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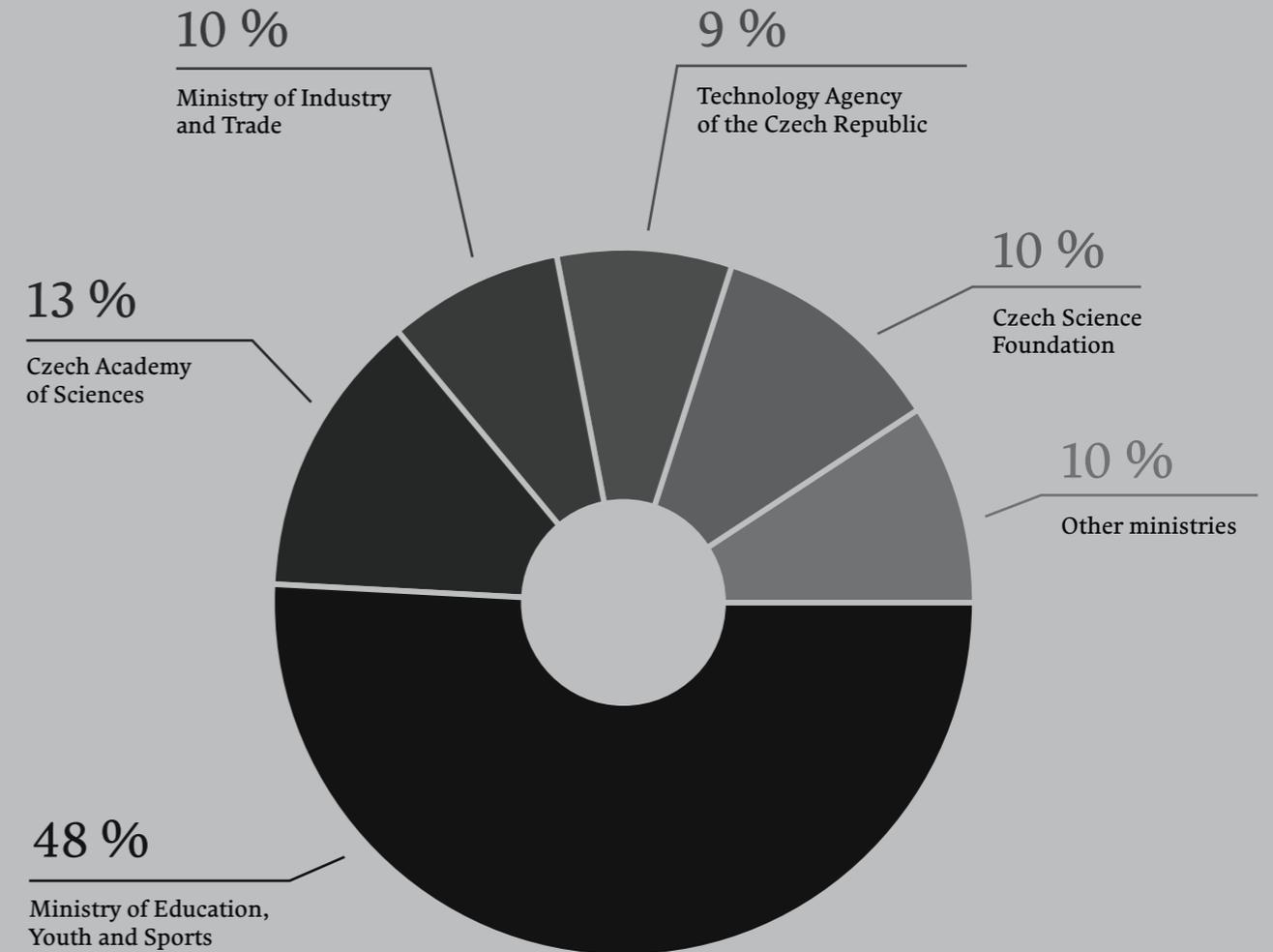
**Technology Agency of the Czech Republic  
and its programmes**

## Technology Agency of the CR

- established by the Government of the Czech Republic
- supports and finances applied research, experimental development and innovation
- invests yearly over 2.8 billion Czech crowns

The development of advanced countries is based on innovations. Investments in new technologies are substantially beneficial to their economies and increase the living conditions of their citizens. That is why we help to change the Czech Republic into a country whose development will be increasingly relying on new ideas and that will be able to introduce them into the production.

