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GUIDE

TO THE SYSTEM OF PUBLIC SUPPORT

FOR RESEARCH, DEVELOPMENT AND INNOVATION

IN THE CZECH REPUBLIC - 2013

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FOREWORD

The Czech Society for New Materials and Technologies was founded in 1993. It assists its members in developing their creative abilities and expert knowledge and supports scientific-technological development in the field of new materials and technologies, including their applications in manufacturing practice as well as international cooperation.

The CSNMT is well aware of the significance of research, development and innovation as one of the tools for maintaining competitiveness and helping develop society and the national economy. For that reason in 1999 it published the first "Guide to the System of Public Support for Research and Development in the Czech Republic - 1999". This publication provided the first gathering of detailed information on state support programmes for research and development in the Czech Republic and support of international cooperation in research and development in a single publication. The first issue met with a very positive response and since then the "Guide to the System of Public Support for Research and Development in the Czech Republic" has been regularly published for the past fifteen years. The "Guide" is updated every year to provide objective information and reflect the current situation in research and development.

We owe our thanks for the idea of creating this guide as a valuable publication for orientation in the entire system of public support for research and development primarily to our dear, wise friend Ing. Tasilo Prnka, DrSc.; he was one of the founders of CSNMT, acted as its first president and initiated most of our society's activities. The CSNMT Management Committee has decided to establish this edition, which will continue to act as a reminder of his legacy.

The Guide is also the second publication issued by CSNMT as part of the Ing. Tasilo PRNKA, DrSc., edition.

CSNMT believes that this publication will be a valuable aid not only for all persons submitting applications in the field of research and development, but also for others interested in these issues.

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President of CSNMT

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INTRODUCTION

You are holding the new issue of the “Guide to the System of Public Support for Research and Development in the Czech Republic - 2013", which is already the fifteenth in the series. As in past years, this year the “Guide" has the objective of informing the wider professional and lay public about the options and methods of getting funds from programmes supporting research and development, as well as about important changes in research and development.

The first edition was published in 1999 in an edition of 1000 copies. It was 202 pages long. It was the first publication which provided comprehensive information of issues in research and development in the Czech Republic, both from the perspective of international support as well as on the level of state support for research and development.

At that time the approaches of individual budget chapters administrators towards state-supported research and development in the Czech Republic were not uniform, there was almost no horizontal coordination of individual programmes and in essence the country lacked a uniform national research and development policy.

In 2000 the first National Research and Development Policy was formulated. In 2002 Act No. 130/2002 Coll., on Support of Research and Development, entered into effect. This law was fundamental for the further direction of Czech Research and Development. In 2007, the creation of the new National Research and Development Policy revealed deep flaws in public support of R&D, which led to the so-called Reform in R&D. The reform fundamentally changed the management of R&D&I on all levels, including state administration, and influenced the direction and level of Czech research and development. In 2009 the amended Act No. 130/2002 Coll. went into effect. In 2012 the newly formulated R&D Priorities, which identified those areas of research and development that are key for the Czech Republic, was approved by the Czech government. All these documents had a fundamental impact on research and development, and for that reason their publication always led to an updating and expansion of the “Guide” to reflect the current situation in Czech research and development.

Like the previous issue the “2013 Guide" is composed again of publicly available data and sources and of materials provided by the Research, Development and Innovation Council and individual budget chapter administrators (providers).

The "2013 Guide" derives from the concept set by the "2012 Guide”. Besides this, this issue features increased space for newly approved R&D Priorities, which will influence the direction of Czech research, development and innovation in the years to come. Since the programme period for operational programmes co-financed by the European Union will come to an end this year, the “2013 Guide” focuses on an assessment of operational

programmes connected with R&D. Space is also dedicated to the upcoming programme period and to outlining the thematic range and operational programmes which will be focused in the coming years on supporting research, development and innovation.

The publication captures the state of affairs as of April 2013. This year, e.g. the preparation of the draft budget for next year is even more complicated than in 2012 and as at the closing date for the “2013 Guide” (i.e. 15 April 2013) the preparation of the draft government budget expenditures for research, development and innovation for 2014, the prospect for 2015 and 2016 and discussions with providers, which were held last year at the beginning of March, had not yet taken place.

The "Guide to the System of Public Support for Research and Development in the Czech Republic - 2013" is published in an edition of 500 copies in Czech and English. A CD-ROM is included with the "Guide”.

1 THE SYSTEM OF RESEARCH, DEVELOPMENT AND INNOVATION IN 2013

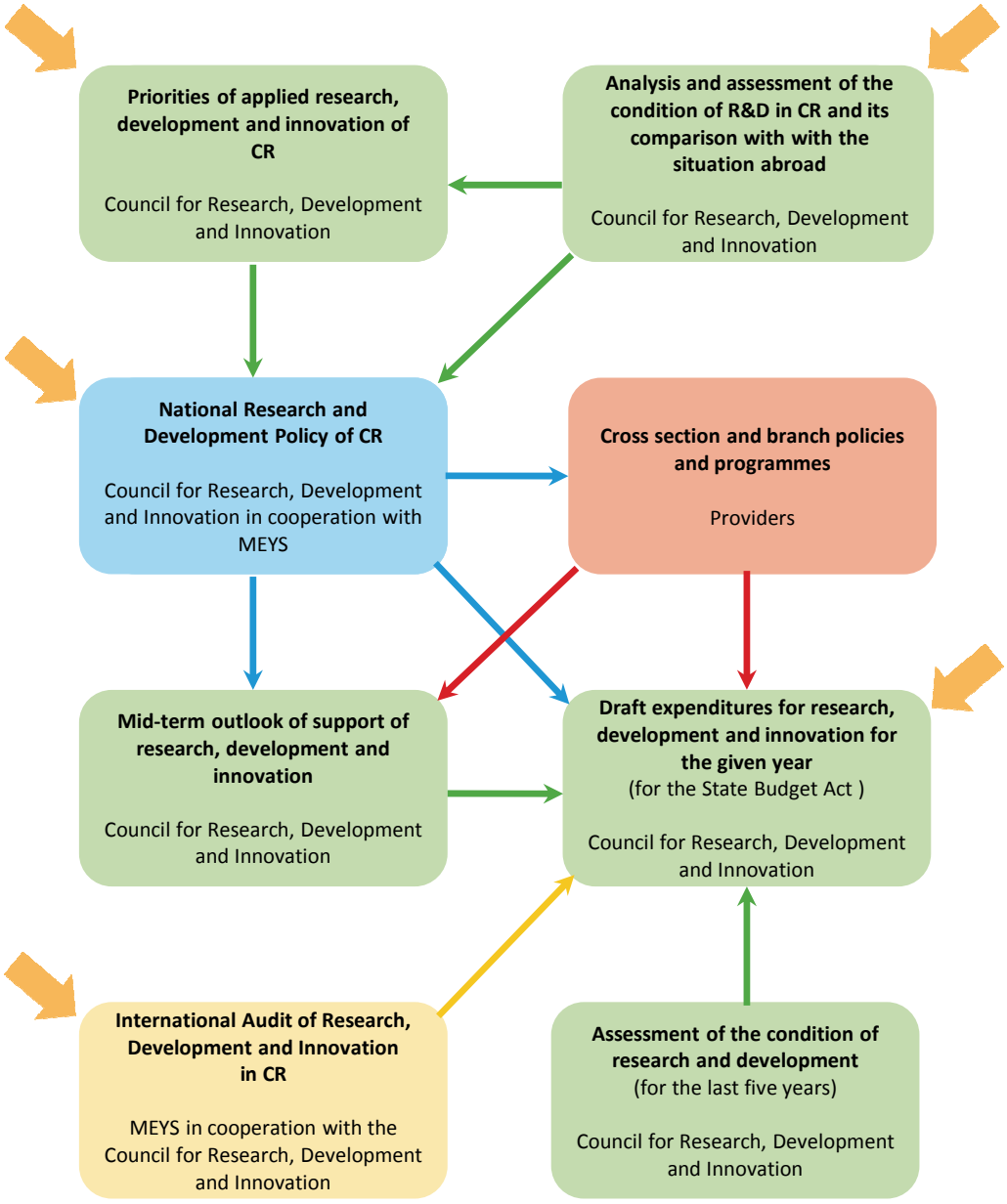
The current state of the system of research, experimental development and innovation (hereinafter just "R&D&I") in the Czech Republic can be characterised from a number of perspectives, e.g. through the basic documents which define its framework. These documents are involved in particular with R&D&I supported from the government budget or public sources (the government budget, EU resources and other public sources, such as expenditures from regions, towns and municipalities). Publicly supported R&D&I is closely connected with other parts of R&D&I, whether they are financed from public sources or abroad; numerous activities have financing from multiple sources. A significant part of R&D&I financed from non-public sources is also supported by the state in the form of tax incentives (deduction of expenditures on research and development from the income tax base).

The state of the system of support for R&D&I is described in the following sections from the perspective of seven aspects:

1. Conceptual and strategic (particularly the National Research and Development Policy of the Czech Republic),
2. Subject of focus (particularly Priorities of Applied R&D&I),
3. Legislative and legal (particularly Act No. 130/2002 Coll., on Support for Research, Development and Innovation, as amended, Framework of the Community for State Support of R&D&I),
4. Financial (government budget for R&D&I, deduction of R&D&I expenses etc.),
5. Assessing (International Audit of R&D&I in the Czech Republic, Evaluation of Research Organisations etc.),
6. Informational (particularly R&D&I Information System),
7. Analytical (e.g. Analysis of the state of research, development and innovation in the Czech Republic and its comparison with that abroad).

The relationships among the main documents in the R&D&I system are set out schematically in Figure 1. The role of individual bodies in the system varies markedly according to the perspective from which we are looking at the system. The Research, Development and Innovation Council (RDIC) and the Ministry of Education, Youth and Sports (MEYS) have overall the greatest sphere of authority in the system, and then ten ministries (providers) in the actual support of R&D&I.

Figure 1: Schematic of the R&D&I System (mutual relations of individual documents)



1.1 The National Research, Development and Innovation Policy of the Czech Republic

The National Research, Development and Innovation Policy of the Czech Republic is the government-approved document which contains the basic objectives of support, its subject focus, the estimated development of research, development and innovation expenditures from the government budget, from European Union funds and from private sources, applied research, development and innovation priorities for a 4- to 6-year period and measures for their realisation (hereinafter just the "National Research, Development and Innovation Policy"). This is thus the basic document defining the basic orientation of the entire system for the next period.

Since 1994 the current policy has been preceded by a number of documents; from the previous period, from 2004 to 2008, the documents consisted of the following in particular:

- The National Research and Development Policy of the Czech Republic for 2004-2008
- The National Innovation Policy of the Czech Republic for 2005-2010
- Harmonisation of the National Research and Development Policy of the Czech Republic for 2004-2008 and the National Innovation Policy with other relevant documents of the Czech Republic and the European Union

During the preparation of the new policy in 2007 it was determined that the problems and shortcomings in public support for R&D were so serious that correcting them would require fundamental changes to the entire system. For that reason RDIC prepared a draft Research, Development and Innovation Reform.

The Reform brought the following fundamental changes:

1. A significant reduction in the number of providers - by half (from 22 to 11) - took place to improve the efficiency of coordination and limit overlap.
2. Institutional support designated for research organisation development is no longer provided on the basis of an evaluation of general research objectives, but on the basis of the overall evaluation of results achieved by research organisations or on the basis of the evaluation performed by the provider (Academy of Sciences of the Czech Republic).
3. For specific R&D support a significant part of support was transferred from ministries and government offices to agencies - the Grant Agency of the Czech Republic (hereinafter "GA CR") and by the amendment to Act No. 130/2002 Coll. on the established Technology Agency of the Czech Republic (hereinafter "TA CR").
4. Support for four cross-sectional and three branch areas remained at individual ministries. Four areas have a cross-sectional character and each of these is supported as a whole: International Cooperation in R&D (Ministry of Education, Youth and Sports), Security R&D (Ministry of the Interior), Applied R&D for National and Cultural

Identity (Ministry of Culture), and Support of Large R&D Infrastructures (Ministry of Education, Youth and Sports).

Three areas have certain specifics which make it impossible to effectively support them as other branch R&D is supported, via the Technology Agency of the Czech Republic, and these are supported through the respective ministries: applied agricultural R&D (Ministry of Agriculture), applied security R&D (Ministry of Defence), and applied healthcare R&D (Ministry of Health).

5. Conditions and rules were defined for the creation of centres of excellence and large infrastructures for R&D.
6. Principles of support provided for R&D&I from EU sources as part of operational programmes for the period to 2013 were defined. Research and Development for Innovation (R&D&I OP), Enterprise and Innovation (EI OP), Education for Competitiveness (EC OP), Prague - Competitiveness, Prague - Adaptability.

1.1.1 The National Research, Development and Innovation Policy of the Czech Republic for 2009-2015

The reform was approved by the Czech government on 26 March 2008 by Resolution No. 287. Among other things it charged the RDIC with submitting, together with MEYS, by 31 March 2009 a draft new National Research, Development and Innovation Policy for the Czech Republic for 2009-2015.

The draft new policy also drew on documents which were prepared by the Technology Centre of AS CR as part of strategic studies. These documents were primarily:

- The Green Book of Research, Development and Innovation in the Czech Republic
- The White Book of Research, Development and Innovation in the Czech Republic
- The Blue Book of Research, Development and Innovation in the Czech Republic

Materials of the EU and Organisation for Economic Cooperation and Development (OECD) were also used, among others, for the preparation of the National Research, Development and Innovation Policy for 2009-2015. The EU Cohesion Policy provides important opportunities for R&D&I in the Czech Republic in the 2007-2013 budget period. In harmony with the Lisbon Strategy the new Cohesion Policy allows for money from the Structural Funds and from the Cohesion Fund for development of R&D capacities to be used to a greater degree. In the 2007-2013 period the Czech Republic should be able to get roughly CZK 13 billion from the three EU fund operational programmes - Research and Development for Innovation OP, Enterprise and Innovation OP, and Education for Competitiveness OP.

The government-approved document contains the National R&D&I Policy of the CR for 2009-2015 itself as well as the Priorities of Applied Research, Development and Innovation for 2009-2011 and five annexes.

The National R&D&I Policy has six connected parts:

1. Starting points of the National R&D&I Policy
2. Main principles of the National R&D&I Policy
3. Objectives and activities of the National R&D&I Policy
4. Main principles of the National R&D&I Policy after 2015 (starting points, financial aspects, international aspects, regional aspects)
5. Demands and impacts (demands on legislation, government budget, other demands and impacts - on the economy, society, the environment)
6. Priorities of applied research, development and innovation of the Czech Republic for 2009-2011

The policy is arranged in 35 specific measures ensuring the fulfilment of nine objectives (administrator objectives):

1. To introduce the strategic management of R&D&I on all levels (RDIC) - 4 measures
2. To target public R&D support to the needs of sustainable development (RDIC) - 2 measures
3. To improve the efficiency of the system of public support for R&D&I (RDIC) - 5 measures
4. To make use of the results of R&D in innovations and to improve public and private sector cooperation in R&D&I (Ministry of Industry and Trade with Ministry of Education, Youth and Sports and TA CR) - 10 measures
5. To improve the involvement of the Czech Republic in international cooperation in R&D&I (Ministry of Education, Youth and Sports with Ministry of Industry and Trade and Academy of Sciences of CR) - 3 measures
6. To ensure quality human resources for R&D&I (MEYS with MIT and AS CR) - 3 measures
7. To create an environment in the Czech Republic for R&D&I (MEYS with MIT and AS CR) - 3 measures
8. To secure effective ties to policies in other areas (RDIC) - 2 measures
9. To thoroughly evaluate the R&D&I system (RDIC) - 3 measures

The document also includes Priorities of applied research, development and innovation.

The National R&D&I Policy, including the priority directions of applied research, development and innovation, the annexes and the government resolution by which it was approved are available at www.vyzkum.cz in the Národní politika výzkumu, vývoje a inovací ČR (National Research, Development and Innovation Policy of the Czech Republic) section.

By its approval of the National Programme the government accepted the obligation to increase the share of public expenditures on R&D&I in the GDP, in which it undertook to take measures so that by the year 2020 public expenditures on research, development and innovation achieve the level of 1% of GDP.

1.1.2 Updating the National Research, Development and Innovation Policy of the Czech Republic for 2009 to 2015 with an Outlook to 2020

The Research, Development and Innovation Council (hereinafter the "RDIC") was involved in updating the National R&D&I Policy starting September 2010. Studies were created for individual measures and its conclusions are one of the basic foundations for updating the National R&D&I Policy. Analyses of the fulfilment of individual National R&D&I Policy activities are published at www.vyzkum.cz.

In the end the RDIC proposed not only to update the National R&D&I Policy, but also to add the outlook to 2020 to this document and to modify it so that its structure matches similar documents of other EU Member States. The reason for this step was the fact that in 2014, i.e. still during the effective period of the existing National R&D&I Policy, a new programme period for EU funds will begin. The period will last until 2020 and it will be useful to have a consistent national policy for research, development and innovation for the period. The RDIC approved the draft updated National R&D&I Policy 2009-2015 with an Outlook to 2020 at its 280th session on 22 February 2013. Then settling the comments from the inter-ministerial proceedings took place. As of this writing the government still had to approve the National R&D&I Policy (approval of the National R&D&I Policy is on the programme for the Czech government meeting of 24 April 2013 under file number 371/13).

Another reason for updating the National R&D&I Policy was the need to harmonise the development of research, development and innovation in the Czech Republic with the abilities of the government budget. At the time when the existing document was created, i.e. in 2008, it was anticipated that total government budget expenditures on research support would increase by 8% annually. Since 2010, however, expenditures have increased at a slower rate due to a lack of funds. In 2014 the difference between planned and actual expenditures equalled CZK 10.5 billion, and the cumulative difference from 2010-2014 was CZK 28.3 billion. Due to the budget situation and its prognosis, therefore, it was necessary to re-evaluate the objectives in updating the National R&D&I Policy to make it financially feasible.

The updated National R&D&I Policy covers the corresponding strategic-conceptual documents in the Czech Republic and is in compliance with the documents accepted on the EU level. It follows primarily from:

1. **The strategy of international competitiveness of the Czech Republic for 2012 to 2020**, which defines the measures whose implementation should help move the Czech Republic onto the list of the twenty most competitive countries in the world

2. **The national innovation strategy of the Czech Republic**, which has the main objective of development of the national innovation system
3. **The national priorities of oriented research, experimental development and innovation (The National Priorities of Oriented R&D&I)**, which identifies six priority areas for focusing R&D&I in the Czech Republic until 2030

The updated National R&D&I Policy also respects the conclusions and recommendations of the **International R&D&I Audit System** from 2011.

The updated National R&D&I Policy builds on the assessment of the condition of meeting objectives and measures set by this policy in 2009. The updated National R&D&I Policy is divided into four blocks which directly fulfil the main objectives set: to create quality conditions for the creation of new knowledge and its use in innovations.

1. **A high quality and productive research system**, which includes measures aimed at securing quality human resources for R&D&I and quality research infrastructures, at increasing efficiency of public resources expended on R&D&I and at improving the integration of the Czech Republic in international cooperation in R&D.
2. **An environment for the effective spread and use of knowledge,** where the objective is increasing proficiency in the effective transfer of knowledge between the research organisation and innovating businesses, the creation and effective use of financial tools supporting the transfer of knowledge from research into practice and the use of new findings from R&D in innovations.
3. **Innovating businesses**, where there is an increase in innovative business efficiency, the creation and effective use of tools for the development of innovative activities in businesses and the stimulation of direct foreign investment in research and innovative activities in the Czech Republic.
4. **A stable, effective and strategically managed R&D&I system,** where there are measures aimed at improving coordination in the R&D&I management system, strengthening the strategic approach to the creation and implementation of R&D&I policy and strengthening the position of the Czech Republic in shaping the ERA.

The updated National R&D&I Policy also includes several areas which received only marginal focus in the existing National R&D&I Policy, such as the issue of innovation or connection of educational, research and innovation activities. Innovations are understood as an interactive process, where the mutual influences among individual parties in the R&D&I system, i.e. innovation users, are applied in a positive manner. For this reason the updated National R&D&I Policy places a greater emphasis on the creation of an environment and conditions for introducing innovation in the private and public sector, including the mutual connection of parties in the innovation system to encourage the effective transfer of new findings and market incentives.

It also places a greater emphasis on assessment, which is included in various connections and relations in all blocks of the updated National R&D&I Policy, including assessment of the

benefits of supported activities. Emphasis is also placed on the "formative" element of assessment, i.e. the use of the outcomes of assessment for modifying and updating the National R&D&I Policy and its specific tools. The updated National R&D&I Policy also tries to effectively use financial resources available from national sources, as well as to use to the utmost possible extent financial resources from abroad, in particular tools and resources from EU funds.

The updated National R&D&I Policy is divided into several parts. In the strategic part the vision and objectives of the updated National R&D&I Policy are set. Then in the implementation part specific measures are presented for the realisation of objectives from the strategic part, which also contains indicators, deadlines and indicators of fulfilment. The choice of the method of implementation of individual measures is left up to the bodies which are responsible for the fulfilment of individual tasks. Setting fulfilment indicators remedies the undesirable condition of the current National R&D&I Policy, where a lack of indicators makes it difficult to determine the status of fulfilment.

1.2 Priorities of Applied Research, Development and Innovation

1.2.1 Long-term Principle Research Directions

Until 2008 research and development priorities were formulated as the long-term basic research directions (hereinafter just “LTBRDs"). Despite numerous efforts the LTBRDs still remained too broad a set of all scientific (research) fields found in the Czech Republic (7 directions).

The set of LTBRDs presented below was created according to a uniform outline and contained a total of seven thematic directions:

1. Sustainable development,
2. Molecular biology,
3. Power sources,
4. Materials,
5. Competitive mechanical engineering,
6. Information society,
7. Security.

1.2.2 Priorities of Applied Research, Development and Innovation of the Czech Republic for 2009-2011

In 2008 the LTBRDs were re-evaluated. After additional partial modifications in 2009 the LTBRDs were modified and renamed the Priorities of Applied Research, Development and Innovation of the Czech Republic for 2009-2011 and became a part of the National Research, Development and Innovation Policy of the Czech Republic for 2009-2015. Due to the need to add further topics to the priorities it did not work out to concentrate further on those directions of research the results of which would be decisive for economic competitiveness and development of society. The majority of developed countries focus on 3 to 5 priorities. The Priorities of Applied Research, Development and Innovation of the Czech Republic for 2009-2011 had 8 priorities:

1. Biological and environmental aspects of sustainable development
2. Molecular biology and biotechnology
3. Power sources
4. Materials
5. Competitive mechanical engineering
6. Information society
7. Security and defence
8. Development priorities of Czech society

1.2.3 National Priorities of Oriented Research, Experimental Development and Innovation

The priorities of applied research, development and innovation of the Czech Republic for 2009-2011 were formulated in a highly general and comprehensive manner. They lacked sufficient focus on areas which would react to the needs of society, particularly the social and economic development of the Czech Republic. Due to a low level of concentration of public resources on selected areas, there was underfunding of certain important research directions which were capable of making groundbreaking discoveries in oriented research and bringing solutions in applied research with the potential of making significant contributions to increasing the competitiveness of the Czech Republic and meeting needs important for socio-economic development. Although programmes for the support of R&D&I through which a significant portion of specific support is distributed often referred to the existing research directions, the actual connection between programmes and these directions was all too often just a formality.

The Priorities of Applied Research, Development and Innovation of the Czech Republic for 2009-2011 were replaced by new National Priorities of Oriented Research, Experimental Development and Innovation (hereinafter the "R&D&I Priorities"), which were approved by the government by its Resolution No. 552 dated 19 July 2012.

The R&D&I Priorities are newly stipulated as a definite, specific subject of state and public interest which is a combination of long-term objectives and multi-thematic focus, has application across the spectrum of Czech society and is desirable. In addition the Czech Republic has sufficient material and human resources conditions to achieve it, it is implementable in the long-term and can be achieved through R&D&I activities. The application of new R&D&I Priorities will lead to the more effective use of public resources for specific R&D&I support, which thus will better match the key needs for the development of Czech society. The main benefit and purpose of the R&D&I Priorities formulation is its strategically oriented parts (particularly applied but also basic) of national R&D&I in areas which assist in solving the basic present and foreseeable future problems and challenges of the Czech Republic and allow for the use of promising opportunities for balanced development of the Czech Republic.

The R&D&I Priorities which are proposed for the period until 2030 will newly become part of the National R&D&I Policy and will subsequently be used in the preparation of R&D&I programmes for the provision of specific support. It is presumed that these R&D&I Priorities will partially be reflected in the provision of institutional support for the development of research organisations. Also the R&D&I Priorities will be used to prepare a draft for government budget expenditures on R&D&I, as stipulated by Act No. 130/2002 Coll., on the Support of Research, Experimental Development and Innovation, as amended. At the

present time the following six Priorities are in effect. They are further divided into area, sub-area and partial objectives. The complete text can be found at www.vyzkum.cz.

- Priority 1 - A competitive knowledge-based economy
- Priority 2 - Sustainable energy and materials
- Priority 3 - An environment for a quality life
- Priority 4 - Social and cultural challenges
- Priority 5 - A healthy population
- Priority 6 - A safe society

The R&D&I Priorities build not only on the objectives of the National R&D&I Policy, but also on the Strategy for International Competitiveness and the National Innovation Strategy, and they also reflect the priority areas from Horizon 2020, the newly created EU Framework Programme.

Although the R&D&I Priorities, or individual priority areas defined in relation to society's basic challenges, were designed to a great extent to avoid overlap, it is clear that connections exist to a greater or lesser degree among the individual priority areas. For that reason it is possible to find a certain connection among the priority objectives set in individual priority areas (hereinafter just "PAs"). These connections must be taken into consideration primarily in the creation of new R&D&I programmes aimed at achieving priority objectives, so that the support always fully covers the related objectives. Part of the preparation of the R&D&I Priorities also included defining their connections to R&D&I expenditures from the Czech government budget. The basic starting point in planning expenditures from the government budget and their use is securing primarily financing of R&D&I Priorities, which involves the use of those government budget expenditures which were approved as expenditures on R&D&I activities as part of the Act on the Government Budget for the respective calendar year.

Due to the fact that this involves R&D&I Priorities (or objectives) implemented on an on-going basis with an implementation period of up to the year 2030, and due to the fact that predicting the development of the amount of expenditures on R&D&I from the government budget is not possible, it was possible to define expenditures on the implementation of individual R&D&I Priority areas for purposes of orientation as a share of the expenditures on the implementation of all R&D&I Priorities. The reason why it is not possible to define specific amounts of expenditures on implementation is the fact that not only specific support for grant or programme projects will serve to achieve R&D&I Priorities, but also of the objectives to be achieved as part of R&D&I activities supported in another form (e.g. institutional support for the long-term conceptual development of research organisations or international cooperation). It is also not possible to rule out the possibility that some objectives may also be achieved as part of specific university research project implementation. At the same time it is assumed that the share of private funds expended on co-financing projects focused on fulfilling R&D&I Priorities will be higher in certain priority areas and lower in others.

Name of priority area	Share of financing
A competitive knowledge-based economy	20 %
Sustainable energy and materials	18 %
An environment for a quality life	18 %
Social and cultural challenges	10 %
Healthy population	20 %
A safe society	14 %

1.3 Legislation and Legal Regulations

The legal framework of public support for R&D&I in the Czech Republic is defined primarily by the following legal regulations:

- Act No. 130/2002 Coll., on the Support of Research, Experimental Development and Innovation from Public Funds and on the Amendment of Certain Related Acts (the Act on the Support of Research, Experimental Development and Innovation), as amended.
- The implementing measure for Act No. 130/2002 Coll. is Government Resolution No. 397/2009 Coll., on an Information System for Research, Experimental Development and Innovation.
- Act No. 341/2005 Coll., on Public Research Institutions, as amended.
- Act No. 227/2006 Coll., on Research on Human Embryonic Stem Cells.
- The Community Framework for State Aid for Research and Development and Innovation 2006/C 323/01.
- Commission Regulation (EC) No. 800/2008.
- Act No. 586/1992 Coll., on Income Tax, as amended.

All the above legislation is available at www.vyzkum.cz, in the Legislativa VaVaI (R&D&I Legislation) section

Act No. 130/2002 Coll., on the Support of Research, Experimental Development and Innovation was already amended thirteen times. Due to the scope of changes the Prime Minister announced Act No. 211/2009 Coll. as the complete text of Act No. 130/2002 Coll. Not even the complete text however is still current, further changes to Act No. 130/2002 Coll. were made by Act No. 420/2011 Coll., on the Amendment to Certain Acts in Connection with the Passage of the Act on the Criminal Liability of Legal Entities and Proceedings against them. In the 24th paragraph certain provisions of Act No. 130/2002 Coll. are amended (§ 7, 9 and 18, new § 14a inserted) with respect to fitness of a candidate. Further changes were brought about by Act No. 469/2011 Coll., amending Act No. 130/2002 Coll., on Support of Research, Experimental Development and Innovation, as amended - the length of the bidding and assessing period is changed. While the last changes follow from Act No. 469/2013 Coll., amending Act No. 130/2002 Coll., on Support of Research, Experimental Development and Innovation and on the Amendment to Certain Related Acts (the Act on Support of Research, Experimental Development and Innovation), as amended - these changes related to the bodies of the Grant and Technology Agency of the Czech Republic. This year further amendments to Act No. 130/2002 were submitted to the Czech government.

The implementing measure for Act No. 130/2002 Coll. is **Government Resolution No. 397/2009 Coll., on an Information System for Research, Experimental Development and Innovation**, which codifies the data of individual parts of the information system etc.

Act No. 341/2005 Coll., on Public Research Institutions, as amended, transformed the majority of contributory organisations in R&D&I to new legal entities. It was amended six times. This act governs:

a) the manner for the establishment, creation and activity of and the manner of closing and dissolution of public research institutions,
b) the position and scope of authority of establishers and bodies of public research institutions,
c) the transformation of contributory organisations involved in research into public research institutions.

Act No. 227/2006 Coll., on Research on Human Embryonic Stem Cells allows for research to be conducted on these cells under transparent conditions. The Act further addresses questions of importing and exporting embryonic stem cells and forbids the export of embryos for research purposes. It was amended two times.

In 2006 the European Commission issued the new **Community Framework for State Aid for Research and Development and Innovation (2006/C 323/01)**. The Framework regulates the level of support for basic research, applied research and experimental development projects, the rules of support for technical feasibility studies, for the costs of industrial intellectual property rights, for procedural innovations and organisational innovations in services, for the activity of highly qualified workers, support for innovation clusters and so on. The Framework is valid until 31 December 2013.

In 2008 the European Commission issued **Commission Regulation (EC) No. 800/2008 of 6 August 2008**, declaring certain categories of aid compatible with the common market in application of Articles 87 and 88 of the Treaty establishing the European Community (**General Block Exemption Regulation**). This regulation enabled the European Commission to reduce or completely omit the obligation of preliminary notification, or notification proceedings obligatory for any form of state support for research, development and innovation, assuming that the conditions of the Community Framework (2006/C 323/01) and other conditions set by the regulation are met.

The validity of the Community Framework and General Block Exemption Regulation will expire this year (as of 31 December 2013). The European Commission has published on its website (http://ec.europa.eu/competition/state_aid/legislation) basic information on the preparation of new documents, which however are of a highly non-specific nature and from which specific changes cannot be deduced (it appears, however, that the changes will be significant).

Besides the abovementioned, a number of related laws indirectly regulate the area of research and development and its support from public funds. These e.g. limit the abilities of the state to intervene in the competitive environment (Act on Public Support), regulate the

awarding of public contracts or stipulate the status of state research organisations (budget rules), define the status of the Academy of Sciences of the Czech Republic, set up universities, regulate the rules for public administration information systems etc. General legal regulations governing e.g. contractual relations, industrial intellectual property rights, the provision of information, control etc. further affect research and development.

Act No. 586/1992 Coll., on Income Tax, as amended, introduced as of 1 January 2005 a deduction from the tax base, which enables tax payers to deduct 100% of expenses on R&D and its equivalent from the tax base, approximately a quarter of the grant for total project costs.

In the amendment to the Income Tax Act (Act No. 458/2011, which is effective starting in 2015) support for R&D projects is preserved by a deduction of project costs from the income tax base (deduction of 100% of costs). It brings two main changes. In contrast to the present condition, it will also be possible to include as expenses the costs of services which are related to the implementation of research and development projects and which are acquired from public universities or research organisations. The amount of the deduction is increased overall from 100% to 110% for increases in expenses compared with the previous period. At the present time an amendment is being prepared which would allow this amendment to enter into effect one year earlier (i.e. Act No. 458/2011 Coll. would be effective starting in 2014).

1.4 Budget for Research, Development and Innovation

1.4.1 Procedure for the Preparation of a Draft Budget

The Research, Development and Innovation Council plays the greatest role in the creation of a budget for research, development and innovation, and then in drafting the definitive draft budget the Ministry of Finance, the Czech government and the Chamber of Deputies of the Czech Republic. After the government budget is approved by the Chamber of Deputies the Ministry of Finance allocates funds to individual budget chapter administrators - support providers.

The actual preparation of the draft budget takes place in several phases (the "ideal course" for approval of the budget for R&D&I is set forth below; unfortunately this was not followed either last year in 2012 or in the present year 2013):

1. In December (2012) RDIC issues the Guideline for the preparation of a draft budget,
2. In January (2013) the RDIC proposes the total amount of expenses for research, development and innovation for individual budgets chapters and the amount of institutional expenses on research organisation development for the following year (2014),
3. In February (2013) it submits to the budget chapter administrator a detailed proposal of the expenses for the following year (2014) and a proposal of the mid-term outlook for the next two years (2015-2016),
4. In March (2013) discussions between the RDIC and budget chapter administrators about their proposals take place,
5. At the end of April (2013) the RDIC approves the draft budget, which is then sent to the inter-ministerial comment proceedings,
6. In May (2013) the comments are dealt with,
7. At the end of May (2013) the draft budget is ratified by RDIC,
8. At the beginning of June (2013) the draft is submitted to the government,
9. From June to September (2013): the Ministry of Finance works the government-approved expenses on research, development and innovation into the overall state draft budget of the Czech Republic for the following year (2014),
10. In September (2013) the government approves the overall draft government budget of the Czech Republic for the following year (2014) and submits it to the Chamber of Deputies,
11. The Chamber of Deputies discusses the draft of the act on the government budget of the Czech Republic for the following year (2014) first in its first reading, after which it is no longer possible to change overall expenses and income in the event of its ratification. Negotiations of the draft in the Deputy of Chamber's committees follow and in December (2013) then the second and third reading. If the draft act on the

government budget of the Czech Republic for the following year (2014) is not ratified by the Chamber of Deputies, a provisional budget regime comes into being.

After the budget is ratified by the Chamber of Deputies its allocation follows within one month and then it is possible to release funds to recipients. In the area of research, development and innovation it is necessary for the release of funds to meet the conditions set by Act No. 130/2002 Coll., as amended, the main aspects of which are fulfilling the recipient's obligations and entering data about projects and other R&D&I activities into the research, development and innovation information system.

For projects which are already being implemented, the act sets a maximum term of 60 days (50 days for providers and 10 days for RDIC) from the start of the calendar year for the provision of funds. For newly started projects and other activities the 60-day deadline applies to the effectiveness of the contract or decision to provide support. If the recipient is in delay the provider has the right to conclude a contract with the next applicant in order, and if the provider is in delay the recipient has the right to receive compensation for costs corresponding to the planned costs for project implementation.

In the past this procedure was adhered to and the draft government budget for R&D&I was submitted to the government by the end of June or in July. In 2010 and 2011 the government did not ratify the draft budget submitted by RDIC and did not set the total expenditures on R&D until September in the draft act on the government budget of the Czech Republic for the following year. In 2012 the government ratified the draft expenditures of the government budget for R&D&I for 2013 and the outlook for 2014 and 2015 by its Resolution of 26 June 2012 No. 458, but in September 2012 expenditures of AS CR were further increased during ratification of the draft act on the government budget of the Czech Republic for 2013. This year, 2013, the preparation of the budget is proceeding in an even more complicated fashion than in past years and as of the closing date for the "2013 Guide" (i.e. as of 15 April 2013) not even discussions with the providers had taken place on the draft expenditures of the government budget for research, development and innovation for 2014. In the past they took place at the beginning of March.

1.4.2 Structure and Division of the R&D&I Budget

Public support of research and development is carried out in two forms:

a) **Specific financing, i.e. support of research projects and other activities:**
   - "**Grant projects**" of basic research, i.e. projects designed by natural or legal persons, where the recipient itself determines the objective and method of implementation,
   - "**Programme projects**" of applied research, development and innovation, i.e. projects fulfilling the objectives of programmes announced by the provider. The programmes are designed and announced by budget chapter administrators,

assessed by the Research, Development and Innovation Council and approved by the government.

Certain programmes are implemented through “government administration project" support, i.e. projects where the government administration defines the parameters of their results. Since the sole user is the state, a public tender is announced in accordance with Act No. 137/2006 Coll.,

- **Specific university research** which is research carried out by students in the realisation of accredited doctoral or master’s study programmes and which is directly connected with their education,
- **Large infrastructures** for research, development and innovation, where individual projects are approved by the government.

Administrators of the government budget chapters give specific funds to legal or natural persons as grants or through increased expenditures of organisational units of the state, organisational units of local governments or organisational units of a ministry involved in research and development.

b) **Institutional financing, i.e. support of research organisations and other activities:**

- Long-term conceptual **research organisation development** on the basis of the assessment of results achieved and, during the transition period (until the end of 2013), for the completion of **research project** implementation,
- **International Czech cooperation in research and development** implemented on the basis of international agreements, which includes fees for participation of the Czech Republic in international programmes and organisations as well as support of international cooperation projects where the European Union or another international organisation (e.g. EU Framework Programmes) carries out the selection of projects,
- **Operational programmes in research, development and innovation** or part thereof aimed at fulfilling objectives in research, development and innovation, where the selection of projects is carried out on the basis of a tender according to European Commission regulations. Of government expenditures on research, development and innovation three operational programmes connected with R&D&I are 15% co-financed and the European Commission provides 85% of the public funds. The Research and Development for Innovation OP (MEYS) is fully financed in this manner, and the Education for Competitiveness OP (MEYS) is partially funded, as well as the Enterprise and Innovation OP (MIT).
- **Costs of the research, development and innovation support** system particularly for securing public tenders and project assessment, evaluation of results etc. and the costs connected with the activities of the Research, Development and Innovation Council, the Grant Agency of the Czech Republic, the Technology Agency of the Czech Republic and the Academy of Sciences of the Czech Republic.

