR acting as the implementing agency (i.e., research funding organisation)

Last year, after being approached from abroad, the Technology Agency of the Czech Republic also joined the upcoming international project “ERA.NET UA” (a CSA type project) focusing on research cooperation with Ukraine and co-financed by the EU’s Horizon Europe programme (to be launched in January 2025). The main objective of the project is to reach an agreement among RFOs on the topics of the calls, their announcement, evaluation, and financing of successful projects. The main condition will be the submission of projects to be implemented by a consortium, with at least one partner from Ukraine. The long-term goal is to support and deepen further integration of Ukraine into the European Research Area through this initiative.

In 2024, TA CR also prepared the implementation of the 1st national call (the so-called projects selected at the international level) within the PRODEF Programme focused on defense industry, or its Sub-programme 1, which aims to provide co-financing for the successful Czech applicants in the European Defense Fund (EDF) calls.

In the past year, TA CR also managed to successfully complete the AquaticPollutants TAP Action, i.e., an “Alignment” type call to support mobility and sharing of good practice, materials, infrastructures, data and results. The Agency coordinated the entire two-year activity. The results and the implementation of this call have far (more than twice) exceeded the original targets, both in the number of countries involved and in the number of researchers involved (including the young researchers) and their outputs.

The successful coordination of AquaticPollutants TAP Action by TA CR was followed by another Water4All TAP Action call, also coordinated by TA CR.

In the past year, the Agency assumed the role of a coordinator of the BiodivRestore Knowledge Hub (operating under the ERA-NET Cofund BiodivRestore), focused on the issue of ecosystem restoration and implementation of the European “Nature Restoration Law”. The Knowledge Hub brings together a total of 52 researchers and experts in the given field from all

over Europe, including several representatives from non-European countries. TA CR, in cooperation with their colleagues from France, coordinates the work and outputs of the involved researchers, who will continue their activities at least until September 2026 (with a possible extension). The outputs of the Knowledge Hub’s work will be diverse – according to the work schedule, these will be recommendations to the EU Member States, instructions for the establishment of national groups to meet the legal requirements, or documents that will enhance the knowledge on this issue.

Last year, the Technology Agency of the Czech Republic also successfully organized several conferences and other events that, among other things, help improve its position within the individual schemes:

- In February 2024, TA CR organized the first meeting of consortiums under the Water4All TAP Action – the aim is to interlink thematically relevant projects that are dedicated to aquatic ecosystems and biodiversity and to support international cooperation and transfer of experience in the framework of the TAP Action project.
- In June 2024, TA CR organized a meeting of the expert panel of the Driving Urban Transitions Partnership. International experts met in order to carry out the final evaluation of international projects and compile the final ranking list of projects in the DUT Partnership Call 2023.

PHOTO BY GOOGLE DEEPMIND ON UNSPLASH.COM



In the course of 2024, TA CR continued to implement the EEA and Norway Grants Research Programme within the KAPPA Programme, which strengthens the international cooperation of Czech entities with partners from Norway, Iceland and Liechtenstein in applied research and connects research organisations with the application sphere, especially with small and medium-sized enterprises. The first and only call for proposals was launched in 2019, the submitted project proposals were evaluated in 2020, and since the turn of 2020/2021, 25 projects funded by a total amount of EUR 32,5 million have been implemented in the field of natural sciences, medical and health sciences, engineering and technology, and agricultural and veterinary sciences. In April 2024, the implementation of 24 projects was completed, whereas 1 funded project was prematurely terminated already in May 2023. All projects completed in 2024 successfully passed the final evaluation, 5 of them with excellent results. In total, approximately 400 results were achieved by the projects and 65 organisations and 360 researchers were supported. In December 2024, TA CR organised the final conference of the KAPPA programme, where the results of the programme and its projects were presented, with an emphasis on their application in practice.

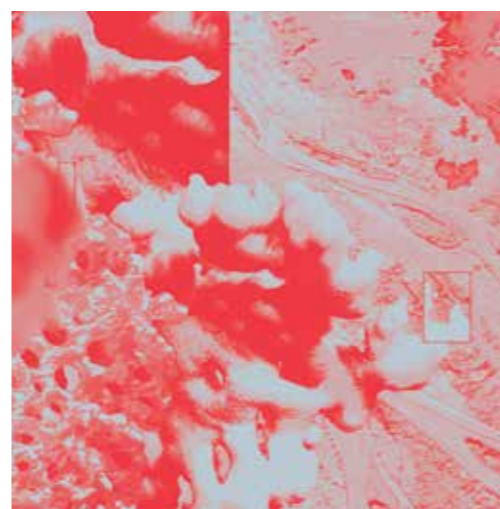
BILATERAL COOPERATION

In May 2024, the 8th call for proposals was launched in the SIGMA Programme – Sub-objective 4, Bilateral cooperation. The call was open for submissions from 16 May 2024 to 17 July 2024. Seven foreign partner organisations from the following locations participated in this call for proposals: South Korea (2×), the United States of America, Taiwan (2×), Saxony, and also France. A total of 49 project proposals were submitted, of which 41 were accepted for the evaluation stage. A total of 19 project proposals were funded by both TA CR and its foreign counterpart.

As part of the SIGMA Programme – Sub-objective 4, Bilateral cooperation, the cooperation continued with the existing partners with whom a memorandum had been concluded in the previous DELTA and DELTA 2 Programmes. New cooperation was established with the French partner ANR (French National Research Agency), and the memorandum with two Korean partners (KETEP, KIAT) was extended. As part of the intensification of relations between the Czech Republic and the Republic of Korea, TA CR received several Korean delegations and co-organized the Czech-Korean Nuclear Forum, attended by more than 100 potential applicants from both countries.

Furthermore, in 2024, TA CR organized a screening for the EIC Accelerator Plug-In mechanism. The beneficiaries of the call for proposals under the SIGMA SO1 Programme, Commercialization of R&D+, who expressed their interest in this screening, were evaluated based on the criteria of the European EIC Accelerator instrument as to whether they can skip the 1st stage of evaluation in this instrument and would be allowed to submit an application directly for the 2nd stage of evaluation. Apart from this opportunity, the selected beneficiaries also received coaching from the EISMEA experts.

For more information on other international projects, see Chapter 6 “Improvement of TA CR activities”.