State budget expenditure on research, development and innovations in 2014 (in thousands of CZK)



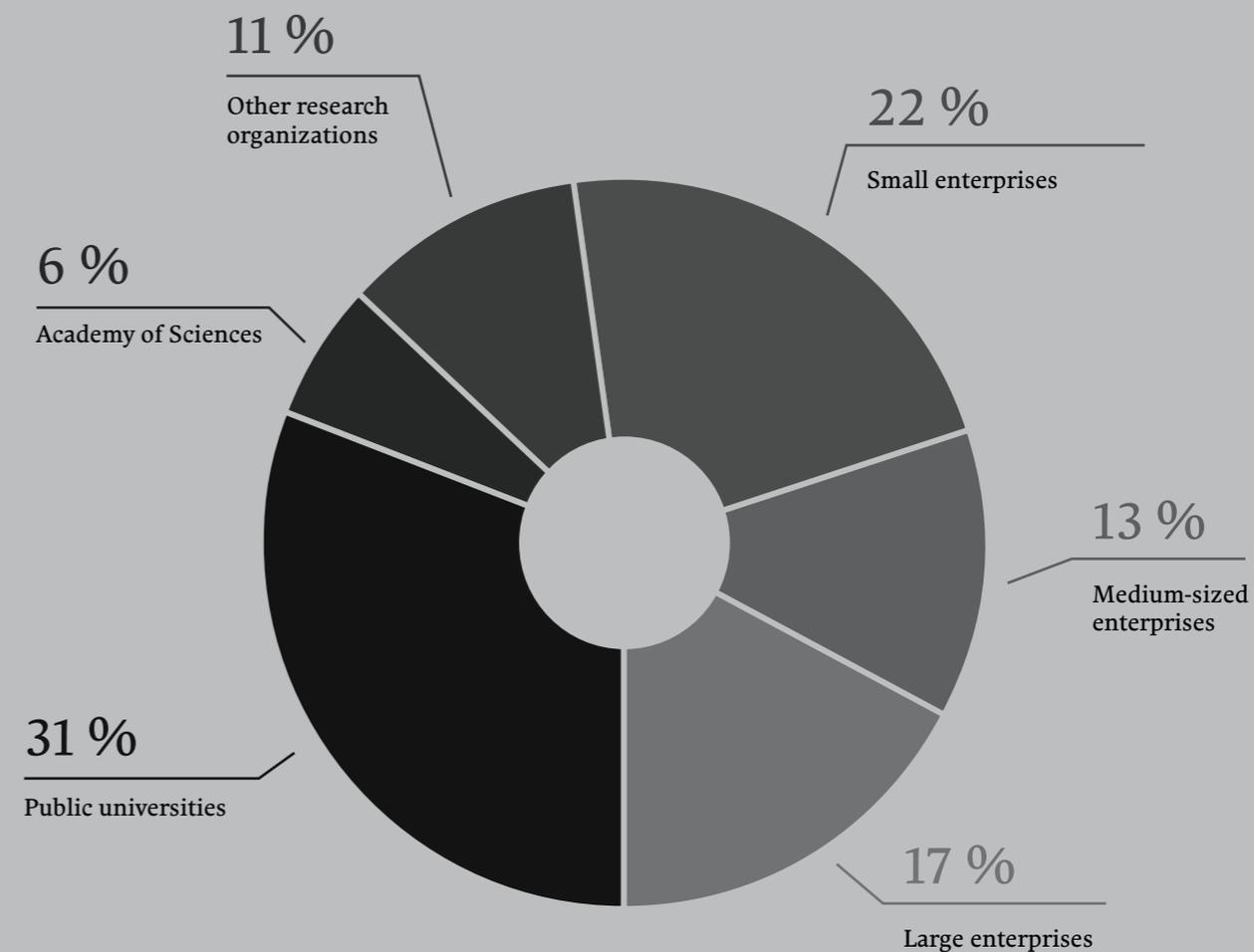
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**In the past, applied research was behind some important and successful Czech stories. We want to pick up on them. That is why the Technology Agency tries to help both the research organizations and the private sector. It is thanks to the cooperation of these two worlds that ideas which can radiate are often generated.**