Since 2007 (Community Framework) institutional support of research projects and now also of resources for research organisation development is designated only for **research organisations**, which may be all public and private legal persons if the conditions defined in Act No. 130/2002 Coll., as amended, are met, in particular:

- Their main objective is to carry out basic research, applied research or to develop and spread its results through instruction, publication or technology transfer,
- Whose profits are invested back into the activities under Point 1,
- For whose research capacities or results persons carrying out business activities consisting in offering goods or services, which may use their influence on the research organisation, do not have privileged access.

The funds provider evaluates the fulfilment of conditions for research organisation and discusses them first with the Office for the Protection of Economic Competition (particularly from the perspective of Article 87 of the Treaty establishing the European Community) and then with the Research, Development and Innovation Council (particularly from the perspective of research organisation support according to results achieved).

1.4.3 Assessment of Research Organisations

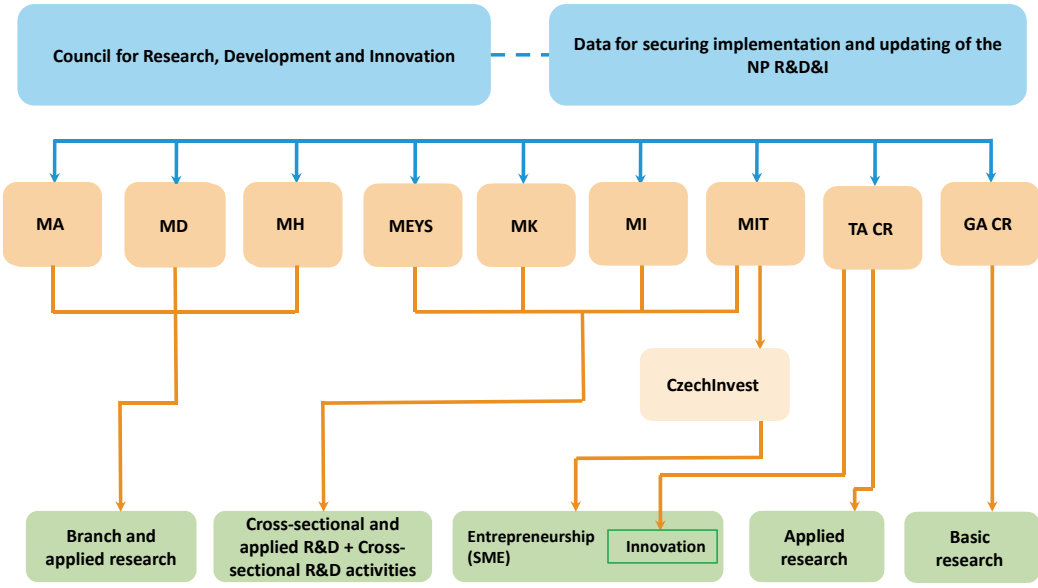
The RDIC has approved Procedure for assessing research organizations, which distinguishes between two phases of research organisation assessment:

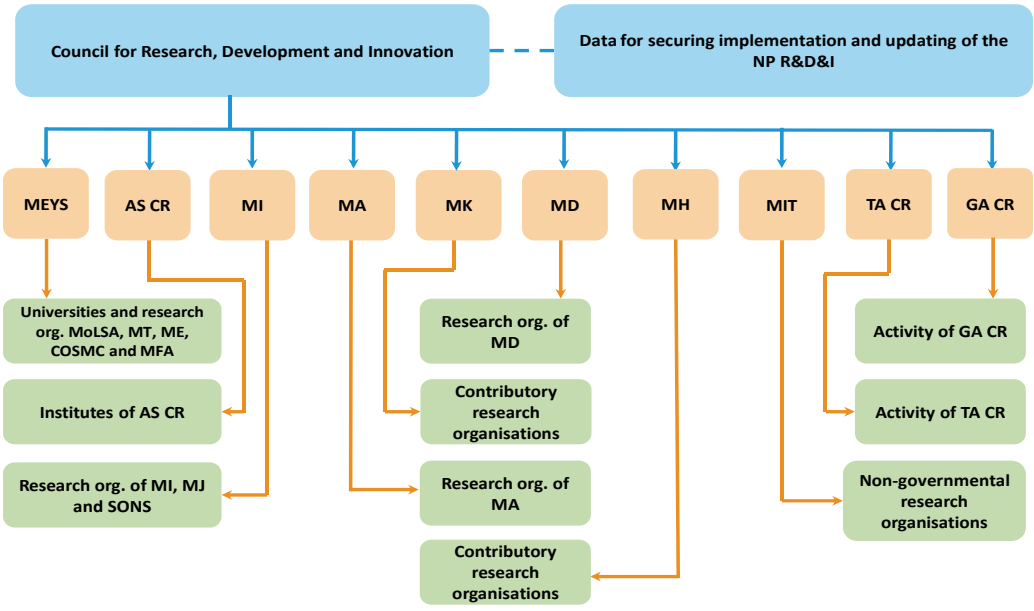
1. A research organisation as the recipient of specific support, where fulfilling the basic (formal) signs of a research organisation is sufficient,
2. A research organisation as the recipient of institutional support for long-term conceptual research organisation development, where besides possession of the basic formal characteristics of a research organisation the professional level is also assessed.

According to Act No. 130/2002 Coll. each of the institutional support providers receives for its use an amount from the government budget funds for institutional support for research organisations established by it. The amount depends in particular on the results of the research organisations established by the provider which were classified by the RDIC as research organisations having the characteristics of an institutional support recipient. For a specific provider thus the situation may arise where certain of the organisations established by it are not classified by the RDIC as research organisations having the characteristics of an institutional support recipient.

Since October 2012 the Research, Development and Innovation Council, according to its website, has been discussing with the Office for the Protection of Economic Competition the new text of the Procedure for Assessing Research Organisations. As of the closing date for the "2013 Guide" (i.e. as of 15 April 2013) it had not, however, published any information on the results of these discussions.

Fig. 2: Overview of specific and institutional R&D&I support





1.5 R&D&I Evaluation

R&D&I evaluation is carried out on several levels. International evaluation in the form of an International Audit of Research, Development and Innovation in the Czech Republic was also added in 2011 for the evaluation of research organisations and their results on the national level.

1.5.1 International Audit of Research, Development and Innovation in the Czech Republic

The following conclusions and recommendations are a summary http://audit-vav.reformy-msmt.cz.

Conclusions

The most important conclusion is probably the one with the most difficult solution. It is a statement of the fact that the generally low level of trust, particularly lack of trust in the government, is the main obstacle in the Czech Republic for additional development of the kind of national research and innovation system which would contain many of the elements needed for success and which - assuming that necessary conditions were met - would be capable of quick development. The cynicism level and instability in Czech political life are much higher than in other rich countries of the OECD. It is possible that history presents good reasons for this, but it seems that this leads to highly counterproductive models of behaviour and policies. The evaluation methodology provides an excellent example of this: what is at hand is an attempt to use arithmetic to achieve objectivity in resource allocation, following from the fact that many people think that it is not possible to trust individuals because they cannot be unbiased and will not make objective decisions. In the same way the scope of responsibility shifted towards the Research, Development and Innovation Council because many people do not trust ministries to do their work properly. These and other recent cases in the area of policy in science are a mere well-intentioned band-aid, which, however, cannot treat a specific patient or suppress the illness as such.

Trust cannot be built overnight. It needs good examples and transparency, in connection with a high level of probability that those who abuse it will have to face public recourse and humiliation. It is a mystery why necessary government administration reforms deemed necessary at the moment when the Czech Republic acceded to the EU failed to be implemented. An effective state needs a neutral, competent and independent government administration. If ministries can hire and fire government employees on a whim, the effectiveness of the performance of government power is undermined and the government truly becomes unworthy of trust.

The Czech national system of research and innovation made great progress since the Velvet Revolution. It was necessary to make the decisions to privatize research institutions and

preserve the structure of the Academy of Sciences very quickly. After two decades, however, it would be reasonable to ask whether the current division of labour and methods of cooperation among institutions are still adequate in light of the increasing convergence of their tasks and increasing interconnectedness with the system of innovation.

Efforts in the area of R&D both on the part of industry and on the part of the government are increasing significantly, although both are still below the level needed to allow the Czech Republic to realise its potential and measure the strength of its industrial and scientific performance against the leading small countries in Western Europe. It is necessary to increase the connections between research and industry, on the level of both management and day-to-day cooperation, so that the necessary balance between research and human resource development is supported in areas which support achieving international standards, and in areas which enable the growth in innovations founded on R&D. It is necessary to achieve a good balance between basic and applied research, which should be accompanied by tools that will signal needs and opportunities. This is one of the reasons why industry must play a more significant role in the policy of development and management, although this process must of course be subject to management through monitoring and balancing, in which the voice of science will be heard.

In research policy it is simple to focus on the hope of making a scientific discovery while overlooking the role of research in human capital development as well as the importance of communication between research and society. This is especially true in the current situation in R&D&I in the Czech Republic, where industry is not capable of formulating its needs as well as companies like the sophisticated Swedish multinationals which influence Swedish research policy. For the same reason it is true that Czech research organisations and managing institutions should pay closer attention than their Swedish counterparts.

In the past few years the Czech Republic expended enormous efforts to reform its R&D&I system, not least of all to try to modernise and improve management in this area. While there is a clear vision, based on international experience, of what the national research and innovation system should ultimately look like, there is a tendency here to try to use the rules (e.g. the laws about how agencies should manage their affairs, or again the known Evaluation Methodology) for a specific benefit, when the main monitored need is capacity development.

Government financing of research, development and innovation grew quickly in the past several years, to a large degree through increased institutional financing of university research and a major increase in specific or competition, project-oriented financing, in the research and academic sector as well as in industry. Together with the use of the Evaluation Methodology as a basis for the allocation of all institutional resources for research this means that probably too great a share of resources is allocated based on tenders, resulting in the fact that it is difficult to develop a research strategy and invest in it. It is necessary to

strike a balance among the types of financial resources which support quality, stability or restructuring.

The Czech Republic shifted its national research and innovation system from a traditionally primarily-science-oriented approach to management, which includes innovation to a much greater extent. Research and development management has also, however, become more centralised, leading to a greater distance between R&D financing decision-making and the parties influenced by this financing. With the development of the newly created Technology Agency there appeared the possibility of strengthening these relations, but this depends to a large extent on whether the RDIC is willing to decrease its involvement in micromanagement. From a wider perspective there is the need here to give greater authority to various government parties in the NSVI, to support the creation and use of individually acquired strategic knowledge and to change RDIC's focus to a body for discussion and setting general policy, which is the opposite of the situation where representatives from different institutions fight at the negotiation table for their share of the budget.

Evaluation in the Czech R&D&I system does not work well. The use of the Evaluation Methodology for the purposes of institutional financing is inappropriate, because it deforms behaviour, reduces the stability of the research system and acts as a hurdle to its productivity. In general, evaluation takes inappropriate indicators into account. It is overly focused on results and provides little information about whether state intervention is successful and whether the programmes fulfil their set objectives. In practical terms it is necessary to make radical changes in evaluation and to use evaluation to achieve responsibility and to create and improve policy.

The productivity of Czech research continues to improve as measured in terms of publication quantity and quality, although it still remains below the global average. The productivity of researches measured in terms of finding quantity and impact is improving. The developing cooperation inside and outside the Czech Republic and the gradual building of research capacity mean that productivity will probably continue to improve, assuming that R&D financing will also increase or at least remain at its present level. The main way to achieve better productivity is to increase the integration of Czech researchers in the global community. For this reason, continuing internationalisation is important, not only through better use of the opportunities provided by EU programmes, but also by creating better contacts with the rest of the world. The Czech Republic has a low level of successful participation in the Framework Programme and very little cooperation outside of Europe. While many Czech researchers have worked abroad and have international contacts, the degree of internationalisation in the research community is low, partially due to bureaucratic hurdles. Weak strategy on both the national and institutional level means that the Czech Republic makes inadequate use of its international opportunities.

Research management in its wider sense is problematic. Enlargement of groups, improved human resource planning and a more detailed strategy could help reduce the current fragmentation and significantly increase finding quantity. This, however, depends on whether universities and institutions will modernize governance and management and define more precise strategies. In order for institutions to be able to approve and implement long-term strategies it is, however, key to reduce uncertainties in financing.

The approach to human resource development within the Czech National Research and Innovation System is quite unsystematic. One of the reasons is the outdated style of R&D management and organisation, which causes research to be fragmented. This also shows up in the extremely low level of numbers of women among people working in the sciences. It is necessary for public research organisations to become more directly responsible for human resource management (including other aspects of research management), which will make it possible for career perspectives to become more flexible to reduce the level of "personnel exclusivity" of teams (groups now plan on meeting 85% of their job openings with their own doctoral study graduates) and to reduce fragmentation by using tools such as national and international doctoral study programmes.

The connections between science and industry are of a varied intensity and do not sufficiently support development. University research has minimal income from industry. Industry cooperates more with research organisations. The low-value activities of many multinational companies indicate that they will not integrate easily into the Czech national R&D system. For that reason the majority of existing connections are the domain of small and medium enterprises. The influence of the Evaluation Methodology as well as the lack of public research organisations however hinders the making of connections with these types of companies. For that reason measures are needed to improve the integration of multinational companies in the Czech research system and to provide an adequate level of coordinated support to less experience companies on a national and regional level.

While the Czech Republic has the most modern laws protecting intellectual property and a small group of experts in this area, outside of this group there is little understanding of intellectual property protection. This concerns not only patents, but also other, more general tools of intellectual property protection. Measures leading to the building of technology transfer centres at universities and institutes are in their infancy and most organisations have not yet managed to acquire experience in replacing formal technology transfer (through patents and licences) with wider functioning knowledge transfer in the public research sector.

Recommendations

The following recommendations are drawn from the overall analysis. More detailed discussions and recommendations are contained in the reports for individual modules.

1. Building trust in the government among the members of the scientific-research-innovation community is a basic condition for the national research and innovation system to be productive. Such trust is founded on the transparent and impartial implementation of fair principles in combination with punishment for those who violate these rules, no matter on what level. The need to carry out the promised reform of government administration is urgent. The government organisations which are supposed to manage the national research and innovation system - the Research, Development and Innovation Council, the ministries, the Grant Agency and Technology Agency - should make available to the public the details of their decisions and the reasons for them. A monitoring process including the use of independent international evaluators should be introduced, so that credible guarantors can test and guarantee the independence and objectivity of decisions.
2. The size and quality of the Czech R&D system increased in the course of a few years, but they still remain below the international level. The state should continue to increase investment in R&D in compliance with the policy of investing 1% of GDP in R&D by the year 2020. It is necessary to create conditions for industry, so that in this period it invests an additional 2% of GDP on R&D in compliance with the earlier Barcelona objectives and with the newly formulated Horizon 2020 for the European Union.
3. There are signs which indicate that the division of labour and institutional boundaries between universities, the Academy of Sciences and ministry research organisations are not optimal and that opportunities for closer cooperation are not being used. In certain cases the outdated forms of organisation and management prevent greater effectiveness. RDIC should check the organisation, performance and distribution of labour among universities, the Academy of Sciences and ministry research organisations with the objective of designing a solution for modernising and potentially reallocating their roles. Modernisation of the management of human resource and research activities should be the basic characteristic of this reform. Measures should be introduced which would lead to a remedy for the shocking lack of women in research, an enormous waste of talent.
4. Recent reforms have tried to confront the lack of trust in the government, the sensed improprieties in the decision-making process and the sensed incompetence of ministries by focusing responsibility for the budget and R&D&I policy under the Research, Development and Innovation Council. This naturally burdens the Council with a level of responsibility which it cannot realistically handle and which hinders its ability to make quality and informed decisions. It turns it into a sort of quasi-ministry for science, without, however, the proper connection with the government or democratic processes, and distances it from systemic and strategic knowledge necessary for connecting policies and needs. Together with government administration reform, ministerial capacities should also be strengthened and the ministries should be once again given the authority to act in R&D&I under the condition that they will have their own budget items for this. RDIC should switch the focus of its interest from

budget allocation and micromanagement to setting wider strategic objectives. The Grant Agency and Technology Agency should be subordinate to the ministries. More ministries would be able to have the ability to use it as providers for its activities in R&D&I similar as with the Research Council of Norway or the FFG in Austria. The relationship between agencies and their superior bodies should have the character of performance-related contracts. Agency activity should be managed using set objectives; their activities should not be subject to the micromanagement of RDIC or other bodies. The character of management should thus be shifted towards soft management with the engagement of the relevant participants.

5. Good international practice in setting R&D programmes includes interested participants, which enables programmes to respond to needs and opportunities. This kind of approach must, however, be monitored and balanced, and its planning and implementation process must be transparent. The practical setting of Czech R&D programmes should respect the international practice of involving interested groups of participants combined with detailed supervision ensuring objectivity and independence.
6. The proportionate part of the resources for research in the Czech Republic provided pursuant to competition is too high and exceeds the level which many countries consider to be dangerous. Institutional resources should comprise at least 50% of research financing. It should be provided on the basis of quality control, while the evaluation cycle should not be based on period of a year, but should be slow (a period of 5 years or more) which creates stability and opportunities for planning.
7. The Evaluation Methodology does not suit the purposes it should serve. It leads to a distortion of structure and behaviour and is an obstacle to many aspects of development of the national research and innovation system. The Evaluation Methodology should be replaced by a performance-based system which would include promising and retrospective elements, supported by a combination of objective indicators and evaluation by an independent international evaluation panel.
8. The R&D evaluation system in the Czech Republic is broadly aimed at counting outputs, at the expense of understanding political intervention and its impacts. It thus provides information, whose relevance is limited at best. The evaluation practice should be reformed from its foundation with the understanding that it will be focused on results and impacts and will contribute to the development of policies and programmes and to planning. Among other things it should include implementation of the “cascade principle”, which means that the management hierarchy levels use independent expertise for evaluating lower hierarchical levels, but they do not evaluate themselves.
9. The Czech national research and innovation system lacks internationalisation strategies, slowing down its development. RDIC should start consultations and commission studies leading to preparation of strategies for Czech R&D&I internationalisation.

10. Copyrights are not sufficiently understood in the Czech Republic. Only a few people understand the scope and usefulness of the correct intellectual property right protection strategy. Employer associations and chambers of commerce should start an educational campaign about intellectual property rights for industry. At the same time universities and institutions must develop clearer strategies to protect intellectual property rights. This does not mean that there should be more pressure generated for patenting irrelevant findings. Rather what is involved is an understanding that intellectual property rights enable rational decision making about what not to patent and how best to share knowledge with industry and other organisations outside the research and university sphere.

1.5.2 Evaluation of Research Organisations' Results

Evaluation of the results of research organisations which were public aid recipients was not started until after the year 2000. Before then, if evaluation of research organisations and institutions was performed at all, it most often involved "self-evaluation" which certain research organisations and institutions carried out themselves. The national innovation policy of the Czech Republic for 2005-2010 charged the RDIC with amending and improving on an ongoing basis the research evaluation methodology.

A number of changes have gradually taken place since 2004, when the Evaluation Methodology was prepared and used for the first time. The Evaluation Methodology and evaluation results are available at www.vyzkum.cz in the R&D&I assessment section.

The Evaluation Methodology for research organisations' findings and evaluation of results of completed programmes (valid for 2010 and 2011) did not differ significantly from the Evaluation Methodology for research organisations' findings and evaluation of findings of completed programmes (valid for 2012). The Methodology makes it possible to evaluate only those findings which meet the definition of results and other conditions for including in the R&D&I Information System and are set out in it.

The 2012 Methodology was built on the following principles in particular:

- Evaluation of the effectiveness of research organisations is not performed,
- Evaluation of the results of research organisations (hereinafter just "RO") includes only ROs which can be recipients of institutional support according to the rules approved by the Research, Development and Innovation Council (hereinafter just "RDIC") and according to the draft government-approved budget expenditures of the Czech Republic on research, experimental development and innovation for the year in which the innovation is carried out, with any necessary addition to ROs according to the results of negotiations between RDIC and the providers on the draft budget for the following year,

- The RO evaluation will include the results applied for the past five years, regardless of the financial aid source from which the results came into being,The RO evaluation will also include newly submitted results included in the Register of Information About Results (hereinafter just “RIA”) from 30 May of the previous year until 30 May of the year in which the Evaluation takes place, or until 29 May 2012.
- RO evaluation results related to the programme and results of other recipients of programme projects submitted and included in the RIA within 250 days after completion of support will also be included in the evaluation of results of completed programmes according to the law.

The Evaluation Methodology for research organisations’ findings and evaluation of results of completed programmes (valid for 2013 to 2015) was approved by the Research, Development and Innovation Council and at the present time is in inter-ministerial deliberations for comments, the results of which as well as the method of settling the significant number of comments was not known as of the “2013 Guide" closing date (i.e. 15 April 2013).

In this newly proposed (but as of yet unapproved) Evaluation Methodology three mutually connected pillars are used, which will bring about the following changes:

- **Pillar I: Professional evaluation of publication results.** The methodology defines for each professional group the relevant types of results and their maximum shares in point values, as applicable. To this part of the evaluation is added Subpillar I., which defines the process and method of peer review for selected types of results, e.g. books, chapters in books and articles in non-impacted reviewed periodicals.
- **Pillar II: Evaluation of the quality of selected results.** The objective is to apply the democratic principal, where each RO submits a limited number of selected results for expert assessment. The expert panel, in which foreign experts will have **significant** representation, will select at most 20 % of the best results in the framework of each professional group. These results will deserve a special award. Besides this there will be a special award for excellence for research organisations whose workers were successful in receiving ERC (European Research Council) projects.
- **Pillar III: Evaluation of patents and unpublished results of applied research.** In distinction from the practice to date of the blanket awarding of points to all the results of a non-publication character, the blanket evaluation will remain only for the patent category of results. For the other results the point score will develop according to financial support both from applied research projects and from contractual research.

In 2013 only Pillars I and III will be applied during evaluation. Pillar II and the full version of Subpillar I will be introduced in 2014. The transition year 2013 and the launching of the other pillars in stages will enable research organisations to prepare in a timely fashion for the newly introduced procedures defined by this methodology and at the same time will not disturb the data collection process already underway.

Part of the material is Impact Analysis of Pillar III in the proposed 2013 Methodology, which indicates the benefits of the transition from blanket awarding of points to applied results (the current 2012 Methodology) to points based on "cash flows" connected with the development and implementation of results (proposed 2013 Methodology). The basic principle for the new Methodology is for institutional support to be directed preferentially to those application teams whose applied results were desirable and which were even paid for.

1.6 The Research, Experimental Development and Innovation Information System

The Research, Experimental Development and Innovation Information System (hereinafter just the R&D&I IS) is a public administration information system ensuring the collection, processing, provision and use of data on research, development and innovation supported by public resources.

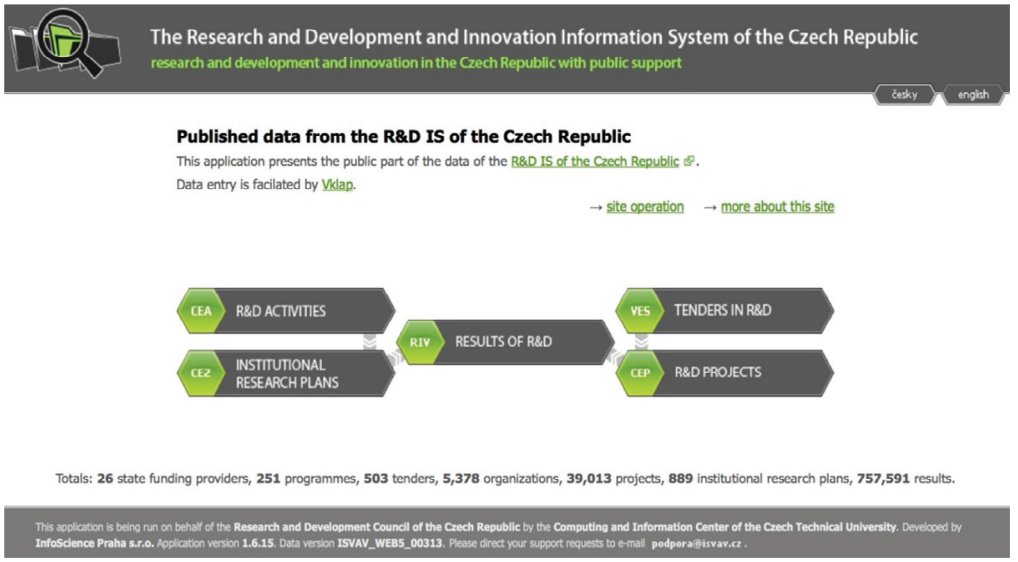
The objectives and content of the R&D&I IS, the rights, obligations and procedure in delivering, processing and providing data are stipulated by Act No. 130/2002 Coll., on the Support of Research, Experimental Development and Innovation, as amended, Government Resolution No. 397/2009 Coll., on an Information System for Research, Experimental Development and Innovation, special legal regulations and the Operating Guidelines of the R&D&I IS.

The administrator of the R&D&I IS is the Research, Development and Innovation Council. The operator of the R&D&I IS is the Office of the Government of the Czech Republic.

The structure of the Information System for Research, Experimental Development and Innovation is as follows:

- Central Record of Activities - CRA
- Central Record of Projects - CRP
- Central Record of Research Plans - CRRP
- Register of Information about Results - RIA
- Record of Public Contracts in Research, Experimental Development and Innovation - RPC

Figure 3: Entry in the R&D&I IS



1.7 Analyses of the State of Research, Development and Innovation in the Czech Republic

Analyses of the state of research, development and innovation in the Czech Republic (R&D&I analyses) have been prepared since 1999. Since 2003 RDIC has prepared them and submitted them to the government every year. After being discussed in the government, they are published in Czech and in English on the Internet and in print. R&D&I analyses do not propose any measures for remedying deficiencies or for further development of benefits found. R&D&I analyses are, however, fully used in the preparation of important conceptual and strategic documents, both for R&D&I as well as the economy as a whole. R&D&I analyses repeatedly state that there is a slight improvement in both inputs and outputs of R&D in the Czech Republic, but that the Czech Republic still lags significantly behind developed countries.

R&D&I analyses were used in the preparation of the National R&D Policy and the National Innovation Policy for 2005-2010. R&D analyses were also used in the preparation of overall concepts and strategies, among others in the preparation of the Economic Growth Strategy in 2005 and the National Strategic Reference Framework, as the foundation for preparing operational programmes and for drawing EU funds for the implementation of the Cohesion Policy in the 2007-2013 budget period. R&D&I analyses were also used in the preparation of the Green and White books of Research, Development and Innovation in the Czech Republic and to justify the proposal for the Research, Development and Innovation Reform of the Czech Republic. R&D&I analyses were also one of the materials used to prepare the National Research, Development and Innovation Policy of the Czech Republic for 2009-2015.

The analysis of the state of R&D&I in the Czech Republic and its comparison with the situation abroad in 2012 was divided into 6 parts:

- Investment in Research and Development (Part A),
- Human Resources for Research and Development (Part B),
- Results of Research and Development (Part C),
- Innovation (Part D),
- International Cooperation in Research and Development (Part E).

All the analytical documents mentioned above and the applicable government resolutions are available at www.vyzkum.cz in the R&D&I Documents section.

2 OUTLOOK FOR THE FUTURE

The year 2013 will be the last year of the current 2007-2013 financial period and for that reason in 2013 new activities will be very limited on the European level and especially on the national level (for a number of other reasons).

At the present time there is available Horizon 2020, a draft programme which influences science and research on the European level from 2014-2020. This programme is conceived as a framework for research and innovation, which will fully integrate activities addressed thus far in the 7th Framework Programme for Research, Technical Development and Demonstration Activities, in the Competitiveness and Innovation Framework Programme 2007-2013 (CIP), in the European Institute of Innovation and Technology (EIT) etc.

In 2013 one new programme will be launched on the national level - the National Programme for Sustainability I 2013-2020. This programme is focused on projects contributing to sustainability of centres for research, experimental development and innovation, supported by the R&D&I Operational Programme (Priority axis 1 - Centres of excellence and Priority axis 2 - Regional research centres in regions outside of the capital city Prague) and the “Prague - Competitiveness" Operational Programme. The National Sustainability Programme I is intended for centres whose building costs do not exceed € 50 million. For centres whose building costs exceed € 50 million there is the National Sustainability Programme II, which will be launched in 2016. More detailed information is in Chapter 4.6 of this booklet.

2.1 Horizon 2020

The Horizon 2020 programme (H2020) acquired its specific form in November 2011. General goals were set, the reasons for them, value added by a common approach, i.e. the European Union's, and of course the financial framework, management of the programme and monitoring and evaluation of its course. This is a working version intended for both the European Parliament and the European Council. In spring 2012 the Danish Presidency in the EU Council organised events which were to lead to clarifying questions that the national administrations and national and European institutions asked after a detailed familiarisation with the mentioned proposals for H2020. In the spring of 2013 as part of the Irish Presidency discussions have mainly concerned comitology (consultation procedures in http://en.wikipedia.org/wiki/Comitology), which in various administrative and expert committees look for agreement between the European Commission and the European Union in implementing acts) for the Horizon 2020 programme, in particular in the area of organisation and negotiation rules, primarily of programme committees. Taking the previous first preparatory phase of H2020 into consideration it appears that the discussions about the documents will not lead to any fundamental changes in the structure of the draft or its contents (at the time when this text was written the rules for participation were being discussed, it is thus possible that some modifications may still take place, in particular with respect to financial models). It can be expected, for example, that stricter requirements for nuclear safety and adherence to ethical norms in research will be proposed by certain Member States.

2.1.1 The Main Priorities of H2020

H2020 will be focused on the realisation of three priorities:

- I. Excellent Science
- II. Competitive European Industries
- III. Better Society

The H2020 budget also covers:

- Non-Nuclear Actions of the Joint Research Centre
- European Institute of Innovation and Technology

2.1.2 The H2020 Budget

The H2020 budget is proposed for the 2014-2020 fiscal period in the amount of € 87.7 billion (in spring 2013 it is almost certain that the total budget will be about € 70 billion, and the division into individual pillars and activities will still be discussed). In the spring of 2013 the Horizon 2020 is being discussed in the Partial General Approach regime, which means that it is being discussed without a budget, which will be approved separately. The indicative

H2020 budget is set forth in Tab 1. From the table it is also evident that the European Institute of Innovation and Technology (EIT) and, as in the foregoing Framework Programmes, the “Non-Nuclear Actions of the Joint Research Centre" will also be also be funded from the H2020 budget. The administration and technical costs of the EC for management of priorities I, II and III are not supposed to exceed 6% of the aforementioned budget.

H2020 Budget in € Million in Today’s Prices

Priority	Budget (€ Million)
I. Excellent Science	27 818
II. Competitive European Industry	20 280
III. Better Society	35 818
Non-Nuclear Actions of the Joint Research Centre	2 212
European Institute of Innovation and Technology (EIT)	1 542 + 1 652*

**) the amount of € 1 652 million given for the EIT derives from the budget for Priority II and III.*

2.1.3 H2020 Priorities

The H2020 priorities are further divided into activities which will be supported:

I. Excellent science (total of € 27 818 million)

- European Research Council (total of € 15 008 million)
- Future and Emerging Technologies (total of € 3 505 million)
- Marie Curie Actions (total of € 6 503 million)
- European Research Infrastructures (including e-infrastructures) (total of € 2 802 million)

The "Excellent Science” priority will be focused on activities attacking the current limits of knowledge or technical capabilities.

- The **“European Research Council**" supports world class frontier research, the topics of which are proposed by research workers themselves from around the world. The condition is that the grant recipient carries out research at a European research facility.
- “**Future and Emerging Technologies**” (FET) will comprise three focus areas: FET OPEN – a programme focused on supporting high-risk initial-stage research; FET PROACTIVE – a programme focused on developing promising topics of initial stage research, and FET FLAGSHIPS – a programme focused on supporting extensive interdisciplinary research.
- “**Marie Curie Actions**” is focused on human resource development in research, specifically by improving the mobility, education and professional growth of

research workers, with an emphasis on professional skills for innovation. The existing eight types of Marie Curie actions should be joined together into four focus areas: Strengthening the professional growth of starting research workers, i.e. in particular Ph.D. students; Support of excellence of experienced research workers through international and interdisciplinary mobility; Stimulation of innovation through interconnection of knowledge and Increasing structural impact through co-financing of activities.

- "**European Research Infrastructures**" focus on the development of European infrastructures to the year 2020 and in the following period, as well as on the support of the innovation potential of research infrastructures and their human capital and the support of the policy of building European infrastructures and international cooperation.

II. Competitive European Industries (total of € 20 280 million)

- Enabling and industrial technologies (total of € 15 580 million, 500 of which is for EIT)
- Access to risk finance (total of € 4 000 million)
- Innovation in SMEs (total of € 700 million)

The "Competitive Industries" priority is focused on improving the position of European industry in the global context. The priority will be clearly focused on enabling (driving radical, step changes) and industrial technologies. The priority will support the innovative activities of small and medium enterprises (SMEs).

- "**Enabling and industrial technologies**" support enabling and industrial technologies in the following six focus areas: information and communication technologies, nanotechnologies, advanced materials, biotechnology, advanced manufacturing and processing, and space applications. Emphasis in programme implementation will be placed in particular on energy consumption reduction, new materials, security, system interoperability and standard creation, and of course on verifying the results of research and pilot applications.
- "**Access to risk finance**" has the goal of expanding and intensifying the use of debt and capital financial tools, which simplify access to risk capital.
- "**Innovation in SMEs (small and medium enterprises)**" sets as its goal the creation of a single tool for the support of all innovative SMEs, which **have** a strong ambition to develop, grow and act on the supranational level. Support will include all types of innovation and all levels of its introduction. It will include support in three of the innovation cycle phases set out below with a fluid transition between them, if the applicant meets all the requirements: Phase 1: Approach and feasibility assessment; Phase 2: Research and development, demonstration, market replication and Phase 3: Commercialisation.

III. Better Society (total of € 35,888 million)

- Health, demographic changes and wellbeing (total of € 9 077 million, € 292 million of which is for EIT)
- Food security, sustainable agriculture, marine and maritime research, and the bio-economy (a total of € 4 694 million, € 150 million of which is for EIT)
- Secure, clean and efficient energy (total of € 6 537 million, € 210 million of which is for EIT)
- Smart, green and integrated transport (total of € 7 690 million, € 247 million of which is for EIT)
- Climate action, resource efficiency and raw materials (total of € 3 573 million, € 115 million of which is for EIT)
- Inclusive, innovative and secure societies (total of € 4 317 million, € 138 million of which is for EIT)

It is assumed that the European Institute of Innovation and Technology (EIT) will play a central role in addressing these challenges.

- "**Health, demographic change and wellbeing**" has the goal of improving the life-long health and wellbeing of all EU citizens. The "Health, demographic change and wellbeing" area is delimited in the proposal for H2020 by sixteen thematic focus areas: Understanding the determinants of health, improving health promotion and disease prevention; Developing effective screening procedures and improving the assessment of disease susceptibility; Improving surveillance and preparedness of healthcare services; Understanding disease; Developing better preventive vaccines; Developing diagnostic methods; Using in-silico medicine for improving disease management and prediction; Treating (transferring knowledge for regular use in clinical practice; Treating specific groups; Improving the use of health data; Developing scientific tools and methods to support healthcare policy making and regulatory needs; Active ageing, support of independent and assisted living; Individual empowerment for self-management of health; Promoting integrated care; Optimizing the efficiency and effectiveness of healthcare systems and reducing inequalities through evidence based decision making and dissemination of best practice, and innovative technologies and approaches.
- "**Food security, sustainable agriculture, marine and maritime research and the bio-economy**" has the aim of securing a sufficient supply of safe, quality foods and bio-products which are the results of the use of modern biotechnologies, developing services for the support of connected ecosystems as well competitive low-carbon production change and thus accelerating the transition to a sustainable European bio-economy. The Food Security, sustainable agriculture, marine and maritime research and the bio-economy area is delimited in the proposal for H2020 by four focus areas: Sustainable agriculture and forestry; Sustainable and competitive agri-food sector for a

safe and healthy diet; Unlocking the potential of aquatic living resources, and Sustainable and competitive bio-based industries.

- "**Secure, clean and efficient energy**" has the objective of making the transition to a reliable, sustainable and competitive energy system, in the face of increasingly scarce resources, increasing energy needs and climate change. The "Secure, clean and efficient energy" area is delimited in the proposal for H2020 by seven focus areas: To develop smart and sustainable energy use and thus reduce energy consumption and the carbon footprint; To contribute to low-carbon, low-cost electricity supply; Alternative fuels for mobile energy sources; A single, smart electricity grid for Europe; New knowledge and technologies; Tools for robust decision making (resilient to unpredictable changes) and public engagement, and Support of market uptake of energy innovation.
- "**Smart, green and integrated transport**" has the objective of contributing to the development in Europe of a transport system which will efficiently use resources, is friendly to the environment, is secure and gives citizens, the economy and society the connectivity they need. The "Smart, green and integrated transport" area is delimited in the proposal for H2020 by four focus areas: Efficient and green transport; Better mobility, less congestion, more safety and security; Leading position for the European transport industry in the global context, and Socioeconomic research and development scenarios for policy making.
- "**Climate action, resource efficiency and raw materials**" has the objective of developing an economy which will make efficient use of resources and is resilient to climate change, and to achieve sustainable raw material supply to satisfy the needs of the growing world population in the face of our planet's limited natural resources. Activities will contribute to improving the competitiveness of Europe and improving living conditions, while securing environmental balance and sustainability, will contribute to keeping average global warming below 2° C, and will help ecosystems and society to adapt to climate change. Research in the "Climate action, resource efficiency and raw materials" has five focus areas in the proposal for H2020: Fighting and adapting to climate change; Sustainable management of natural resources and eco-systems; Ensuring the sustainable supply of non-energy and non-agricultural raw materials; Enabling the transition towards a green economy through eco-innovation, and Developing comprehensive and sustained global environmental observation and information systems.
- "**Inclusive, innovative and secure societies**" has the objective of developing an innovative and secure European society supporting integration in the context of unprecedented transformation and increasing global interdependence. The "Inclusive, innovative and reflective society" is divided in the proposal for H2020 into three clearly different focus areas: Inclusive societies; Innovative societies, and Reflective societies. Inclusive societies include Promoting smart, sustainable and inclusive growth; Building resilient and inclusive societies in Europe; Strengthening Europe's role as a global actor;

Closing the research and innovation divide in Europe. Innovative societies include Strengthening the evidence base and support for the Innovation Union and European Research Area (ERA); Exploring new forms of innovation, including social innovation and creativity; Ensuring societal engagement in research and innovation; Promoting coherent and effective cooperation with third countries. Secure societies include Fighting crime and terrorism; Strengthening security through border management; Providing cyber security; Increasing Europe's resilience to crises and disasters; Ensuring privacy and freedom on the Internet and enhancing the societal dimension of security.