4. PROGRAMMES AND CALLS FOR PROPOSALS OF TA CR

TA CR PROGRAMMES

Last year, the Technology Agency of the Czech Republic had 19 active programmes. The completed programmes from previous years (ALFA, OMEGA, BETA) were joined by the Centers of Competence Programme, which ended last year. A total of 1 366 applied research projects were implemented with the funding amounting to EUR 258 million. Last year, 10 calls for proposals and 6 international calls were announced.

Table No. 1:
Summary data on programmes administered by TA CR (2011–2024)

PROGRAMME	PROGRAMME DURATION	CALLS FOR PROPOSALS ANNOUNCED	PROJECT PROPOSALS SUBMITTED	PROJECTS FUNDED	SUCCESS RATE [%]
OF – ALFA	2011–2019	4	3 501	961	27,4
TD – OMEGA	2012–2017	3	650	194	29,8
TE – CENTERS OF COMPETENCE	2012–2019	2	210	34	16,2
TF – DELTA	2014–2021	6	142	47	33,1
TG – GAMA	2014–2019	8	82	42	51,2
TH – EPSILON	2015–2026	6+23	2 257	722	32,0
TJ – ZÉTA	2017–2025	3+1	888	300	33,8
TK – THÉTA	2018–2025	5+1	694	295	42,5
TL – ÉTA	2018–2025	5	2 035	419	20,6
TM – DELTA 2*	2020–2025	5	185	76	41,1
TN – NATIONAL CENTERS OF COMPETENCE	2018–2028	2	61	31	50,8
TO – KAPPA	2019–2024	1	163	25	15,3
TP – GAMA 2	2020–2022	4	87	42	48,3
TQ – SIGMA* **	2022–2029	12+11	1 471	292	19,9
TS – THÉTA 2**	2024–2031	2	132	80	60,6
CK – TRANSPORT 2020+	2020–2026	4	765	153	20,0
CL – TRANSPORT 2030*	2023–2030	2	321	66	20,6
FW – TREND**	2020–2027	11	2 312	670	29,0
SS – ENVIRONMENT FOR LIFE	2020–2026	7+4	1 524	257	16,9
SQ – ENVIRONMENT FOR LIFE 2*	2024–2033	1	235	44	18,7
OZ – PRODEF	2024–2031	1	20	-	-
TOTAL		94+40	17 735	4 750	26,8

Note: Public procurement programmes BETA, BETA2 and BETA3 are not included
* data for funded projects also include the projects for which a contract is expected to be signed
** data on the number of projects and the success rate are calculated only for the calls for proposals and calls with announced results

EXAMPLES OF PROJECTS

TREND PROGRAMME

FW01010471

THYROPIX – NEW GENERATION GAMMA CAMERA FOR THYROID GLAND AND SMALL ORGANS IMAGING IN NUCLEAR MEDICINE

The main objective of the project was to develop a new type of portable gamma camera that will be used to examine the thyroid gland and small organs using nuclear medicine methods. The camera will be used both in diagnosis and in treatment of various diseases, such as thyroid cancer. Prototypes of this camera have been developed so that they can be used in practice immediately after the completion of the project. The device uses the cutting-edge Timepix3 detector technology, which was originally developed at CERN for research in particle physics. These detectors can capture individual particles of light (photons), determine where exactly they were captured, measure their energy, and find out when it happened.

The camera enables very detailed imaging of the thyroid gland and other small organs, thanks to which the physicians will obtain more accurate information about the location and size of tumors and will thus be able to better determine the optimal method of treatment. The camera can be used to monitor the course of radionuclide therapy, for example, to determine how effectively the tumor is targeted. The new type of gamma camera is compact and portable, which makes it easy to use in various health care facilities, including smaller clinics or regional hospitals.

Project investigators:

ADVACAM s.r.o.
Czech Metrology Institute
University Hospital in Motol
Radalytica a.s.
Charles University / 1st Faculty of Medicine

DELTA 2

TM02000084

APPLIED RESEARCH AND DEVELOPMENT OF LONG-TERM SMALL JOINT REPLACEMENTS BASED ON ADDITIVE MANUFACTURING

The aim of the project is to apply the direct 3D printing method of Ti6Al4V titanium alloy for the construction of a new type of small joint implants based on the applied research and development. The principle is to use specific properties of additive manufacturing methods (ConceptLaser, ITRI and InssTek) in the design of new anchoring components improving long-term osseointegration, and to develop surface treatments improving the wear properties of contact surfaces. In parallel with the development of implants, verification of 3D printing methods in the construction of anchoring components of joints and their wear properties will also be conducted. Combining the knowledge of the application, clinical and academic spheres from the Czech Republic and Taiwan will help significantly accelerate the development, introduce small-scale production of new types of implants with high added value, and thus obtain a significant competitive advantage on the European, US and Asian markets.

The practical results of the project make it possible to use 3D printing to produce custom-made implants adapted to the individual needs of patients (the so-called personalized medicine). Thanks to the optimization of the anchoring components of Ti6Al4V titanium alloy implants, the ability of the implant to fuse firmly with the surrounding bone will be increased, which will prolong its life and improve stability. The new surface finish of contact surfaces will reduce the wear of implants and thus the risk of their failure or complications, which will improve the patients' quality of life. The combination of experts from the application, clinical and academic spheres from the Czech Republic and Taiwan will accelerate the development of implants thanks to sharing their experience from research and production, and their cooperation will make it possible to better understand the requirements of the European, US and Asian markets and to adapt the products to specific regional needs.

Project investigators:

ProSpon, spol. s.r.o.
Czech Technical University in Prague / Faculty of Mechanical Engineering
Industrial Technology Research Institute (ITRI)
COMTES FHT a.s.

KAPPA

TO01000112
CO₂ STORAGE PILOT IN A CARBONATE
RESERVOIR

The main goal of the CO₂-SPICER project was to prepare the CO₂ geological storage pilot project at the mature Zar-3 oil and gas deposit in southeastern Moravia to the stage of readiness for implementation. To meet this goal, a set of sub-activities was to be performed:

- Construction of a 3D geological model of the storage complex
- Implementation of dynamic modeling and computer simulation of CO₂ injection into the storage using different scenarios
- Evaluation of geomechanical and geochemical properties of the storage complex
- Assessment of risks associated with the CO₂ storage
- Elaboration of the Site monitoring plan
- Development of scenarios for the next stages of project implementation, including the project of storage facilities
- Strengthening of the Czech-Norwegian cooperation in this field

The proposed activities fall under the category of industrial research and generated new knowledge in the field of geological CO₂ storage. The research was implemented jointly by one Norwegian and four Czech project partners. Building the capacities of Czech research partners, supported by sharing knowledge and experience with the Norwegian partner, was an integral part of the project activities.