There is no question that we can be proud of the inventors that were successful in substantially enhancing our lives. František Křižík set into motion the first tram in Prague and introduced electricity into many Czech towns. Otto Wichterle fundamentally improved contact lenses and contributed to their global upswing. Antonín Holý managed to bring his material research into specific medications thans to which AIDS and viral hepatitis is being treated. What did these three successful inventors have in common? They managed to make a connection with companies (actually, František Křižík was himself an entrepreneur) and succeeded in bring their ideas into useful results.

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Organizations supported through the ALPHA programme.



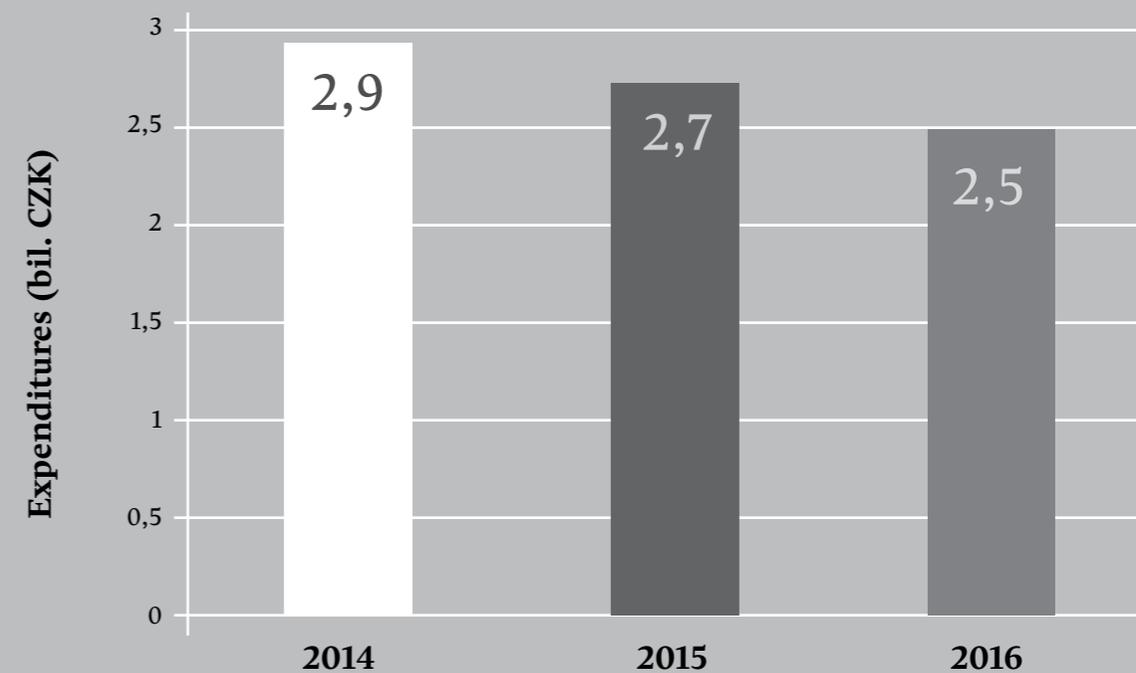
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**The Technology Agency was established in 2009. While in the past, the support of applied research and development used to be dispersed among large number of providers, today it is mainly concentrated in the Technology Agency. First finances were distributed by the Agency in 2011.**