2.1.4 Beyond the Scope of the Priorities - Paid from the H2020 Budget

"Non-nuclear direct actions of the Joint Research Centre" and the "European Institute for Innovation and Technology" are not a separate H2020 priority, but their activities are partially counted on directly in the H2020 budget.

Non-nuclear direct actions of the Joint Research Centre (total of € 2 212 million)
The Joint Research Centre (JRC) is an institute established by the EU. The JRC is comprised of seven institutes and has several unique research laboratories. It is an integral and very important part of the European research space.
JRC's objective is to provide European Union policies with scientific and technical support customer targeted support and at the same time to react flexibly to new policy needs. We can thus expect JRC participation in H2020 in areas such as in activities supporting standard creation, pre-standard research, reference material development, assessment of the safety of new technologies, macroeconomic analyses and comparative studies.

The European Institute for Innovation and Technology (EIT) (total of € 3 194 million)
The EU established the EIT in 2008. At the present time the EIT has its own budget, however, the proposal for H2020 counts on the EIT providing substantial assistance in addressing Community challenges, and for that reason an amount for financing the EIT is allocated in the budget for each challenge, a total of € 1 652 million, beside EIT's own budget of € 1 542 million. In total thus € 3 194 million should be made available to EIT from the H2020 budget from 2014-2020.

EIT's objective is to integrate the "knowledge triangle" of research, innovation and education, thus strengthening the innovation capacity of the Union and finding solutions to Community challenges. The main characteristics of EIT activities will be concentrated on seven focus areas: Transfer and use of activities in higher education, research and innovation for starting new businesses; Top level research focused on innovation in areas of the main economic and societal interest; Development of talented, qualified and entrepreneurial people through education and professional preparation; Spreading tested

approaches and system knowledge sharing; International dimension; Strengthening the European-wide impact using innovative financing model; Connection of regional development with European opportunities.

2.1.5 Proposal for the Rules of Participation in H2020

Together with the proposal for the H2020 programme, the European Commission (EC) published a proposal for rules for participation in Horizon 2020 programme projects. The most significant of these are financial rules and rules regulating intellectual property right treatment.

This is still just a proposal of the European Commission, which is the subject of further negotiations. Discussions with Member States indicate that the proposal for rules can still see major changes. In all it seems that in the H2020 the Grant Agreement negotiation process will play a major role, as this will be a key document where the detailed rules and procedures for administration and management of the H2020 projects will be anchored.

Proposal for Funding Rules

Among other things, this document contains the basic rules according to which funding for projects implemented in H2020 will be managed. The proposal for rules of participation has a number of measures in financial management which should gradually contribute to simpler implementation of the H2020 itself and to uniformity of the rules and procedures which today are quite fragmented, across all union programmes for R&D&I support.

A summary of the basic measures follows:

- Strengthening complementariness of H2020 with the Financial Regulation - strengthening the flexibility of rules in H2020 since the Financial Regulation is updated every three years;
- Adoption of financial and administrative principles which individual participants use regularly in practice;
- One funding rate to compensate for total eligible costs in one project, regardless of the legal form of participants and the division of activities in the project. The grant can cover a maximum of 100 % of total eligible costs. The grant is limited to 70 % of total eligible costs for projects which include the following types of activities: prototype production, testing, experimental development etc. The specific maximum rate will be defined in the applicable work programme;
- The method of financing in H2020 projects will develop from the forms of financing set in the Financial Regulation (grants, awards, awarding of contracts and financial tools). Cost eligibility will also be defined in the Financial Regulation;
- One rate of 20 % for indirect costs (however, it is not out of the question that an agreement will be reached on 25 %) of direct costs without subcontractors and third party costs;

- Proposed simplification in the area of reporting personnel costs: e.g. personnel working full time on a project will not have to keep time sheets;
- A financial statement certificate will be required only at the end of project implementation, if the total EU grant to the participant is greater than or equal to € 325 thousand;
- According to the proposal for rules for H2020, if the requested funding from EU sources equals at least € 500 thousand for the entire project, financial capacity should be verified in advance only for project coordinators.

Proposal for Intellectual Property Rights for H2020

- H2020 moves away from regulating how to proceed in the period preceding the conclusion of a contract on joint ownership of results;
- The obligation to secure adequate territorial and temporal protection for project results is explicitly stated;
- If a project participant loses ownership to rights, the EC can take over protection of these rights, so it will be able to develop activities itself for spreading them, thereby supporting innovation policy of the EU;
- A significant change took place in the part on the use and spreading of results. H2020 places a greater emphasis on an open approach to publications on research implemented and opens up the possibility of an open approach to other results - the obligation to spread the results of EU financed projects free of charge through an open approach;
- If participants are planning a merger, acquisition or another company transformation, the new rules for the protection of results obligate it to notify other participants of this fact and at the same time to provide them with sufficient information and of course an appropriate time period for comments and statements;
- There is no longer the ability to ask other partners for access rights within one year after completion of their participation in the project, it can therefore be anticipated that the ability to access for access rights to project completion will be opened (i.e. it will be possible to ask even a partner who has completed its participation on the project for access rights if the project is still running);
- A new section on access rights for EU institutions and Member States will be introduced - these institutions will be able to get access rights to results free of charge, however, only if they meet the set conditions. It follows from this that in certain situations project results may be used be parties who are not contracting parties.

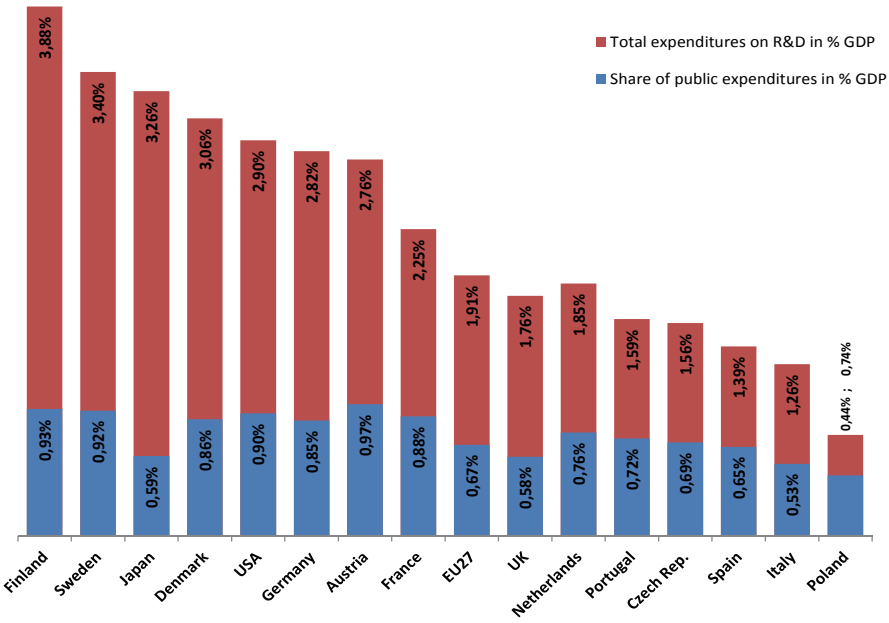
3 PUBLIC FUNDING OF RESEARCH AND DEVELOPMENT

A basic tool all over the world for the implementation of R&D policy is direct financial support from public budget resources. The total amount of direct funding for R&D and support from public resources is one of the basic indicators for evaluating R&D in individual countries. It is well known that the EU as a whole lags behind the USA and Japan, or Asian economies, in the amount of money spent on R&D. The Lisbon Strategy, which was approved in 2000 in Lisbon, set the objective of the EU becoming the most competitive global economy. In 2002 specific R&D objectives were announced in Barcelona - to increase total expenditures on R&D to 3 % of gross domestic product (GDP) by 2010, one third of which (1 %) would be paid from public resources and two thirds of which (2 %) from private sources (businesses). The EU has not yet achieved its objective, the same as the majority of its Member States.

The Czech Republic accepted the Lisbon Strategy, which has been reflected in documents determining at the direction of R&D in the Czech Republic. It still lags behind the Union average, however.

3.1 Total and Public Expenditures on R&D in Selected Developed Countries in 2009

Graph 1: Total and public expenditures on R&D in selected developed countries in 2009 (% GDP)



Source: EUROSTAT, OECD MSTI 2012-1

In 2009 Finland, Sweden and Denmark became the countries in the EU to fulfil the first Lisbon Strategy criterion (total expenditures on R&D equalling 3 % of GDP). Of the other countries, Germany, Austria and France were the closest to satisfying it. These countries are also among the ones whose expenditures on R&D are above the average for all of Europe.

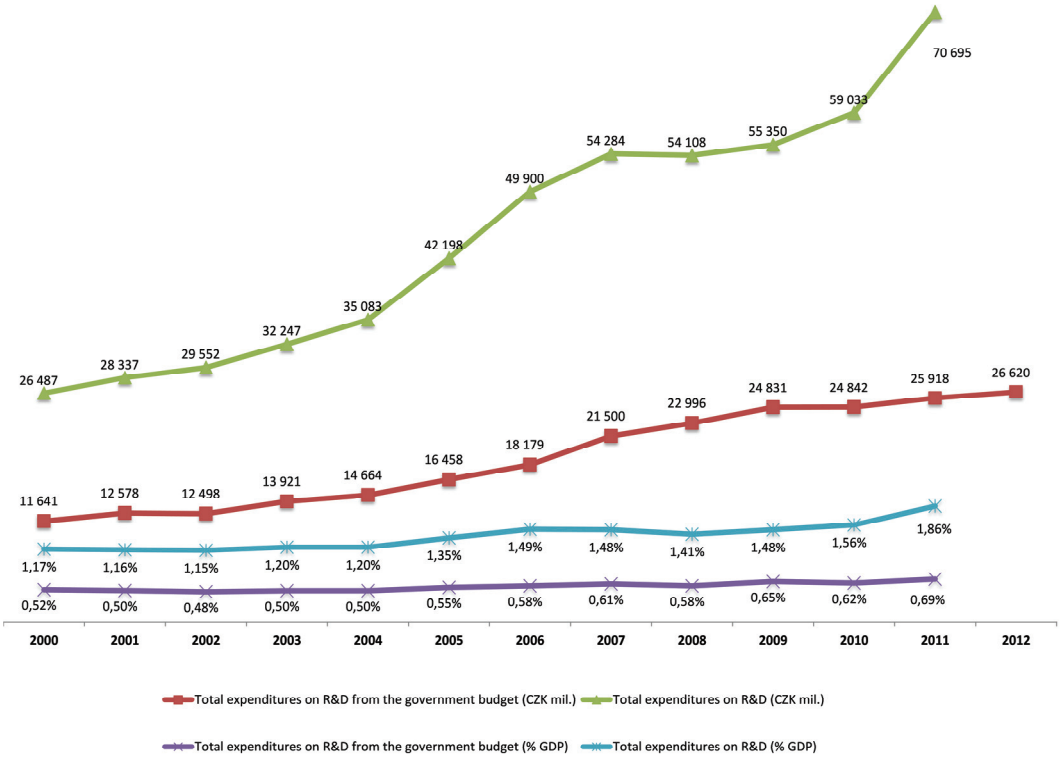
The second criterion (2 % of total expenditures from non-public resources) was met in 2009 by Finland, Sweden and Denmark; Germany, Austria and also France came the closest to it.

The EU as a whole, as the Czech Republic, has not yet satisfied either of these criteria. Countries which spent overall less on R&D than the Czech Republic were Spain, Italy and Poland, in other words, countries that are at the present time experiencing economic problems. As only data from 2009 are available, it will be interesting to determine how the 2008-2009 economic crisis and their present problems contributed to reduction in expenditures on R&D in these countries.

A high share of private expenditures on R&D is typical mainly for Asian countries; Japan is given as an example. No countries in the EU have more than 70 % share of private expenditures on R&D. Finland and Germany come the closest to this share. Globally countries such as the USA and Korea have a high share of non-public expenditures on R&D.

3.2 Total Czech Government Budget Expenditures on Research, Development and Innovation

Graph 2: Total Czech government budget expenditures on R&D&I from 2000 - 2012 (% GDP and CZK million)



Source: CSO, Government budgets of the Czech Republic for the given years

Government budget expenditures on R&D continuously increased in the financial statement to 2012, although the growth rate started to slow down significantly after the economic crisis. R&D is one of the government's main priorities, on which the government increased its expenditures even during the time of the economic crisis, in other words at a time when expenditures were cut in a number of other areas. The present outlooks for the budget of the Czech Republic indicate that expenditures in the coming years should remain approximately at the same level as in 2011.

Government budget expenditures on R&D expressed in % GDP in the recent past basically stagnated, but in 2011 they showed an increase to 0.7 % of GDP, almost to the declared objective. This is given not only through an increase in expenditures on R&D but also by the overall slowdown in economic growth, and with it the related lower growth in GDP. Estimates of the development of GDP (and with that also the share of expenditures on R&D&I in % GDP) are highly problematic and continuously change due to the global financial

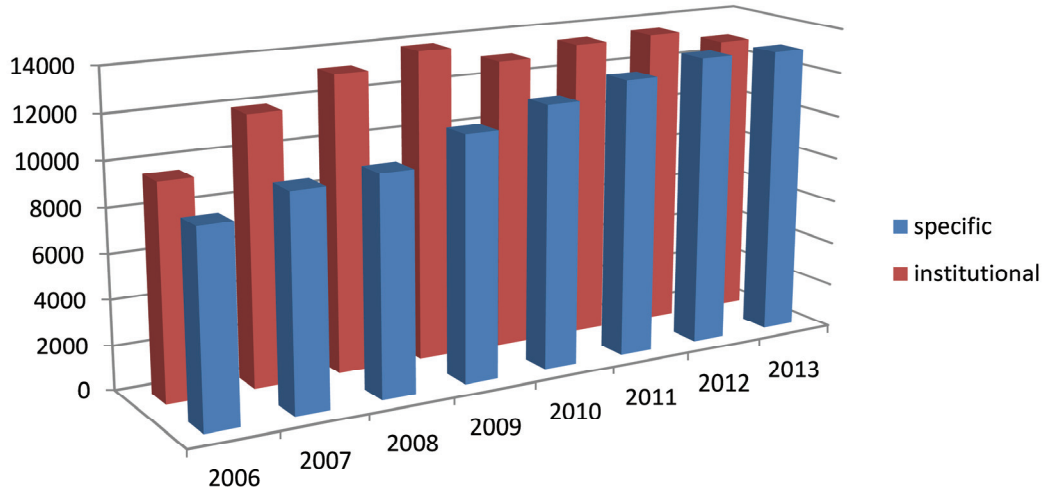
crisis and its impacts. This uncertainty applies not only to the Czech Republic, but also to other countries.

Government budget expenditures on R&D, however, are not the only public source for this area. Structural EU funds have been gradually gaining in importance since 2007. This primarily involves the “Research and Development for Innovation” operational programme, and partially the “Education for Competitiveness” and “Enterprise and Innovation” operational programmes. More than CZK 80 billion from EU resources are designated for research and development in these three operational programmes until 2015.

Total expenditures on R&D increased every year, the most dramatically from 2004 - 2007. This increase slowed down in 2007. Public expenditures in the Slovak Republic did not start to slow down until after 2010, mainly due to the lower expenditures resulting from the economic and budget crisis and increase in the budget deficit. A more detailed comparison among the EU-27 Member States indicates that public expenditure increases in R&D in the Czech Republic in 2001 - 2005 period were the fourth highest among the EU-27 Member States.

3.3 Institutional and Specific Czech Government Budget Expenditures on Research, Development and Innovation

Graph 3: Institutional and specific support of R&D&I in the Czech Republic from 2006 - 2013 (CZK million)



Source: Government budgets of the Czech Republic for the given years

Total expenditures on R&D from the government budget are comprised of two parts. The first is specific support, and the second is institutional support.

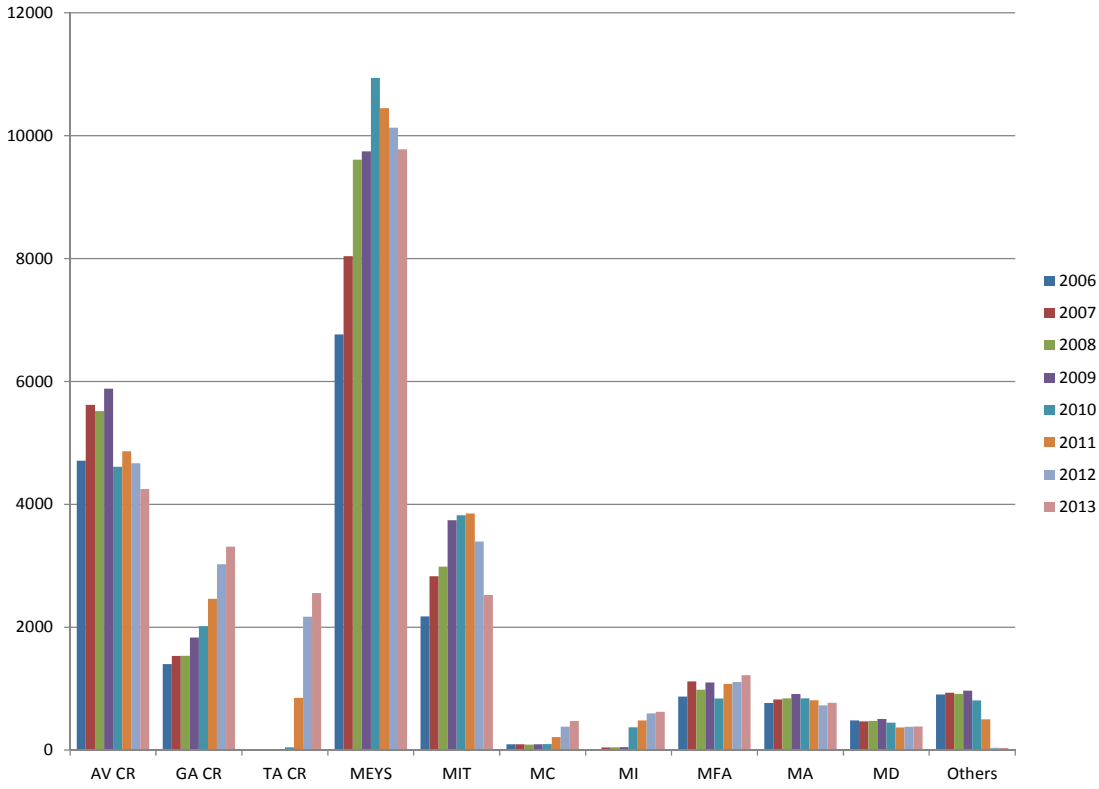
Specific support is provided on the basis of public tenders for selected research projects, either grant projects, for which the objective and procedures of projects in basic research are set by the research workers themselves, or programme projects, where projects of applied research and development aim to fulfil preset programme objectives, or as the case may be research projects designed for the needs of the state (public contracts in research and development). Further specific support is provided for the development of infrastructures for R&D, for specific university research.

At the present time, institutional support is provided to research organisations and larger research teams in particular in the form of expenditure for development of research organisations according to evaluation of their results. Certain activities of international cooperation in R&D for co-funding of operational programmes in R&D&I are funded from institutional support resources. Costs for public tenders, evaluation and financial appraisal of extraordinary results are also covered from institutional resources.

Since 2001 institutional support has been higher than specific support. RDIC has worked to reduce the differences between institutional and specific support. In decision-making on specific support tender principles are applied more, while the claim component of support is used in a number of cases from institutional support. Data since 2010, however, are not directly comparable with that from the previous years due to changes in R&D support (e.g. until 2009 specific research at universities was classified as institutional support, starting in 2010 specific university research has been classified as specific support).

3.4 Total Expenditures on Research, Development and Innovation for Selected Providers

Graph 4: Total expenditures on R&D&I for selected providers from 2006 - 2013 (CZK million)



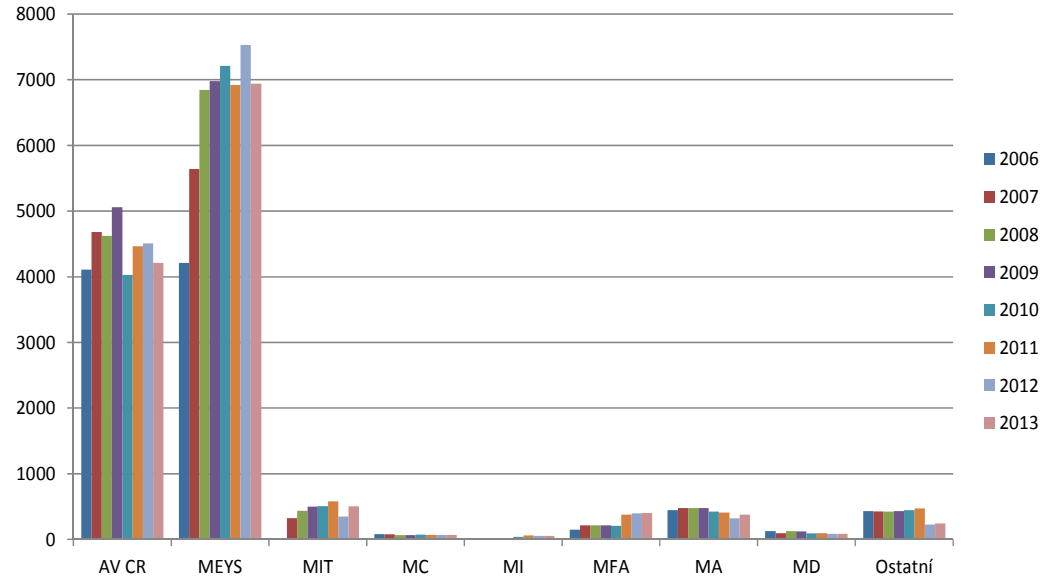
Source: Government budgets of the Czech Republic for the given years

The graph shows the development of total support, which is provided by 10 current providers. The government-approved Research, Development and Innovation Reform from 2008 reduced the number of budget chapters in R&D from 22 to 11 (the eleventh chapter, from which, however, no resources are provided to other organisations, is the Office of the Government of the Czech Republic - this chapter is used for financing only expenditures on activities of the Research, Development and Innovation Council).

Financing of issues addressed by dissolved R&D chapters was transferred to a large degree to the TA CE, but only with part of the funds. In the graph these chapters are labelled “others”.

3.5 Institutional Support for Research and Development for Selected Providers

Graph 5: Institutional support for R&D for selected providers from 2006 - 2013 (CZK million)



Source: Government budgets of the Czech Republic for the given years

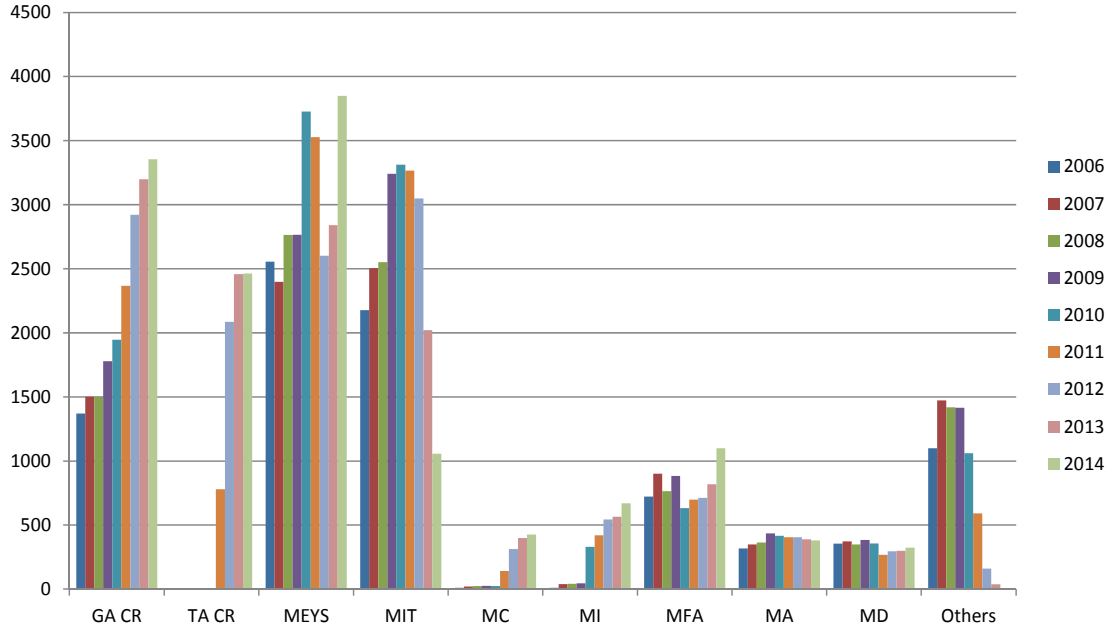
The government-approved reform of the research, development and innovation system (Government Decree No. 287 of 26 March 2008) introduced a fundamental change in the provision of institutional support. Existing research plans were gradually completed, new ones were no longer announced. Institutional support is now provided on the basis of the evaluation of research organisations according to the methodology approved by the government or in the case of AS CR according to its own evaluation. The RDIC reflects evaluation results in the draft of government budget expenditures on R&D&I. The results of the International Audit of Research, Development and Innovation in the Czech Republic, which was completed in 2011, should be applied to the decision-making on the amount of institutional support.

As was already mentioned, institutional support is also provided for co-financing of operational programmes in R&D&I. Costs for public tenders, evaluation and financial appraisal of extraordinary results are covered also from institutional resources.

MEYS and AS CR divide the decisive part of institutional support. MEYS provides institutional support to universities and parts of research organisations, but also partially co-finances operational programmes in R&D&I (the winding down R&D&I OP and EC OP). AS CR provides institutional support to institutions of AS CR. For that reason expenditures are not directly comparable with each other.

3.6 Specific Support for Research, Development and Innovation for Selected Providers

Graph 6: Specific support for R&D&I for selected providers from 2006 - 2014 (CZK million)



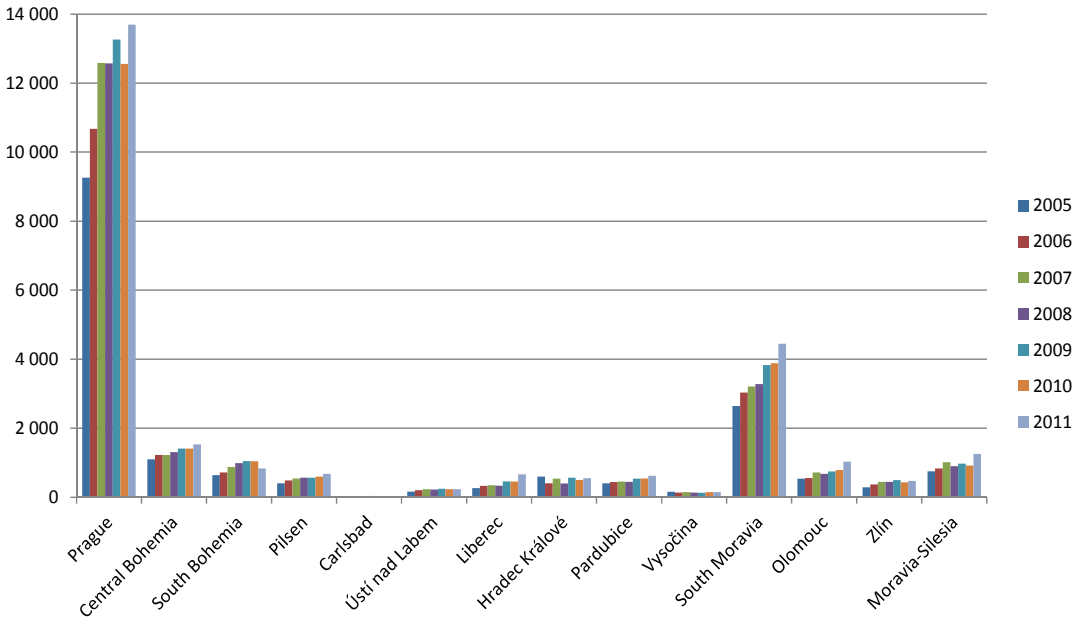
Source: Government budgets of the Czech Republic for the given years

Specific support for R&D is provided to R&D projects based on the results of public tenders. GA CR provides support to grant projects. Other providers, including AS CR and TA CR, support programme projects which are part of the R&D programmes announced by them, and in the case of MD, MI and TA CR and public contracts in R&D.

The increase in GA CR expenditures after 2010 was caused by a change in the composition of support - since 2011 GA CR has gradually been financing even wage costs for new projects. The increase in TA CR expenditures was caused by taking over R&D issues from those chapters from which R&D&I support is no longer provided.

3.7 Total Government Support for Research, Development and Innovation in Individual Regions

Graph 7: Total support for R&D&I in individual regions from 2005 - 2011 (CZK million)



Source: Government budgets of the Czech Republic for the given years, R&D&I IS

All specific support is included in the total R&D support category. Only support provided on the basis of research plans and expenditures on development research organisations are included in the institutional support category. It does not include support for specific research at universities or support for selected international cooperation activities in R&D.

R&D support from public funds is divided very unevenly around the Czech Republic. This unevenness is due to the uneven historical division of R&D capacities around the Czech Republic. More than 50 % of total public support for R&D goes to the capital city of Prague, and almost 80 % of total support to four regions. The building of new R&D infrastructures in regions, with the exception of the capital city of Prague, should help mitigate the significant differences. The construction is supported by EU sources as part of the Research and Development for Innovation Operational Programme.

4 R&D&I PROVIDERS AND PROGRAMMES IN THE CZECH REPUBLIC

4.1 Grant Agency of the Czech Republic (GA CR)

The Grant Agency of the Czech Republic (GA CR) launched its activities in 1993. One of its tasks is to award grants every year to the best basic research projects from all fields of science, on the basis of a public tender in research and development.

GA CR's tasks also include checking the course of implementation and fulfilment of project objectives for each past year and evaluating the project's achieved results after its conclusion. GA CR awards grants or specific funds from a separate government budget chapter.

According to information from the Central Record of Projects (CRP) since the agency's inception 13 811 projects have been supported, in a total government support amount of CZK 30 541 billion. Every year approximately 3 000 bidders apply for GA CR grants, and roughly one quarter of them are awarded a grant.

GA CR provides financial support on scientific projects within the framework of standard projects, doctoral projects, post-doctoral projects, on projects in the Eurocores programme, organised by the European Science Foundation (ESF) and since 2012 on excellence projects.

GA CR has the following tasks:

- Public tender preparation and announcement in research and development to support grant projects;
- Assessment of project proposals by expert consulting bodies of GA CR and selection of the best projects for awarding grants;
- Awarding grants to selected projects according to financial abilities, i.e. according to the amount which GA CR receives from the government budget for a given year, and conclusion of a contract with bidders;
- Checking the course of project implementation and objective fulfilment for each past year pursuant to progress reports;
- Evaluating achieved project results after completion pursuant to final reports;
- Checking management of funds allocated for project implementation, i.e. whether they are spent in accordance with the purpose and in compliance with applicable regulations and requirements;
- Co-operation with foreign scientific bodies and institutions, in particular with Member States of the European Community.

4.1.1 Branch Committees and Panels of GA CR

Branch committees take care of the approval, assessment and evaluation of basic research project proposals. The following branches have been established:

1. Technical sciences
2. Sciences studying nonliving nature
3. Medical and biological sciences
4. Social sciences and the humanities
5. Agricultural and biological-environmental sciences

These branches are further divided into so-called panels:
(On 7 March 2013 GA CR agreed to specifying the content of panels P102, P108, P402 and P403. A bidder should not choose panels only based on their name, but should familiarize itself with their content.)

1. **Technical sciences**
   - P101 Mechanical engineering
   - P102 Electrical engineering and electronics
   - P103 Cybernetics and information processing
   - P104 Building materials, architecture
   - P105 Building mechanics and construction, fluid mechanics
   - P106 Technical chemistry
   - P107 Materials and metallurgy
   - P108 Material sciences and engineering
2. **Sciences studying nonliving nature**
   - P201 Mathematics
   - P202 Informatics
   - P203 Nuclear and particle physics, plasma and low temperature physics
   - P204 Physics of condensed substances and materials
   - P205 Biophysics, macromolecular physics and optics
   - P206 Analytical chemistry - chemical and structural analysis of atomic, molecular and (bio)molecular systems
   - P207 Chemical and biochemical transformations
   - P208 Chemical physics and physical chemistry
   - P209 Astronomy and astrophysics, physics of the atmosphere, meteorology, climatology and hydrology, the physics of geography
   - P210 Geophysics, geochemistry, geology and mineralogy, hydrogeology
3. **Medical and biological sciences**
   - P301 Genetics, experimental oncology, medical biochemistry, metabolism and nutrition

- P302 Morphological branches, microbiology, immunology, epidemiology and hygiene
- P303 Physiological branches, pharmacology, neurosciences and toxicology
- P304 Clinical and preclinical research, experimental medicine
- P305 Molecular, cell, structural and developmental biology and bioinformatics

4. **Social sciences and the humanities**
   - P401 Philosophy, theology, religious studies
   - P402 Economic sciences, macroeconomics, microeconomics, econometrics, quantitative methods in economics
   - P403 Business sciences, finance, administration, management
   - P404 Sociology, demography, social geography and media studies
   - P405 Archaeology and earlier history (to 1780)
   - P406 Linguistics and literary studies
   - P407 Psychology, pedagogy
   - P408 Legal sciences, political science
   - P409 Aesthetics, music and art studies
   - P410 Modern history (since 1780) and ethnology

5. **Agricultural and biological-environmental sciences**
   - P501 Plant physiology and genetics, plant medicine
   - P502 Animal physiology and genetics, veterinary medicine
   - P503 Food science, ecotoxicology and environmental chemistry
   - P504 Landscape care, forestry and soil biology, ecosystem ecology
   - P505 Ecology of animals and plants
   - P506 Botanical sciences and zoology

4.1.2 Types of Grant Projects

GA CR provides specific support for the implementation of grant projects in the following grant project groups:

- Standard research grant projects (GA)
- Doctoral research grant projects (GD)
- Post-doctoral research grant projects (GP)
- International (bilateral) projects (GC)
- EUROCORES (GE)
- Excellence projects (GB)

Standard research grant projects (GA)

Standard research grant projects are focused on basic research. GA CR has supported this project type since its inception, i.e. since 1993. According to information from CRP 11 585

projects have been supported to date, with the total amount of state support equalling CZK 26 485 billion.

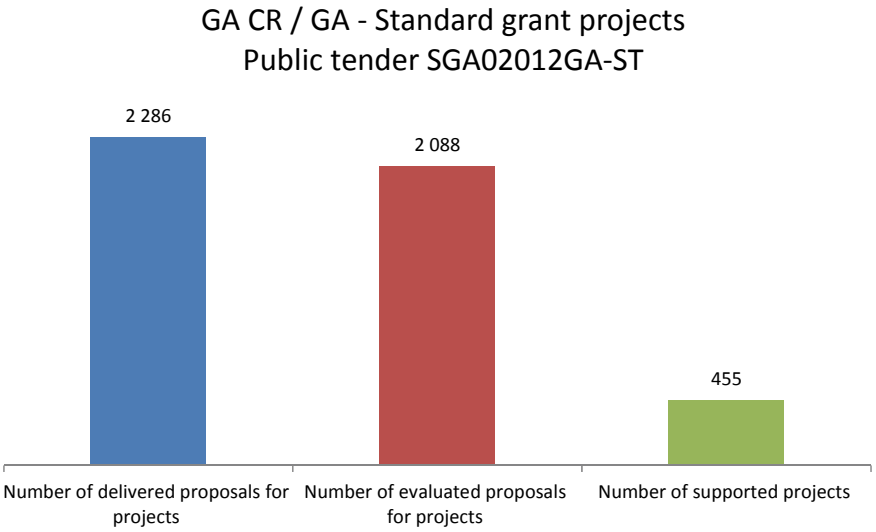
- Projects typically last 2-5 years. The public tender for 2014 however anticipates that projects will last 2 or 3 years.
- They can be granted for all areas of basic research.
- The proposer chooses the project topic.
- Any legal or natural person, an organisational unit of the state or local government, an organisational unit of the Ministry of Defence or Ministry of the Interior involved in research and experimental development can be a bidder.
- The public tender is typically announced once a year, as a rule in March. The evaluation process runs through the fall and the results of the public tender are announced before the end of the year at hand.
- The investigator can be a single person or a team of scientific workers, even from different institutions.
- The main criteria are the objectives of the project, the proposed manner of implementation, the proposed outputs of implementation, foreign cooperation, assessment of the bidder's previous cooperation with GA CR and the suitability of financial requirements.

Funds which are being competed for in 2013 (CZK thous.)

Period	2014	2015	2016	Total
Support Amount	650 000	660 000	670 000	**1 980 000**

Graph 8: Graphic depiction of the last evaluated public tender

(The amount of specific support awarded in the public tender: CZK 2 870 053 thousand)



Source: Research, Experimental Development and Innovation Information System

Doctoral research grant projects (GD)

Doctoral research grant projects are intended to support basic research projects of doctoral study students with an eye to strengthening international cooperation of the worker exchange carried out; this involves support and coordination of scientific activities in the framework of doctoral study, multidisciplinarity and cooperation among institutions. According to information from the CRP 129 projects have been supported to date by the agency, with a total amount of state support of CZK 1 208 billion. The GA CR has supported this type of project since 2003; lately GA CR has been moving away from further support of this activity and at the present is no longer announcing new calls. Since 2013 no funds have been allocated for this group of grant projects in the budget.

- Project duration is a maximum of 4 years.
- They can be granted for all areas of basic research.
- The proposer chooses the topic of the project.
- The main criteria for evaluation of project proposals are a high level of scientific quality and quality of the doctoral study programme.

Post-doctoral research grant projects (GP)

This is a basic research type project intended for young scientists (up to age 35) who are just starting out and have completed doctoral study, at most however 4 years after awarding of the doctorate. GA CR has supported this project type since 1997. According to information from CRP 1 941 projects have been supported to date, with the total amount of state support equalling CZK 1 785 billion.