The project enables safe storage of CO₂, contributing to the reduction of emissions that are key to combating climate change. This technology helps fulfill the climate targets of the Czech Republic and the EU, while at the same time, the economic and environmental value of extracted oil and gas deposits will increase. The CO₂ storage technology provides a transitional solution for energy-intensive industries that generate high levels of emissions and therefore cannot immediately switch to emission-free sources. Furthermore, it enables CO₂ generated during the production of energy from biomass or other renewable sources to be stored and thus contributes to achieving carbon neutrality.

Project investigators:
Czech Geological Survey
Institute of Geophysics of the Czech Academy of Sciences , v. in. and
MND a.s.
FOOLS
VSB – Technical University of Ostrava / Faculty of Mining and Geology

SIGMA

TQ01000275
CHRONIC NON-COMMUNICABLE DISEASE
PREVENTION TOOLS: INNOVATIVE APPROACHES
AND TOOLS FOR ASSESSING CHILD HEALTH AND
OBESITY RISKS

The project responds to dynamic social, economic, globalization, cultural and technological changes in accordance with EU4Health, the National Recovery Plan and Health 2030. Across all project stages and activities, an important element is the monitoring and assessment of the health status, determining the degree to which the socio-economic, demographic and other factors influence a healthy lifestyle and have an effect on the onset and development of obesity and other non-communicable diseases in children. To this end, indicators, methods and techniques of social sciences and humanities will be used, especially in the field of sociological (or psychological) research (questionnaires, eye-tracking, etc.). Sociological data will be evaluated using qualitative and statistical methods and visualized in space and time. The outputs will have a significant practical impact on both professional and general public.

The project will produce educational tools (e.g., online applications, games or interactive materials) that will help children and their parents better understand a healthy lifestyle. The new tools will offer personalized approaches to prevention that take into account the needs of children specific to their age, health status and socio-economic conditions. Consistent prevention of obesity in children will contribute to improving the overall health status of the population. The project will support the fulfillment of objectives of the EU4Health and Health 2030 programmes, which will support better coordination of healthcare at the European and national level. The results of the project will subsequently help create an environment that promotes health, increases productivity and reduces social inequalities. Thanks to the combination of sociological research, latest technologies and interactive educational tools, the results of this project will help improve healthcare, increase the awareness of a healthy lifestyle and reduce health risks in the population in the long term.

Project investigators:
Mendel University in Brno / Faculty of Regional Development
and International Studies
Masaryk University / Faculty of Medicine
National Institute of Public Health in Prague

INTERNATIONAL ERA-NET COFUND CALLS
AND EUROPEAN PARTNERSHIPS

In 2024, TA CR was part of ERA-NET Cofund/European Partnership projects under which 6 international calls were launched. The awareness and interest of researchers in international calls continue to grow.

In 2024, projects could be submitted under the following calls:



**CHIST-ERA IV
Call 2023**
Information and Communication
Sciences and Technologies (ICT)



**Water4All
Partnership
Call 2024**
Management of
water resources



**M-ERA.NET 3
Call 2024**
Materials research
and innovation



**Biodiversity
Partnership
Call 2024**
Supporting biodiversity and
protection of ecosystems



**Driving Urban
Transitions
Partnership
Call 2024**
Sustainable mobility, urban climate
neutrality and circular economy

**Clean Energy
Transition
Partnership
Call 2024 (CET)**
Clean energy



The conditions to be met by the Czech applicants reflected the international rules of the call and the national conditions set out by the funding programme (in these cases the SIGMA Programme – SO4).
In 2024, the most popular international call among the Czech researchers was once again the M-ERA.NET 3 Call. Under this call, a total of 389 projects were submitted in 2024, of which 79 projects involved 107 Czech applicants. The results of the call

will be announced in February 2025. The Biodiversity Partnership Call 2024 and the Clean Energy Transition Partnership Call 2024 also belong to the popular calls. In both calls, approximately 30 projects with Czech applicants were submitted.
In addition to the calls launched in 2024, also the results of the calls from 2023 (namely 6 evaluated international calls) were announced this year.

Table No. 2:
Overview of announced and evaluated international ERA-NET Cofund/ European Partnership calls in 2024

ERA-NET COFUND/PARTNERSHIP	CALL	TOTAL NUMBER OF PROJECTS SUBMITTED	NUMBER OF PROJECTS WITH CZECH APPLICANTS	NUMBER OF CZECH APPLICANTS IN PROJECTS	NUMBER OF SUCCESSFUL PROJECTS	NUMBER OF SUCCESSFUL CZECH PROJECTS/ CZECH APPLICANTS
M-ERA.NET 3	Call 2023	382	68	104	43	5/9
CHIST-ERA IV	Call 2023	31	7	8	9	2/2
BIODIVERSITY PARTNERSHIP	Call 2023	191	19	20	34	2/2
WATER4ALL	Call 2023	116	6	8	23	2/2
CET	Call 2023	207	17	18	62	7/8
DUT	Call 2023	183	13	14	42	4/5
M-ERA.NET 3	Call 2024	389	79	107	the results will be announced in February 2025	
BIODIVERSITY PARTNERSHIP	Call 2024	284	29	33	the results will be announced in February 2025	
CET	Call 2024	309	32	35	the results will be announced in February 2025	
WATER4ALL	Call 2024	148	12	12	the results will be announced in February 2025	
DUT	Call 2024	254	7	7	the results will be announced in February 2025	

The ERA-NET Cofunds calls and European Partnerships have so far granted funding to 150 Czech applicants in 105 projects of the total number of 854 projects submitted with the participation of Czech researchers.

In each of the above-mentioned schemes, TA CR fulfills responsibilities (Work Packages and Tasks) through its representatives, as outlined in the consortium agreements. In the framework of ERA-NET Cofunds and European Partnerships, the Agency’s representatives are thus in charge of agenda covering e.g. “Outreach” (mapping and establishing various collaborations between the partnership and other schemes), “Follow-up” (for projects and RFOs within the given scheme), “Partner-

ship Impact” (definition of indicators and assessment of the impact of projects, the given partnership and the European policies), or “Communication” (communication, especially externally on behalf of the given scheme). Moreover, a TA CR representative was elected a member of the Executive Board of the European Biodiversity Partnership (Biodiversa+), therefore, TA CR now has a representative among the top leaders of this project.