The support of applied research through a single institution allows for easier following of long-term aims and also to connect institutions with similar focus. All projects that we support must end up with a practical and usable result. These can be patents, utility models or industrial designs, prototypes, functional samples, software etc. Also results usable for the drafting of legal norms or other binding regulations and methodologies are accepted. Apart from direct financing of applied research we also aim to provide consultancy to supported institutions mainly in the legal, financial and IPR fields.

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Overall expenditure on applied research from TA CR sources.



## TA CR programmes

### Programme for the support of applied research and experimental development

#### ALPHA

The first programme prepared by TA CR in cooperation with the Ministry of Industry and Trade, the Ministry of Transport and the Ministry of the Environment is the Programme to support applied research and experimental development ALPHA.

The programme places emphasis on strengthening public-private partnerships in research, development and innovation, and research, development and innovation projects requiring rigorous co-financing from private sources.

Thematically, the programme supports projects of applied research and experimental development in the areas of advanced technologies, the environment, energy and transport. These areas are reflected in the structure of the programme which is divided into three sub-programmes – **Advanced technologies, materials and systems, Energy resources and environmental creation and protection and Sustainable development of transport.**

#### Characteristics of the programme

Duration	2011 to 2019
Tenders announced in years	2010, 2011, 2012 and 2013
Total expected budget	14.4 billion CZK
of which from the state budget	9.3 billion CZK (65 %)
Length of projects	2 to 6 years
Recipients of support	enterprises, research organizations

#### Focus of the programme

The programme is focused on supporting projects of applied research and experimental development, the results of which have high potential for application in new products, production processes and services.

#### Aims of the programme

- The main aim of the programme is to significantly increase the quantity and quality of new knowledge in applied research and experimental development in the areas of advanced technologies, materials and systems, energy resources, protection and creation of the environment, and sustainable development of transport, which will be applicable in the form of innovation;
- The programme also aims to highlight the need for interdisciplinarity of topics and a comprehensive approach to performing the projects;
- The programme seeks to increase the intensity and effectiveness of cooperation in research and development between different subjects, and especially between enterprises and research organizations.

#### Types of results

- patents;
- pilot operations, proven technologies;
- results with legal protection – utility models, industrial designs;
- technically realized results – prototypes, functional samples;
- certified methodologies and procedures, and maps with expert content;
- software.

#### ALPHA in numbers

Projects proposals	3 501
Supported projects	963
Supported organisations overall	2 536
: Research organisations	1 222
: Enterprises	1 314

## TA CR programmes

### Programme of public procurement in research, experimental development and innovation for the needs of public administration bodies

#### BETA

The BETA programme is aimed at promoting research, development and innovation for the needs of the government, especially public administration bodies that are not providers of support for research, development and innovation. The objectives of the programme are to enhance current practices, methodologies, regulatory mechanisms, supervision activities, and to improve services, information and control products and processes that will lead to greater innovation, efficiency and effective allocation of public funds. The programme is announced for the period 2012–2016 with the allocated amount of 640 million CZK.

The first round of tenders in the BETA programme was launched by TA CR on the 10th of February 2011. By the end of September 2015, there were a total of 202 tenders announced and in 120 cases the contracting authority (TA CR) decided to choose the best offer.

#### Characteristics of the programme

Duration	2012 to 2016
Identification of research needs	yearly until 2015 (including)
Total expected budget	640 mil. CZK
of which from the state budget	640 mil. CZK (100 %)
Length of projects	6 months to 3 years
Recipients of support	enterprises, research organizations
Max. level of support /project	100 % of total eligible costs

#### Focus of the programme

The programme is aimed at promoting research, development and innovation for the needs of the following governmental bodies:

- State Mining Administration;
- Czech Office for Surveying, Mapping and Cadastre;
- Ministry of Transport;
- Ministry of Labour and Social Affairs;

- Ministry for Regional Development;
- Ministry of Interior;
- Ministry of Foreign Affairs;
- Ministry of the Environment;
- State Office for Nuclear Safety.