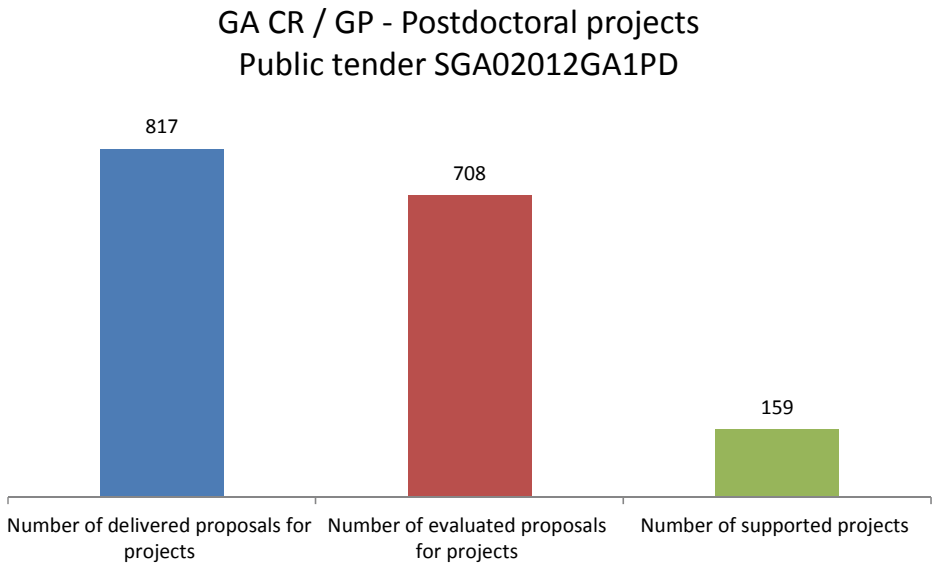
- Project duration is 2-3 years.
- They can be granted for all areas of basic research.
- The proposer chooses the topic of the project.
- The investigator can be a single person, or a team of up to three scientific workers from one institution.
- The public tender is typically announced once a year, as a rule in March. The evaluation process runs through the fall and the results of the public tender are announced before the end of the year at hand.
- The main criteria are the objectives of the project, the proposed manner of implementation, the proposed outputs of implementation, foreign cooperation, assessment of the bidder's previous cooperation with GA CR and the suitability of financial requirements.

Funds which are being competed for in 2013 (CZK thous.)

Period	2014	2015	2016	Total
Support Amount	91 000	92 000	93 000	**276 000**

Graph 9: Graphic depiction of the last evaluated public tender

(The amount of specific support awarded in the public tender: CZK 302 667 thousand)



Source: Research, Experimental Development and Innovation Information System

International (bilateral) projects (GC)

International grant projects are focused on support of basic research projects based on bilateral cooperation of scientists and scientific teams in cooperation with various foreign grant institutions: Deutsche Forschungsgemeinschaft (DFG), the National Research Foundation of Korea (NRF) and the National Science Council of Taiwan (NSC). According to information from CRP 75 projects have been supported to date, with the total amount of state support equalling CZK 0.227 billion.

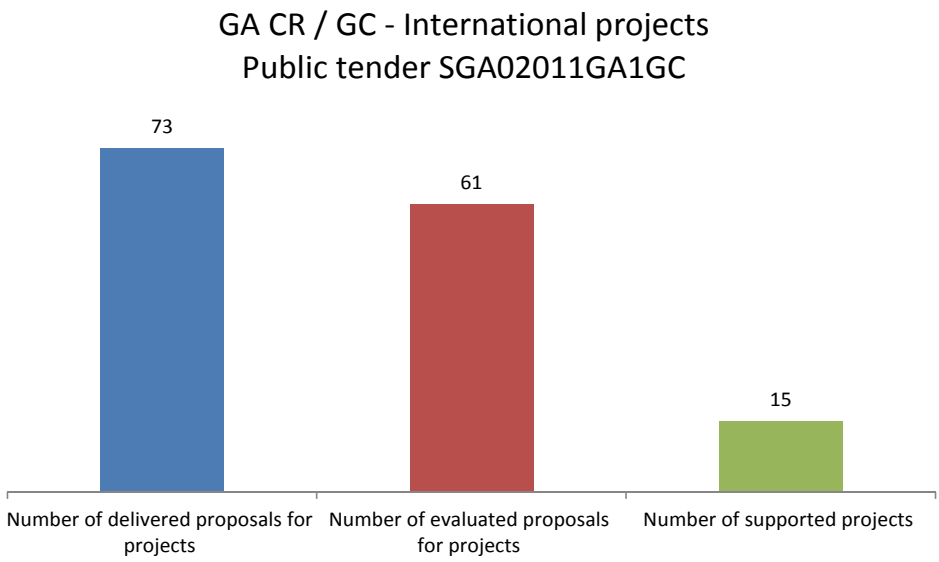
- For GA CR to award a grant to a bilateral project, the project must be awarded a grant in a partner country, i.e. the grant is awarded to bidders under the condition that its awarding is approved by both national providers.
- They can be granted for all areas of basic research.
- The proposer chooses the topic of the project.
- Project duration is 2-3 years.
- In the Czech Republic this type of tender is always announced once a year, as a rule in March. The evaluation process takes place through the fall and the deadline for announcing results depends on the deadline for project approval in the partner country.
- Each national provider finances activities related to part of project implementation within its territory.

Funds which are being competed for in 2013 (CZK thous.)

Period	2014	2015	2016	Total
Support Amount	19 000	20 000	21 000	**60 000**

Graph 10: Graphic depiction of the last evaluated public tender

(The amount of specific support awarded in the public tender: CZK 71 974 thous.)



Source: Research, Experimental Development and Innovation Information System

EUROCORES (GE)

These are projects which involve support for participation in Eurocores international programmes, coordinated by the European Science Foundation, in the form of international cooperation of scientific teams within thematically defined areas (thematic sub-programmes). According to information from the CRP 26 projects have been supported to date by the agency, with a total amount of state support of CZK 0.104 billion. The GA CR has supported this type of project since 2003; lately GA CR has been moving away from further support of this activity and at the present time is no longer announcing new calls. Since 2014 no funds have been allocated for this group of grant projects in the budget.

- ESF (European Science Foundation) arranges the coordination of evaluation of project proposals and evaluation of ongoing projects.
- The minimum number of cooperating scientific teams is specified in the thematic sub-programme announcement (most often cooperation of at least 3 scientific teams is required).
- Projects are financed by member organisations within individual sub-programmes - national providers (NP) in Member States.

- Individual NPs finance only parts of joint ESF projects implemented by parties (individuals or scientific teams) of a given country.
- The legal standards, internal rules and regulations which govern the respective NP are decisive for setting the conditions for the provision of funds to subjects of a given country.
- In the case of the Czech Republic the national provider for announced thematic sub-programmes is the Grant Agency of the Czech Republic.
- The duration of EUROCORES grant projects is for the most part 36 months.

Projects supporting excellence in basic research (GB)

These are projects which are focused on top level basic research for whose implementation it is not possible to create conditions within existing GA CR grant project groups. GA CR has supported this type of project since 2011. Due to the fact that the group of grant projects supporting excellence in basic research was not initiated until 2012, according to the information from CRP no project has been supported to date which was already completed.

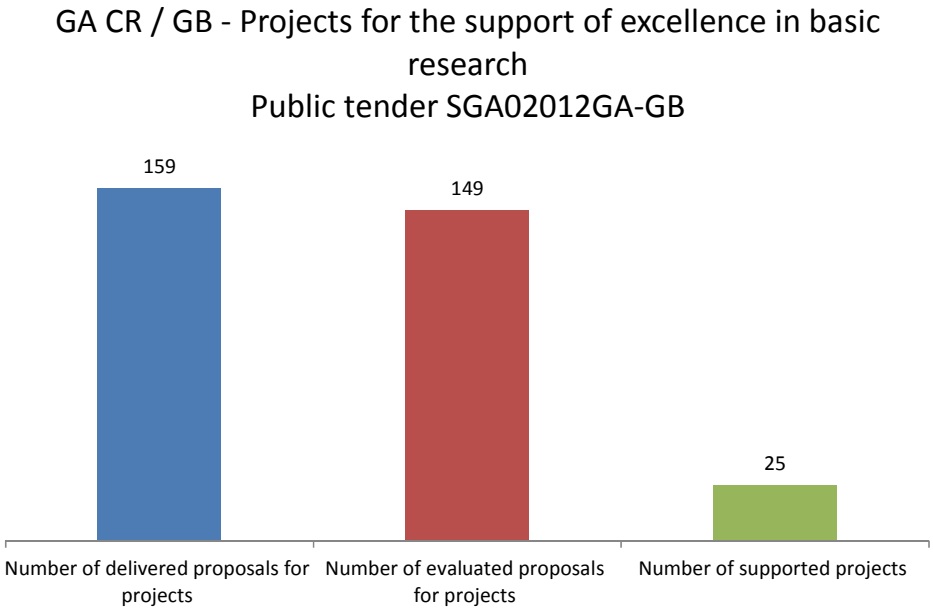
- This is a new group of projects, whose main objective is the support of excellence in basic research, development of multidisciplinary in basic research and cooperation of at least two scientific institutions in the Czech Republic.
- They can be granted for all areas of basic research.
- The proposer chooses the topic of the project.
- The anticipated project duration is 5 years.
- The main criteria in the public tender is multidisciplinarity, scientific value and quality of the submitted project proposal, conformity of the project proposal with the basic characteristics of a project of excellence, the proposed method of implementation, the proposed output of the implementation, the bidder's foreign cooperation, assessment of the bidder's previous cooperation with GA CR and suitability of the financial requirements. A branch committee evaluates project proposals in accordance with the law and GA CR Regulations.
- Public tender in research, experimental development and innovation supporting grant projects for the support of excellence in basic research was first announced in 2011 and start of support in 2012. After evaluation of the course of implementation of projects for the support of excellence in basic research after 2 years the cycle was renewed by announcing another public tender in March 2013. Start of support will be in 2014.

The estimated amount of support for the entire implementation period of the grant project group (CZK thous.)

Period	2012	2013	2014	2015	2016	2017	2018	Total
Support Amount	310 575	389 209	483 479	483 479	483 479	483 479	483 479	**3 117 179**

Graph 11: Graphic depiction of the last evaluated public tender

(The amount of specific support awarded in the public tender: CZK 2 316 685 thousand)



Source: Research, Experimental Development and Innovation Information System

4.1.3 Public Tenders

Code	Date of announcement	Date of deadline	Announcement of results
GA	3. 7. 2013	18. 4. 2013	13. 12. 2013
GB	9. 4. 2013	22. 5. 2013	13. 12. 2013
GC	7. 3. 2013	18. 4. 2013	13. 12. 2013
GP	7. 3. 2013	18. 4. 2013	13. 12. 2013

4.1.4 Contacts and Additional Information

Grant Agency of the Czech Republic
Prague 6, Evropská 2589 / 33b, 16000
Telephone: +420 227 088 841
email address: info@gacr.cz

Useful links:
http://www.gacr.cz/
http://www.isvav.cz/
http://www.gacr.cz/category/zajemci/verejne-souteze/

4.2 Technology Agency of the Czech Republic (TA CR)

The Technology Agency of the Czech Republic is an organisational unit of the Czech government which was established in 2009 by Act No. 130/2002 Coll., and launched its activities in 2010. TA CR centralises government support of applied research and development, which was fragmented among a large number of providers before it was established.

According to information from CRP 597 projects have been supported to date, with the total amount of state support equalling CZK 8.988 billion.

TA CR takes care of the following tasks in particular:

- The preparation, execution and implementation of applied research, development and innovation programmes, including those for the needs of the public administration, public tenders in research, development and innovation for the support of projects and awarding of public contracts;
- Evaluation and selection of programme project proposals;
- Provision of specific support for realisation of programme projects pursuant to contracts to provide support or decisions to provide support;
- Checking the performance of contracts to provide support or decisions to provide support, and the use of specific support;
- Evaluation and checking the course of programme project implementation and objective fulfilment, and checking the results achieved by it;
- Support of cooperation between research organisations and the private sector and partial financing of programme projects.

In 2013 the following projects are being implemented in these programmes:

- The ALPHA programme supporting applied research and experimental development
- The BETA programme of public contract in research, experimental development and innovation for the needs of public administration bodies
- The OMEGA programme for the support of applied social science research and experimental development
- Competence centres

4.2.1 The ALPHA Programme of Applied Research and Experimental Development 2011-2016 (TA)

According to information from CRP 503 projects have been supported to date, with the total amount of state support equalling CZK 4.786 billion.

The programme's main objective is to significantly increase the quantity and quality of new findings in applied research and experimental development in the area of progressive technologies, materials and systems, energy resources, environmental protection and creation and sustainable development of transportation, which it will be possible to apply in the form of innovations. These findings will then lead to improving business performance, increasing the competitiveness of the Czech economy and society and to improving the quality of life of its inhabitants through the development of progressive technologies in the specified areas.

The estimated amount of support for the entire programme period (CZK thous.)
(Actual expenditures in individual years differ from those originally approved depending on the government budget capabilities)

Period	2011	2012	2013	2014	2015	2016	Total
Support Amount	817 000	1 541 000	1 650 000	1 450 000	1 200 000	900 000	7 558 000

The programme was designed for a six-year period (2011-2016), during which a total of CZK 7.5 billion should be distributed. The first public tender was called 24 March 2010, and the second tender was called 20 July 2011. The third and last public tender for the Alpha Programme was called 6 June 2012.

The ALPHA Programme is divided into 3 sub-programmes:

- Progressive technologies, materials and systems
- Energy resources and protection and creation of the environment
- Sustainable development of transportation

4.2.2 The BETA Programme of Public Tenders in R&D&I for the Needs of Public Administration Bodies 2012-2016 (TB)

According to information from CRP 27 projects have been supported to date, with the total amount of state support equalling CZK 0.089 billion.

The programme's objective is to improve current practice, methodologies, regulatory mechanisms and supervising activities as well as to acquire new knowledge, skills, services, information and management products and procedures that will be designed for state administration and will lead to greater innovativeness, i.e. to improving quality, allowing improved sustainability and promotion, as well as to improving the thriftiness of this activity.

The programme supports in particular the creation of various models and new legal standards and strategies for the current state policy, in the national and European context (e.g. economic or social). Anticipated results also include a proposal for methods of evaluating the effectiveness of these policies and strategies to get feedback and create materials for future shaping policy as part of quality improvement of government administration performance and the effective allocation of resources.

Due to the cross-sectional nature of the programme, specific programme objectives are divided according to the needs of the respective government administration bodies. The objectives of individual projects will be clearly defined in the tender documentation of the tenders announced.

The Government of the Czech Republic approved the proposed change in the BETA programme by its Resolution No. 75 of 30 January 2013. Starting 31 January 2013 TA CR will announce public tenders for the following government administration bodies:

- **The needs of the Czech Mining Authority**
  The objective is to acquire new scientifically based knowledge from the field of activity of the government mining authority, enabling proper oversight in mining activities and activities carried out by methods used in mining in the full extent of authority of the Czech Mining Office.
- **The needs of the Czech Office for Surveying, Mapping and Cadastre**
  The objective is to acquire knowledge, materials and tools for the conceptual and methodological activity of the performance of state administration activities secured by the Czech Office for Surveying, Mapping and Cadastre so that these activities can be executed on a highly professional level and can meet the current state of knowledge.

- **The needs of the Ministry of Transport**

  The objectives are to acquire materials and knowledge for the conceptual, methodological, decision-making and inspection activities, and the performance of state administration activities secured by the Ministry of Transport so that the activities can be executed on a highly professional level and to acquire expert knowledge which will enable government administration bodies to achieve, maintain and develop specific capabilities which are needed for ensuring sustainable development in transportation.
- **The needs of the Ministry of Labour and Social Affairs**

  The objectives are to expand the socioeconomic knowledge base in the area of new factors influencing social security systems for the population and the quality of working life, social impacts of the integration of the Czech Republic in European and global structures, the socioeconomic impacts of the aging of the population, Czech social and family policy and the effectiveness and quality of the labour market.
- **The needs of the Ministry of Industry and Trade**

  The objectives are the improvement materials and tools for the conceptual and methodological activity of the performance of the state administration activities secured by the Ministry of Industry and Trade so that these activities can be executed on a highly professional level and can meet the current state of knowledge. The anticipated areas in which research needs will be presented include areas within the sphere of authority of the MIT, in particular industrial policy, energy, support of business and international trade.
- **The needs of the Ministry for Local Development**

  The objectives are to improve the quality of methodological, legislative and decision-making activities of the Central Administrative Authority in matters of regional policy, the travel industry, land use planning and housing, in particular with respect to the preparation of new strategic materials of the Ministry for Local Development, such as the Regional Development Strategy, the National Development Plan, the National Strategic Reference Framework and the Land Use Development Policy.
- **The needs of the Ministry of the Interior**

  The objectives include improving current practice, methodologies, the acquisition of new knowledge, skills, services, information and managing products and procedures, which will be exclusively intended for the performance of the Ministry of the Interior and will lead to improving its quality, innovativeness and thriftiness.
- **The needs of the Ministry of Foreign Affairs**

  The objective is the acquisition of new findings leading to the formulation of recommendations for government administration decision-making in the area of international relations and foreign policy of the Czech Republic. Emphasis will be placed on the creation and promotion of government interests, foreign policy within Europe and outside of Europe, including security, energy, development, economic and cultural dimensions. Another objective will be achieving greater administrative efficiency.

- **The needs of the Ministry of the Environment**
  The objectives of programme in the environment include the acquisition of specialised materials for improving methodologies, the assessment of changes in the environment, supervisory activities and the acquisition of new knowledge, skills and procedures, which will be designed to improve the quality and effectiveness of the performance of the activities of the state administration and administrative authorities and will lead to improving the quality of decision-making, evaluation and management processes in the performance of their activities.
- **The needs of the State Office for Nuclear Safety**
  The objective is to acquire knowledge, materials and tools for the conceptual and methodological activity of the performance of the state administration activities secured by the State Office for Nuclear Safety so that these activities can be executed on a highly professional level and can meet the current state of knowledge. Emphasis has been placed, in particular in the recent past, on the continuous improvement of nuclear safety of nuclear facilities operated on the territory of Member States of the EU.
- **The needs of other providers in the area of the implementation of research and development programmes**
  The objective is the acquisition of new knowledge, materials and tools for the conceptual, methodological, evaluating and control activities for the purpose of improving the quality of the process of support of applied research and experimental development in the Czech Republic. The stated objective will lead to improving the quality of decision-making, evaluating and control processes in the performance of the activities of providers of specific support in research and development.

The estimated amount of support for the entire programme period (CZK thous.)

Period	2012	2013	2014	2015	2016	Total
Support Amount	80 000	134 500	150 500	150 500	124 500	**640 000**

Project duration

The identification of research needs of central government administration bodies will take place during the course of each calendar year, until and including 2015. The first identification of research needs and the following announcement of calls to tender took place in 2011. Since 2012 the on-going announcement of calls to tender has taken place.

Selected research needs serve as the base for the preparation of tender documentation for public contracts in research, development and innovation (hereinafter just "Public Contract"), which will be announced for the entire duration of the programme.

The duration of project implementation in the BETA programme has been set at 6 to 36 months since 2013.

Support, its type and size

The amount of project costs is limited by programme resources and resources allocated to the specific government administration body. Eligible project costs will be 100 % covered due to the selection of Public Contract aid. Support will be provided gradually, through advance financing by stages. The total amount will be paid after due evaluation of project completion. The total programme budget is CZK 640 million for the entire duration of the programme. For 2013 CZK 134.5 million has been allocated, and for 2014 CZK 150.5 million.

Recipients of support

Businesses and research organisations which meet the definition of bidder according to § 2 Paragraph 2 Letter b) of Act No. 130/2002 Coll. and the definition of supplier set out in § 17 Paragraph 1 Letter a) of Act No. 137/2006 Coll. can submit projects in the BETA programme.

4.2.3 The OMEGA Programme for the Support of Applied Social Science Research 2012-2017 (TD)

According to information from CRP 46 projects have been supported to date, with the total amount of state support equalling CZK 0.084 billion.

The main objectives of the programme are the improvement of research activities in applied social sciences and the use of the results of these activities to improve the competitiveness of the Czech Republic, improve quality of life of its inhabitants and provide for the balanced socioeconomic development of society.

The objective of programme implementation will be to increase the number of applications for social science research and development in practice and to create results which will enable:

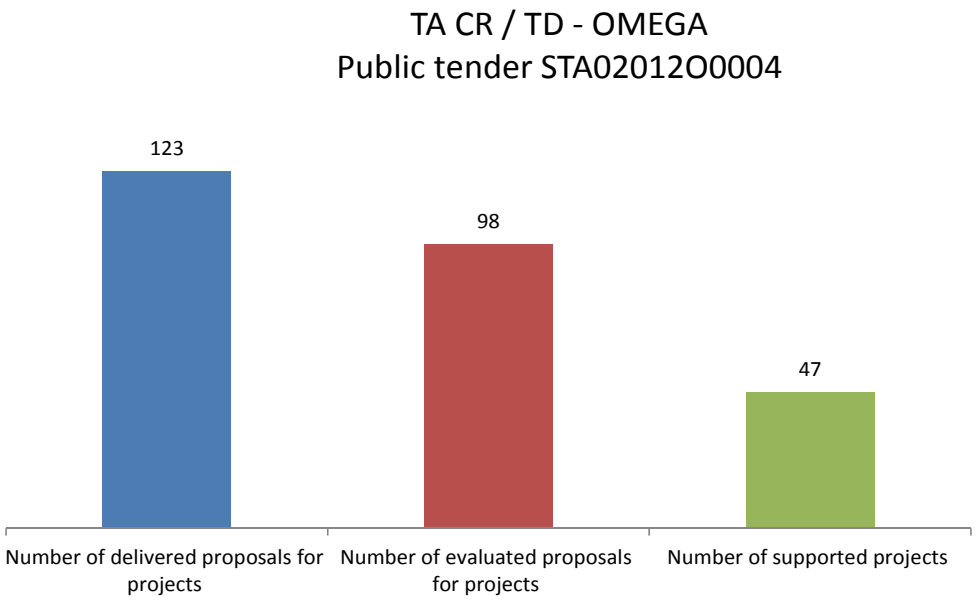
- The creation and introduction of new procedures for improving the effective usability of existing public policies on a central, regional and local level; the preparation and securing of new approaches for the introduction and use of new public policy in the Czech Republic in the context of the implementation of common EU policy.
- The creation and introduction of new procedures for promoting and realising Czech public interests.
- The preparation and introduction of new procedures for the purposeful development of the Czech Republic and its regions, for strengthening its position in the EU in the framework of the on-going European integration process.
- The preparation and introduction of new procedures and methods for the analysis and evaluation of socioeconomic problems and their impacts on sustainable development of society and the impacts of socioeconomic development of society on the environment.

- The creation and introduction of new procedures and the development of new methods and systems for evaluating the impacts of state intervention on economic and social development.
- The development of new procedures and systems for predicting economic development and improving the competitiveness of the Czech economy in the global framework, for monitoring and analysing the impacts of bank and financial market regulation in the Czech Republic.
- The preparation and introduction of new procedures and methods for limiting the negative impacts of the on-going social stratification processes in Czech society and for mitigating emerging social inequalities.
- The preparation and introduction of new procedures and methods for limiting the negative impacts of demographic developments in the Czech Republic.
- The creation and introduction of new procedures, methods and systems for human capital development and for improving the effectiveness of the current education system in the Czech Republic.

The estimated amount of support for the entire programme period (CZK thous.)

Period	2012	2013	2014	2015	2016	2017	Total
Support Amount	51 500	51 500	51 500	51 500	51 500	51 500	**309 000**

Graph 12: Graphic depiction of the last evaluated public tender
(The amount of specific support awarded in the public tender: CZK 83 666 thousand)



Source: Research, Experimental Development and Innovation Information System

Project duration

It is expected that the OMEGA project will run from 2012 to 2017, i.e. for 6 years. The minimum length of project implementation in this programme is set for 12 months, and the maximum length of implementation at 24 months. The first public tender for the Omega Programme took place in 2012; additional public tenders are planned for 2013 and 2015.

Support, its type and size

Support will be provided in the form of a grant to legal entities or in the form of increasing expenditures for government organisational units or organisational units of ministries involved in R&D.

The level of support, set as a percentage of approved project costs, will be calculated independently for each programme project and for each recipient and additional participant according to the Framework and Commission Regulation. The maximum level of support for one project on average for all recipients together equals 80 % of total approved costs. This level is also valid for projects implemented solely by research organisations. The minimum share of resources amounting to 20 %, which the recipient and other project participants must jointly expend to complete financing for the project, should motivate the support recipient to use public support more efficiently in project implementation. Project recipients, except for research organisations, must pay the stated 20 % funds necessary for co-financing from private sources. Research organisations may also cover funds for co-financing from public resources of an institutional nature.

The maximum amount of financial support spent on one project is limited to CZK 3 million. The maximum level of support for applied research and experimental development and individual categories of recipients are given in the following tables:

Table of the maximum level of support which individual categories of enterprises can achieve in applied research

Level of Support	Small Enterprise	Medium Enterprise	Large Enteprise	Research Organisation
Reflection of SME Fees	70 %	60 %	50 %	100 %
Cooperation with research organisation	80 %	75 %	65 %	100 %

While respecting the maximum support limit of 80 % for a project.

Table of the maximum level of support which individual categories of enterprises can achieve in experimental development

Level of Support	Small Enterprise	Medium Enterprise	Large Enteprise	Research Organisation
Reflection of SME Fees	45 %	35 %	25 %	100 %
Cooperation with research organisation	60 %	50 %	40 %	100 %

While respecting the maximum support limit of 80 % for a project.

Recipients of support

According to the law and Framework recipients of support for a project can be:

- **Businesses** - legal persons, which according to Annex 1 of the Commission Regulation perform a business activity and implement a project individually or in cooperation with other participants and which prove their ability to co-finance the project from non-public resources.
- **Research organisations** - legal persons which according to the Framework and the Act meet the definition of research organisation and which implement a project individually or in cooperation with other participants and which prove their ability to co-finance the project from public and non-public resources of an institutional nature.

4.2.4 Competence Centres Programme 2012-2019 (TE)

According to information from CRP 21 projects have been supported to date, with the total amount of state support equalling CZK 4.030 billion.

At the beginning of 2013 the Competence Centres Programme was modified. The proposal for changes in the Competence Centres Programme was approved by Government Resolution No. 146 of 27 February 2013.

The main objective of the programme is to improve the competitiveness of the Czech Republic in progressive fields with a high potential for the use of R&D results in innovation. In connection with the main programme objective, which is increasing competitiveness of the Czech Republic, the programme stimulates the creation and activities of the kinds of centres of research, development and innovation which will be innovative, competitive, sustainable in the long-term, which will have market potential and in which research and application capacities from the public and private sector will be concentrated.

Changes in the Competence Centres Programme reflect the knowledge acquired in the first public tender and newly incorporate the National priorities of oriented research, experimental development and innovation, approved by Government Resolution No. 552 of 19 July 2012.

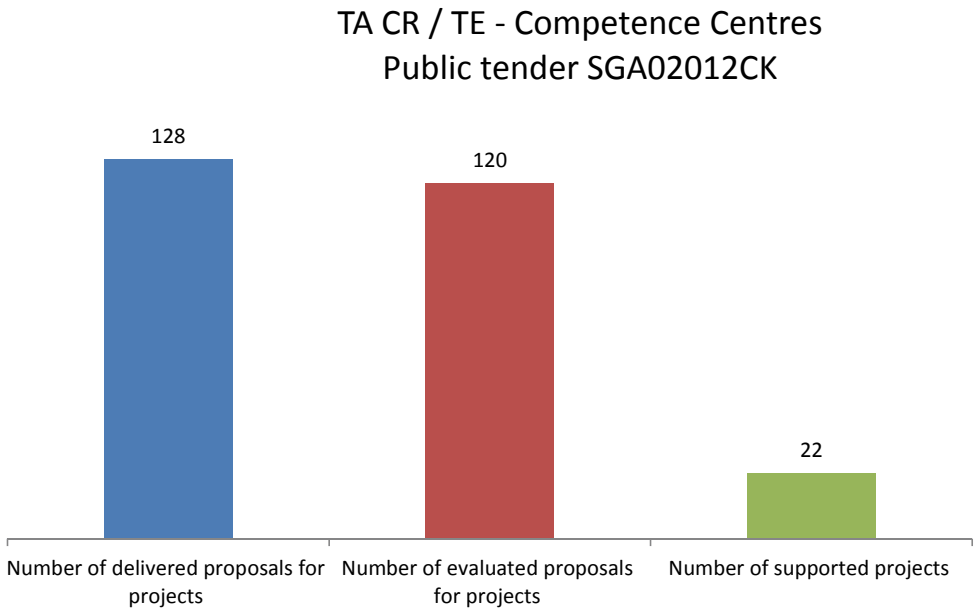
The partial programme objectives include:

- Strengthening long-term cooperation between research organisations and enterprises in R&D
- The creation of a research and business sphere through strategic partnerships, created to achieve progress in R&D and for implementation of its results
- Strengthening R&D interdisciplinarity
- Creating conditions for human resources development in R&D&I, in particular with an emphasis on the involvement of starting research workers to the age of 35, including students participating in the project
- The creation of conditions for horizontal mobility of research workers
- Fulfilling the National Priorities of Oriented Research, Experimental Development and Innovation, which are in harmony with the main objective of the Competence Centres Programme and its direction
- The sustainability of the strategic research agenda in centres for at least five years after project completion.

The estimated amount of support for the entire programme period (CZK thous.)

Period	2012	2013	2014	2015	2016	2017	2018	2019	Total
Support Amount	447 000	498 000	812 000	740 000	950 000	950 000	950 000	950 000	**6 297 000**

Graph 13: Graphic depiction of the last evaluated public competition
(The amount of specific support awarded in the public competition: CZK 4 270 197 thous.)



Source: Research, Experimental Development and Innovation Information System

Project duration

Project duration is defined as at least 4 years and must end by 2019 at the latest. The programme has a duration of 8 years (2012-2019). In 2011 a two-tier public tender was announced. After its evaluation, a change was made in the programme and the next public tender, which will also be the last, will be announced as one-tier.

Support, its type and size

The level of support, set as a percentage of approved project costs, will be calculated independently for each programme project and for each recipient and additional participant according to the Framework and Commission Regulation. Regardless of recipient type, the maximum level of support for one project is set at 70 % of total approved costs. The minimum share of non-public resources which the recipient and other project participants must jointly expend on project implementation is 30 %.

Table of the maximum level of support which individual categories of enterprises can achieve in applied research

Level of Support	Small Enterprise	Medium Enterprise	Large Enteprise	Research Organisation
Reflection of SME Fees	70 %	60 %	50 %	100 %
Cooperation with research organisation	80 %	75 %	65 %	100 %

While respecting the maximum support limit of 70 % for a project.

Table of the maximum level of support which individual categories of enterprises can achieve in experimental development

Level of Support	Small Enterprise	Medium Enterprise	Large Enteprise	Research Organisation
Reflection of SME Fees	45 %	35 %	25 %	100 %
Cooperation with research organisation	60 %	50 %	40 %	100 %

While respecting the maximum support limit of 70 % for a project.

Recipients of support

Support will be given primarily to those centres which will fulfil the National priorities for oriented research, experimental development and innovation. According to the Act, Commission Regulation and Framework recipients of support for a project can be:

- Businesses - legal and natural persons which carry out business activity according to Annex 1 of the Commission Regulation.
- Research organisations - legal persons which meet the definition of a research organisation according to the Act and which implement a project in cooperation other participants, at least three of which must be independent businesses.

- A business or research organisation established jointly by at least three independent businesses according to the Commission Regulation and at least one research organisation with the objective of achieving common objectives in R&D&I.

Recipients can only be businesses which implement a project in cooperation with other participants, of which at least two must be independent businesses and one a research organisation. Pursuant to § 2 Paragraph 2, Letter j) of the Act, another project participant can be a research organisation or business whose activity is limited in the project proposal and with whom the recipient concluded a contract on its participation in project implementation.

A recipient of support must always be an organisation with legal subjectivity, which undertakes by signing the grant agreement (for centre = programme project) to fulfil all the obligations concerning the support centre (as well as obligations after project support has ended). Other participants' obligations are treated in the Cooperation Agreement between the recipient and other participants.

4.2.5 Public Tenders

Code	Date of announcement	Date of deadline	Announcement of results
TB	Calls for submission of bids are announced during the course of 2013 in the form of public contracts		
TD	17. 1. 2013	6. 3. 2013	14. 6. 2013
TE	28. 3. 2013	20. 5. 2013	22. 11. 2013

4.2.6 Contacts and Additional Information

Technology Agency of the Czech Republic
Hadovka Office Park
Evropská 2589/33b, 160 00 Prague 6
Telephone: +420 234 611 111
e-mail: info@tacr.cz

Useful links:
http://www.tacr.cz/
http://www.tacr.cz/programy-ta-cr/program-alfa/
http://www.tacr.cz/programy-ta-cr/program-beta/
http://www.tacr.cz/programy-ta-cr/program-omega
http://www.tacr.cz/programy-ta-cr/centra-kompetence/

4.3 The Ministry of Culture (MC)

According to information from CRP 716 projects have been supported to date, with the total amount of state support equalling CZK 2.434 billion. The following programme is underway in 2013:

4.3.1 Applied Research and Development for National and Cultural Identity Programme - NAKI 2011-2017 (DF)

According to information from CRP 106 projects have been supported to date by the Ministry of Culture within the framework of the NAKI Programme, with the total amount of state support equalling CZK 1.740 billion.

The main objective of the proposed Programme is to contribute to the bringing about of specific economic or other social benefits through the realisation of publicly-funded research and development projects in the area of national and cultural identity. The main objective of the Programme is fulfilled through result-oriented partial objects in connection with the main thematic priorities, thematic sub-priorities and defined applied research and development in national and cultural identity. The programme is divided into individual partial objectives according to thematic priorities:

- Cultural heritage and national identity
- History and a multicultural society
- Technologies, procedures and materials
- An environment for the development of art and cultural heritage preservation

The estimated amount of support for the entire programme period (CZK thous.)

Period	2012	2013	2014	2015	2016	2017	Total
Support Amount	327 505	425 000	425 000	425 000	77 665	97 495	**1 908 748**

4.3.2 Public Tenders

The third and final public tender was announced 2 May 2012, with the start of support provision in 2013. At the present time the Ministry of Culture is working on a connected programme.

4.3.3 Contacts and Additional Information

Ministry of Culture
Maltézské náměstí 1, 118 11 Prague 1
Research and Development Department
Office in Prague 7 - Dukelských hrdinů 47
tel.: +420 224 301 430
e-mail: martina.dvorakova@mkcr.cz

Useful links:
http://www.mkcr.cz
http://www.mkcr.cz/vyzkum-a-vyvoj/default.htm

4.4 Research Programmes at the Ministry of Defence (MD)

According to information from CRP 709 projects have been supported by the Ministry of Defence to date, with the total amount of state support equalling CZK 4.447 billion. In 2013 the Ministry of Defence is announcing a call in the following programme:

4.4.1 The Defence Applied Research, Experimental Development and Innovation Programme 2011-2017 (OF)

According to information from CRP 27 projects have been supported to date by the Ministry of Defence within the framework of the OF Programme, with the total amount of state support equalling CZK 0.439 billion.

The objective of the Programme is the systematic development in the area of defence R&D&I and the acquisition of new knowledge, its use in practice and attainment of a level of knowledge which will enable the acquisition, mastery, maintenance and development of specific abilities necessary to secure the defence capabilities and specific aspects of state security and acquire operational abilities which the armed forces of the Czech Republic need to achieve to fulfil the tasks called for by national and international standards, obligations and the political-military ambitions of the Czech Republic to 2020.

A number of the objectives, obligations and requirements for the operational capabilities of the Armed Forces of the Czech Republic follow directly or indirectly from the results of RTO/NATO activities (Research and Technology Organization NATO). RTO/NATO's main task is to implement and support research and information exchange among Member States of the Alliance to support R&D&I and for the effective use of national resources invested in these areas with the objective of securing the military needs of the Alliance, maintaining technological predominance in the military and providing the main NATO functionaries with information needed for making decisions.

The estimated amount of support for the entire programme period (CZK thous.)

Period	2011	2012	2013	2014	2015	2016	2017	Total
Support Amount	69 467	197 928	315 000	323 000	333 000	270 000	110 000	**1 618 395**

Project duration

The Programme was announced in 2010 for a 7-year period, i.e. for 2011-2017. Programme projects, whose minimum length of implementation is 2 years and maximum 4 years, are to

be completed by 31 December 2017 at the latest. The Programme will be implemented through individual public contracts in R&D&I, which will be announced repeatedly for individual projects from 2010 to 2016, depending on the current needs of the Ministry of Defence.

Support, its type and size

Specific support for projects will be provided in the framework of the Programme from government budget expenditures on R&D&I of the MD chapter. The sole user of results from R&D&I realised in the Programme will be the state represented by the applicable government administration body which requests that its R&D&I needs be met. The share of specific support for approved costs will equal 100%.

Recipients of support

Any party which meets the conditions set by Act No. 130/2002 Coll. can be an applicant for specific support in the framework of the Programme. Specific support in the Programme can be provided to legal or natural persons, organisational units or organisational units of ministries involved in R&D&I.

4.4.2 Public Tenders

Code	Date of announcement	Date of deadline	Announcement of results
OF	Calls for submission of bids are announced during the course of 2013 in the form of public contracts		

4.4.3 Contacts and Additional Information

Ministry of Defence of the Czech Republic
Department of Management of the Programme, Research and Development
Náměstí Svobody 471, 160 00 Prague 6
Ing. Milan Bajtoš
tel.: +420 973 214 681
e-mail: bajtosm@army.cz

Useful links:
www.vyzkum.army.cz
www.army.cz

4.5 Research Programmes of the Ministry of Industry and Trade (MIT)

According to information from CRP 3 161 projects have been supported by the Ministry of Industry and Trade to date, with the total amount of state support equalling CZK 39.348 billion.

For 2013 MIT is not expected to announce any public tenders for the support of R&D&I projects in the framework of specific support. At the present time the TIP Programme 2009-2017 is active at MIT, but according to available information no public tenders in the TIP Programme are planned for the near future.

4.5.1 "TIP" Programme 2009 - 2017 (FR)

According to information from CRP 870 projects have been supported, with the total amount of state support equalling CZK 12.427 billion. No more calls will be announced. According to the growth stimulation measure of the government, approved by Government Resolution No. 936 of 20 December 2012, in the next several years "the programme for the support of applied research and development for the needs of industry should be implemented with the objective of improving competitiveness of the Czech Republic, and a replacement for the TIP Programme, and possibly the ALPHA Programme, should be prepared with new rules".

4.5.2 Contacts and Additional Information

Ministry of Industry and Trade of the Czech Republic (MIT)
Na Františku 32, 110 15 Prague 1
Department of Research, Development and Offset Programmes
tel.: +420 224 852 556
e-mail: faltus@mpo.cz

Useful links:
http://www.mpo.cz
http://www.mpo.cz/cz/podpora-podnikani/vyzkum-a-vyvoj/

4.6 Research Programmes of the Ministry of Education, Youth and Sports (MEYS)

According to information from CRP 7 218 projects have been supported by the Ministry of Education, Youth and Sports to date, with the total amount of state support equalling CZK 52.161 billion.