NATIONAL RECOVERY PLAN

In 2024, the implementation of the National Recovery Plan (NRP) continued under the components 1.3 and 5.2, which are focused on research and where TA CR acts as the implementing body.

Within Component 1.3, projects funded by the 7th and 8th call for proposals of the TREND Programme were implemented, whereas in Component 5.2 the implemented projects included those funded by the National Center of Competence Programme and the Environment for Life Programme (Sub-programme 2), projects from the European Partnerships and ERA-NET Cofund calls, and projects that were awarded the Seal of Excellence label from the European EIC Accelerator tool.

In the framework of an update of the National Recovery Plan, investments 5, 6 and 7 were added to Component 5.2 in 2023, which will be used to fund research and development in enterprises under the TREND Programme, to fund research and development in transport and space activities under the Transport 2030 Programme, and to fund research and development in the field of environment under the Environment for Life Programme. In 2024, the results of the latter two of these three new investments (7th call for proposal in the Environment for Life, Sub-programme 2 and 1st call for proposal in the Transport 2030) were announced and selected projects were funded from the National Recovery Plan.

Also in 2024, changes were made in the implementation of the National Recovery Plan in the Czech Republic, which reflect the current needs and the situation in the field of research and innovation and respond to the developments in the first half of the period when the Czech Republic drew funds from the EU Recovery and Resilience. Due to the time limits of the National Recovery Plan and the lesser involvement of the European Commission in the EIC Accelerator programme, the intended scope of projects in the field of international cooperation could not be supported. However, it was possible to increase funding for projects focused on translating research results into practice, especially in industrial production and product marketing, where there was a large excess of successful projects.

As a result, a total of EUR 175 million has been allocated in the NRP to fund the Czech applied research through TA CR.

Under Component 4.1.4, the project “Ensuring staffing capacities of TA CR for the implementation of the National Recovery Plan” was implemented by TA CR in 2024. The project covers staffing capacities and administration of the NRP, particularly of projects funded through the investments under Components 1.3 and 5.2 and related activities.



MINISTERIAL PROGRAMMES

In 2024, the Agency continued to implement ministerial programmes of three ministries – the TREND Programme of the Ministry of Industry and Trade, the Environment for Life and the Environment for Life 2 Programme of the Ministry of the Environment, and the TRANSPORT 2020+ and the TRANSPORT 2030 Programmes of the Ministry of Transport.

Cooperation continued also with the ministries whose programmes are not administered by TA CR, but which implement their programmes in the ISTA, information system of TA CR. ISTA is used by the Ministry of the Interior for the IMPAKT 1, SECTECH and OPSEC Programmes and by the Ministry of Agriculture for the ZEMĚ II Programme. Furthermore, TA CR is a co-creator and the implementing body of the PRODEF Programme (Ministry of Defence).

PREPARATION OF NEW PROGRAMMES

In 2024, the Technology Agency of the Czech Republic completed the preparation of a new programme to support applied research and innovation in the defense industry PRODEF. This programme was developed in close cooperation with the Ministry of Defence, which acts as the programme manager, and the General Staff of the Czech Armed Forces. PRODEF is focused on supporting applied research and innovation in the defense industry and aims at international and national support in this area.

Through its implementation, TA CR, together with the programme manager, intends to develop cooperation between businesses and research organisations and to create an enabling environment for linkages with activities of the European Union. The programme will therefore be divided into two sub-programmes – with a focus on co-financing activities funded by the European Defense Fund and supporting projects that contribute to addressing strategic goals of the Czech Republic in the field of defense. The programme was approved by the Government of the Czech Republic in May 2024, and in the autumn, the first call for proposals was announced in Sub-programme 2. The call for proposals is aimed at supporting applied research and innovation projects in the field of emerging and breakthrough technologies usable by the Army of the Czech Republic, which also have a high potential of applicability in a wide range of civilian and military fields.



PHOTO BY NASA ON UNSPLASH.COM

Since the approval of the SIGMA framework Programme, TA CR has cut down on the number of its own programmes in the making. Instead, it focuses on optimization and implementation of calls for proposals under the SIGMA Programme. These calls for proposals cover most of the areas that used to be covered by the earlier TA CR programmes. The Agency places great emphasis on the thorough preparation of calls for proposals, as they outline the main directions and interventions that TA CR intends to support in the following period in accordance with the approved Strategy.

TA CR also helps other ministries design and develop applied research and innovation programmes and subsequently ensures their implementation.

5. PROMOTING GENDER EQUALITY AND RESPONSIBLE RESEARCH AND INNOVATION

Support for gender equality and responsible research and innovation is one of the topics that TA CR has been addressing for a long time. With the aim of further developing and systematizing its activities in support of gender equality, TA CR has been implementing the Gender Equality Plan 2022–2025 since last year. The plan contains measures aimed at supporting gender equality in the research ecosystem as well as activities supporting equality and an open and respectful environment in the TA CR Office itself.

Within the implementation of the Plan, TA CR has focused particularly on promoting a more balanced representation of women and men in research teams and on improved reflection on gender dimensions in the context of research and innovation. These aspects have been reflected in the evaluation criteria of project proposals in the selected calls for proposals of the SIGMA Programme. In order to support the reconciliation of research work and personal life and parenting, TA CR has elaborated a document (available on the TA CR website and Helpdesk) which provides male and female researchers with a clear overview of options they have in the course of project implementation in case of pregnancy, maternity/parental leave and return back to work (e.g. the process and conditions of handing over and reassuming responsibility for a project implementation, the possibility of extending the project implementation period). TA CR also continued its ongoing monitoring of gender-relevant data related to the submitted and funded projects.

In relation to its own employees, TA CR focused on raising awareness of obstacles to gender equality in the field of research and possible measures for their elimination through internal training. In order to improve the organizational culture and its gender aspects, an internal campaign Harm(less) Comments was carried out as a follow-up to the conducted employee survey - focused on equal opportunities and possible experiences of sexual harassment, mobbing and bossing. The gender pay gap continued to be also monitored through the Logib analytical tool, which TA CR has been using since 2020.

In the field of gender equality, TA CR was also active at the international level. Since June 2022, TA CR has been participating in the GENDERACTIONplus project, which was supported by the Horizon Europe programme. It is a three-year project that brings together 26 partners from 21 countries - mainly research funding organisations and ministries. The project aims to strengthen the coordination of activities promoting gender equality in research and thus contributing to the fulfillment of the ERA goals in this area. Within the framework of the project, TA CR mainly carries out activities focused on the inclusion of the gender dimension in the content of research and innovation.