The programme is implemented through individual tenders in research and development based on the requirements of the relevant public administration bodies.

#### Aims of the programme

- The programme aims to enhance current practices, methodologies, regulatory mechanisms, supervisory activities, as well as to gain new knowledge, skills, services, information and control products and procedures intended for use by the state administration and will lead to greater innovation and also to an increase in the efficiency of these activities.
- Specific objectives are broken down according to the research needs of the relevant governmental bodies. The research needs are met through specific projects implemented by individual public contracts in research and development.

#### Types of results

- results reflected in legislation and standards;
- results reflected in directives and regulations of a non-legislative nature which are binding within the competence of the relevant provider;
- results reflected in the approved strategic and conceptual documents of state or public administration bodies;
- results with legal protection – utility models, industrial designs;
- technically realized results – prototypes, functional samples;
- certified methodologies, specialized maps with expert content;
- software;
- patents;
- research papers;
- pilot operations, proven technologies.

#### BETA in numbers

Research needs proposed	274
Identified research needs	184
Closed contracts	128

## TA CR programmes

### Programme of applied research, experimental development and innovation

#### GAMMA

The GAMMA programme supports the verification or research results from the point of view of their practical applicability. The results of research usually cannot be used right away. It is necessary to perform further tests, validate some features, and also the introduction of R&D results to the market can be complicated.

The programme is divided into two sub-programmes. First sub-programme (SB1) helps to verify if the result of research performed by the research organization is applicable in the practice. Mostly these are unplanned results that were generated during the fulfilment of research tasks, often these are new ideas of students or young researchers. And yet, within the competency of the research organization is the whole process from the searching for suitable R&D results, over the protection of IP, to offering the results to the application sphere and division of possible profits.

The second sub-programme (SB2) offers support to enterprises that are trying to bring to the market innovative products whose development was supported with the use of public funding. The aim of the sub-programme is not only to reduce the risk of failure of the entrepreneur that decides whether to invest his own resources into the project or not, but also to get back part of the finances previously used for financing of R&D. The prosperity of the producer of the innovated product, if he is able to sell it, has an effect on the whole society – through state taxes and through new products for the customers.

#### Characteristics of the programme

Duration	2014 to 2019
Tenders announced in years	Sub-programme 1: 2014–2016 each year Sub-programme 2: 2015–2017 each year
Total expected budget	2.770 billion CZK
of which from the state budget	1.798 billion CZK (65 %)
Length of projects	SP1: 3 to 5 years, SP2: 1 to 3 years
Recipients of support	SP1: research organizations, SP: research organizations, enterprises
Max. level of support /project	SP1: 100 % of total eligible costs, SP2: 55 % of total eligible costs

#### Aims of the programme

The aim of SB1 is to support and significantly improve the effectiveness of transfer of new R&D findings arising from public resources in research organizations and support their launch in practice. The actual application of findings is not an aim of SB1. The achieving of the aims of SB1 leads to an improvement in the effectiveness of use of public resources invested in R&D

and indirectly to the reinforcing of the economic performance of the research organizations, growth in the competitiveness of the economy and society in the Czech Republic and an increase in the quality of life of its inhabitants. In the first sub-programme only research organizations may be recipients or other participants of the project.

Sub-programme 2 focuses on support for projects of applied research and, in particular, experimental development leading demonstrably to a commercialization of the gained results which will not, however, be supported by the programme. For the purposes of SB2 commercialization means the subsequent application of these results in the form of innovations as new or fundamentally improved products and services offered on the market or in production procedures used in the production of the relevant products or services. In the second sub-programme only companies can be recipients; research organizations may participate only as other participants of a project.