At the present time MEYS is managing three R&D&I support programmes. These are the National Sustainability Programme I, National Sustainability Programme II and the Information - the Foundation of Research Programme.

4.6.1 The National Sustainability Programme I (NSP I) 2013-2020 (LO)

The Programme will be used to support the development and sustainability of projects for new European centres of excellence, regional and other types of research centres built in the Czech Republic from 2007-2013/2015 with financial contributions from the European Fund for Regional Development (hereinafter just the "Centres") with building costs of less than € 50 million after their financing from structural fund resources comes to an end. This involves research capacities (Centres) support from the R&D&I OP - Priority Axis 1 (Centres for Excellence) and Priority Axis 2 (Regional research centres in regions outside of the Capital City Prague) and the EI OP.

The actual building of the infrastructure from European structural funds does not constitute the basis of a claim for the allocation of support from the government budget within the programme. Support is designated only for those Centres which have a high quality existing concept for research and development and management, quality strategy and concept for their future development in the next 5 years, and proven ability to produce quality R&D&I results.

Support will be designated to cover part of Centre operating costs, to cover part of the costs for reinvestment in Centres and to cover part of the wage costs of employees and students of applicants and if applicable any other project participants (recipients of support in Centre projects), who participate in project implementation.

Implemented projects will be focused on project support for both basic and applied research, and partially experimental development as well.

The estimated amount of support for the entire programme period (CZK thous.)

Period	2013	2014	2015	2016	2017	2018	2019	2020	Total
Support from the governm. budget	133 270	958 431	1 644 766	1 400 000	1 520 000	1 500 000	1 200 000	500 000	**8 856 467**
Total support amount	266 540	1 916 862	3 289 532	2 800 000	3 040 000	3 000 000	2 400 000	1 000 000	**17 712 934**

Project duration

It is expected that the Programme will run from 2013 to 2020, i.e. for 8 years. The duration of one project in the NSP I is 5 years at the most, under the condition that all projects must be completed by 31 December 2020 at the latest.

A public tender was first announced at the end of 2012 and provision of support was started in 2013. Another public tender should be announced in 2013 and 2015, with commencement of support in 2014 and 2016.

Support, its type and size

- The maximum support amount for one project focused on basic research is limited to € 20 million.
- The maximum support amount for one project focused on applied research is limited to € 10 million.
- The maximum support amount for one project focused on experimental development is limited to € 7.5 million.

Besides the limits stated above, allocation of support for the programme is further restricted by a limit of 50% of total approved project costs. The provider decides on the total support level and its amount based on the results of the project proposal evaluation.

Recipients of support

Only a research organisation which is a Centre and implements a project on its own or in cooperation with other project participants can be a recipient of support.

4.6.2 The National Sustainability Programme II (NSP II) 2013-2020 (LQ)

NSP II is meant to ensure the sustainability of projects of centres of research, experimental development and innovation which are significantly dedicated to large infrastructure for research, experimental development and innovation (hereinafter just "large infrastructure"), built in the Czech Republic from 2007-2013/2015 from operational programmes of European Structural Funds with building costs in excess of € 50 million (hereinafter just the "Centres") after their financing from structural fund resources comes to an end. This involves research capacities (Centres) support from the R&D&I OP - Priority Axis 1 (Centres for Excellence) and

Priority Axis 2 (Regional research centres in regions outside of the Capital City Prague) and the EI OP.

The building itself of the infrastructure from European structural funds does not constitute the basis of a claim for the allocation of support from the government budget within the programme. The programme will be used to support projects which secure the sustainability of built Centres so that at the end of project implementation (after five years) the Centre will be able to compete with similar centres abroad and will unconditionally meet the requirements placed on large infrastructure projects, so that it will be able to be supported further as large infrastructure. Support will be designated to cover part of Centre operating costs, to cover part of the costs for reinvestment in Centres and to cover part of the wage costs of employees and students of applicants and if applicable any other project participants (recipients of support in Centre projects), who participate in project implementation.

The estimated amount of support for the entire programme period (CZK thous.)

Period	2016	2017	2018	2019	2020	Total
Support from the government budget	1 100 000	980 000	1 000 000	1 300 000	2 000 000	**6 380 000**
Total support amount	2 200 000	1 960 000	2 000 000	2 600 000	4 000 000	**12 760 000**

Project duration

The duration of the Programme is set at 5 years, from 2016 to 2020. Support is provided for the implementation of one project with duration of 5 years. The Programme will be announced first in 2014, and provision of support will be commenced in 2016.

Support, its type and size

It is anticipated that the maximum amount of support of the programme will be 50 % of total approved project costs.

The level of support, set as a percentage of approved project costs, will be calculated separately for each project according to the Framework. The recipient and other project participants must jointly expend the mandatory share of private resources on project implementation, ranging approximately from 30 to 60 % (according to the amount of approved support).

Recipients of support

Each project will have only one single support recipient. Only a research organisation which is a Centre and implements a project on its own or in cooperation with other project participants can be a support recipient pursuant to the Act and Framework. Additional project participants may include an additional research organisation as well as a business involved in research.

4.6.3 Information - the Foundation of Research 2013-2017 (LR)

According to information from CRP no projects have been supported yet in this programme.

The programme supports making accessible basic electronic information sources necessary for research (EIS) by research organisations in the Czech Republic through fast-evolving research information infrastructures. This infrastructure is necessary for primary research non-business activities of research organisations. The Programme is focused on forms of purposeful use of specially priced nationwide or national multi-licenses and mass branch licences.

The objectives of the programme cover the comprehensive needs of basic provision of information for Czech science. For that reason research information infrastructures are supported by the Programme and it does not have a primarily research nature. Individual projects, however, may partially support actual research or the development of user-friendly tools and services for the accessibility of EIS supported by the Programme, including their implementation carried out by the applicant/recipient of support itself as part of the supported project. Projects can be implemented by a support recipient only in the framework of its non-business activities. If a research, experimental development or innovation result is created as part of the project, it must be published within 1 calendar year from project completion at the latest and made available for use to all interested parties under the same, non-discriminatory conditions.

The estimated amount of support for the entire programme period (CZK thous.)

Period	2013	2014	2015	2016	2017	Total
Support Amount	123 266	141 756	284 610	327 301	376 397	**1 253 330**

Project duration

The Programme is proposed for 2013-2017 for projects with an implementation period of 60 months at most. The Programme will be repeatedly announced through a public tender in research, experimental development and innovation (hereinafter the "public tender") as a rule in one-year intervals. Implementation of projects which are successful in the public tender must be started as of 1 January 2013 at the earliest. Each project must achieve the set objectives and its activities must be completed by 30 September 2017. Drawing of support must be completed by 30 November 2017 at the latest.

Support, its type and size

The level of support is set as a percentage of approved project costs and will be calculated separately for each recipient and project. Its maximum level shall not exceed 75 % of total approved project costs. This maximum allowed amount shall not be exceeded for the entire

period of implementation, and not even by any other of the participants or users of project results.

The maximum amount of support for one project is limited in sum for the entire period of implementation in the Programme to CZK 580 million (at the time of approving the Programme this amount corresponds to the limit of € 20 million), if the provider does not reduce the limit while announcing the public tender, in particular with consideration for the amount of Programme resources available at the time.

Recipients of support

Any applicant which is a legal person with its registered office in the Czech Republic and is at the same time a university as defined in Act No. 111/1998 Coll., a public research institution, a research organisation meeting the Framework definition, a specialised library whose main activity is providing library services on a national level in compliance with a special legal regulation, with independent legal subjectivity, registration with the Ministry of Culture of the Czech Republic, established by a central government administrative authority and arranging for the price advantaged licence access to EIS to research organisations on a nationwide level can be a recipient of Programme support.

The recipient of support must further meet all the conditions for the provision of support for R&D according to the Act and at the same time all the conditions of the Programme announced in the public tender.

4.6.4 Public tenders

Code	Date of announcement	Date of deadline	Announcement of results
LO	The first public tender took place 12.12.2012 to 5.2.2013. It is presumed that another public tender will be announced one year later.		
LQ	It is presumed that a public tender will be announced during the course of 2014.		
LR	It is presumed that a public tender will be announced at the end of 2013 or beginning of 2014.		

4.6.5 Contacts and Additional Information

Ministry of Education, Youth and Sports
Karmelitská 7, 118 12 Prague 1
posta@msmt.cz

Useful links:

www.msmt.cz
www.msmt-vyzkum.cz

4.7 Research Programmes at the Ministry of the Interior (MI)

According to information from CRP 244 projects have been supported by the Ministry of the Interior to date, with the total amount of state support equalling CZK 2.200 billion.

The following programmes are underway at the Ministry of the Interior in 2013:

- Security Research for the Needs of the State
- Programme of Security Research of the Czech Republic

4.7.1 Security Research for the Needs of the State 2010 to 2015 (VF)

According to information from CRP 28 projects have been supported in this programme, with the total amount of state support equalling CZK 0.399 billion.

The objective of the programme is to achieve a level of knowledge, technical ability and technology which will enable government administration bodies, fulfilling tasks in the scope of authority entrusted to them in the area of internal security and protection of the Czech Republic's population, to draft legislative and organisational measures, new methods and tools to increase the security of the state and its population, to develop a modern system of technical resources to improve the efficiency and effectiveness of crisis management processes and to improve the safety of critical infrastructures.

The programme is designed to meet the specific research needs of individual ministries and other central government administration bodies participating in the performance of tasks in the system for the internal security and protection of the population of the Czech Republic. The sole user of results from research realised in the framework of the VF Programme will be the state, i.e. the applicable government administration body which requests that its research needs be met. The VF Programme is secured in the form of public tenders.

The estimated amount of support for the entire programme period (CZK thous.)

Period	2010	2011	2012	2013	2014	2015	Total
Support Amount	130 000	170 000	150 000	150 000	100 000	100 000	**800 000**

Project duration

The duration of the programme is 6 years, from 2010 to 2015. The optimum period of project implementation is set for 3 years (minimum of 2 years and maximum of 5 years). All projects will be completed at the latest as of 31 December 2015. The first tender proceeding

took place in the second half of 2009 and the next tender proceedings took place in 2010 and 2011. The last one to date took place in 2012.

Support, its type and size
For individual projects 100 % of approved costs will be paid.

Recipients of support
It is anticipated that applicants for specific support will include research organisations and businesses with proven practical experience and results in research and development and with a sufficient amount of research capacity.

4.7.2 Programme of Security Research of the Czech Republic 2010-2015 (VG)

According to information from CRP 102 projects have been supported in this programme, with the total amount of state support equalling CZK 1.523 billion.

The programme was designed with the objective of increasing the security of the state and its population through the use of applied research, experimental development and innovation in the area of identification, prevention and protection, both against unlawful attacks on the population, organisations, systems, property and the infrastructure of the Czech Republic as well as against natural and industrial catastrophes. The programme will result in new methods, tools and technologies.

The main objective of the Programme is to increase the security of the state and its citizens using new technologies, knowledge and other results of applied research in the area of identification, prevention and protection against unlawful actions harmful to citizens of the Czech Republic, organisations or structures, property, infrastructures and against natural or industrial catastrophes.

The main objective of the Programme is to be fulfilled through result-oriented partial objectives.

The realisation of at least three calls in 2010, 2011 and 2012 was anticipated.

4.7.3 Public Tenders

In the Programme of Security Research for the Needs of the State there will be announcement of calls to submit bids in the form of public tenders from 2010 to 2015.

The third and final public tender for the Programme of Security Research of the Czech Republic was announced 30 May 2012, with the start of support provision in 2013. At the present time the Ministry of the Interior is working on a connected programme.

4.7.4 Contacts and Additional Information

Ministry of the Interior
Department of Education and Police Academy Administration
Division of Research and Development
Nad Štolou 3, 170 00 Prague 7
tel.: +420 974 833 268, +420 974 832 240
e-mail: vyzkum@mvcr.cz

Useful links:
http://www.mvcr.cz
http://www.mvcr.cz/clanek/bezpecnostni-vyzkum-pro-potreby-statu-v-letech-2010-az-2015.aspx
http://www.mvcr.cz/bezpecnostni-vyzkum.aspx

4.8 Research Programmes at the Ministry of Health (MH)

According to information from CRP 4,812 projects have been supported by the Ministry of Health to date, with the total amount of state support equalling CZK 11.503 billion.

In 2013 the Ministry of Health has one programme which is winding down. At the same time it is working on a connected programme.

4.8.1 Ministry of Health's Departmental Research and Development Programme III 2010-2015 (NT)

According to information from CRP 372 projects have been supported in this programme, with the total amount of state support equalling CZK 2.421 billion.

Within the framework of the NT programme projects of applied healthcare research, development and innovation will be supported, i.e. projects implemented for the purpose of acquiring new knowledge aimed at a specific, previously set practical objective whose results have an anticipated application in healthcare.

The basic objectives of the NT programme are: Increasing the specific healthcare benefit in individual areas of applied research; Supporting molecular-biological approaches in the corresponding areas of medical research and development; Supporting research in the area of prevention of new infectious diseases and mass diseases; Improving therapeutic results using the most demanding modern approaches; Ensuring continuity of our medical research with global science development; Securing the additional development of current top-level research medical facilities.

The estimated amount of support for the entire programme period (CZK thous.)

Period	2010	2011	2012	2013	2014	Total
Support amount	73 376	329 357	746 101	1 150 000	1 100 000	4 448 834

4.8.2 Public Tenders

No more calls will be announced n the Ministry of Health's Departmental Research and Development Programme III. The Ministry of Health is currently working on a new programme. No more information is available at the present time.

4.8.3 Contacts and Additional Information

Internal Grant Agency MH (IGA MH)

The Internal Grant Agency of the Ministry of Health is an advisory body for the MH in the meaning of the provisions of § 21 of Act No. 130/2002 Coll. It proposes to the Minister of Health the provision of specific support for the implementation of medical research and development programme projects.

Internal Grant Agency of the Ministry of Health

Palackého nám. 4, post office box 81, 128 01 Prague 2
Ing. Šárka Nováková, Department Head, IGA
e-mail: sarka.novakova@mzcr.cz
J. Hanáková, secretariat,
tel: +420 224 972 319, +420 224 972 637

Useful links:

www.mzcr.cz
www.iga.mzcr.cz

4.9 Research Programmes at the Ministry of Agriculture (MA)

According to information from CRP 1 581 projects have been supported by the Ministry of Agriculture to date, with the total amount of state support equalling CZK 7.704 billion.

At the present time two programmes are running at the Ministry of Agriculture:

- Research in the agrarian sector 2009-2014 (QI) - the programme will run until 2014, in that year it will no longer be possible to apply for this programme.
- Comprehensive sustainable systems in agriculture 2012-2018 "CSS" (QJ)

4.9.1 Comprehensive Sustainable Systems in Agriculture 2012-2018 "CSS" (QJ)

According to information from CRP 98 projects have been supported in this programme, with the total amount of state support equalling CZK 1.095 billion.

The programme objective is to contribute to the food safety of the Czech Republic by increasing the production potential of agricultural crops and livestock. This objective will be achieved by the following resources: By securing sufficient production of high quality and safe foods of domestic origin for healthful nutrition of the population; by introducing new methods, technological procedures and systems to increase the competitiveness of Czech agriculture in the conditions of the EU and by supporting the sustainable development of the agricultural sector, countryside and regions of the Czech Republic; to contribute through new knowledge and its implementation to the sustainable use of natural resources while placing a minimal burden on the environment and introducing farming systems leading to a limitation of the negative impacts of climate change on the functions of ecosystems in agriculture and forest and water management; to increase the potential extra-productive functions of agriculture and forest and water management.

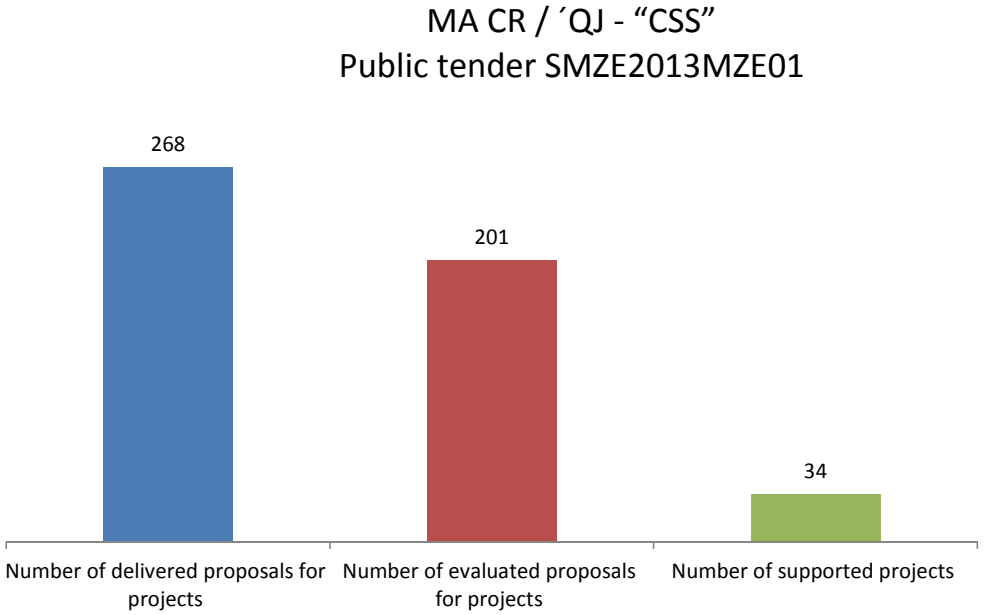
The main objective of the programme will be fulfilled by the realisation of research activities comprising individual projects in the framework of three sub-programmes. The individual sub-programmes are:

- Sustainable agricultural systems
- Sustainable development of forest and water management and other areas of agriculture
- Support of agrarian sector policy

The estimated amount of support for the entire programme period (CZK thous.)

Period	2012	2013	2014	2015	2016	2017	2018	Total
Support Amount	149 000	204 000	224 000	424 000	464 000	420 000	340 000	**2 225 000**

Graph 14: Graphic depiction of the last evaluated public competition
(The amount of specific support awarded in the public competition: CZK 354 604 thousand)



Source: Research, Experimental Development and Innovation Information System

Project duration

The project will run for 7 years, from 2012 to 2018. The duration of individual projects will be a maximum of 60 months. Projects implemented as part of the programme must be completed by 31 December 2018 at the latest.

The first tenders were announced in 2011 and 2012. The announcement of further public tenders is expected in 2014 and 2015. In the programme the first public tender was announced as two-tier; since 2012 public tenders have been announced as one-tier.

Support, its type and size

The maximum support amount in the programme is designated as 85.4 % of total approved project costs. The basic level of support shall not exceed 50 % of eligible costs for applied research and 25 % of eligible costs for experimental development. This basic level of support can be increased by bonuses pursuant to the Commission Regulation. The maximum amount of bonuses for individual recipients will be included in the tender documentation

announcing the public tender. (e.g. for Sub-programme III projects, where cooperation between a research organisation and a business does not take place, the level of support can be up to 100 % for a research organisation).

Recipients of support

- **Research organisations** - legal persons which meet the conditions of the definition of research organisation according to the Framework and implement a project independently or in cooperation with other project participants;
- **Businesses** - legal and natural persons which according the Commission Regulation perform a business activity and implement a project in cooperation with other participants and which prove their ability to co-finance the project from non-public resources.

Strengthening cooperation of public research with users of R&D&I results is one of the main programme objectives. The programme creates conditions for involving users of R&D&I results in the implementation of individual projects. For sub-programmes I and II research organisation and business participation - user of the result - is mandatory. The business can act in the project as the recipient or another project participant. Sub-programme III is intended only for research organisations.

4.9.2 Public Tenders

Code	Date of announcement	Date of deadline	Announcement of results
QJ	It is presumed that more public tenders will be announced in 2014 and 2015.		

4.9.3 Contacts and Additional Information

The National Agency for Agricultural Research (NAAR) was established by the Ministry of Agriculture of the Czech Republic. NAAR arranges for public tenders for R&D projects according to the conditions and criteria set by the MA in cooperation with the programme committees, which are appointed by the Deputy Minister of Agriculture. Every year NAAR organisationally arranges the evaluation of periodical and final reports of implemented projects.

National Agency for Agricultural Research
Těšnov 17, 117 05 Prague 1
Telephone: 221 811 111
e-mail: info@mze.cz, posta@mze.cz

Useful links:
www.eagri.cz
www.nazv.cz

4.10 Summary of Calls in Current Support Programmes

Budget Chapter	Code	Activity Name	Start	End	Call in 2013	Other Calls
MPO	**FR**	TIP	2009	2017	N	N
MA	**QI**	Research in the Agrarian Sector (RAS)	2009	2014	N	N
MC	**DF**	Programme of Applied Research and Development for National and Cultural Identity	2011	2017	N	N
MI	**VG**	Programe of Security Research of the Czech Republic 2010 - 2015	2010	2015	N	N
MH	**NT**	Departmental Research and Development Programme III for 2010-2015	2010	2015	N	N
TA CR	**TA**	ALPHA	2011	2017	N	N
MI	**VF**	Security Research for the Needs of the State for 2010 to 2015	2010	2015	A	N
TA CR	**TE**	Competence Centres	2012	2018	A	N
GA CR	**GA**	Standard Projects	1993	-	A	A
GA CR	**GC**	International Projects	2007	-	A	A
GA CR	**GP**	Post-doctoral Grants	1998	-	A	A
MD	**OF**	Defence Applied Research, Experimental Development and Innovation	2011	2017	A	A
TA CR	**TB**	BETA	2011	2016	A	A
TA CR	**TD**	OMEGA	2011	2017	A	A
GA CR	**GB**	Projects for the Support of Excellence in Basic Research	2012	2018	A	A
MEYS	**LR**	Information - the Foundation of Research	2013	2019	A	A
MEYS	**LO**	National Sustainability Programme I	2013	2020	A	A
MEYS	**LQ**	National Sustainability Programme II	2016	2020	N	A
MH	**XE**	Departmental Research and Development Programme IV for 2015-2019	2015	2019	N	A
MA	**QJ**	Comprehensive Sustainable Systems in Agriculture "CSS“	2012	2018	N	A

5 RESEARCH AND DEVELOPMENT IN THE CZECH REPUBLIC IN THE CONTEXT OF THE EUROPEAN UNION

5.1 Support for Research and Development in the Czech Republic from EU Structural Funds 2007 - 2013

The Programme Period for 2007-2013 is coming to a close. For that reason support of new projects will practically come to an end this year. Given these facts, the following pages present only the most important information and elaborate only on those areas where it is possible still this year to acquire support. The calls announced this year should already have been implemented this year according to the original time periods. The managing authorities will now emphasize the successful completion of projects underway, their proper administration and the evaluation of entire programmes. Information on additional programme periods can be found in Chapter 5.2 of this publication.

In this chapter, the basic documents and terms concerning structural funds and their operational programmes are presented; further the programmes for the support of research and development (R&D) in the Research and Development for Innovation OP (R&D&I OP) and Education for Competitiveness OP (EC OP) of the provider MEYS and the Enterprise and Innovation OP (EI OP) of the provider MIT are briefly described.

The EU funds are a tool for the realisation of the economic and social Cohesion Policy of the European Union, which has the objective of reducing the differences between the development levels of regions and the EU Member States and the degree to which the most disadvantaged regions lag behind.

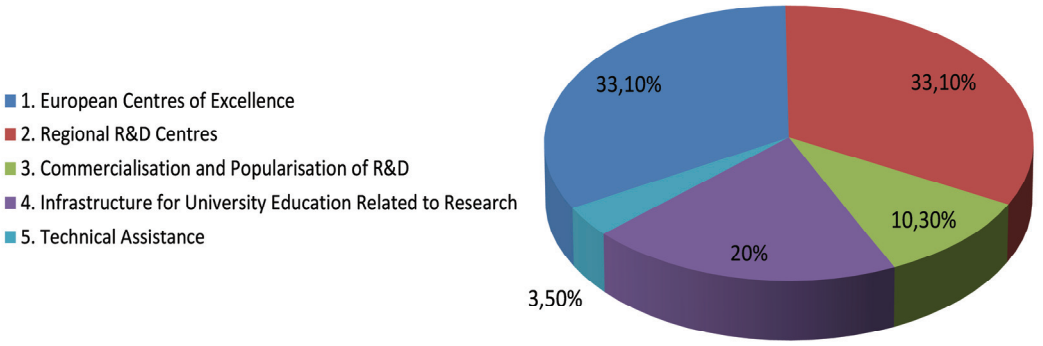
5.1.1 Research and Development for Innovation OP - MEYS (R&D&I OP)

The global objective of the R&D&I OP is strengthening the research, development and innovation potential of the Czech Republic, which will contribute to the growth, competitiveness and creation of highly qualified jobs in order to enable regions in the Czech Republic to become important sites of concentration of these activities in Europe.

The Research and Development for Innovation OP contains 5 Priority Axes dividing operational programmes into logical units. These are further specified through areas of support defining what types of projects can be supported in the framework of the respective

Priority Axis. The information presented here has been taken from officially published documents of the provider (MEYS).

Graph 15: Distribution of allocation to individual Priority Axes for the entire programme period



Source: Annual Report R&D&I OP 2011

Priority Axis 1 - European Centres of Excellence

The objective of Priority Axis 1 is to build a limited number of top-level worksites - Centres of Excellence - with an international reputation, which will spark the interest of foreign partners, strengthen international cooperation and accelerate production and transfer of knowledge of top-level research into practical work and the educational process. Centres of Excellence will also provide highly qualified training for students (primarily graduate study programmes) and young researchers. They will also thus connect research with educational innovation activities.

Project applications within Priority Axis 1 of the Research and Development for Innovation Operational Programme are no longer being received, and at the present time the Managing Authority of the R&D&I OP is not considering making further calls in this Priority Axis.

Priority Axis 2 - Regional R&D Centres

The objective of axis 2 is to create a network of R&D workplaces offering high quality equipment and fittings which are focused on applied research and to improve their cooperation with the application sphere (businesses, hospitals etc.). The centres will thus be a key partner for long-term cooperation in R&D for the application sphere (including innovative SMEs, clusters etc.), improve R&D's accessibility for companies and commercial partners, speed up the transfer and spread of new information towards the application sphere, shorten the innovation cycle in companies and thus contribute to improving the competitiveness of regions. Centres will involve students (at all levels of study) and young researchers in their activities.

Project applications within Priority Axis 2 of the Research and Development for Innovation Operational Programme are no longer being received, and at the present time the Managing Authority of the R&D&I OP is not considering making further calls in this Priority Axis.

Large projects (specific categories in Priority Axis 1 and Priority Axis 2)
Within the framework of the R&D&I OP large projects, i.e. projects whose overall costs are in excess of € 50 million, as defined in Council Regulation (EC) No. 1083/2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund, are also implemented.

In 2009 a total of 8 projects meeting the established criteria for a large project were submitted as of 16 November 2009 within the calls for area of support 1.1 European Centres of Excellence and for area of support 2.2 Regional R&D Centres. Specifically these were: ELI, BIOCEV, CEITEC, FNUSA-ICRC and IT4Innovations projects in Priority Axis 1 and the Sustainable Energy, CVEVL and CERIT projects in Priority Axis 2.

Due to the fact that these are unique projects in the Czech Republic, both in terms of scope and anticipated future significance, a brief description of the approved large projects follows. At the present time most of them are in the construction and infrastructure building phase.

- **ELI (Extreme Light Infrastructure)**
  Applicant: Institute of Physics of the Academy of Sciences CR
  Place of implementation: Dolní Břežany
  The project's total eligible costs: CZK 6 800 575 902 (€ 262 469 159)

  The ELI Project (Extreme Light Infrastructure) is part of the European plan to build the next generation of large research facilities which were identified and selected at the European Strategic Forum for Research Infrastructures (ESFRI). ELI will be an international research facility which will use innovative laser technologies to create light pulses with the highest intensity in the world. ELI will become a pioneering research centre in many areas of research using ultraintensive lasers. For the Czech Republic it provides a unique opportunity to host a major international research infrastructure. ELI's mission will be both basic academic research as well as applied research with a direct impact on society.

- **IT4Innovations Centre of Excellence**
  Applicant: VŠB - Technical University of Ostrava
  Place of implementation: Ostrava
  The project's total eligible costs: CZK 1 819 490 241 (€ 70 223 475)

  The objective of the IT4Innnovations Centre of Excellence (also called the IT4Innovations project) is to contribute to improving the competitiveness and living standard of the population of the Czech Republic through the significant development

of research and development potential in the area of information technologies, computational mathematics and the applied sciences connected with these.
The global objective of the project is to build in the Czech Republic a national centre of excellent research in the area of information technologies. As part of the project a research environment, including the corresponding infrastructure, will be built which focuses on the development of both computer methods as such - IT as a subject of research, as well as and primarily tools for their effective use - IT as a means for further research or application use.

- **CEITEC (Central European Institute of Technology)**
  Applicant: Masaryk University
  Place of implementation: Brno
  The project's total eligible costs: CZK 5 246 000 000 (€ 202 470 089)

  At the centre excellent research will be carried out and advanced graduate and post-doctoral instruction will be provided in nano- and micro-technologies, structural biology, genomics and proteomics leading to advanced materials and medicine. The state of the art technology installed there will enable the synergistic study of objects from living and non-living nature at all levels of complexity which are available at the present time, starting from individual atoms to molecules, molecular groupings and cells to whole organisms.

  As the second largest city in the Czech Republic Brno has an exceptional concentration and combination of scientific fields, ranging from technical disciplines to human and veterinary medicine and pharmacy. Such a setting is rare in Europe. The main Project leaders are Masaryk University (as the Applicant), the Brno Institute of Technology, the Faculty of Agronomy at Mendel University in Brno, the University of Veterinary and Pharmaceutical Sciences Brno, the Research Institute of Veterinary Medicine, the Institute of Scientific Instruments AS CR and the Institute of Physics of Materials AS CR (as Partners).

- **Sustainable Energy - SUSEN**
  Applicant: Centrum výzkumu Řež s.r.o. (Research Centre Rez)
  Place of implementation: Řež, Pilsen
  The project's total eligible costs: CZK 2 450 696 000 (€ 94 584 948)

  The main objective of the project is to build two regional centres (NUTS 2 Southwest and Central Bohemia) for research and development in long-term sustainable energy as the basic circumstances for strengthening the competitiveness of the Czech economy.

  Research infrastructure expansion and modernization will lead to the creation of a top-level facility focused on key energy segments as an important centre in the Central European Region with close ties to European research space.

The objectives include building a centre for theoretical and experimental review of approaches and materials, including their subsequent practical application in the interest of achieving a level of safety and environmental impact of energy equipment, primarily of those used for nuclear power generation, which will enable the gradual replacement of traditional approaches based on coal and oil use with the objective of improving efficiency, reducing production costs, reducing CO2 emissions and recycling as large a percentage of raw materials as possible.

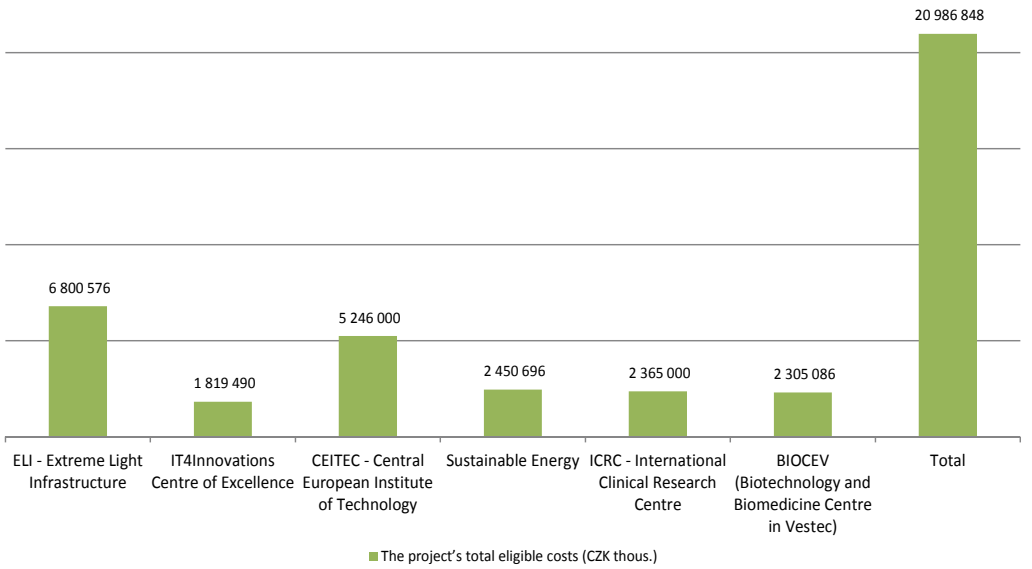
- **St. Anna Teaching Hospital in Brno - International Clinical Research Centre (FNUSA - ICRC)**
  Applicant: St. Anna Teaching Hospital in Brno
  Place of implementation: Brno
  The project's total eligible costs: CZK 2 365 000 000 (€ 91 277 499)

  The objective of the ICRC project is to build a first-rate international centre for applied medical research in the Czech Republic, which centre will be able to achieve up to 50% acceleration of the development of new breakthrough therapeutic and diagnostic strategies, new technologies, including bio and nanotechnologies and new drugs, while respecting all the strictest international standards for ethics and research safety, thanks to the unique logistics of international scientific cooperation, based on the concept of dynamic scientific teams (scientific teams composed for each research project working at flexible times at one location) and the original flexible scientific laboratory system. At the same time the scope and quality of the ICRC will enable the realisation of research projects whose implementation was not possible to date.

- **BIOCEV (Biotechnology and Biomedicine Centre in Vestec)**
  Applicant: Institute of Molecular Genetics of the AS CR, v. v. i.
  Place of implementation: Vestec
  The project's total eligible costs: CZK 2 305 086 161 (€ 88 965 116)

  The main objective of the project is to concentrate mutually synergistic teams of renowned experts, who to date have been dispersed in several partner facilities of the Academy of Sciences of the Czech Republic and Charles University, to supplement them with newly created research teams of talented young scientists and foreign experts and to create a biotechnology and biomedicine centre for research in Vestec (BIOCEV) with the ambition of becoming a European Centre of Excellence. The concentration of teams bringing unique basic research knowledge together with experts who build on new scientific findings through practical applications in a single state-of-the-art equipped infrastructure will comprehensively fill a sensitive gap in the professional environment for the development of the advanced biotechnology industry in the Czech Republic. An important factor for fulfilling this mission is connecting the BIOCEV Centre to the Euro-BioImaging and INFRAFRONTIER European consortium network within the ESFRI (European Strategic Forum for Research Infrastructures) and cooperation with renowned European partners.

Graph 16: Large projects in the R&D&I OP (CZK thous.)



Source: Annual Report R&D&I OP 2011

Priority Axis 3 - Commercialisation and popularisation of R&D

This Priority Axis is focused first on the creation of conditions for the successful commercialisation of R&D activity results in research organisations and for improving the system of intellectual property protection and support of the establishment of new technology-oriented companies. The priority's second objective is to improve the system providing information on R&D results, the accessibility of scientific information, to contribute to the promotion and popularisation of R&D, to improve the research organisation evaluation system using experience from abroad and to contribute to making public support for R&D more effective.

Priority Axis 3 will be fully financed from public funds, specifically 85% from ERDF resources and 15 % from Czech government budget resources. For the period from 2007-2013, 10.3 % of the Community contribution for the R&D&I OP (out of € 2 070 680 884), i.e. € 213.3 million, is allocated for this Priority Axis. Supported projects will acquire funds for their activities after the R&D&I OP has been completed through a combination of their own resources, contributions from their founders and revenue from cooperation with the commercial and application sphere.

Recipients of support in Priority Axis 3 will be entities which meet the definition of research organisation according to the Framework, state administration and local government bodies and other organisations involved in specialised activities specified for individual areas of support.

Commercialisation of research organisation results and intellectual property protection (Area of Support 3.1)

The main objective of area of support 3.1 is to support the commercialisation of R&D results in research institutions, in particular through support of systems of commercialisation and intellectual property protection and use, including establishing and developing Centres for Technology Transfer (CTT) in the framework of scientific institutions. Besides this intervention supports financing of the stage from scientific findings to the subsequent commercial use phase. Intervention has the objective of changing the approach of Czech research organisations to cooperation with the users of results and to improving the economic relevance of their activities.

Besides the above, intervention counts on targeted support of research workers and students in the phase aimed at the establishment of new technology companies (such as spin-offs) and services connected with their subsequent commercial evaluation. Increased orientation of research organisations to commercially useable research, a greater degree of evaluation of public expenditures on R&D and in the long-term new job creation can be expected as a result of these interventions.

The basic requirement for acknowledgement of support will be verifiable potential for commercialisation (such as commercially successful projects in the past and convincing application sphere interest in this cooperation) and documentation of quality results in applied R&D (patents etc.). Each project must have a clearly formulated plan for using the systems created and their capacities, including securing their operation even after project financing from the ERDF comes to an end.

Priority Axis 4 - Infrastructure for university education related to research

Priority Axis 4 has the objective of eliminating the negative legacy of insufficient financing accumulated from the past and at the same time of enabling selective support for universities which actively work on modernising their study plans and educational methods and which take into consideration in them the needs of the labour market.

Project applications within Priority Axis 4 of the Research and Development for Innovation Operational Programme are no longer being received, and at the present time the Managing Authority of the R&D&I OP is not considering making further calls in this Priority Axis.

Priority Axis 5 - Technical assistance

Only the department of technical assistance of MEYS as part of the Managing Authority of R&D&I OP can be a recipient of support in Priority Axis 5.

Plan for calls for R&D&I OP

Calls can be found at the address:
http://www.msmt.cz/strukturalni-fondy/aktualizovany-indikativni-plan-vyzev-op-vavpi-na-rok-2012

Call 7.3 "Pre-seed activity support" for submitting projects in Priority Axis 3, area of sub-support 3.1.
The main objective of call 7.3 is to support commercialisation of promising results with high application potential which come into being in particular at universities and public research institutions. The call will thematically build on call 6.3 for pre-seed activity support and also partially on call 3.3 Centres for Technology Transfer. Supported activities from call 6.3 will also be supported in call 7.3, the option of financially and organisationally support the search for and preparation of research and development result commercialisation not specified when submitting the project application will be added.

The date for announcing calls: 7. 1. 2013
Receipt of project applications: from 1. 2. 2013 to 20. 3. 2013.
The planned allocation for this call is CZK 600 million.

Call 5.3 "Improving quality and making the R&D policy more effective" for submitting projects in Priority Axis 3, area of sub-support 3.2.