Apart from activities dedicated to gender equality, TA CR also addressed other aspects of responsible research. It continued to promote open access to research data and results. Under all calls for proposals, international calls and public procurements announced in 2024, it was mandatory to publish research data (subject to legal exemptions). In selected calls for proposals under the SIGMA, THÉTA 2 and Environment for Life Programmes, the beneficiaries were obliged to ensure also open access to the specified types of publication results and research outputs. In order to comply with the principles of responsible research, the assessment of potentially negative impacts of the planned outputs/ results of the project on a social (e.g. strengthening social inequalities), environmental, economic and security levels was included by TA CR in the evaluation criteria for project proposals under the implemented call for proposals of the SIGMA Programme - Sub-objective 2.

6.

COOPERATION WITH
BENEFICIARIES

Communication with beneficiaries is very important for TA CR as it plays a key role in improving the Agency's activities and services. The main effort of the Agency is to meet as much as possible the needs of investigators of research projects as well as applicants for funding. The TA CR staff provide information and answers to all partners in a comprehensive and easy-to-follow form through standard helpdesk, e-mail or telephone communication as well as through numerous webinars/seminars, workshops and consultations.

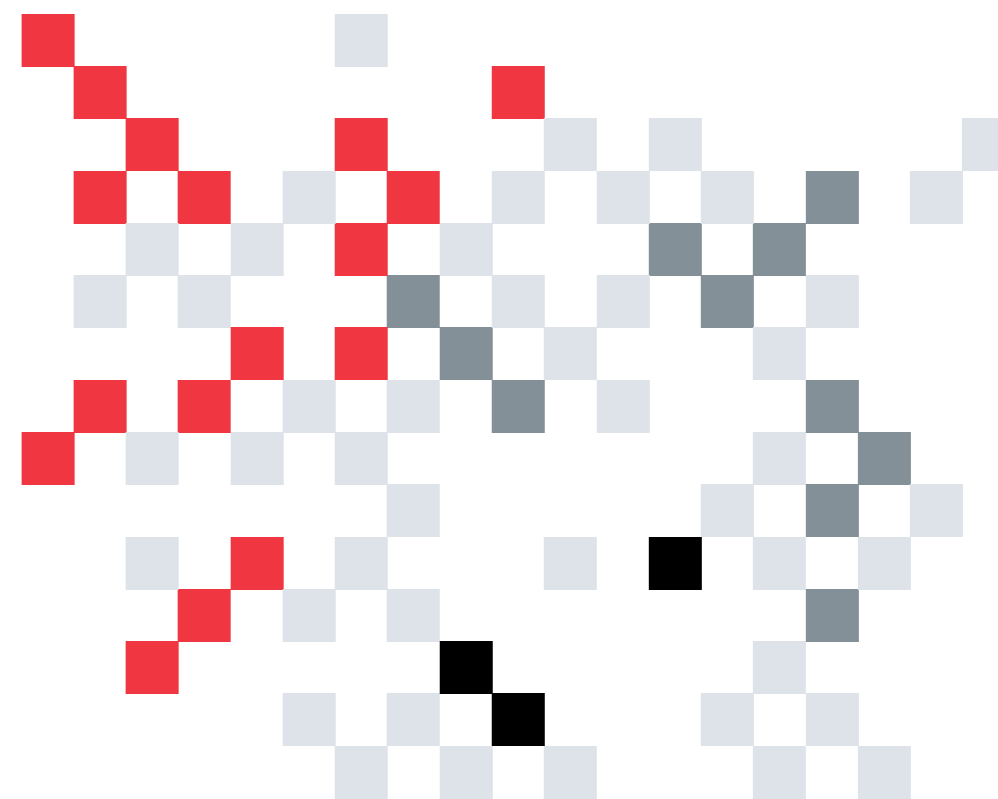
In 2024, TA CR held a total of **77** events for applicants and beneficiaries and also many other events in which the TA CR employees participated in order to raise awareness of applicants and beneficiaries. Specifically:

■ **17** events for applicants in the framework of national and international cooperation; these events focused on the conditions and parameters of announced calls for proposals and international calls.

■ **11** events for successful project investigators of funded projects; these events focused on project administration processes, e.g., how to conclude a Project Contract, how to initiate the project change management process, how to prepare for administrative and financial inspection or how to elaborate an annual progress report on the implementation of the project.

■ **46** events were catering for both applicants and successful project investigators; these events include the newly introduced consultations for researchers (which can take place online as well as face-to-face), consultation meetings and consultancy days held in the regions.

■ **3** interactive workshops *How to approach media?* where the experienced lecturer Pavla Hubálková teaches TA CR beneficiaries how to effectively promote applied research and communicate the results of their research.



7. IMPROVEMENT OF TA CR ACTIVITIES

DEVELOPMENT PROJECTS

In 2024, in the framework of the European Structural and Investment Funds, the Agency implemented one project from the Johannes Amos Comenius Programme (P JAC). It also implemented international projects under the European Commission's programmes Horizon 2020 and Horizon Europe, and the implementation of a new project from the European programme Interreg Europe was launched.

In cooperation with the Ministry of Industry and Trade and the CzechInvest Agency, TA CR continued to implement the project Systemic Support for the Implementation and Management of the National RIS3 Strategy 2023+ (P JAC). The main objective of the project is to improve the implementation and management of the National RIS3 Strategy so that it intensively supports the development of strengths of the R&D&I system at national and regional level, responds to new challenges/trends/megatrends resulting from the process of identifying business opportunities, strengthens industrial transformation and digitalization, and develops interregional and international cooperation.

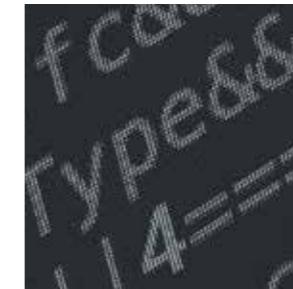
At the transnational level, the Agency continued to implement CSA type projects, ERA-NET Cofund projects within the Horizon 2020 programme, and European Partnership projects within the Horizon Europe programme.

During 2024, the implementation of the TRAMI project, a CSA-type project, was successfully completed. The aim of the project was to provide support and

an information base for the implementation of missions at the European, national and regional level. The objectives were achieved by mapping key organisations for mission-oriented policies, spreading awareness of these policies, and creating a network to share best practices.