#### Types of results

The concrete supported activities of “sub” projects in SB1 and projects in SB2 must lead to results of the type:

- creation of test series;
- performance of experimental tests proving the in/applicability of results in practice (in the form of a verification protocol);
- concrete proposal for new, fundamentally improved products, procedures or services in the form of a model, functional sample etc.;
- technology where the commercial potential was verified;
- performed technology transfer;
- sale of commercial license;
- products or services prepared for market launch.

“Sub” projects and projects in SB2 must also lead to the attainment of at least one of the results of the types below:

P – patent; G – technically implemented results – prototype, functional sample; Z – semi-operation, verified technology;

R – software; F – industrial and utility model.

The attained results must have their concrete user in PP2. In view of the cross-section character of the programme, users of the results will be subjects operating in various branches of the national economy.

#### GAMMA in numbers

Projects proposals	55
Supported projects	21
Supported organisations overall	24
: Research organisations	24
: Enterprises	N/A

## TA CR programmes

### Programme for the support of collaboration in applied research and experimental development through joint projects and technological innovation agencies

#### DELTA

TA CR's DELTA programme supports the collaboration in applied research and experimental development of Czech enterprises and research organizations with their foreign partners.

Only joint projects with partners from countries where TA CR has partner institution can apply. Main aim of the programme is to enable Czech enterprises and research organizations to cooperate with institutions from countries outside of EU, like the USA, China, Japan, South Korea or Vietnam. The first tender focused on Czech-Vietnamese cooperation was announced on the 9th July 2014 and 4 of the total 27 project proposals received were supported.

#### Characteristics of the programme

Duration	2014 to 2019
Tenders announced in years	2014–2017 up to 4 times each year
Total expected budget	1.039 billion CZK
of which from the state budget	768 million CZK (74 %)
Length of projects	till 3 years
Recipients of support	Enterprises, research organizations (ROs only if at least 1 Czech enterprise is also collaborating within the project)
Max. level of support /project	Research org.: 100 % of the total eligible costs, Enterprises: 80 % of the total eligible costs.

#### Aims of the programme

The objective of the programme is to increase the number of specific results of applied research and experimental development in areas where there is a consensus with foreign partners who will successfully implement the results in practice, whereby strengthening the competitiveness of the Czech Republic by promoting bilateral or multilateral collaboration of leading Czech and foreign participants.

The programme will improve the access of teams from the Czech Republic to international expertise and know-how, international research capacity and facilitate the penetration to foreign markets. The synergistic effect of the programme is also the transfer of “best practice” to the Czech Republic from abroad.

#### Types of results

P – Patent

Z – Pilot operation, verified technology, variety, breed

F – Results with legal protection – utility model, industrial design

G – Technically realized results – prototype, functional sample

N – Certified methodologies and practices, treatment, conservation methods, specialized maps with expert content

R – Software

#### DELTA in numbers

Projects proposals	27
Supported projects	4
Supported organisations overall	18
: Research organisations	7
: Enterprises	11

## TA CR programmes

### Programme for the support of applied research and experimental development EPSILON

TA CR's The EPSILON programme is aiming to increase the number of results of applied research and experimental development applicable in the new products, services or production processes. This programme will gradually replace programme ALPHA (TA CR) and programme TIP of the Ministry of Industry and Trade.

Thematically, the EPSILON programme is divided into three priority areas, which are in accordance with the National priorities of oriented research, experimental development and innovation.

The 1<sup>st</sup> priority area is the Competitive knowledge-based economy and its aim is to increase a longer perspective of industries which have a traditionally strong position in the Czech economy, thus, for example, engineering and transport.

The 2<sup>nd</sup> priority area – Energy and Materials – is focused on sustainable energy and material resources, which in practice means to increase energy self-sufficiency and to ensure the energy security of the Czech Republic. This sub-programme aims to move the Czech economy towards resource efficient, low-carbon economy that uses all resources in efficient manner.