Support in the framework of the given call will be focused on activities aimed at improving the quality and making the system for specific R&D support evaluation more effective (creation of general methodologies for the systematic evaluation of various types of specific support programmes, including the specific formulation of these methodologies for individual programmes with the ability for pilot testing, monitoring system consolidation, the creation and strengthening of necessary capacities for evaluation etc.).

Recipients should be government administration bodies responsible for managing and implementing research, development and innovation policy.

The tentative date for announcing calls: the first half of 2013.
Estimated allocation: CZK 50 million.

5.1.2 Annual Report R&D&I OP 2011

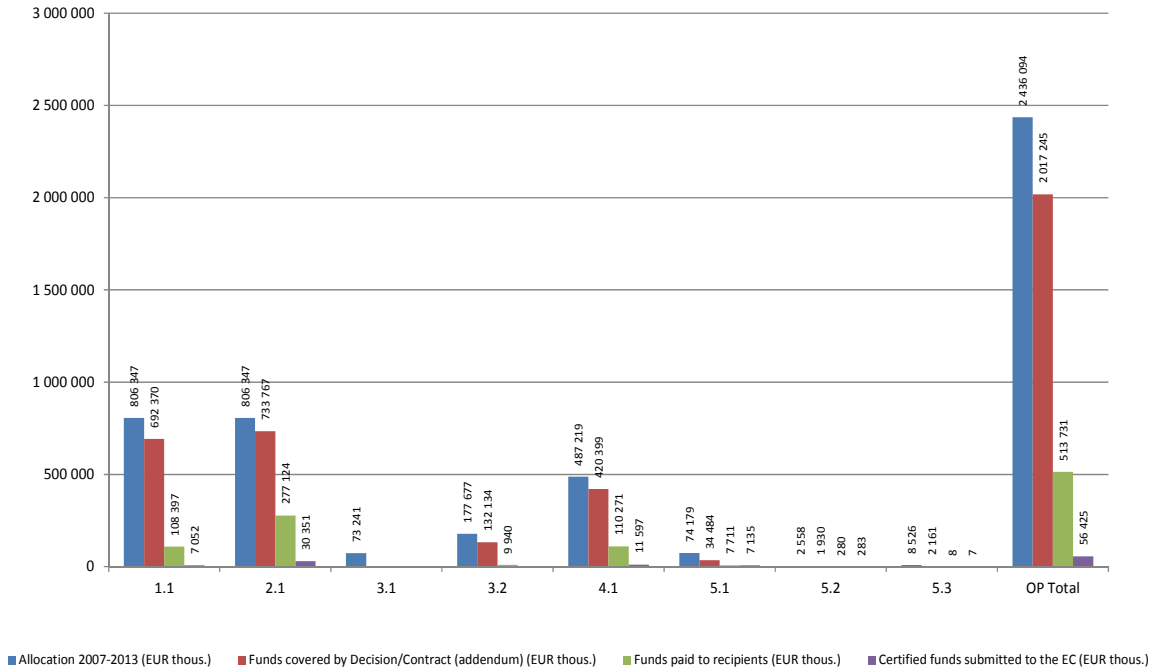
In 2011 recipients received a total of € 513.7 million (CZK 13.3 billion) i.e. approximately 21% of the OP allocation, of this volume € 56 million (CZK 1.4 billion) was certified, which equals 2.3% of the OP allocation.

Cumulatively 224 project applications with a total financial volume of more than € 4.1 billion (CZK 105.2 billion) of public funds were received in all R&D&I OP priority axes, which represents roughly 167 % of the share of the total allocation of R&D&I OP for the 2007-2013 programme period. The results achieved thus reflect the attempt of the R&D&I OP Managing Authority to build sufficient absorption capacities which create good conditions for implementation with a low level of risk. Overlap of submitted applications was registered

in all announced calls with the exception of Priority Axis 5 (Technical Assistance), where ongoing calls for the entire allocation of the 2007-2013 programme period are announced.

Another significant shift in drawing and material project fulfilment can be expected in the next period. The smooth handling of public contracts on the part of recipients and their control on the part of the Managing Authority will be a key. Further the additional stabilization of personnel capacities for the R&D&I OP Managing Authority is necessary for the smooth course of implementation, as even in 2011 there continued to be worker fluctuation in the Managing Authority. The R&D&I OP Managing Authority will have to be strengthened considering in particular the administration needed for new calls in Priority Axis 3 (in particular planned calls for pre-seed, where a larger number of projects is anticipated) and control of public contracts. In addition, stability in ministry leadership, in particular in leadership of the Section IV., is also desirable for the smooth course of the OP implementation, considering any planning and promotion of MEYS priorities for the next programme period.

Graph 17: Financial indicators of the R&D&I OP



Source: Annual Report R&D&I OP 2011

Contacts and additional information

Ministry of Education, Youth and Sports
Karmelitská 7, 118 12 Prague 1
http://www.msmt.cz/

5.1.3 Education for Competitiveness OP - MEYS (EC OP)

The EC OP focused on the area of human resource development through education in all its diverse forms with an emphasis on the comprehensive lifelong learning system, the creation of a suitable environment for research, development and innovation activities and stimulation of cooperation of the participating parties.

For the EC OP € 1.83 billion has been allocated, i.e. approximately 6.8% of all the funds designated from EU funds for the Czech Republic. Programme financing should moreover be increased by an additional € 0.32 billion from Czech public sources.

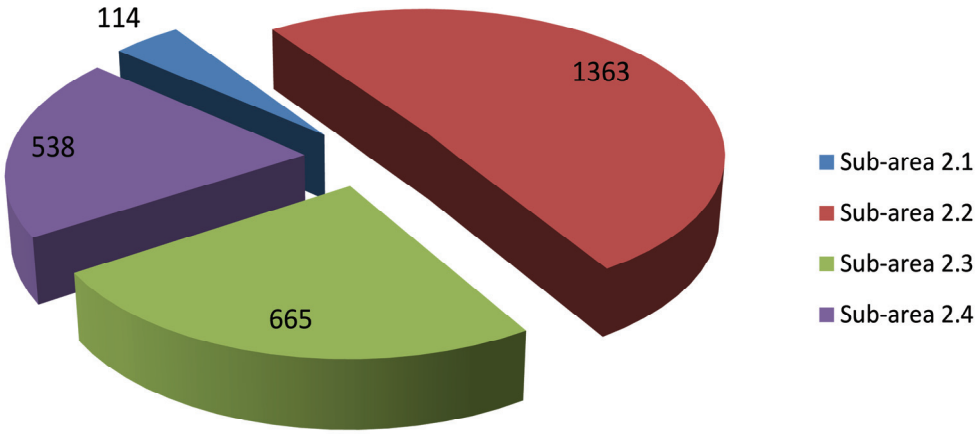
The global objective of the EC OP 2007-2013 is to develop an education society with the objective of strengthening competitiveness of the Czech Republic through modernising systems at all levels of education, linking them to the comprehensive system of lifelong learning and improving conditions in research and development.

Specific objectives of the EC OP are:

- Developing and improving the quality of first stage education, with an emphasis on improving key proficiency of graduates, guaranteeing their employability on the labour market and improving their motivation for further education.
- Innovation in tertiary education aimed at making a connection with research and development activities, increasing the flexibility and creativity of graduates which can be applied in a knowledge-based economy, improving the attractiveness of conditions for research and development and for creating comprehensive and effective tools, which can support the innovation process as a whole.
- Strengthening human resource adaptability and flexibility as the basic factor of economic competitiveness and sustainable development of the Czech Republic by supporting further education on both the demand and supply sides.
- Creating a modern, quality and effective system of lifelong learning by developing first stage, tertiary and further education, including linking these individual parts of the lifelong learning system.

R&D&I is related only to Priority Axis 2, which meets the second specific objective of the EC OP and is focused on modernisation of tertiary education, including making the system of higher professional education more attractive. The Priority Axis is further directed at making research and development more attractive and strengthening partnership and networks between the public and private sector.

Graph 18: Distribution of project applications submitted in Priority Axis 2 of the EC OP



Source: Annual Report R&D&I OP 2011

Plan for Calls for EC OP

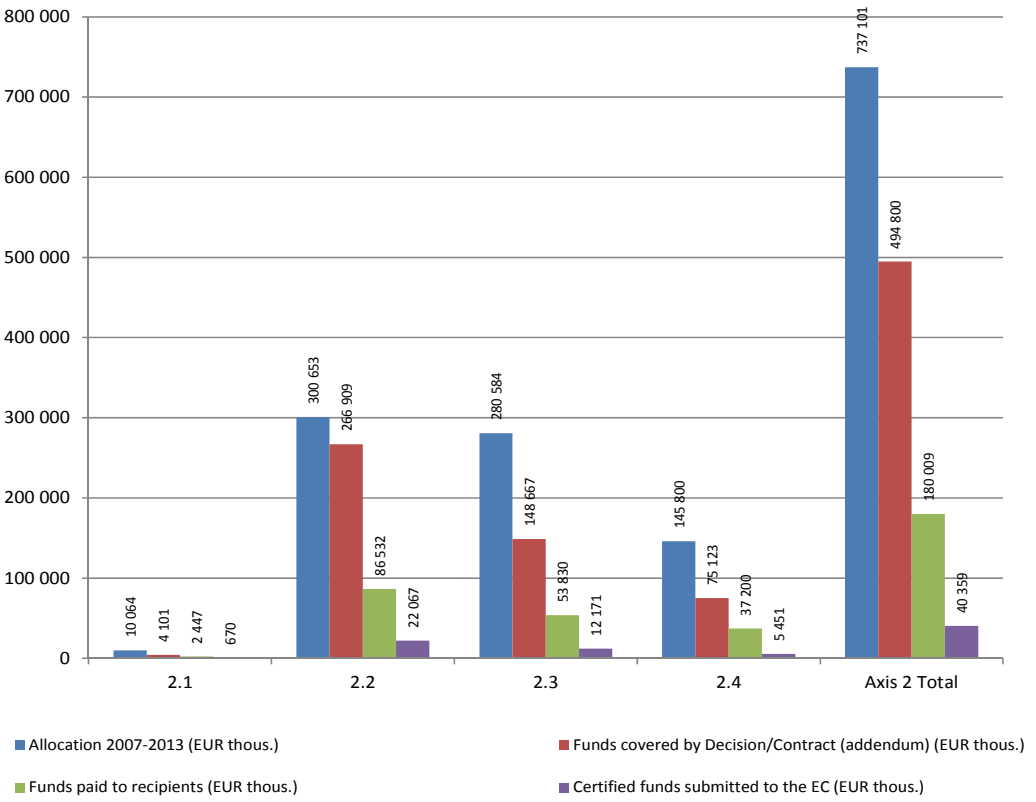
Calls can be found at the address:
http://www.msmt.cz/strukturalni-fondy/plan-vyzev-op-vk-2013

In 2013 no calls related to R&D are planned.

5.1.4 Annual Report EC OP 2011

In Priority Axis 2 significant progress was achieved in 2011 in announcing calls and contracting projects. At the end of the year 67 % of the axis allocation had already been contracted, a 43 % increase in the allocation for one year. Success was also achieved in making up for this axis's delay because of the late announcement of calls in 2010. Due to the large number of quality projects, an increase in allocations for three of the already-announced calls was allowed in September and December. Due to the deadline for announcement of calls, at the end of the year recipients had received only 24.42 % of funds and only 29 projects had been completed. Here the least resources are certified, after Priority Axis 3, i.e. 5.48 % of the axis's allocation.

Graph 19: Priority Axis 2 EC OP financial indicators



Source: Annual Report R&D&I OP 2011

Contacts and additional information
Ministry of Education, Youth and Sports
Karmelitská 7, 118 12 Prague 1
http://www.msmt.cz/

5.1.5 Enterprise and Innovation OP - EI OP

For the 2007-2013 period the Enterprise and Innovation Operational Programme is focused on supporting the development of the business environment and supporting transfer of research and development results into business practice. It supports the creation of new and the development of existing companies, their innovation potential and the use of modern technologies and renewable energy sources. It enables improving the quality of infrastructure and services for businesses and starting cooperation between businesses and scientific research institutions. The Ministry of Industry and Trade is responsible for executing the position of the Managing Authority of the Enterprise and Innovation Operational Programme. As with other programmes from EU structural funds, this one is

also approaching the end of its period and for that reason only one call will be announced in the INNOVATION axis.

The global objective of the Enterprise and Innovation Operational Programme is to increase competitiveness of the Czech economy by the end of the programme period and bring the innovation performance of the industrial and services sectors closer to the level of the top industrialised countries of Europe.

Recipients of support include entrepreneurs, associations of entrepreneurs, research institutions, universities and other educational institutions, non-profit organisations, natural persons, municipal government units and the organisations established and founded by them, CzechInvest, CzechTrade and so on.

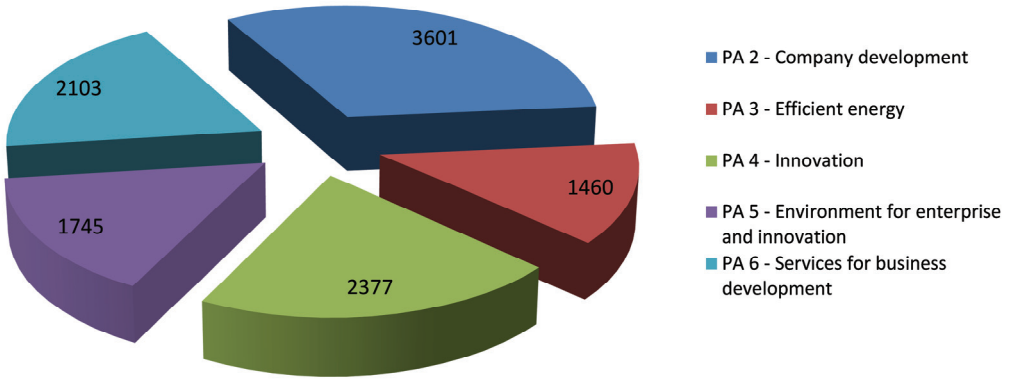
The EI OP is financed from the European Regional Development Fund (ERDF). The Enterprise and Innovation Operational Programme (EI OP) is among the thematic operational programmes in the Convergence objective; in terms of funds, it is the third largest Czech operational programme: € 3.04 billion is allocated for it from EU funds, which is approximately 11.4 % of all the funds designated from the EU fund for the Czech Republic. Programme financing should moreover be increased by an additional € 0.54 billion from Czech public sources.

To achieve the global objective within the EI OP funds will be concentrated on defined priority axes, characterising individual strategic objectives so that all regions have a share in the economic growth of the Czech Republic and at the same time tendencies for social exclusion of certain groups of the population are suppressed.

Further, only Priority Axes 4 and 5, related to R&D, will be described. These support, among other things, the creation or expansion of a development centre focused on research, development and innovation of products and technologies, or support the creation and development of territorially concentrated branch or professional groupings of businesses, scientific-research, educational and other supporting institutions, and they further support connecting Czech research institutes and businesses in international technological platforms, the establishment and development of business incubators and business innovation centre, which operate the incubators etc.

Programmes in the EI OP supporting various aspects of research and development also include the POTENTIAL, INNOVATION, PROSPERITY and COOPERATION programmes.

Graph 20: Number of accepted full grant applications from the start of EI OP implementation



Source: Annual Report EI OP 2011

The POTENTIAL Programme

The objective of the POTENTIAL programme is to support the introduction and increase the capacity of companies for the realisation of research, development and innovation activities, and at the same time to increase the number of companies which carry out their own research, development and innovation activities. The programme further has the objective of intensifying cooperation among companies and research and development organisations, the creation of qualified jobs and with that the development of the knowledge-based economy, the improvement of conditions for involving companies in national and European research and development programmes, and the continuous improvement of the competitiveness of the Czech economy.

PROSPERITY Programme

The main objective of the PROSPERITY Programme is to support, through grants, the founding and further development of infrastructure entities for industrial research, technological development and innovation focused primarily on the realisation of new technologies and competitive products and services. In connection with support of innovative infrastructure for newly created innovation companies, the programme also focuses on support of the establishment, activity and further development of business incubators. The programme devotes special attention to the Business Angels network for the support of emerging small and medium enterprises.

COOPERATION Programme

The objective of the COOPERATION programme is support of the creation and development of cooperative branch associations - clusters, technological platforms and cooperation projects on the regional, interregional and international level, as tools for the development of economic competitiveness and economic growth.

The general objective of the programme is the continual creation of a favourable business environment, improving conditions for business and innovation and development of competitive advantages thanks to improving the quality of ties among research, universities and the business sphere.

INNOVATION Programme

The objective of the programme is improving the innovation potential of the business sector through grants for the realisation of innovation business projects (in particular small and medium enterprises) and projects of public research institutions, universities, natural persons and small and medium enterprises aimed at intellectual property right protection. Fulfilling this objective will lead to a strengthening of long-term competitiveness, sustainable growth and balanced regional development of the Czech economy. With a view to sustainable development, the programme pays special attention to supporting ecologically effective innovations (eco-innovations).

Activities directed at the realisation of an innovation project are supported. For the purposes of the programme, an innovation project is a project focused on any of the following activities:

- Improving the technical abilities or functional characteristics of products, technologies and services (product innovation).
- Increasing the efficiency of the processes of manufacturing and service provision (process innovation).

Only a SME or a large business which meets all the conditions presented in the call can be a recipient of support.

A grant for eligible costs incurred in connection with the realisation of activities leading to product innovation or process innovation is provided in amounts of up to CZK 1 - 50 million, in the case of regions with concentrated state support a grant of up to CZK 75 million is possible, at most, however, always up to the eligible cost percentage limits.

Maximum grant level by region:

NUTS II Region	Small Enterprise	Medium Enterprise	Large Enterprise
Central Moravia, Northwest, Central Bohemia, Moravia-Silesia, Northeast, Southeast	50 %	50 %	40 %
Southwest	50 %	40 %	30 %

Plan for Calls for EI OP

Calls can be found at the address:
http://www.czechinvest.org/aktualni-vyzvy

Innovation - Innovation project

On **20 February 2013** the second extension of the IVth Call to submit projects in the INNOVATION support programme was announced. Acceptance of registration applications was started **8 March 2013** and completed **22 March 2013**. The start of the acceptance of full applications was set at **8 April 2013**, and the end of the acceptance of full applications was planned for **22 May 2013**. The planned allocation for this call is CZK 2 400 million.

5.1.6 Annual Report EI OP 2011

From the perspective of contribution to fulfilling the specific objective of Priority Axis 4 - "strengthening business innovation activities (introducing innovation in technologies, products or services)" - it is possible to state that in 2011 considerable progress was made in both the area of obligations (year-on-year growth of 66.2 %) and the indicator values achieved (growth of 89.2 %) and that Priority Axis 4 is moving towards meeting its objectives by the end of 2015.

The overall status of fulfilling the specific object of Priority Axis 4 is 44.4 %, which is the highest value in the material axes of EI OP. In addition the level of fulfilment of obligations is 75 %, which is the highest. Priority Axis 4 is a type of backbone for the EI OIP strategy, and thus it is fully meeting expectations and developing very successfully.

By the end of 2011 a total of 516 projects in research and development, innovation and patents were supported in the framework of Priority Axis 4 - Innovation, which corresponds to 29.5 % of the target value by 2015. Another roughly 700 projects with an issued decision are still being implemented, and including those projects the target value is 70 % fulfilled. The number of projects with an issued decision increased by 50 %. In 2012 primarily completion of project implementation can be expected. Within the INNOVATION support programme implementing area of support 4.1 906 innovations of products, processes, organisation and marketing were already successfully implemented and a total of 162 discovery and patent applications have been claimed. In both cases this involves more than a 100 % growth compared to the value achieved in 2010, where 100 % growth was also noted compared to 2009. Projects for which at least a decision on grant provision was issued and of which the majority is still in the implementation stages, in total recorded a sum of target values equalling 2 416 innovations, which already corresponds to 86.3 % of the target value by 2015. At the same time 532 patent and discovery applications are pending, i.e. more than 100 % of the target value. The following graph shows a regional view of the innovations, patents and discoveries introduced.

From the perspective of meeting the specific objective of Priority Axis 5, which is "to stimulate cooperation of industry with entities from research and development, to improve infrastructure for industrial research, technological development and innovation, to improve the effective use of human potential in industry and to improve the quality of the business

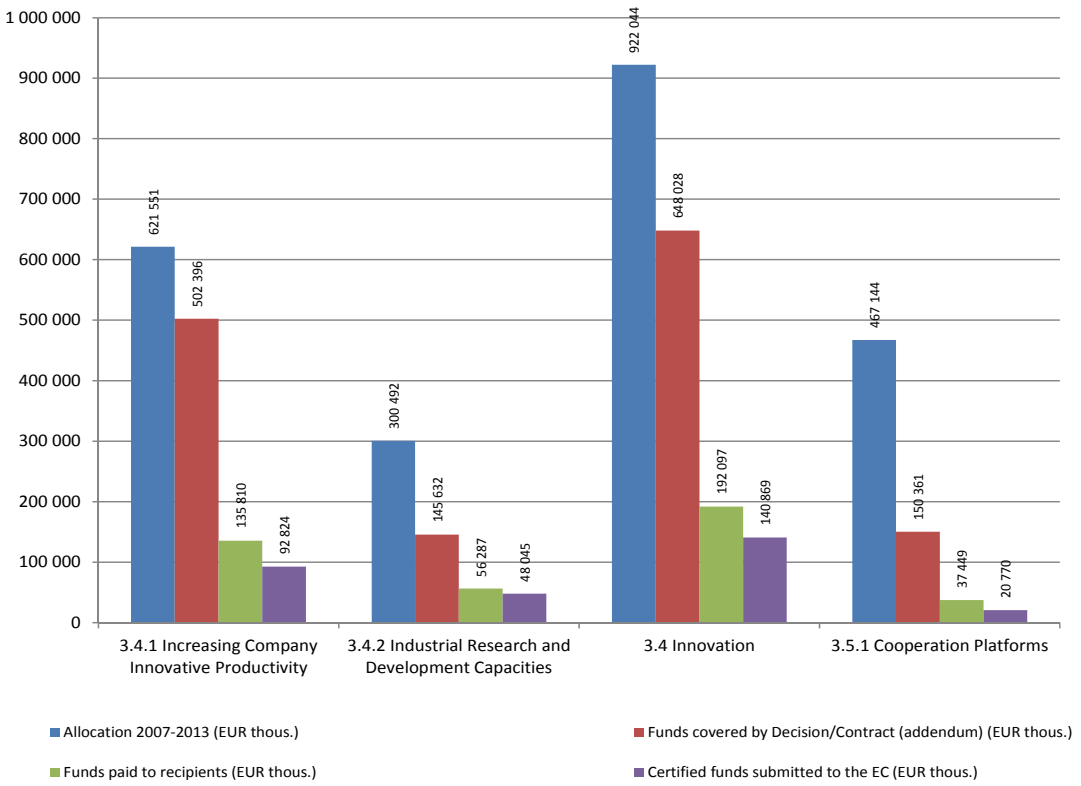
infrastructure", it can be stated that in 2011 significant progress was made primarily in increasing values achieved and that Priority Axis 5 is moving towards fulfilling its objectives by the end of 2015.

The present status of fulfilling the specific objective of Priority Axis 5 is on the level of 36.1 %, which means that Priority Axis 5 has already caught up with the levels of axes 2 and 6, which are developing in an average manner. In 2011, there was a fast growth in values achieved, almost fourfold, which is by far the largest number in the EI OP. This was caused primarily by completion of a large number of projects with great financial and time demands, in all three area of supports, i.e. already in area of support 5.1. Indicator obligations increased by 31.5 % in total.

Priority Axis 5 - Environment for enterprise and innovation can be considered the most diverse in terms of the spectrum of areas of support. For that reason, further evaluation of material progress of the programme is divided by individual areas of support.

In the framework of area of support 5.1 Cooperation platforms a total of 92 decisions on providing a grant had been issued by the end of 2011, 29 of which were focused on CLUSTERS (while 25 clusters were supported), 19 on TECHNOLOGICAL PLATFORMS and 44 concerned the PROSPERITY support programme. The results of supported projects from the first calls are already starting to be recognizable. During the course of 2011, the first 12 projects were completed, which brought about another two new incubators and 13 STP and Centres for Technology Transfer. More than 100 innovation companies are already settled in innovation infrastructure facilities.

Graph 21: Financial indicators for selected EI OP Priority Axes



Source: Annual Report EI OP 2011

Contacts and additional information

CzechInvest, Investment and Business Development Agency
Financial Support Department
Štěpánská 15, 120 00 Prague 2
http://www.czechinvest.org/

Ministry of Industry and Trade of the Czech Republic (MIT)
Na Františku 32, 110 15 Prague 1
http://www.mpo.cz
http://www.mpo.cz/cz/podpora-podnikani/vyzkum-a-vyvoj/

5.2 Support for Research and Development in the Czech Republic from EU Structural Funds 2014 - 2020

Since 2010 the Ministry of Regional Development has been preparing a concentrated strategy for the Cohesion Policy for the 2014-2020 programme periods. The newly formed strategy is created systemically and transparently according to the strictly set partnership principle. The Partnership Agreement is a document prepared by a Member State with participation of partners in compliance with the approach based on multiple level administration, which sets the strategy of the Member State, priority and measure for efficient and **effective use of CSF funds for the purpose of achieving the Europe 2020 strategy objectives**.

In August 2011 a list of main national priorities and objectives for the Cohesion Policy with consideration for the European document objectives, primarily the Europe 2020 strategy document and its corresponding document on the national level, i.e. the National Reform Programme (NRP):

- Increase in economic competitiveness
- Development of a backbone infrastructure
- Increase in the quality and effectiveness of public administration
- Support of integration, fight against poverty and healthcare system
- Integrated development of territories

For the simple creation of a system and management of the OP, 8 thematic spheres (TS) were proposed, which should serve as a link between the level of national development priorities and objectives and priority axes for individual operational programmes. The TSs analyse the economic and social reality of the Czech Republic and at the same time define activities which should be supported from the OP to achieve the objectives defined in the national development priorities.

The sources for the 8 TSs are the basic material of the Czech Republic for the upcoming long negotiations with the EU, including discussions of the Position Document on the part of the EC, which the EC has already prepared for the Czech Republic. This primarily involves the conditionality of any intervention on relevant preliminary conditions which define conditions on the side of EU for a given sector of the economy or public policy. It is necessary to demonstrably fulfil on an on-going basis the programme objectives via the narrowly and clearly defined national priorities, which were set at the beginning and which can be partially adapted to the needs of the Czech Republic during the programme period. Their fulfilment is one of the conditions for successful management of the CSF funds for the 2014-2020 programme period. The thematic spheres are:

- The labour market and education
- A functioning research and innovation system
- Competitive businesses
- Mobility, accessibility, networks, energy
- Effective administration and institutions
- Integrated development of territories
- Fight against poverty, social integration and health
- The environment

Research, development and innovation are thus contained directly and indirectly in three of these eight spheres. Primarily this involves the sphere: A functioning research and innovation system The global objective of this sphere is to use major investments in the production of new knowledge, qualified human resources and interconnection of the research and business spheres to accelerate the structural shift of the Czech economy towards a knowledge-based economy, i.e. an economy founded on an educated workforce, the use of top technologies, the production of high-quality research results and their transformation into innovations and competitive advantages for Czech companies.

The strategic objectives are:

- Commercialisation - To build a quality R&D result commercialisation system with an emphasis not primarily on technical infrastructure, which already exists in a number of cases, but rather on the provision of top-level services (pre-seed, proof of concept fund, centres of technology transfer etc.). The use of an intelligent specialisation strategy as a tool for the systematic creation and cultivation of a suitable environment for linking investments in research, development and innovation and education with the wider economic and social environment of the regions.
- Internationalisation - The purposeful acquisition of foreign investments aimed at building specialised R&D centres of multinational companies in fields where there is excellence in the Czech Republic in the area of basic or, if applicable, applied research (see the intelligent specialisation concept), involvement of international companies and investors in sophisticated activities in the Czech Republic, strengthening the establishment of existing R&D centres of multinational companies in the Czech Republic. To strengthen long-term cooperation among top-level facilities in the Czech Republic and foreign (academic and business) partners. To increase the integration of the research and business sphere in European and international projects.
- Infrastructure - Focusing on the maximum use of European centres of excellence and other innovation infrastructures built in the 2007-2013 period. In harmony with the principles of intelligent specialisation to support activities leading to the creation and development of specialised centres of technological competence.
- Management - Introducing a top management system for the R&D sphere, both on the level of the government and on the level of individual institutions, including changes in the system of evaluating and financing the R&D sphere so that the system supports not

only top-level scientific results, but also (in particular in the technical and natural science fields) the successful application together with the private sphere, reduction of the administrative demands of leading research teams, effective promotion and popularisation of R&D&I.

- Human resources - To devote increased attention to the development of human resources for research, development and innovation (support of international and inter-sector mobility, research workers and managers, acquiring and maintaining top-level research workers, including foreign workers, work with talents, the return of the best scientists from abroad, improving the quality of first stage, tertiary and further education).

The second thematic sphere covering the problem of R&D&I, and then primarily innovation, is the "Competitive Businesses" sphere. Its global objective is to increase the competitiveness of businesses by creating and spreading innovations with consideration for the concept of intelligent specialisation, effective energy use and the transition to a low-carbon economy, and at the same time while strengthening territorial cohesion of regions of the Czech Republic.

The strategic goals are economic development with an emphasis on activities which, however, are not directly tied to R&D:

- Improving competitiveness of businesses - Through a sophisticated and stable public support system for company R&D, whether realised within partnerships of multiple organisations or "in house."
- Increasing internationalisation - To increase the degree of internationalisation of companies and strengthen the involvement of multinational companies in sophisticated activities in the Czech Republic, including support for the localisation of development centres of multinational companies and their establishment in the Czech Republic.
- Effective infrastructure use - The maximum use of European centres of excellence and other innovation and business infrastructures built in the 2004-2013 period and the full use of the potential for cooperation with European centres of excellence, to focus capital expenditures rather towards investments in top-level technologies than on the construction of buildings, while respecting the needs of individual regions and preferring brownfield regeneration projects over greenfield construction.
- Human resource development - Increasing qualification and motivating human resources, of both existing employees as well as of secondary school students, particularly at trade schools, and additionally university students, developing international mobility, acquiring and holding talents in connection with the Labour market and education TS.

The last thematic sphere which is relevant for R&D is the sphere: "Labour market and education", of course mainly in its second part, i.e. education. The global objective is to ensure high-quality and accessible education, which fulfils the principles of lifelong learning.

The strategic objectives are:

- Development of excellence at universities and development of the human resources needed for their achievement.
- A diversified university system in the Czech Republic - universities with a focus on research, education and also professions.
- Developing creativity and supporting talent in the framework of education, preparing graduates for entrepreneurial activities, innovative thinking and flexibility - improving the position of graduates on the labour market.
- Development of international cooperation and mobility.
- Cooperation between universities and the private sector, and also the public sector, on research and innovations and reflecting the needs of the labour market.
- Expanding the level and improving the quality of lifelong learning.
- Improving the quality of first stage and further education.
- Significantly increasing mathematical, reading and IT literacy of pupils and students.
- Completing education standards for individual levels of education, completing the school evaluation and monitoring system.
- Developing inclusive education methods in the Czech education system.
- Developing the preschool and school preparation of children with special education needs, including children with social disadvantages.

Eight operational programmes for the next programme period, from 2014-2020, were created from the above eight thematic spheres. These do not copy the thematic spheres, but rather create new coherent structures from them.

- The “Enterprise and Innovation for Competitiveness” OP managed by MIT;
- The “Research, Development and Education” OP managed by MEYS;
- The “Employment” OP managed by MLSA;
- The “Transport” OP managed by MT;
- The “Environment" OP managed by ME;
- The “Integrated Regional Operational Programme” managed by MRD;
- The “Prague - Field of Growth in the Czech Republic" Operational Programme managed by the Prague municipal authority;
- The “Technical Assistance” OP managed by MRD.

In addition to these, programmes for the support of the countryside, fisheries, and for cross-border, multinational and inter-regional cooperation will be supported (as they have been to the present).

The three thematic spheres mentioned are fulfilled by two OPs, which will resolve issues of research, development and innovation. R&D will be treated as part of the RDE OP, which to a certain extent can be considered as a successor to the current R&D&I OP and certain measures of the EC OP. Measures supporting innovation will be handled as part of the EIC OP. This can also be considered a successor to the ideas of the EI OP.

5.2.1 Enterprise and Innovation for Competitiveness (EIC OP)

The objective of the proposed operational programme is to ensure the support of a business environment and innovation to increase Czech economic competitiveness.

Focus: support of entrepreneurship, innovation in the business sector, saving energy, ICT infrastructures

Justification for the OP:

- The main focus of the OP is to support the business environment and innovation activities, particularly in small and medium enterprises. The link between publicly supported research and development to universities as part of the Research, Development and Education OP will be an important synergistic connection. The institutional and material separation of research and development support and areas of innovation in the Czech Republic is a problem of the current programme period.
- Support for energy efficiency, reconstruction and development of heat production systems and support of innovative solutions contributing to emission reductions are included among other activities supported in the above OP, particularly in the business sphere. The introduction of high-speed internet and other modern communication resources will also make a significant contribution to competitiveness.
- In the proposal for the Enterprise and Innovation for Competitiveness OP all this is under one roof, so that interconnection and synergistic effects will be better secured.

Shifts in the OP:

- The use of existing innovation infrastructures created in the 2007-2013 period.
- Support of business in internationalisation, commercialisation and global competitiveness.
- Capital expenditures focused primarily on investments in top-level technologies, away from construction.
- Emphasis on foresight and interconnectivity of businesses with science and research and educational institutions.
- Transition to projects focused on the ability of businesses to make the most effective use of all resources (including energy and information) to increase productivity and create higher added value.
- Strengthening projects for the cooperation of multiple businesses, connecting SMEs and large businesses and penetrating into global distribution chains.
- Focusing on greater integration of Czech businesses in international and European projects.
- Strengthening the effectiveness of energy and raw materials.

5.2.2 The Research, Development and Education Operational Programme (RDE OP)

The objective of the proposed operational programme is to use major investments in the production of new knowledge and qualified human resources to accelerate the structural shift of the Czech economy towards a knowledge-based economy, i.e. an economy founded on an educated workforce, the use of top technologies, the support of creativity, the production of high-quality research results and their transformation into innovations and competitive advantages for Czech companies. The objective of the OP is also the transformation of the Czech educational system towards ensuring equal opportunity in education and support of education for children with special educational needs as part of the pedagogical-educational current and ensuring pre-school preparation particularly for socially disadvantaged children.

Focus: support of research and development; increasing quality of education and creating quality human resources and new knowledge; linking public institutions and education, research, development and innovation with the greater economic and social environment of regions; supporting equal opportunity in education and eliminating segregation in the education of children with special educational needs, particularly socially disadvantaged children, including Roma.

Justification for the OP:

- The main focus of the OP is to support the foundations of the knowledge-based economy, i.e. education, research and development and innovation based on knowledge, ensuring better transfer of research results into practical use, the role of research and development in the educational process and bringing up a young generation of researchers, improving the quality of the entire educational system, the realisation of synergies and complementarities among the given thematic objectives of the Cohesion Policy and the Horizon 2020 programme and other related programmes, such as Erasmus for All.
- The systematic formation and cultivation of a suitable environment for linking public institutions to research, development and innovation with the wider economic and social environment of regions will contribute to increased competitiveness. An integral part of this is support for quality education as a key condition for quality research and development, and subsequently innovation.
- The programme will enable the effective interconnection of interventions from EFRD and ESF funds in the area of education, research and development so that intervention in these areas is mutually supported and supplemented. The interconnection of EFRD investments in research centre developments with investments from the ESF in human resource development in these centres and universities is fundamental, as is improving the material conditions at the lower stages of schools (EFRD) and improving the quality

of pedagogic work. The OP further directly connects measures in education and improving the quality of human potential with increasing the performance of the national research and innovation system, for whose functioning increasing the level of education and quality preparation of experts is one the main conditions.

- Support of equal opportunities in education will open the possibility of education and subsequent success on the labour market, also for children who are disadvantaged in different ways in education, e.g. who are educated outside of mainstream education, without adequate support at preschool, school or outside of school. Support for nursery schools and schools in mainstream education is also necessary, so that they are able to also educate children with special educational needs, particularly children who are socially or physically disadvantaged, and have sufficient financial, material and personnel capacity to do so.

Shifts in the OP:

- Focus on making the most use of European centres of excellence and other research infrastructures built in the 2007-2013 period.
- Greater concentration on human resource development, international mobility and acquiring and retaining the best minds.
- Focusing on activities which lead to greater involvement of Czech R&D&I institutions in international and European projects and acquiring foreign business (internationalisation and commercialisation).
- The opportunity to connect education in a suitable manner with the labour market, to develop key and professional qualifications, to connect first stage and further education, to develop talents and implement inclusive measures where needed, in particular on preschool and school-level education. Supplementing investments where they are lacking (in particular in lack of equipment in primary schools etc.), but with a concentrated focus on human resource development (including school management).
- Focused interventions resulting in sufficient comparable data about education and its quality (comparative tests, the ability to evaluate schools according to results).
- Internationalisation of schools (international cooperation) and teacher education.
- Introduction of new education methods for children with special educational needs, the development of non-segregating preschool and primary education networks.

6 INTERNATIONAL COOPERATION OF THE CZECH REPUBLIC IN THE AREA OF RESEARCH AND DEVELOPMENT

In accordance with Act No. 21/1993 Coll. (on competencies), international cooperation in research and development is organised by the Ministry of Education, Youth and Sports. International cooperation in research and development (ICRD) is conducted according to a long-term concept. The foundation and main part of the ICRD concept are joint research and development projects and participation in international multilateral projects (activities). In some cases bilateral agreement on cooperation is limited to support of researcher mobility – see cooperation with specific states. One of the Czech Republic's main priorities in international cooperation is participation in R&D structures of the European Union – European Research Area, and principally the most effective participation in the EU and EURATOM framework research and development programmes.

The Seventh Framework Programme of the EU has been running from 2007 to 2013 (some projects can, however, run until 2017) and during the 2011 – 2013 period a proposal for Horizon 2020, a new framework programme, was discussed.

Another priority is the participation of the Czech Republic in the development, structuring and strengthening of the European Research Area (the Ljubljana Process) and participation in the Europa 2020 strategy – achieving competitiveness comparable to that of the USA and Japan and the Barcelona Objective – R&D expenditures comparable to the European average – 3 % of GDP. Multilateral and bilateral independent projects, selected for financial support in public tenders and the support of participation in important international government and non-governmental organisations and activities, are also important from the standpoint of international cooperation in research and development. When formulating the ICRD policy it is necessary to take into consideration not only the developed European countries but also the legislative environment of the Central European region, research and development policies in the USA and Canada and policies of the developed Asian countries.