Furthermore, the implementation of the GENDER-ACTIONplus project continued. The aim of the project is to create a network of representatives of research funding organisations and ministries from individual EU Member States (and several associated countries), which will help coordinate the efforts in promoting gender equality in research and meet the ERA goals for this area. The project brings together 26 partners from the EU Member States and associated countries and is coordinated by the Institute of Sociology of the Czech Academy of Sciences.

TA CR has recently joined the international project Knowledge Analytics funded by the Interreg Europe programme. The project aims to improve tools to support the knowledge transfer between research institutions and the business sphere with the aim of supporting activities in the field of research, development and innovation. The project is focused on activities supporting joint projects of research and business entities, contract research and involvement of researchers in business activities. The coordinator of the project is the Research Council of Lithuania. TA CR acts as a project partner.



SISTA

Shared Information system
of TA CR

In 2024, TA CR continued to implement the internal project aimed at developing a new shared information system of TA CR (SISTA). SISTA is a single information system for the provision of support to applied research under TA CR, the aim of which is to fully administer research projects, from submission of proposals through evaluation to the implementation of calls for proposals and public tenders. In 2024, the implementation of other business and cross-cutting services continued in the regime of multi-supplier framework agreements, so that calls for proposals/calls could be announced in SISTA as of 2025. Key services such as Citizen identity for simplified authentication, Logging in via the means of identification, and the Organisation Management service were launched. At the same time, the services of management of experts and implementation of public contracts have been developed.

STRATEGY FOR THE DEVELOPMENT OF THE TECHNOLOGY AGENCY OF THE CZECH REPUBLIC 2035

PHOTO BY GOOGLE DEEPMIND ON UNSPLASH.COM

novation. Special attention is paid to digitalization, automation and introduction of artificial intelligence into the Agency's processes, which should improve their efficiency and speed. Actions are then listed for each strategic objective. They represent the planned activities of TA CR, which support the gradual accomplishment of the strategic objectives. An important part of the strategy is also the introduction of a strategy implementation management system, including monitoring and evaluation of the progress achieved in its implementation.

In the preparation of the strategy, not only the representatives of the TA CR bodies and employees of the TA CR Office, but also many external experts were involved. The focus of the strategy was consulted with the Minister for Science, Research and Innovation and other stakeholders.

In February 2024, the approval process of the strategy began, at first internally within TA CR, where it was discussed at the TA CR Board meeting and also at the Research Board meeting. Subsequently, the strategy was submitted to the Research, Development and Innovation Council of the Government, where it was discussed at its 402nd meeting on 28 June 2024. From 29 July to 19 August 2024, an interservice consultation took place, which was concluded with no contradictions. After the interservice consultation, the strategy was submitted to the Government of the Czech Republic and approved on 30 October 2024 by Resolution No. 766. The approved Strategy for the Development of the TA CR 2035 replaced the previous strategic documents and its implementation will begin in 2025.

In 2024, the new Strategy for the Development of the TA CR 2035 was finalised. The purpose of the strategy is to support the continuous improvement of TA CR in fulfilling its mission. The strategy is a key document that serves as a long-term framework for the TA CR management. It is intended primarily for the TA CR top-level bodies (i.e., the TA CR Board, the Research Board and the Supervisory Board) and the TA CR Office, which will implement the strategy.

The Strategy for the Development of the TA CR 2035 is based on three key strategic objectives. The first objective "Maximizing the impact of funding from TA CR programmes" reflects the main purpose of TA CR's existence by emphasizing the achievement of specific results and impacts of projects funded by the Agency. The second objective focuses on strengthening international cooperation in applied research, as it is a crucial factor for the openness of the research environment, sharing know-how and gaining access to European resources and global perspectives. The third objective, "Increasing the effectiveness of TA CR processes" focuses on continuous improvement of the internal functioning of TA CR and on qualitative improvement of its services provided within its role as a provider of funding for applied research and in-

INKA MAPPING

In 2024, preparatory works began on INKA 4, a new round of Innovation Capacity Mapping. At first, an updated list of questions for interviews in businesses was compiled. The set of questions was consulted with the mapping partners, who will be once again the regional innovation centers and the CzechInvest Agency. For the needs of INKA mapping, a completely new INKaviz application was being developed throughout the year which will, once finalised at the beginning of 2025, serve not only to present data from the past surveys, but also to collect the data from INKA 4 mapping. Data collection in businesses will take place in 2025.

PHOTO BY VERNE HO ON UNSPLASH.COM

8.
PEOPLE IN TA CR
EMPLOYEES

For the year 2024, TA CR was allocated 127 permanent positions and 20.4 FTEs for internal projects. The resulting annual cumulative number of FTE of permanent employees (including 5 members of the Board) was 127 employees. The following table provides an overview of the employment situation.

Table No. 3:
Employment situation as of 31 December 2024:

	TOTAL	OF WHOM WOMEN	OF WHOM WOMEN IN %	OF WHOM MEN
HEADCOUNT	167	117	70,1%	50
EMPLOYEES WORKING ON THE BASIS OF WORK AGREEMENT	29	14	48,3%	15
EMPLOYEES TOTAL	196	131	66,8%	65
EMPLOYEES IN MANAGEMENT POSITIONS	38	24	63,2%	14
EMPLOYEES IN THE POSITIONS OF DIRECTOR AND SECTION DIRECTOR	4	2	50%	2