The topic of the 3<sup>rd</sup> sub-programme is the Environment for quality of life. Its aim is to promote environment friendly technologies, processes leading to the reduction of pollutant emissions, climate change mitigation, but also the support of biodiversity research or analysis focused on cost-effectiveness measures in the environmental field.

On 5<sup>th</sup> May 2014 the 1st call for proposals of the programme was announced. 725 project proposals were submitted and 89 projects will be supported.

#### Characteristics of the programme

Duration	2015 to 2025
Tenders announced in years	2015–2018 each year
Total expected budget	16.150 billion CZK
of which from the state budget	9.690 billion CZK (60 %)
Length of projects	till 4 years
Recipients of support	Research organizations, enterprises
Max. level of support /project	Research org.: 100 % of the total eligible costs, Enterprises: 80 % of the total eligible costs.

#### Types of results

- patents;
- pilot operations, proven technologies;
- results with legal protection – utility models, industrial designs;
- technically realized results – prototypes, functional samples;
- certified methodologies and procedures, and maps with expert content;
- software.

#### EPSILON in numbers

Projects proposals	725
Supported projects	88
Supported organisations overall	241
: Research organisations	117
: Enterprises	124

## TA CR programmes

### Programme for the support of Applied social science research and experimental development **OMEGA**

The main aim of the OMEGA programme, which is intended for a six-year period from 2012 to 2017, is to strengthen research activities in the field of applied social sciences and humanities. The allocated amount for the entire duration of the programme should reach 386.4 million CZK. Support will be provided for small-scale projects with a duration not exceeding two years whose results will help to streamline the conceptual, methodological and decision-making activities in the socio-economic sectors of the society. The first tender was announced on the 20<sup>th</sup> of July 2011. 48 of the total 123 project proposals received were supported. The second tender of this programme was announced in 2013, 228 project proposals were received and 82 projects were supported.

#### *Characteristics of the programme*

Duration	2012 to 2017
Tenders announced in years	2011, 2013 and 2015
Total expected budget	386.4 mil. CZK
of which from the state budget	309 mil. CZK (80 %)
Length of projects	1 to 2 years
Recipients of support	enterprises (only legal entities), research organizations
Max. level of support /project	80 % of the total eligible costs

#### *Aims of the programme*

The main aims of the programme are to strengthen research activities in the field of applied social sciences and humanities and the application of the results of these activities to enhance the competitiveness of the Czech Republic, to increase the overall quality of life of its inhabitants and to balance the socio-economic development of society.

#### *Characteristic features*

- the interdisciplinary nature of research and development;
- emphasis on the acquisition of new knowledge and applicability of results in practice;
- outputs that streamline conceptual, methodological and decision-making activities in socio-economic areas.

#### *Types of results*

- certified methodologies and practices, including specialized maps with expert content;
- software;
- results reflected in legislation and standards;
- results reflected in directives and regulations of a non-legislative nature which are binding within the competence of the relevant governmental body;
- research papers.

#### *OMEGA in numbers*

Projects proposals	650
Supported projects	128
Supported organisations overall	177
: Research organisations	147
: Enterprises	30

## TA CR programmes

### Programme for the support of development of long-term collaboration between the public and private sectors on research, development and innovation **Competence Centres**

The largest programme of TA CR (regarding the average support per a project) is the Competence Centre programme which supports projects with a length of up to eight years. This programme was prepared based on the results of analyses focused on the current experience of the Czech Republic with programs of a similar nature, as well as similar international programmes. The programme supports the establishment and operation of centres of research, development and innovation in advanced fields. The resulting centres create conditions for the development of long-term cooperation in research, development and innovation between the public and private sectors. Therefore, only consortia consisting of research organizations and enterprises, which are required to co-finance projects from private sources, are eligible to participate in the programme. The duration of the programme is from 2012 to 2019 with the publication dates of three-stage public tenders being 2011 and 2013. Overall, more than 6 billion CZK will be distributed in the framework of the programme. The first tender was announced on 29th of June 2011. Of the total amount of 128 project proposals received 22 projects were supported. The second tender of this programme was announced on 27th March 2013 with 82 project proposals submitted and 12 projects selected for support.