In 2011 major changes took place at MEYS in the management of international cooperation in research and development and in the Czech Republic’s participation in the European Research Area: the Department of International Cooperation in R&D, which organises the Czech Republic’s membership in the ERA (including participation in and evaluation of framework programmes), and the Research and Development Project Finance Department, responsible for the implementation of bilateral and multilateral agreements on international cooperation in research and development and for the financing of the specific cooperation programmes, were created. In 2013 the Research and Development Department, which is divided into two sections and is responsible for international cooperation including the financing and participation of the Czech Republic in ERA, started its activities at MEYS.

6.1 European Research and Innovation Area

The European Research Area (ERA) was established by the decision of the European Council with the objective to create a unified European research and development environment, to achieve better cohesion in this area and to contribute to the improvement of the European ability to compete against the United States and the developed Asian countries. This decision is based on the fact that support of research and development in Europe is continuously declining, the number of individual investments in research (especially private) is decreasing and a career in science or research is not among the most desirable life and career goals, the share of women in research is declining or is inadequate, the use of research resources for the benefit of society is inadequate or sometimes not appropriate and the mobility of the European research workers is too low. There is an absence of sufficient coordinated support of large research infrastructures, which significantly contributes to the excellence of science in Europe and on the other hand there are continuing problems with scientific ethics (for example in stem cell research). The establishment of the European Research Area should contribute to the resolution of such problems.

The ERA incorporates EU Framework Programmes, national policies and EU Member State research programmes and their coordination and European research organisations and their infrastructure. The most significant fact is that framework programmes are being established with the objective of contributing to the formation and structure of the ERA. All such measures are designed to contribute to the improvement of the quality of life in the EU and in Europe in general by more efficient use of resources invested in research and development (this includes not only, but especially private funds, including Private-Public Partnerships – PPP), increased efficiency in research and development in general and the improvement of research infrastructure support.

6.2 European Union's Seventh Framework Programme in the Area of Research and Development and EURATOM

The European Framework Programme (FP) for the period of 2007 – 2013 defined the EU research policy and its financial instruments and especially the multi-year research framework programme. In 2007 the Seventh Framework Programme for research and development, technical development and demonstration was established. The main coordinator of the FP in the European Commission is the Directorate General for Research and Innovation.

The final approved budget of the 7th FP for the period of 2007 – 2013 is 50.521 million and the EURATOM FP (2007 – 2011) budget is 2.751 million.

More information about the programme, including contacts can be found at:
http://cordis.europa.eu/fp7/home_en.html
http://ec.europa.eu/dgs/jrc/index.cfm?id=1370
http://cordis.europa.eu

The FP includes the specific (now special) programmes with set rules and financing. The Joint Research Centre (JRC) tasks – projects in the non-nuclear and nuclear area - also fall under FP financing. The 7th Framework Programme of the EU is divided according to its content into four areas: Cooperation, Ideas, People and Capacities.

Area I: Cooperation
This contains its own research activities which include support in the comprehensive area of research conducted with the following priorities:

- Health
- Food, agriculture and biotechnology
- Information and communication technology
- Nanosciences, nanotechnologies, materials and new manufacturing technologies
- Energy
- Environment (including climate change)
- Transportation (including aviation)
- Social-economic sciences and humanities
- Security
- Space research

Area II: Ideas

This provides support for basic (frontier) research from the "bottom up." The research is conducted in all areas by individual or international teams. The European Research Council and the European Research Council Executive Agency (ERCEA) were formed to establish this programme.

Area III: People

This supports growth of (qualitative and quantitative) human potential in research and technical development in Europe. It supports human resources in research and development, including the support of researchers, and young scientific workforce - both men and women. It especially includes the "Marie Curie Project" events.

Area IV: Capacities

Key aspects of European research and innovation capacities are supported, such as research infrastructures, regional level clusters, development of research potential in both convergence and the most remote EU regions, research benefiting small and medium enterprises, activities improving the relationship between science and the society at-large, development of the EU Cohesion Policy and international cooperation activities. This part of the FP supports European research infrastructures (European Strategic Forum on Research Infrastructures – ESFRI), their development and operation.

Research subjects are implemented through projects, whose proposals are submitted by consortiums of research institutions, through Joint Technological Initiatives (JTI – Art. 187 Treaty on European Union), coordination of national research programmes (Art. 189 Treaty on European Union) and through international cooperation. The proposals are submitted by consortiums based on "calls for proposals." The following financial instruments are used to promote the FP objectives: "Integration Grants" (Network of Excellence) and "Overall Budget Grants" (Cooperation projects, sometimes also called Integrated Projects). Teams receive funds for projects in the form of advance payments (initial financing) and regular payments.

A legal person, or natural person, with a registered address in a EU Member State or third country (any country outside of the EU) can apply. Candidate countries (Croatia – as an accession country – and Turkey) and EFTA participating countries can participate under the same conditions as Member States; these countries are associated in the 7th FP; an international European organisation can also apply under the same conditions as teams from a single Member State.

The minimum number of partners is three (cooperation projects and networks of top workplaces), however, they have to be from a EU Member State or from a country associated with the 7^{th} FP and each team must reside in a different EU Member State or a state associated with the 7th FP. Participation of a single applicant is possible under the

Marie Curie Events and other specific supporting activities (conferences, studies, etc.). The minimum number of participants in the projects is always specified in each call.

The following instruments are used to implement the Framework Programmes: large-scale (integrated) projects, Specific Targeted Research Projects (STRePs) and by integrating workplaces in the Network of Excellence. Large-scale cooperation projects include research and technical development and/or demonstration activities that support innovation. Such projects should promote the ability to compete, should target the basic needs of society and should produce new products, processes and services. Subjects for which such projects can be submitted are described in detail in the work programmes published with each specific call.

6.2.1 ERA-NET PLUS

ERA-NET PLUS are programmes implemented jointly by participating states with a financial contribution from the EU (joint implementation of national and regional programmes – Art. 185 (previously Art. 169) of the Treaty on European Union, for example with the support of the harmonised work programmes, joint and coordinated calls and by issuing calls for submitting project proposals, joint evaluation procedures and joint implementation of projects. Such instruments can be used in all the FP activities. The FP uses the following activities: Specific Targeted Research Projects (Cooperation Projects, formerly STRePs), research and technical projects; demonstration projects, specific research projects for small and medium enterprises (SMEs), collective research projects for associations of small and medium enterprises, events supporting the development of human resources and mobility, coordinating activities, specific supporting activities, integrated infrastructure activities, participation of the European Union in programmes organised by several Member States (Art. 185 (169) of Treaty on European Union).

6.2.2 EURATOM

The 7th EURATOM FP was formed for the period of 2007 – 2011, with a budget of € 2.751 million. At the beginning of 2011 a proposal to extend the EURATOM FP for the period of 2012 – 2013 was submitted and this extension was approved. The programme includes one specific programme (Nuclear Research and Education) and activities of the Joint Research Centre (JRC).

Specific Programme (Nuclear Research and Education)
The thematic priority “Fusion Energy Research": Its objective is to gain knowledge for the International Thermonuclear Experimental Reactor (ITER) and to develop ITER as a safe prototype for nuclear power plants in Cadarache (France). Parties to the agreement are the

EU, USA, Japan (special conditions have been created for Japan), the Russian Federation, India, China and the Republic of Korea.

The thematic priority "Nuclear Fission and Radiation Protection": Its task is to support the safe use of nuclear fission and other uses of radiation in industry and medicine.

Activities of the Joint Research Centre (JRC)
In response to the Lisbon Agenda and the request of many customers, the JRC will make significant efforts in the area of education, technical education and dissemination of information. The JRC will conduct research activities in areas connected to waste management, environmental impact and also in the area of nuclear safety, as it has been doing already.

Similarly to the previous FP, EU Member States (and to some degree also associated states) will participate in programme management, most importantly, by participating in a number of permanent and ad hoc committees and expert groups. Some of the most important are the Programme Committees – PC. Together with the European Commission the Programme Committees participate in work programme creation and updating for individual thematic priorities, examining calls for submitting project proposals and informing members about the results of project evaluation and providing consultation in cases that are either contentious or require consultation, and making decisions about accepting or rejecting project proposals (proposals for grant agreements on project implementation fall under the jurisdiction of the European Commission). The structure of the Programme Committees is parallel to the FP structure.

The contact organisation for the 7th FP in the Czech Republic is the Technology Centre of AS CR. The list of the National Contact Points for individual programmes of the 7th FP and information about the programme in Czech are available at http://www.fp7.cz

6.2.3 NICER III, CZERA

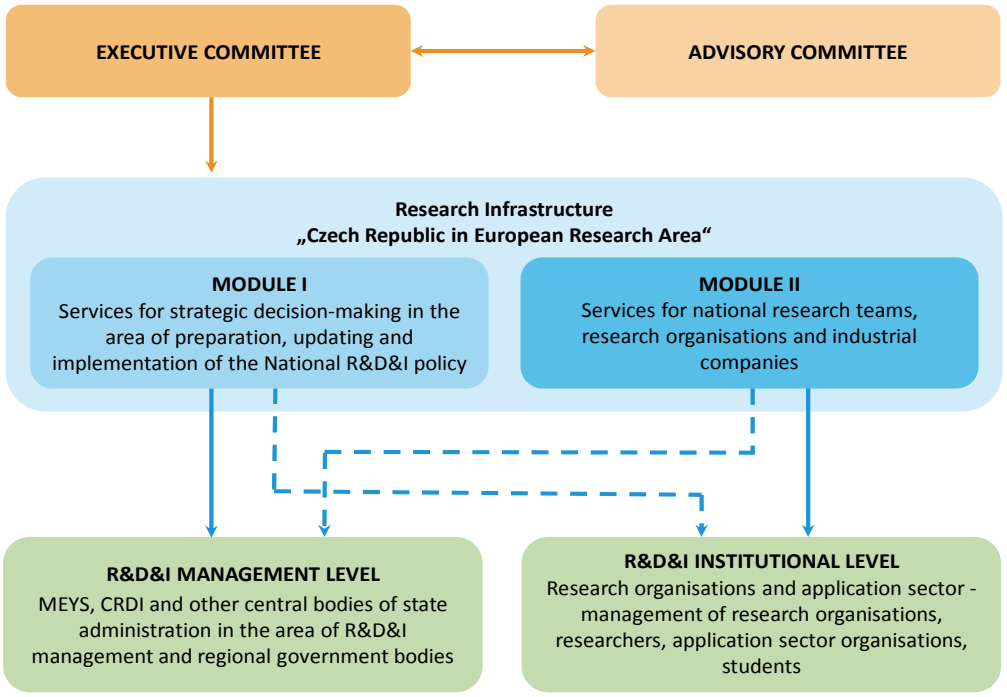
NICER III (National Information Centre for European Research) is a project of the Technology Centre of AS CR, which during 2009 – 2012 provided comprehensive support to all workplaces in the Czech Republic regarding their participation in ERA. Since 2013, a similar scope of support is provided under the CZERA (Czech Republic in ERA) project infrastructure, specifically under Module II of this project. For NICER III and CZERA projects the Technology Centre of AS CR organises the activity of the NCP (National Contact Point) for the 7th FP EU, organises large-scale information and educational events on the 7th FP and within Horizon 2020, a connected Framework Programme, and provides expert consultation to the individual teams which are working on preparing and implementing the specific 7th FP projects. In these activities special attention is paid to small and medium enterprises. One of the outputs of the project is ECHO, a magazine focused on bringing information about ERA, and publications specialised on European research and framework programs. A web portal

focused on ERA and the participation of the Czech Republic in ERA is being prepared for launch in spring 2013. The TC AS CR team is connected with the European network of National Contact Points (NCP) for the 7th FP and with the National Information Network (NINET) (more information, including the entire network of NINET Regional Contact Organisations: http://www.ninet.cz) and other contact points in the Czech Republic. It also contributes to the creation of ties between the local workplaces and ERA and cooperates with the European Commission in the 7th FP Committees. The team further organises annual Czech Days for European Research (CZEDER) – a conference on Czech participation in FP and on current events in European research.

In 2000 the national information infrastructure for the 6th Framework Programme EU, NINET (National Information Network) was established to ensure successful participation of the Czech Republic in ICRD projects. Its activities also continue under the 7th FP. NINET serves as a Czech national information network for the EU Framework Programmes which incorporates regional and professional organisations. NINET's task is to provide information and consultation services primarily related to the FP. Financially, the network is supported from the MEYS budget (EUPRO and EUPRO II programmes). More information about NINET is available at http://www.ninet.cz.

Calls for submitting project proposals are published by the European Commission at: http://ec.europa.eu/research/participants/portal/page/fp7_calls

CZERA – Framework Activity Programme



Module I – Services for strategic decision-making in the area of preparing, updating and implementing the National R&D&I Policy

In the first stage of the CZERA infrastructure activity, i.e. during the period when NICER III activities are implemented in parallel (or are being finalised in parallel), activities of the current NICER and NCP groups (system of National Contact Point workers) will be (for the most part) preserved and the groups should, according to their focus (and as possible) take part in the activities conducted in Module II (i.e. ad hoc work groups, in which members of the current NICER III group also take part in addition to the Module I workers). In the subsequent phases of infrastructure activity all activities will gradually be reorganised.

Module I activities, in accordance with the approved project programme, are focused on four main areas – strategy, priorities, evaluation and analysis.

1) Strategy

- Creating a system for transferring and sharing information (information system) about the preparation and discussion of documents connected to ERA by the EU bodies, so that adequate preparation of data is ensured (sufficiently in advance) establishing the position of the Czech Republic (i.e. ensuring the flow of information between the representatives of groups in EC, MEYS, MIT, CZELO, CZERA, CERA – Committee for ERA, …);
- Completing the R&D&I cooperation strategy between the Czech Republic and third countries;
- Preparing strategic conceptual output from the relevant Akcent Project materials, which will facilitate greater involvement of the Czech Republic in ERA on various levels (research organisations, projects, programmes, system measures, position of the Czech Republic, etc.)

2) Priorities

The setting (or clarification) of priorities of the Czech Republic in the area of international R&D (especially Framework Programmes and Joint Programming):

- Connection to R&D&I priorities of the Czech Republic, which will be formed as a part of the Akcent public procurement process;
  - Identifying the R&D areas which will be addressed as a part of international R&D activities. There are areas where it is more effective for the Czech Republic to conduct R&D in cooperation with international partners (for example the need for extensive or unique R&D infrastructure, working on global-scale problems, acquiring foreign know-how, etc.);
  - Using (some) experts working on setting the Czech priorities in the Akcent Project;
- Connection to priorities of the Czech Republic for the 8th FP set by CERA in 2010 (taking into consideration the socioeconomic needs of the Czech Republic);
- Connection to the strategies and priorities of the European Union;
- Connection to strategies of “third countries” prepared by CZERA, etc.

3) Evaluation

Evaluations will be conducted with the objective of improving the involvement of the Czech Republic and Czech R&D in ERA and in international research on various levels. The work will include, for example, the following:

- Forming the methodology for evaluating international cooperation programmes (connection to rules and principles of the methodology formed by the Akcent Project);
- Evaluation of participation of Czech teams in international R&D&I programmes (FP, Eureka, Joint Programming, JTI etc.) – evaluation criteria should not be limited to participation, but should include contributions and impact;
- Evaluation of the contributions of participation in FP for companies (use of micro-data, working on the articles of JV).

Other suggestions for evaluation can come out of the activities of the Akcent Project.

4) Analysis

- Analysis of the involvement of large R&D infrastructures (especially the newly created ones in R&D&I OP) in ERA (FP, JTI, Joint Programming, etc.) and also their connection to the priorities of the Czech Republic;
- Evaluation of the options for involvement in international cooperation on the level of regions (cross-border cooperation) – input for possible strategies in this area (analysis of international approaches, evaluation of the Interreg Programmes;
- Evaluation of the situation of research organisations and the options for the involvement of Czech teams in international R&D (completion/analysis and research of additional activities, which were conducted in this area by NCP);
- Evaluation of current procedures of the Czech involvement in ERA formation (what is being done at the present, why is everything done at the last minute, etc.), materials for information system creation (mentioned in point 1).

Other suggestions for evaluation can come out of Akcent Project activities.

Module II – Services for national research teams, research organisations and industrial companies

In 2011 and 2012 services for national research teams which consisted mainly of providing information and consultation services aiding the successful participation of research organisation and companies in the 7th FP were funded by the NICER III Project. In 2013 – 2015 these activities will be fully integrated into the CZERA Project.

During the period when the NICER III and CZERA Projects run simultaneously, activities of Module II focused primarily on the support and supplemental expert help to activities of Module I.

1) Strategy

a) Ensuring the flow of information related to ERA according to the areas of focus of individual teams (NCP) – specifically:
   - on the level of Programme Committees
   - on the level of key conferences organised by EC on the development of ERA
   - systematic monitoring of EC strategic documents relevant to R&D&I in the individual focus areas

b) Cooperation with Module I in the formulation of the Czech Republic's strategy of cooperation with third countries for MEYS (statistical analysis of cooperation of the Czech Republic with third countries in FP, mapping European priorities for cooperation with third countries)

2) Priorities

Cooperation on setting/formulating standpoints and priorities of the Czech Republic for the 8th FP (Horizon 2020) in connection with the needs of MEYS and CERA. The principal EC documents in 2011 were:

- Orientation Paper on Next FP (February 2011)
- Commission Proposal for Next FP (end of 2011)

3) Evaluation

Cooperation with Module I on the planned activities:

- Formation of the methodology for evaluating international cooperation programmes (connection to rules and principles of the methodology formed by the Akcent Project)
- Evaluation of Czech team participation in FP and **if data are available** also evaluation of participation in Eureka, Joint Programming, JTI, etc. – evaluation should not be limited to participation, but should include contributions and impact
- Evaluation of the impact of participation in FP for companies (use of micro-data, working on the articles of JV)

4) Analysis

Ad hoc cooperation of NCP and other Module II members according to their focus and type of analysis

6.3 European Research Council - ERC

The European Research Council – ERC is an institution founded to support frontier research whose focus is determined by scientists (investigator-driven research).

The main objective of the ERC is to stimulate scientific excellence by supporting the best, truly creative scientists. Scientists are motivated to exceed the current limits of knowledge and limits of the scientific disciplines. The ERC supplements other funding activities within the EU (it was established as part of the 7th FP EU) such as the national agencies that finance research and it is the flagship of the Ideas Programme of the 7^{th} FP EU. Because the ERC uses the bottom-up mechanism for choosing its projects, it makes it possible for researchers to identify new opportunities and directions in any scientific area.

The ERC grants are awarded in open competitions to projects introduced both by young and experienced scientists, regardless of their nationality, who either work in Europe or have relocated to Europe - the only criterion for selection is scientific excellence.

More information about the ERC, including contacts, can be found at:
http://erc.europa.eu/pdf/memo.pdf
http://erc.europa.eu

6.4 ERC CZ Programme (LL)

The programme supports “frontier research” (i.e. projects that shift the limits of knowledge regardless of traditional structuring) which is conducted by internationally acclaimed Czech researchers who received a positive evaluation for their projects by the Expert Research Committees (ERC) with the outcome of the evaluation concluded by the ERC evaluator statement: *“The proposal is of good quality and fundable but not retained for funding due to budgetary constraints.”* The ERC CZ Programme therefore is not divided into sub-programmes. The main goal of the programme is the targeted and effective support of excellent research in the Czech Republic. At the same time the objective is also to support increased production of high quality, internationally acclaimed research results.

The duration of the programme and financial support has been set for 2012–2019. The ERC CZ Programme will be announced in the form of periodic public tenders in the areas of research, experimental development and innovation (hereinafter only “R&D&I"). The first public tender in R&D&I was conducted in 2012. The dates of the individual R&D&I public tender calls of the ERC CZ Programme will be coordinated with the announcements of the results of the individual ERC, more specifically each ERC CZ Programme R&D&I public tender will be conducted in the same calendar year or at the latest in the next one (so that the ERC CZ Program R&D&I tenders would always follow the evaluation of the ERC call projects and the publication of their results).

The implementation period for individual projects is identical to the implementation period set by each ERC call under which the project proposal was evaluated (for example for the ERC "Starting Grants” the maximum implementation period is usually set at five years).

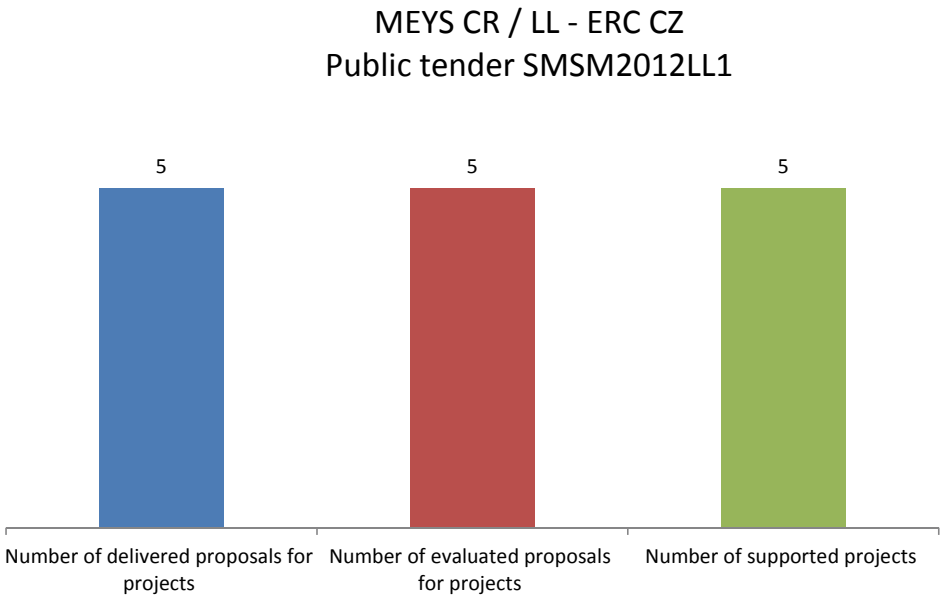
The provision of support and drawing the individual payments for the implementation of the individual projects can be commenced no earlier than 1 January 2012 and must be concluded by 31 December 2019.

Anticipated amount of support for the entire duration of the programme (CZK thous.)

Period	2012	2013	2014	2015	2016	2017	2018	2019	Total
Support Amount	20 000	80 000	100 000	100 000	100 000	80 000	70 000	50 000	**600 000**

A research institution can receive up to 100% of approved costs for the implementation of individual frontier research projects, provided that the conditions of Article 3.1.1. of the Framework are met.

Graph 22: A Graph showing evaluation of the last public tender (Amount of specific support provided through the public tender: CZK 167 221 thousand)



Source: Research, Experimental Development and Innovation Information System

More information about the programme, including contacts, can be found at: http://www.msmt.cz/vyzkum/erc-cz

6.5 RETURN Programme (LK)

The main objective of the RETURN Programme is to create the conditions for the return of the top R&D&I experts to the Czech Republic, to stimulate the interest of those who would be interested in qualified work in Czech research and to stimulate the interest of Czech research institutions in such people. The RETURN Programme provides conditions for the further professional skill development of such people, their return from abroad, rapid career growth supported by sufficient-quality work and material base for their research activities.

The RETURN Programme supports and encourages specific persons and research organisations and their employers to motivate people with long-term research and development perspective, their activities on the territory of the Czech Republic and it negotiates legal conditions that provide high-quality work conditions for their further professional growth.

On the one hand, the RETURN Programme motivates specific research workers to return to the Czech Republic from long-term stays abroad, by creating a financially and materially stable base for their long-term activity at domestic R&D&I workplaces and for their professional development on a level that is comparable with the current international openings in the field.

On the other hand, the RETURN Programme stimulates research organisations to develop their research potential (including human resources) more effectively by providing support that enables the creation of high-quality research base suitable for achieving more international-level R&D&I results and sufficient conditions for the professional growth of young research workers with international R&D&I experience. This is needed to transform personal international contacts into international professional cooperation for entire research institutions

The RETURN Programme takes into consideration the strategic objectives of the Education for Competitiveness Operational Programme and complements its activities.

The duration of the programme and financial support has been set for 2012 – 2019.

The RETURN Programme will be announced in the form of repeated R&D&I public tenders. It is anticipated that each year from 2011–2014, in accordance with § 17 – § 26 of the Act on the Support of Research, Experimental Development and Innovation, one R&D&I public tender will be announced each year to select projects whose implementation and support provision will always begin on 1 January of the following calendar year.

The RETURN Programme provides synergistic support and works in accord with the Education for Competitiveness Operational Programme (ECOP). The R&D&I public tenders of this programme will be called as a compliment to the Education for Competitiveness

Operational Programme, especially during 2012 and 2013 when the RETURN Programme will be eligible only for participants outside of the regions of this programme. Only multi-year programmes, mostly three- to five-year, will be supported. The implementation period will be always specified by each R&D&I public tender programme call.

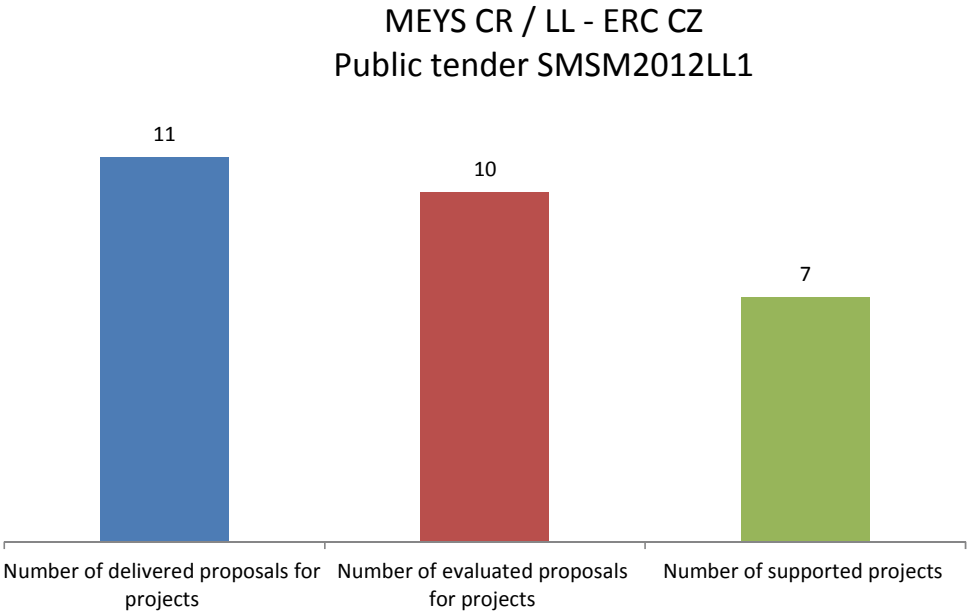
Both the receipt of support and project implementation must be concluded at the latest by 31 December 2019.

Anticipated amount of support for the entire duration of the programme (CZK thous.):

Period	2012	2013	2014	2015	2016	2017	2018	2019	Total
Support Amount	40 000	60 000	70 000	75 000	70 000	60 000	50 000	40 000	**465 000**

A research institution can receive up to 100 % of approved costs, provided that the conditions of Art. 3.1.1. Framework are met. The money can be used only for expenses directly related to the implementation of the project. The research projects will be of for-profit nature and will be implemented by research institutions as non-profit activities.

Graph 23: A graph showing evaluation of the last public tender
(Amount of specific support provided through the public tender: CZK 69 558 thousand)



Source: Research, Experimental Development and Innovation Information System

More information about the programme, including contacts, can be found at:
http://www.msmt.cz/vyzkum/program-navrat

6.6 Czech Liaison Office In Brussels – CZELO

The Czech Liaison Office – CZELO was established in Brussels in 2005. CZELO is a project of the Technology Centre of AS CR and it is supported by a MEYS grant as part of EUPRO – International Cooperation in Research and Development. This office facilitates better information exchange between the European Commission and the Czech research community.

Its main objective is to aid successful integration of Czech research into European research cooperation – especially through Framework Programmes. The office provides its services to researchers from all areas of research activities and to research organisations in the Czech Republic free of charge. Similar offices were established in Brussels by many other Member States; all such Liaison Offices are associated in an unofficial network called IGLO.

More information about the programme, including contacts, can be found at:
http://www.iglortd.org
http://www.czelo.cz/

6.7 Large Infrastructures for Research Development and Innovation

Large infrastructure for research, development and innovation (hereinafter only “Large Infrastructure”) is a unique research facility, including its establishment, related investment and the support of its activity, which is used for financially and technically demanding and comprehensive research and development activities and which is organised by a single research organisation for the use of other research organisations. In accordance with the provisions of Act No. 130/2002 Coll., § 3, Paragraph 2, d) and § 4, Paragraph 1, e), individual Large Infrastructure projects are approved by the government and are provided with a specific subsidy from the MEYS budget chapter (since MEYS is the organiser of the national and international research) provided by the state budget for research, experimental development and innovation, more specifically from the activities of specific expenditures of Large Infrastructure Projects for R&D&I.

Systematic steps were taken on the national level to strengthen the strategic approach in the area of Large Infrastructures. MEYS also formed a Council for Large Infrastructures for Research Development and Innovation (hereinafter only the “Council”). The task of the Council is to evaluate new proposals of Large Infrastructures for financing, monitoring and oversight of implementation of already financed projects and to evaluate strategic measures of the Czech Republic, both on the national and the European level.

As an equivalent of the ESFRI Roadmap (European Strategic Forum for Research Infrastructures) in the national environment MEYS prepared a Czech Roadmap for Large Infrastructures for research, development and innovation (hereinafter the “Roadmap”). This strategic document, approved by the government at the beginning of 2010, reflects the interconnection of large national infrastructures with the European research infrastructures and it is the first systematic document pertaining to this subject in this country.

The Roadmap divides Large Infrastructure projects contained within it into the six following thematic categories: Social Sciences and Humanities, Environmental Sciences, Physics of Materials and Space, Energy, Biomedicine and e-Infrastructures. It includes a total of 33 priority and 20 perspective Large Infrastructure projects. The Roadmap is a purely strategic document and it does not guarantee the implementation or financing of Large Infrastructure projects.

More information about the programme, including contacts, can be found at:
http://www.msmt.cz/vyzkum/velke-infrastruktury-vyzkumu

6.8 The Research Fund for Coal and Steel – RFCS

When the Czech Republic joined the European Union it also automatically became a member of the European Coal and Steel Community. The original focus of the Community (the Coal and Steel Community was formed in the 1950s and its activity ended on 23 July 2002) - the RFCS was gradually transformed (especially its financial resources) to the research programme in the area of coal and steel. The organiser of the Czech membership in the Community is MIT and the co-organiser is MEYS.

The Research Fund for Coal and Steel provides financial support for projects in the area of coal and steel for all business entities and research institutions. The Fund provides grants for research, pilot and demonstration projects that are separate from the EU Framework Programmes.

The main objective of the programme is defined as the support of competitiveness of industries connected to coal and steel. The priorities of the programme in the area of coal are the improvement of the competitive position of the EU, and health and safety in the mines, and the improvement of coal use as a clean source of energy. A total of 12 Coal and Steel Technical Groups were formed to evaluate and monitor projects; three of the groups are focused on coal. The Research Fund provides financing from its budget for approved and successfully evaluated projects – in the ratio of 27.8 % for coal and 78.2 % for steel. The option of co-financing coal-related projects from the RFCS budget is not fully used by organisations in the Czech Republic.

Applicants for support are mostly SMEs, other companies and research institutions. Potential applicants must be from the former ECSC countries (European Coal and Steel Community), from candidate countries, or they can also be from third countries if their project will benefit the programme objectives. The applicant's focus does not necessarily have to be directly related to coal and steel, but the research, technical and development plans must be in accord with the focus of the programme.

The programme supports activities such as research work leading to simplification of manufacturing; the equipment used in the project must be on a sufficiently high level.

In research projects the maximum financial contribution is 60 % of approvable costs, in pilot projects the maximum financial contribution is 40 % of approvable costs, in demonstration projects the maximum financial contribution is 40 % of approvable costs and in accompanying, supporting and preparation activities the maximum financial contribution is 100 % of approvable costs. The public financial subsidy can be used only for the purpose and for activities specified in the contract and only to cover costs related to the project. The budget of each calendar year is typically about € 53 million. The call of the Fund for submitting projects is on-going, with an annual close on 15 September.

The proposals of all projects are evaluated from the standpoint of compliance with the EU interests. Preference is given to projects that are well coordinated, complement and stimulate synergies among various programmes and facilitate mutual exchange of information between projects financed by the programme and the 7th FP.

More information about the programme, including contacts, can be found at:
http://www.isvav.cz/programmeDetail.do?rowId=7C
http://www.cordis.lu/coal-steel-rtd/home.html
http://ec.europa.eu/research/industrial_technologies

6.9 Competitiveness and Innovation Framework Programme (CIP)

The Competitiveness and Innovation Framework Programme – (CIP) was established by the EU in 2006 to stimulate competitiveness and to support innovation during the 2007–2013 period. The programme is administered by the European Commission and the Czech partner is the Ministry of Industry and Trade. The Competitiveness and Innovation Programme – (CIP) focuses on the support of innovation, including environmental innovation, business, information and communication technology and energy – 60 % of the budget is dedicated to small and medium enterprises.

6.10 Programme for the Competitiveness of Enterprises and SMEs (COSME)

The Competitiveness of Enterprises and SMEs (COSME) Programme was introduced on 30 November 2011. In the upcoming programme period (2014–2020) it will be focused on the support of competitiveness of enterprises – especially the small and medium sized ones. The programme will be focused on: simpler access to financing for small and medium enterprises, the creation of environment supporting forming and development of enterprises, promotion of business education in Europe, strengthening of long-term competitiveness of European companies, support of reorganisation of small and medium enterprises and their access to international markets.

For the 2014–2020 period € 2.5 billion will be allocated to this programme; this should contribute to the growth of the European GDP by more than € 1 billion.

More information about the programme, including contacts, can be found at:
http://www.mpo.cz/cz/podpora-podnikani/cip/
http://ec.europa.eu/cip/index_en.htm
http://www.enterprise-europe-network.cz
http://ec.europa.eu/cip/cosme/

6.11 Cooperation with the Russian Federation and Ukraine as Part of EU - STCU, ISTC

The support of research and development in the Russian Federation and Ukraine is also counted among the EU international cooperation activities in research and development. The original intention was to support the transition of military research to a civilian focus. There are two treaties under which the International Science and Technology Centre (ISTC) in the Russian Federation and the Science and Technology Centre in Ukraine (STCU) were formed.

These institutions organise scientific and technical cooperation between institutions in the EU Member States (ISTC and STCU partnership) and in the Russian Federation and Ukraine. ISTC/STCU (international science and technical centres) are intergovernmental organizations and were founded in 1992 based on a treaty between the EU, USA, Japan and the Russian Federation (and Ukraine).

Their objective is to offer highly qualified military research scientists working in the former Soviet Union an opportunity to change their focus to civilian activities.

More information about the programme, including contacts, can be found at:
http://www.istc.ru
http://ec.europa.eu/research/nis/en/istc.html

6.12 Financial Mechanisms FTA/Norway – FTA Grants Norway 2009 – 2014

Part of the measures introduced by the European Free Trade Association (EFTA) was the introduction of financial mechanisms through which the EFTA countries (Iceland, Lichtenstein and Norway) contribute to the new EU Member States and EFTA through expanded free market area projects. Additionally, Norway contributes assistance under the bilateral Norwegian Financial Instrument (Norsk Finansieringsordning). Based on both of the mentioned financial mechanisms the FTA states and Norway pledge to contribute to economically weaker countries of the European Free Trade Association by providing grants for investment and development projects in priority areas such as the protection and renewal of cultural heritage, environmental protection, support of the judicial system, health system and infant care, research and development in priority areas, etc.

The total amount allocated to the Czech Republic for the five-year period 2009–2014 is € 131.8 million; from that € 61.4 million is provided under the FTA Agreement and € 70.4 million under the Norwegian Financial Instrument Agreement.

The three basic priorities are Environmental Protection, Social Sciences and Health. All basic principles and rules pertaining to the ETA financial mechanism and Norway are stipulated by the European Free Trade Agreement between the EU, Iceland, Lichtenstein and Norway under the Norway Financial Instrument Agreement (2009–2014) and also by the memoranda of understanding between the Czech Republic, Norway and Lichtenstein. This involves chiefly the total amount provided for investment and development projects, the reasons of and priorities for drawing the allocated funds, the required amount of project co-financing, frequency of evaluation and, if applicable, re-allocation of unused funds.

More information about the programme, including contacts, can be found at:
http://www.mfcr.cz/cps/rde/xchg/mfcr/xsl/zah_pomoc.html
http://www.eeagrants.org/

6.13 Multilateral Intergovernmental Cooperation

6.13.1 COST (LD) Programme

The COST Programme (COST – originally European Cooperation in the Field of Scientific and Technical Research, now European Cooperation in Science and Technology) is a European multilateral cooperation in research and development focused on basic and applied research. COST coordinates research and development through its "Actions", in which scientists from the COST Member State (after approval by the Committee of High Representatives from other countries) can participate with their own projects. The basic working rule of the COST Programme is the "bottom-up" principle. The Actions are proposed by scientists and researchers working in a long-term system of open calls, which are organised by the COST office. The highest management body of the COST Programme is the Ministerial Conference, or during the interim periods the Committee of High Representatives from all COST Member States, the European Commission and the EU Council (or its secretariat, which comprises the COST secretariat).

More than 260 Actions are currently running – the Czech Republic is now represented in 162 currently running Actions and over time participated in over 500 Actions. Approximately 40,000 scientists from 36 COST European Member States and 50 scientific and research institutions from 14 other countries participate in this work.

Since 2003 COST has been closely cooperating with the European Science Foundation, based on an agreement between COST and EST. ESF received financing from the 6th and 7th Framework Programme on the basis of a project for the support of the COST offices and its other activities. This cooperation will conclude with the end of the 7th FP and so the future of COST is not entirely clear at the moment. The selection of new Actions is conducted via a two-stage mechanism: in the first stage (for announcement date see the COST website) any type of proposals, such as expressions of interest, is submitted; such short proposals are evaluated by Domain Committees and selected proposals are then expanded to full proposals. The full proposals are then evaluated by independent experts. The success rate of Action proposals is approximately 5 %, considering the number of submitted expressions of interest.

The Actions are coordinated by the Management Committee. Members of the Management Committee are representatives from Member States that joined the Action by submitting a Memorandum of Understanding (see below). Member States participate in the Actions through individual projects. At the commencement of the Action the projects are evaluated by the commissioner of the Action. If there are additional applications for acceptance, the decision is made by the Management Committee (one year after the commencement of the Action). Domain Committees – DC are formed. The DC members (including experts) representing the Czech Republic form the COST Committee in the Czech Republic. The COST

council examines proposals and recommendations for allocation of finances for COST project grants for each fiscal year and the Committee discusses the concept of scientific and organisational activities related to Czech participation in the COST Programme.