The average age of the
employee was

48
years

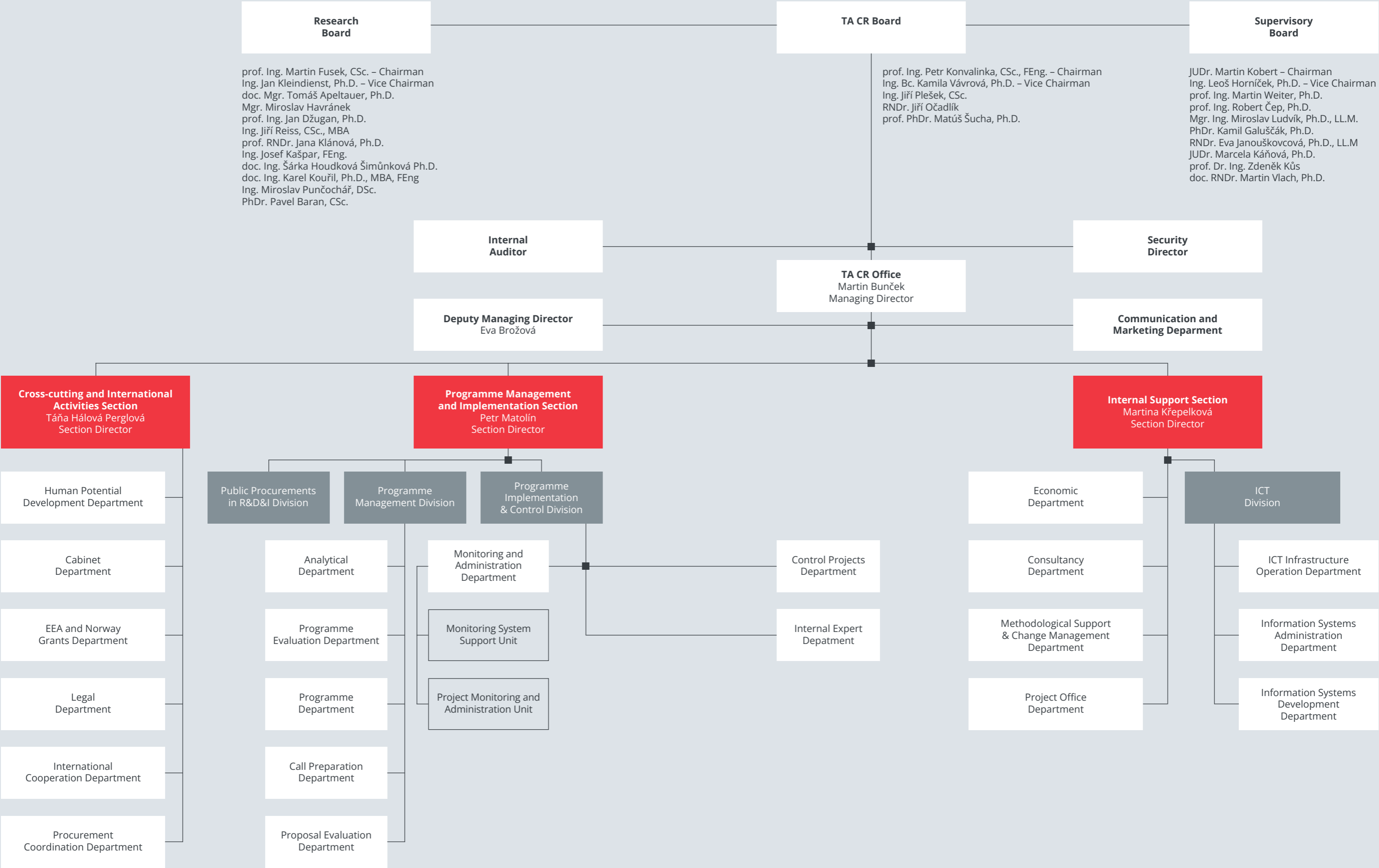
The average length of employment
in TA CR in 2024 was

5,3
years

The turnover rate of TA CR employees
in 2024 was

12%

ORGANIZATIONAL
STRUCTURE



COOPERATION WITH EXTERNAL EXPERTS

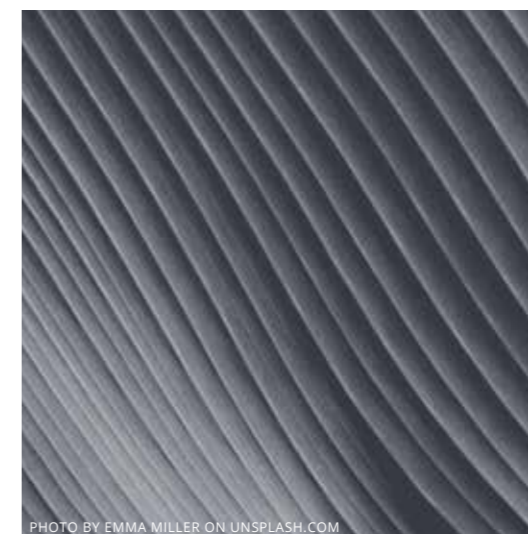


In the past year, 3 613 expert evaluation reports, 32 expert reports, 2 231 summary evaluation reports, and 1 030 reports for the project evaluation and final project evaluation procedure were drawn up.

In 2024, TA CR database included 5 071 registered experts (967 foreign, 4 104 Czech and Slovak experts) – of whom 1 906 were contracted for 2024 (1770 contracts with Czech experts, 63 contracts with Slovak experts and 73 contracts with other experts). The majority of experts – 55.8%, were from the research and academic sphere, 25.9% from the business sphere, and the remaining 18.3% cannot be clearly classified. Among the domestic experts, men (72.8%) predominate over women (27.2%).

The foreign experts are from 52 countries worldwide, with most experts coming from Italy, Spain, and Germany. Also, in the group of foreign experts, men (67%) prevail over women (23%). The Czech and Slovak experts are considered domestic experts and can evaluate all programmes, both the Czech and foreign programmes. Therefore, the number of Czech and Slovak experts is a cumulative number.

For the purposes of evaluating research needs and public contracts in 2024, 16 experts were contracted for the BETA2 Programme, of whom 13 men and 3 women. For the BETA3 Programme, 12 expert consultants were contracted, of whom 8 men and 4 women.



9. TA CR AWARDS



THE TA CR DAY

The Technology Agency of the Czech Republic has awarded the best applied research projects for the twelfth time already. The underlying theme of the TA CR Day 2024 was 15 years of TA CR, and this important anniversary of the Agency was celebrated together with the Czech applied research. The technical part of the TA CR Day, which in previous years was the traditional conference, was replaced by a unique website with content reflecting the theme of the event. The absolute novelty of TA CR Day was a podcast mini-series, the TA.LK, in which Martin Bunčák, director of the TA CR Office, discussed with inspiring guests the research, technology, and state administration related topics in an easy-to-understand and creative way. On 7 November 2024, four top projects with a high contribution to society and economy received the awards in the categories PARTNERSHIP, GOVERNANCE, BUSINESS and SOCIETY in the premises of the National Museum. The absolute winner was chosen through a public vote on the TA CR website, together with the audience in the hall. The winner was the project from the SOCIETY category.



Watch a montage from the entire
TA CR Day 2024.