#### Characteristics of the programme

Duration	2012 to 2019
Tenders announced in years	2011 and 2013
Total expected budget	9 billion CZK
of which from the state budget	6.297 billion CZK (70 %)
Length of projects	4 to 8 years
Recipients of support	enterprises, research organizations
Max. level of support /project	70 % of the total eligible costs
Expected number of supported centres	34

#### Focus of the programme

- The programme is focussed on supporting the establishment and activities of centres for research, development and innovation in advanced fields with strong application potential and the prospect of providing a significant contribution to increasing the competitiveness of the Czech Republic;
- The resulting centres will create conditions for the development of long-term cooperation in research, development and innovation between the public and private sectors;
- The focus and research aims of the centres are set by the partners of the centres in a strategic research agenda, which is a key link between the partners and the main prerequisite for the formation and activity of the centres.

#### Aims of the programme

- The main aim of the programme is to increase the competitiveness of the Czech Republic in advanced fields with a strong potential for application in innovation;
- The programme hopes to encourage businesses and research organizations to develop strategic partnerships, strengthen interdisciplinary research, development and innovation and increase the horizontal mobility of researchers, particularly new researchers.

#### Types of results

- patents;
- pilot operations, proven technologies;
- results with legal protection – utility models, industrial designs;
- technically realized results – prototypes, functional samples;
- certified methodologies and procedures, and maps with expert content;
- software.

#### Competence Centre programme in numbers

Projects proposals	210
Supported projects	34
Supported organisations overall	334
: Research organisations	219
: Enterprises	115

## Activities of the Technology Agency CR

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### TA CR's cooperation in the national system of research, development and innovation

The Technology Agency of the CR works closely with the central government in the framework of the system of research, development and innovation on the preparation of support programmes that implement the approved departmental concepts in research and development. Since its establishment, TA CR has been collaborating with the Ministry of Education, Youth and Sports, the Ministry of Industry and Trade, the Ministry of Transport, the Ministry of Environment and other ministries that are no longer providers of research and development. The competence centres programme was prepared with the Ministry of Education, Youth and Sports and further steps are being discussed leading to cooperation with other agencies of a similar type.

The possibility of cooperation in the preparation of complementary programs has also been discussed with other partners including the business development agency CzechInvest and the Czech Science Foundation of the Czech Republic.

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### Cooperation with similar foreign agencies and other international activities

During 2010 a number of steps were taken to ensure the entry of TA CR into the prestigious European Network of Innovation Agencies (TAFTIE) and in December of the same year the Technology Agency of the Czech Republic was adopted as a permanent member of this network. Since then TA CR has been an active member of the association and in 2017 TA CR will be presiding over TAFTIE.

In the framework of international bilateral collaboration TA CR has signed number of cooperation documents with foreign partners. These memoranda are one of the incentives for the development of mutual technological collaboration between the Czech Republic and other countries and exchange of information and best practices on R&D support instruments and their management between TA CR and its foreign partners.

In addition, in 2014 TA CR has launched its programme promoting cooperation in research and development through joint projects of the technology and innovation agencies (DELTA), which aims to increase the quantity and quality of the results of applied research and development that will be successfully applied in practice and to strengthen the competitiveness of the Czech Republic through the promotion of bilateral or multilateral cooperation of top Czech and foreign participants. A positive experience of the first call for proposals of the programme is in cooperation with the Vietnamese partner SATI.

Technology Agency of the Czech Republic  
Evropska 1692/37, 160 00 Prague 6, Czech Republic  
Tel.: +420 234 611 111  
E-mail: [info@tacr.cz](mailto:info@tacr.cz)