WINNING PROJECTS OF THE TA CR DAY 2024

BUSINESS CATEGORY

New shock absorbers will help reduce noise pollution from the rolling stock

- BONATRANS GROUP a.s.
- VSB – Technical University of Ostrava / Center for Advanced Innovation Technologies



SOCIETY CATEGORY

Unique water purification technology deals with hard-to-remove micropollutants

- ZENA s.r.o.
- Institute of Botany of the Czech Academy of Sciences
- Masaryk University / Faculty of Science
- T. G. Masaryk Water Research Institute



PARTNERSHIP CATEGORY

Center of Electron and Photonic Optics

- Institute of Scientific Instruments of the Czech Academy of Sciences
- Biology Centre of the Czech Academy of Sciences
- CRYTUR, spol. s r.o.
- Institute of Physics of the Czech Academy of Sciences
- Meopta - optics, s.r.o.
- MESING, spol. s r.o.
- Thermo Fisher Scientific Brno s.r.o.
- Institute of Photonics and Electronics of the Czech Academy of Sciences
- Institute of Plasma Physics
- Institute of Macromolecular Chemistry of the Czech Academy of Sciences
- Czech Technical University in Prague / Faculty of Mechanical Engineering
- Masaryk University / Central European Institute of Technology
- Palacký University Olomouc / Faculty of Science
- Brno University of Technology / Central European Institute of Technology
- Brno University of Technology / Faculty of Mechanical Engineering



GOVERNANCE CATEGORY

Methodology and development of standards for the creation and periodic updates of regional raw material concepts, model solutions for two selected regions

- Czech Geological Survey
- G E T s.r.o.



THE TA CR FILM AWARD

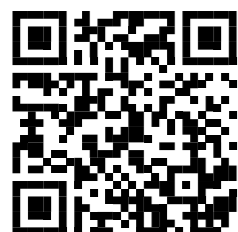


The winner Jáchym Vlček

At the opening ceremony of the 64th Zlín Film Festival, the Film Award of the Technology Agency of the Czech Republic was awarded for the fifth time for the popularization of science among young people.

The fifth year of the competition built on the successful concept from last year - it focused on filmmaking of schoolchildren and the way they view science, inventions and the future. The topic "Inventions for a better life" was well chosen. Pupils of all grades of primary schools could thus make a live action, animated or combined (live action combined with animation elements) 5-minute short films and thus portray their idea of various innovations that will simplify or enrich our lives. A total of 13 short films made by primary school and primary art school pupils were entered in the competition. Journey of the Bottle, made by Jáchym Vlček, the 8th grade pupil from Jičín, was chosen by the expert jury as the best film.

The TA CR Film Award was printed on a 3D printer by 3Dees and assembled in collaboration with the glassblower Lukáš Jabůrek, the author of the TA CR Awards for Applied Research.



The winning film by Jáchym Vlček

10. TA CR AS THE RESPONSIBLE COMPANY

The Technology Agency of the Czech Republic has long strived to implement the principles of responsible behaviour, both internally and externally. For example, the Agency holds the P.E.T. Free Pledge certificate, through which it has committed to reducing the use of single-use plastic bottles.

Every year, the Agency's employees are actively involved in various charity collections. This year, they provided material assistance to people affected by floods in a fundraiser organized by Junak - Czech Scouting. They also made a financial contribution to the Center for Palliative Care, which improves care for the dying people in the Czech Republic, namely systematically across the health and social care system. The Agency's employees also decided to join the material assistance collection held by the non-governmental non-profit organisation Charita Hvězda, whose main project is a hub for foster parents providing material assistance not only to children in substitute family care, but also to children from socially disadvantaged families.

Moreover, the Agency provides each employee with a leave of absence with salary compensation (equal to average earnings) beyond the scope of the Labor Code requirements for up to two working days for volunteer activities and activities to improve the environment, which enhances the reputation of TA CR and the Trade Union Organisation of the TA CR ZOO (e.g. forest cleaning, tree planting, hospice assistance).

PHOTO BY CHUTERSNAP ON UNSPLASH.COM

SUMMARY

The role of TA CR, as an organisational unit of the state and the administrator of a budget allocation, is the preparation and implementation of programmes of applied research, development and innovation and the effective provision of targeted funding for the implementation of projects within these programmes. Other tasks include fostering communication and cooperation between research organisations and the private sector, advising project participants and users of results, and cooperating with similar agencies abroad.

LAST YEAR OF THE TA CR
IN A NUTSHELL:

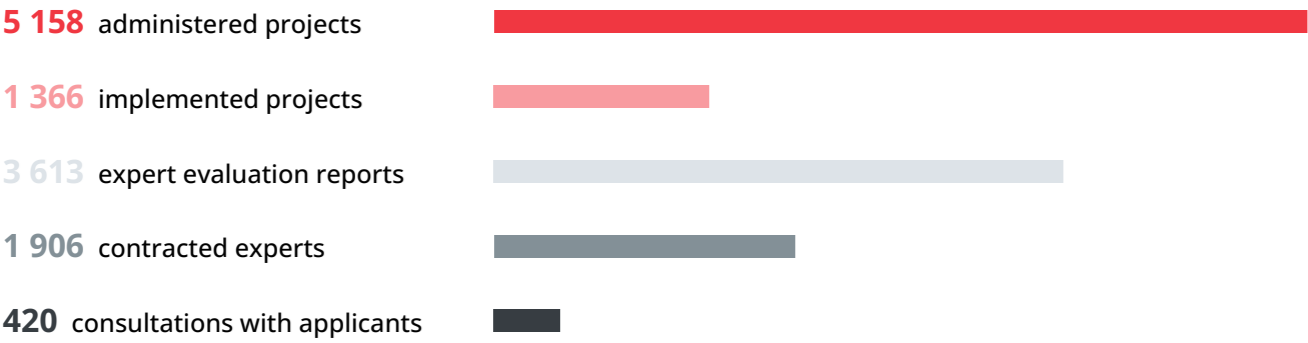


15 years since the establishment of the Agency

EUR 258 million

targeted funding for applied research and innovation

- significant progress in the development of a new shared information system SISTA – introduction of key services
- approval of the Strategy for the Development of the Technology Agency of the Czech Republic 2035 by the Government
- establishment of a new Procurement Coordination Department
- change in the membership of the Supervisory Board
- completion of preparations of the new PRODEF Programme and announcement of the 1st call for proposals



EXPERIENCE THE TA CR
IN A DIFFERENT WAY

ANIMATION
TA CR: 15 YEARS



TA CR
INTERNATIONAL
COOPERATION
BROCHURE



15 YEARS OF
TA CR WEBSITE



TA.DI
MAGAZINE