Memorandum of Understanding (MoU): The document has the character of an international treaty, which in its Technical Annexes formulates both scientific and legal aspects of the Actions. In the MoU the participants, among other things, pledge to share all results achieved during the implementation of the projects with all the other participants of the Action. The acceptance of the Memorandum of Understanding is managed by the national coordinator based on the fulfilment of the domestic procedures related to the admission to the COST Action.

Participation in a COST Action is possible either by joining an already existing Cost Action (especially at the beginning of the implementation period) or a new COST Action can be proposed (in such cases the period between the Action proposal and its approval is approximately one year). COST is known for its non-bureaucratic attitude and its forms are quite simple. An applicant submits a description of the project in English and two copies of the proposal form and he/she also must include a statement from the Management Committee regarding the suitability of the project. There are no set deadlines (except when calls for submission of new Action proposals are issued) and project proposals can be submitted on an on-going basis. The process includes roughly the following steps:

1. Selection of a suitable Action (proposal of a new Action)
2. Downloading the forms
3. Formulating the project plan
4. Requesting a statement from the Management Committee
5. Sending all documentation to the COST Secretariat in the Czech Republic – MEYS, waiting for the approval of the MoU
6. Start of research and joining the public tender process for the national project financing.

The financing of all projects is always done on the national level. COST does not provide financial support from its own budget; the COST budget covers costs related to research coordination, the approval process negotiations conducted by the COST executive bodies, operation of the COST offices and also projects called Short Scientific Missions. In the Czech Republic projects have specifically been co-financed since 1993 from the state budget in the form of public tenders.

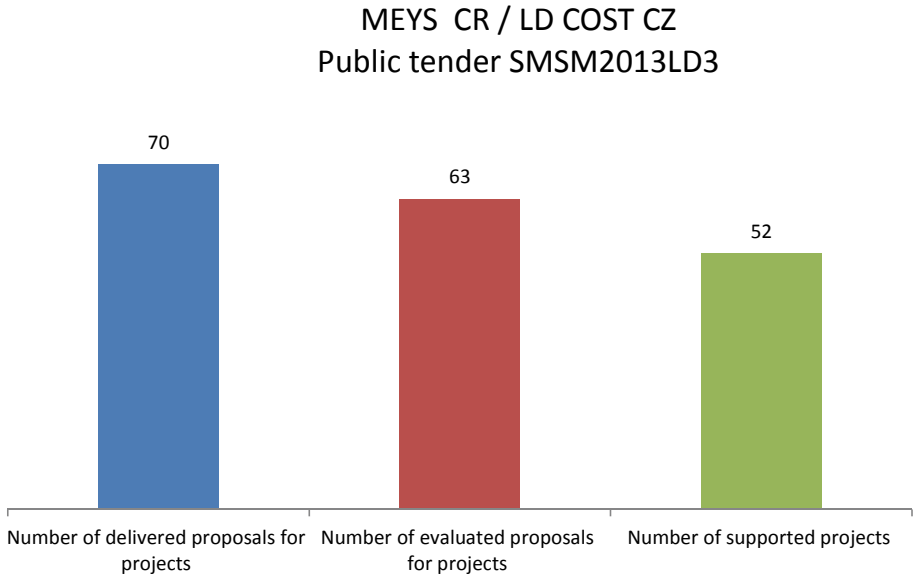
Anticipated amount of support for the entire duration of the programme (CZK thous.):

Period	2011	2012	2013	2014	2015	2016	2017	Total
Support Amount	35 468	63 300	103 000	132 000	133 000	105 000	70 000	**641 768**

Financial support is provided by MEYS according to the results of each public tender and based on the recommendations of the COST Council in the Czech Republic. In 2011 a new international cooperation programme in research and development was announced by COST CZ; it is a continuation of the previous COST international cooperation programmes.

The objective of the COST CZ programme is to provide support to research institutions conducting multilateral cooperation in basic research. The financial support provided by the COST CZ programme covers the implementation costs of projects approved by the appropriate COST Action Management Committee. The national COST (NCC) Coordinator is RNDr. Josef Janda from MEYS (tel.: +420 234 811 720).

Graph 24: A graph showing evaluation of the last public tender
(Amount of specific support provided through the public tender: CZK 63,632 thousand)



Source: Research, Experimental Development and Innovation Information System

More information about the programme, including contacts, can be found at:
http://www.msmt.cz/mezinarodni-vztahy/vyzkum-a-vyvoj-1/cost-evropska-spoluprace-ve-vedeckem-a-technickem-vyzkumu
www.cost.eu
www.msmt.cz

6.13.2 EUREKA Programme (LF)

The EUREKA Programme – European cooperation in the area of applied and industrial research and development was created in 1985, with the objective to support cooperation between industrial companies, research institutions and universities and to create conditions for increasing the technical advancement and efficiency of European industry, to develop its common infrastructure and to resolve problems involving more countries.

The EUREKA projects support civilian research and are focused on both the private and public sectors. Their output is state of the art products, technologies and progressive services that are able to compete well on the market. Their objective is active engagement of research and development mechanisms in the market economy, i.e. the need of practical commercial application of project implementation outputs.

The EUREKA Programme does not specify thematic tasks and it also does not centralise the financing and selection of its projects. It functions according to the rule that proposals and initiatives must come from the field (the bottom-up principle), from the individual enterprises and research institutions that express an interest in cooperation. For this reason, no limits are set on details such as total cost and project implementation time, number or participants, etc.

Currently EUREKA associates 40 European countries, and the European Union is its 41st regular member. The thematic focus of projects is not limited in scope and it emerges from the priority development areas of individual industrial sectors. In general, projects are focused on the following areas: information technology, the environment, biotechnology and healthcare technology, new materials, robotics and automation, communication technology, transportation, energy and laser technology. Parties interested in participation in the EUREKA Programme can follow one of two paths: Either submit their own project proposal with the objective of finding partners for its implementation or join an already approved project which meets the desired criteria.

Good quality preparation of an international project requires approximately 6 – 8 months; each project is proposed and managed by its participants and is subject to a minimal administrative burden. Proposals for projects, on the appropriate international forms, can be submitted to the Secretariat of the National Programme Coordinator at any time of the year – there are no deadlines.

Project criteria: cooperation of companies and research institutions - especially from two member countries, achieving significant progress (high-level innovation) in technical and utility value of the developed product, technology or services, future market value, financial profit brought by the implementation of the project; the implementation and output of the

project must be limited to the civilian sector, participants must have the technical, financial and management skills needed for the implementation of the project.

The EUREKA Programme does not create any common financial fund for the support of project implementation. The participants have to cover their own costs related to the projects, however, cooperation within EUREKA offers many options for the fast accumulation of funds from private sources, grants or loans from public sources, because in many countries, including the Czech Republic, it is possible to receive support for participating in the EUREKA Programme from public and other sources. The Czech government decided to financially support industrial companies, research institutions and universities participating in the EUREKA Programme projects from the state budget. Support provided to individual projects can comprise up to 50 % of cost of the research part of the implementation.

The EUREKA Programme Secretariat, headquartered in Brussels, conducts all tasks necessary for coordination of the programme, such as circulation of proposals for new projects or seeking suitable international cooperation partners, publishing information materials and maintaining the international database. The EUREKA Secretariat pays significant attention to the protection of information, intellectual property, industrial property rights and standardisation.

The national programme coordinator manages EUREKA Programme activity in individual Member States and conducts all activities related to the EUREKA Programme. It provides all necessary information, consulting and advisory services, international evaluation of projects and submission of the projects to the international EUREKA Programme network. It also provides financial support for project implementation.

The EUREKA Programme Council of the Czech Republic acts as an advisory body to MEYS. The Committee of High Representatives is the managing authority of the EUREKA Programme. It is comprised of high government officials from the Member States and a representative from the European Commission. This Committee is responsible for the preparation of the main strategic documents, exchange of information among the Member States about possible areas of cooperation, and it approves proposals for new projects and awards the EUREKA Programme status. The Ministerial Conference is the highest body of the EUREKA Programme. It is comprised of ministers from the Member States' governments and a representative of the EU Commission, who are responsible for the area of technical research and development. The Ministerial Conference makes decisions about the development, focus and objective of the programme and about admitting new members.

MEYS provides co-financing only to internationally qualified projects of the international EUREKA programme. In a 2011 public tender a continuation of an international cooperation programme in research and development, called EUREKA CZ, operating in the Czech

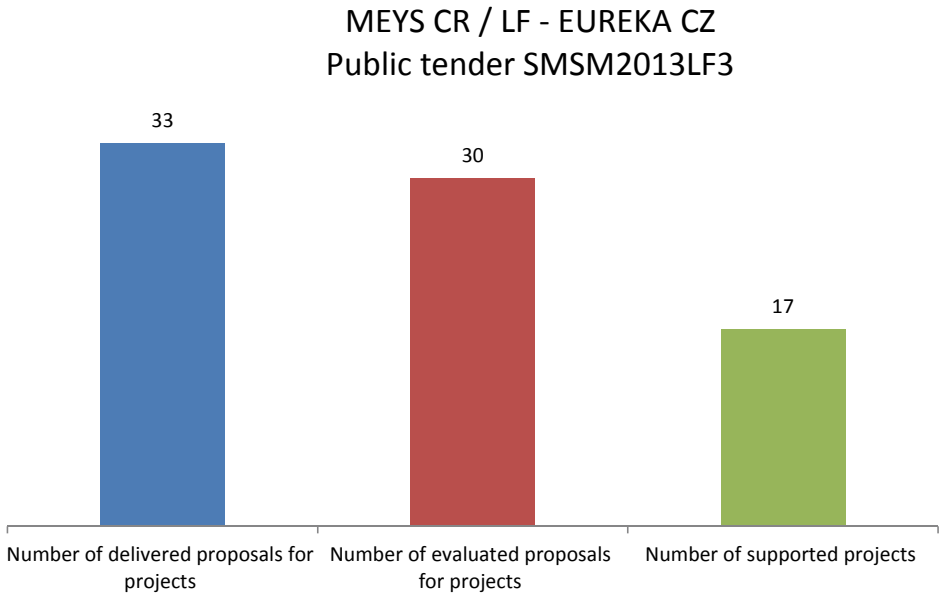
Republic, was announced for the first time. The international EUREKA programme remains without changes.

Anticipated amount of support for the entire duration of the programme (CZK thous.):

Period	2011	2012	2013	2014	2015	2016	2017	Total
Support Amount	36 000	69 134	108 000	140 000	148 000	105 000	70 000	**676 134**

Graph 25: A graph showing evaluation of the last public tender

(Amount of specific support provided through the public tender: CZK 111 478 thousand)



Source: Research, Experimental Development and Innovation Information System

More information about the programme, including contacts, can be found at:
http://www.eurekanetwork.org
http://www.msmt.cz

6.13.3 EUROSTARS Programme

The EUROSTARS Programme – European cooperation in the area of applied and industrial research and development - is a new European research and development programme. It makes possible co-financing of project implementation from the European Union budget. Its support is based on the rules of the EUREKA Programme; it uses the bottom-up principle and works in accord with the 7th Framework Programme and the Treaty on European Union. The EUROSTARS Programme was officially announced on 2 September 2007.

Similarly to other EU community programmes this programme is also primarily focused on the support of small and medium enterprises which also conduct research and development in addition to their main activity. The objective of this programme is to create new project activities with the participation of international consortia that will benefit small and medium enterprises working together or cooperating with research institutions and large companies, to support European small and medium enterprises, especially those with high growth potential, and to create new market opportunities and activities based on the results of research and development. The programme supports new products, technologies and services and helps to expedite their market application by shortening the time usually needed for this.

The EUROSTARS Programme currently associates 33 Member States. The Czech Republic is one of the founder states of this programme. The first contact point for getting information about the EUROSTARS Programme is the EUREKA National Coordinator.

More information about the programme can be found at:
http://www.eurostars-eureka.eu
www.msmt.cz

6.13.4 NATO Science Programmes – Civilian Research

The Science for Peace and Security Committee (SPS) was formed by the merger of the Science Committee and the Committee on the Challenges of Modern Society; it supports international cooperation in science and innovation. The objective of the SPS is to support security, sustainable development, increased stability and solidarity among nations aided by cooperation, infrastructure development, democratic development and economic growth. The SPS Programme includes activities financed from the NATO budget, based on applications submitted by scientists. Or it includes proposals prepared by the SPS Secretariat and on the national level, based on proposals prepared by the individual countries.

The SPS Programme offers grants to scientists from the NATO Member States, partner states and Mediterranean Dialogue states. Grants are also provided to academic institutions in partner states for the development of computer infrastructure and optimisation of electronic communication. Cooperation must be conducted between scientists from NATO Member States on one side and scientists from partner states or Mediterranean Dialogue states on the other. Completed applications are submitted to the NATO headquarters, where they are evaluated. Individual science areas are managed by international expert commissions that meet three times per year to evaluate submitted applications.

Scientists from the NATO Member States, partner states and Mediterranean Dialogue states can apply for SPS Programme grants. The applications must be submitted jointly by an applicant from NATO and an applicant from a partner or Mediterranean Dialogue Member State. The applications usually also include other partners from other NATO countries,

partner and Mediterranean Dialogue Member States - depending on the subject of the cooperation.

Applications can be submitted at any time. The deadlines for individual rounds are: 1 March, 1 July and 1 November.

Applications for financing from international sources are prepared by individual states, in compliance with the guidelines, and are focused on key priorities defined by the SPS Committee.

The priorities are divided into three categories: Counterterrorism, Other Security Threats and Partner State Priorities.

The grant mechanisms that will be implemented are: Pilot Studies - PS: study duration 3 – 5 years; Short-term Projects - STP: specifically focused projects with a duration 12 – 24 months; and Topical Workshops - WS. Support Grants serve as financial support for the participation of international experts in national projects.

NATO – Russia Scientific Council (NCR)
This is a specific programme supporting cooperation between scientists from Russia and NATO countries in seven priority areas: detection of explosives, psychological and social ramification of terrorism, disaster prediction and prevention, cyber security, transportation safety - including cross-border, and topics related to environmental protection. Applications can be submitted at any time. The deadlines for individual rounds are: 1 March, 1 July and 1 November.

More information about the programme, including contacts, can be found at:
http://www.nato.int/science/about_sps/introduction.htm

6.13.5 European Space Agency (ESA)

The European Space Agency (ESA) is an international organisation for the development of space research and technologies and their applications. ESA's main mission is to coordinate and harmonise the European strategy and policy for astronautic research, broaden scientific knowledge about our planet, the solar system and space and about materials and life organisms using the International Space Station, satellites and interplanetary probes, to provide a broad technical base and support for the European industry, to be able to produce and operate space systems and supporting ground infrastructure and to use the technical knowledge and skills acquired to satisfy the ever increasing demands of society and the market.

The ESA activity programme and its scope, determined by the amount of available financing, is set by the ESA Ministerial Conference. The Ministerial Conference meets once every three years and is comprised of ministers from the Member State governments. The last ESA Ministerial Conference met in 2008 in the Hague; the next meeting will take place in the second half of 2012.

ESA on-going activity is managed by the ESA Council and its Committees (IPC – Industrial Policy Committee, SPC – Scientific Programme Committee, AFC – Administration and Finance Committee, IRC – International Relations Committee) The activities of the ESA optional programmes are managed by Programme Committees. All the managing authorities are comprised of delegated representatives of Member States and states participating in specific optional programmes. The Czech Republic became an ESA member on 12 November 2008. ESA activities are divided into mandatory and optional.

The mandatory activities are the General Study Programme (GSP), the Scientific Programme (SP), the Science Core Technology Programme (CTP), Technology Transfer Programme (TTP), the Innovation Triangle Initiative (ITI), the European Components Initiative (ECI), the Guiana Space Centre (CSG - *Centre Spatial Guyanais*) and the Student Experimental Programmes (BEXUS, REXUS, FYT, DYT, SYT).

The Czech Republic is participating in optional programmes in the area of scientific research, the Programme for the Development of Scientific Experiments (PRODEX), the General Support Technology Programme (GSTP), the European Life and Physical Sciences in Space (ELIPS) (in conditions of micro gravity), the Future Launchers Preparatory Programme (FLPP, ETHE), the Global Navigation Satellite System (GNSS Evolution) and the Advanced Research in Telecommunications Systems (ARTES 1, ARTES 3-4, ARTES 10, ARTES 20).

More information about the programme, including contacts, can be found at:
http://www.esa.int/esaCP/Czech.html

6.13.6 The European Science Foundation (ESF)

European Science Foundation The European Science Foundation (ESF) is an association of European national organisations responsible for the support of scientific research. It was founded in 1974, is headquartered in Strasbourg and brings together 78 member organisations from 30 countries. Members include scientific institutions, academies, grant agencies, etc. The ESF is an independent non-profit organisation whose members receive contributions from the government budgets of the individual Member States. The ESF, for example, administers the COST Programme - it acts as the COST Implementation Agent – through the 7^{th} FP.

The ESF's objective is to create and develop contacts among scientific researchers from different countries and to support cooperation in important projects. This cooperation

should also enable more comprehensive use of large, expensive scientific equipment. One of ESF's priorities is to define new directions for European research based on the results of common research.

The ESF member organisations that have been representing the Czech Republic since 1999 are the Grant Agency of the Czech Republic (GA CR) together with the Academy of Sciences of the Czech Republic (AS CR). The ESF is a non-governmental organization.

More information, including contacts, can be found at:
http://www.gacr.cz/mezinarodni-aktivity/esf/

6.13.7 European Molecular Biology Conference (EMBC)

The European Molecular Biology Conference – EMBC is an intergovernmental organisation supporting activities in molecular biology and related fields.

The European Molecular Biology Organisation (EMBO) is a non-governmental organisation associating top European scientists from the various fields in molecular biology. The EMBO provides support for the implementation of the EMBC General Programme on the basis of evaluation and selection; for this reason the individual activities of the General Programme carry the EMBO name.

The EMBC and the EMBO jointly award more than 600 stipends for research and organise more than 70 practical courses and conferences. Each year there are two deadlines for submitting applications – 15 February and 15 August.

The young scientist programme organised by the EMBO gives awards to excellent young scientists who have already opened their own laboratories. Young scientists selected by this programme receive the prestigious award for the quality of their scientific work. The recipients of the award also receive a three-year grant in the amount of € 15,000 per year and have the unique opportunity of meeting previous recipients and EMBO members. The application deadline is 1 April.

A special Installation Grant was created in selected EMBC Member States to support research in molecular biology and related sciences; the Czech Republic is one such Member State. The grants are designed for research team leaders who want to start their own laboratory and have an excellent publication portfolio and an offer from the organisation by which the laboratory was founded. One of the conditions is that the applicant has worked for at least two consecutive years outside of the country in which he/she wants to open the laboratory. The annual application deadline is 15 April.

The EMBC also supports the EMBO Science for Society Programme, which provides space for dialogue between scientists and other members of society and the Electronic Information Programme, providing web-based services for the EMBO scientific community.

The EMBC budget also provides funds for prestigious European meetings that support cooperation and sharing of the most recent achievements and advances in molecular biology. The meetings are visited by more than 5000 scientists each year. Practical courses help in the acquisition of new skills in the use of state-of-the-art technologies and workshops serve as discussion forums for scientist from different fields.

More information about the programme, including contacts, can be found at:
www.embo.org/
www.embc.org/

6.13.8 Organisation for Economic Cooperation and Development (OECD)

The Organisation for Economic Cooperation and Development – OECD is an intergovernmental organisation that associates 34 countries from around the world. The Czech Republic has been a member since 1995.

The active participation of MEYS in cooperation in the area of research and development is focused primarily on the preparation of reports and comprehensive questionnaires, which then serve as the basis for forming the research and development policies of the Member States (Science, Technology and Industry Outlook), participation in horizontal thematic projects (for example Innovation Strategy, Green Growth Strategy) and their implementation or participation in selected areas such as research organisations, new technologies creating the foundation for economic growth and cooperation between the public and private sectors. This activity is also connected to providing human resources, know-how, skills and career growth and also with participating in international cooperation in the context of the growing importance of using and sharing know-how from various areas of research, development and innovation among the OECD Member States.

The current OECD strategy focuses its activity on the type of projects in which activities are shared by individual committees which make use of their ability to employ an analytical and multidisciplinary approach on the basis of which it is possible to formulate qualified recommendations for resolving current problems. The global character of current problems also requires improving cooperation with some non-Member States and international organisations.

More information is available at: http://www.oecd.org

6.13.9 European Southern and Northern Observatory (ESO, ENO)

Since January 2007 the Czech Republic has been a regular member of the European Organisation for Astronomical Research in the Southern Hemisphere, also known as the European Southern Observatory, where astronomical and astrophysical research is conducted. The ESO headquarters is located in Garching, near Munich. It is also an administrative, technical and scientific centre, and part of it is the European Centre for Hubble Space Telescope Observation. Membership brings not only the opportunity to use the unique telescopes for astronomical and astrophysical observations but also the possibility of getting a contract for the design of new ESO equipment, or for the modernisation and maintenance of the existing equipment.

More information about the programme, including contacts, can be found at:
http://www.eso.org/public
http://www.CzechTrade.cz

6.13.10 CERN and JINR Dubna

The Czech Republic is a regular member of the CERN and JINR Dubna, international organisations for research in the area of nuclear and sub-nuclear physics and physics of elementary particles and high energy. Cooperation is organised by the Committees for Cooperation with CERN and the Committee for Cooperation with JINR Dubna. In 2009 the largest supercollider in the world – LHC (Large Hadron Collider) was festively brought back into operation after a repair. In 2012 the supercollider was shut down again. Czech membership in both organisations has been managed and also partially financed since 2004 by the Ministry of Education, Youth and Sports (O31 – the Department of Research and Development of MEYS) and the Ministry of Foreign Affairs. The CERN projects are also partially supported by the INGO II Programme.

Participation of the Czech institutions in major CERN programmes, such as ATLAS, ALICE, COMPASS, TOTEM and others, are financially secured from the specific expenditures of the MEYS budget for international cooperation in research and development.

More information about the programme, including contacts, can be found at:
http://www.cern.ch
http://www.particle.cz/vyborcern

6.13.11 Other International Cooperation Institutions

The Central European Initiative – CEI is a regional association of 18 states focused on the development of cooperation among the Member States and it supports its members who are not members of the European Union in their process of integration into the European Union. It aids their transformation and also the development of regional cooperation in a number of thematic areas, including research and development. The Central European Initiative is focused on strengthening cohesiveness and solidarity in Europe and it tries to prevent the development of new boundaries dividing the continent.
More information is available on the website at: http://www.ceinet.org/

The Visegrad Group reflects the effort of the Central European countries to cooperate in areas of common interest. Cooperation is organised on many levels during regular meetings. The work group (usually the Slovenian Republic is also invited) meets annually on the ministerial or vice-ministerial level in one of the Member States. Subjects include exchange of experience and proposals of common approaches for participation in EU programmes and projects.

The Salzburg Group is an initiative of ministers of the interior of 10 countries which meet annually in Salzburg, Austria and work on further development of cooperation in the area of politics. Other meetings take place during the negotiations of the Council for Competitiveness with the objective to harmonise common approaches. In the Salzburg Declaration (8/2009) Member States pledged to maximise the benefits of the European Research Area. Another objective of the Salzburg Group is to support the development of professional skills and to provide political support to the future presidencies which will be held by Salzburg Group members.

The Danube Strategy is the second EU macro-regional strategy after the Baltic Strategy; the Council conclusions were approved by the General Affairs Council on 12 April 2011. The macro-regional strategy is a new regional cooperation concept. The most important document for strategy implementation is the Action Plan, which identifies areas where regional cooperation should be further developed and problems and challenges that should be addressed by projects implemented under the common Strategy.

Von Kárman Institute for Fluid dynamics (VKI) – is an international association that conducts research and education of experts working in the area of liquid dynamics. It was founded in 1956 with the objective of improving the qualification and skill level of experts working in aircraft and aircraft propulsion manufacturing and scientific and research experts working in the area of liquid mechanics. The association also supports the dissemination of state-of-the-art know-how from the area of fluid mechanics and its own theoretical and experimental research and development of numerical methods in the area of internal and external aerodynamics. Information on current programme calls and stipends can be found at: http://www.vki.ac.be

Some of the other multilateral activities in which the Czech Republic participates are:

- **The Institute Laue – Langevin** (http://www.ill.eu/) – Grenoble – synchronised radiation
- Synchrotron **Elettra** – **Italy** (http://www.elettra.trieste.it/about/alliances-and-partnerships.html)
- **The Pierre Auger Observatory** (http://www.auger.org/) – cosmic rays – Argentina.

6.14 Bilateral Cooperation

The legal framework for the participation of the Czech Republic in bilateral international cooperation in research and development is based on treaties on scientific and technical cooperation concluded by the Ministry of Education, Youth and Sports, cultural treaties concluded jointly by the Ministry of Education, Youth and Sports, the Ministry of Culture and the Ministry of Foreign Affairs and treaties on economic, industrial, scientific and technical cooperation also concluded jointly by the Ministry of Education, Youth and Sports and the Ministry of Industry and Trade.

International cooperation in research and development activities include the MOBILITY Programme supporting the mobility of research scientists, CONTACT II, supporting international cooperation in research and development, and GESHER/BRIDGE, a programme of international cooperation between the Czech Republic and the State of Israel in applied research and experimental development. They provide the frameworks for bilateral international cooperation support in research and development.

6.14.1 The MOBILITY Programme – Promoting International Cooperation in R&D and Supporting the Mobility of Research Scientists

The objective of the MOBILITY Programme, supporting research scientists working the area of research and development, is to help establish contacts and develop cooperation among institutions working in the area of research and development in the partner states by supporting the mobility of research scientists (work exchanges) cooperating on international basic research projects.

The research activities supported by the MOBILITY Programme are usually two-year projects; in this context the policy of the Czech Republic is that institutional support provided to projects with implementation teams comprised of the same staff should not be repeated more than three times. A six-year period is considered sufficient to establish contacts among partner institutions, to develop their cooperation and to create joint research teams for projects with the objective of seeking other sources of financing.

The support of projects under the MOBILITY Programme consists in the financing of travel and accommodation expenses for research scientists working abroad, where the sending party covers travel expenses for the project implementing party to and from its place of accommodation in the receiving party's country (including health insurance costs) and the receiving party covers its room and board expenses (accommodation, food and daily allowance). Generally, short-term stays of 1 – 15 days and long-term stays of 1 – 3 months are supported under the MOBILITY Programme.

Expenses related to international travel (including health insurance costs) are calculated by the Czech Principal Investigator for joint research projects; the maximum amount of support provided by the Ministry of Education, Youth and Sports for a single trip abroad is CZK 15 000 for European countries and CZK 50 000 for non-European countries. The amount of contribution which a Czech Principal Investigator of a joint research project can receive to cover expenses of the foreign project Principal investigator related to accommodation in the Czech Republic (accommodation, food and daily allowance) is CZK 2 000 per day for short-term stays and CZK 30 000 per month for long-term stays.

The maximum amount of support provided by the Ministry of Education, Youth and Sports for implementation of joint research projects conducted with European countries is CZK 100 000 per year, i.e. CZK 200 000 for the entire implementation period, and CZK 160 000 per year, i.e. CZK 320 000 for the entire implementation period if cooperation is conducted with non-European countries.

Participation of research scientists in seminars, conferences, conventions and other meetings conducted in partner states is not supported under the MOBILITY Programme, unless participation is directly related to the implementation of the joint research project.

Applicants for institutional support under the MOBILITY Programme can be individuals, public universities, public research institutions and other research entities which qualify as research organisations under Art. 2.2. d) of the Community Framework for State Aid for Research and Development and Innovation (2006/C 323/01), and the submitted proposals of the joint research projects must qualify as proposals for basic research projects as defined in Art. 2.2. e) Community Framework for State Aid for Research and Development and Innovation (2006/C 323/01).

In general, joint research project proposals must be submitted simultaneously by the Czech part of the team in the Czech Republic and the foreign part of the implementation team in the partner state, and they must comply with the criteria set by the providers of the support. The joint research project proposals are then evaluated separately on the national level in each of the partner states. The final selection of proposals for joint research projects receiving public fund support in the partner states is conducted based on expert evaluation conducted by an international committee comprised of representatives of the support providers.

The Czech Republic is currently cooperating with the following countries under the MOBILITY Programme: Argentina, France, Germany, Poland, Austria, Greece and Slovakia.

More information about the programme, including contacts, can be found at:
http://www.msmt.cz/mezinarodni-vztahy/vyzkum-a-vyvoj-1/dvoustranne-spoluprace

6.14.2 “CONTACT II" International Cooperation in Research and Development (LH)

The purpose of the international cooperation in research and development programme, CONTACT II, is the support of bilateral international basic and applied research projects and especially those developed in cooperation with countries that are not members of the European Union.

Applicants for specific support under the CONTACT II Programme can by individuals who are active in research and development, public universities, public research institutions and other research entities that qualify as research organisations and small and medium enterprises; especially those cooperating with research institutions. An organisational branch of a state or an organisational unit of a ministry can also apply for specific support.

This means that the Ministry of Education, Youth and Sports can finance:

- Personnel expenses;
- Expenses for instruments and equipment;
- Expenses incurred in contractual research, development of technical know-how and patents;
- Costs of consulting and equivalent services;
- Additional overhead costs directly related to the research project;
- Other operational costs, including costs of materials.

Joint research projects under the CONTACT II Programme are conducted based on a financing principle where each of the contracting parties covers only costs accrued on its side, i.e. the Ministry of Education, Youth and Sports covers only costs accrued on the side of the Czech implementation team of the joint research projects and vice versa. It is not necessary for the amount of support provided to the Czech implementation team of the joint research project by the Czech side and the amount of support provided to the foreign implementation team of the joint research project by the partner party to be equal. Also the structures of the qualifying costs of the project do not have to be identical on each side.

A research, development and innovation public tender, under which the CONTACT II proposals for joint research projects are submitted, is announced each year on the website of the Ministry of Education, Youth and Sports.

Anticipated amount of support for the entire duration of the programme (CZK thous.):

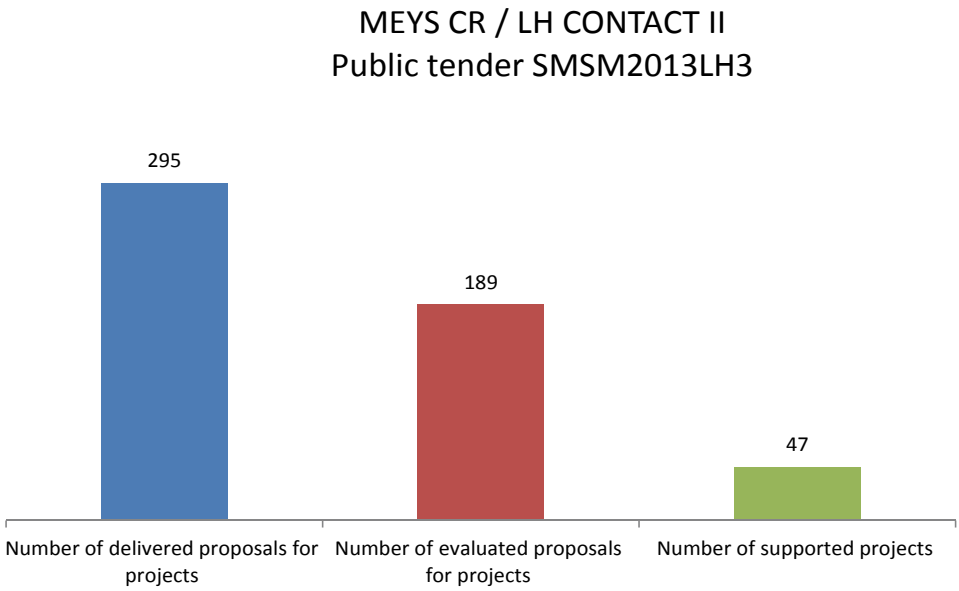
Period	2011	2012	2013	2014	2015	2016	2017	Total
Support Amount	33 825	55 336	91 000	131 000	128 000	95 000	60 000	**594 161**

In general, a joint research project proposal must be submitted simultaneously by the Czech part of the team in the Czech Republic and the foreign part of the implementation team in the partner state and it must comply with the criteria set by the support providers. The joint research project proposals are first evaluated separately on the national level in each of the partner states. The final selection of proposals for joint research projects which will receive public fund support in the partner states is conducted based on expert evaluation conducted by an international committee comprised of representatives of the support providers. Approved project proposals are then published as winning proposals in the announcement of results of the public tender in research, development and innovation for the CONTACT II programme.

The Czech Republic is currently cooperating with the following states under the MOBILITY Programme: People's Republic of China, Israel, India, Japan, Republic of Korea, Russian Federation and the United States of America.

Graph 26: A graph showing evaluation of the last public tender

(Amount of specific support provided through the public tender: CZK 74 842 thousand)



Source: Research, Experimental Development and Innovation Information System

More information about the programme, including contacts, can be found at:
http://www.msmt.cz/mezinarodni-vztahy/vyzkum-a-vyvoj-1/program-kontakt-ii-lh

People's Republic of China

The call for submitting proposals for joint Czech-Chinese research projects is announced once every two years in the contracting party states. On the Czech side this is done in the

form of an announcement of a CONTACT II research, development and innovation public tender.

E-mail contact in the Czech Republic: luoq@most.cn
Website: http://www.most.gov.cn/eng/

Japan

The Czech side supports joint Czech-Japanese research projects based on an agreement between the Ministry of Education, Youth and Sports and the Academy of Sciences of the Czech Republic on the support of bilateral Czech-Japanese scientific cooperation. The agreement was concluded to support public universities in their participation on the implementation of the Memorandum of Understanding on scientific cooperation between the Academy of Sciences of the Czech Republic and the Japan Society for the Promotion of Science. Each year three joint projects with a two-year implementation period are supported from public funds.

On the Czech side participants can be scientific institutions of the Academy of Sciences of the Czech Republic, public universities or other research institutions cooperating with universities and research institutions that fall under the jurisdiction of the Japanese Ministry of Education, Culture, Sport, Science and Technology.

E-mail contact in Japan: nikokukan@jsps.go.jp
Website: http://www.jsps.go.jp/

Republic of Korea

The call for submitting proposals for joint Czech-Korean research projects is announced once every two years in the partner states. On the Czech side this is done in the form of an announcement of a CONTACT II research, development and innovation public tender.

Website: http://www.mest.go.kr/

Russian Federation

The call for submitting proposals for joint Czech-Russian research projects is announced every year in the contracting party states.

E-mail: info@mon.gov.ru
Website: http://eng.mon.gov.ru/

The United States of America

The call for submitting proposals for joint Czech-American research projects is announced every year in the contracting party states. On the Czech side this is done in the form of an announcement of a CONTACT II research, development and innovation public tender. More information on submitting proposals for joint projects is available at the American Science Information Center, o.p.s. (AMVIS).

AMVIS was founded in 2002 as a non-profit and non-governmental organisation. AMVIS's objective is to provide information, consulting and advisory services in the area of international cooperation in science and research, help with seeking suitable partners, financial sources and developing contacts between Czech and American non-governmental institutions active in the area of science, research and commercial application of technology. AMVIS participates in the preparation and organisation of specialised seminars and conferences. Its services are available to universities, public and private sector research institutions and individuals active in science and research.

E-mail: amvis@amvis.cz
Website: http://www.amvis.cz/

J. William Fulbright Commission

The J. William Fulbright Commission is a state contributory organization whose establishing entity is the Ministry of Education, Youth and Sports. The Commission is co-financed by the governments of the Czech Republic and the United States. The American side provides funds for all personnel expenses for Commission Employees (including wages and all other related costs required by law) and the operation of the Educational Exchange of the Commission, which provides information about studies in the United States, and the Czech side covers Commission expenses for the operation of its office space. The individual stipend programmes are co-financed by both of the partner states.

The main objective of the J. William Fulbright Commission is the support of educational, scientific and cultural exchanges between the Czech Republic and the United States of America. The Commission organises activities including stipends, grants and other programmes for study, teaching and research in the Czech Republic and the United States of America. Programme administration includes receipt of proposals, organising tenders, providing support for Czech stipend holders in the United States of America and selecting and supporting American stipend holders in the Czech Republic.

More information about the programme, including contacts, can be found at:
http://www.fulbright.cz/

6.14.3 The EUPRO II (LE) Programme

EUPRO (OK)

The EUPRO (OK) Programme supports the Czech Republic's participation in international research and development cooperation projects. The last public tender (VES10) was announced in 2009; projects accepted into this programme must be completed by 2012, when this programme will be concluding.

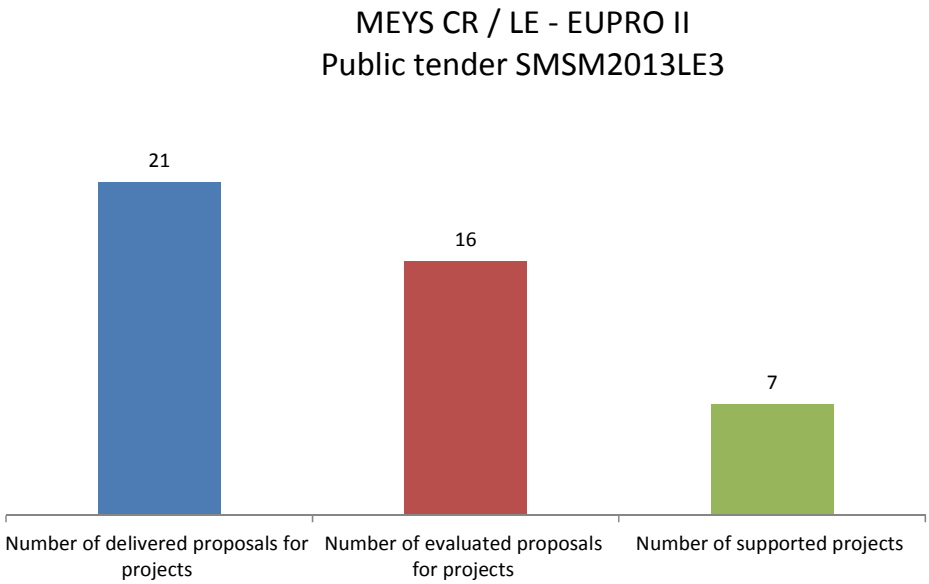
EUPRO II (LE)

The EUPRO II (LE) Programme acts as a continuation of the EUPRO Programme. The EUPRO II Programme's first public tender was announced in 2010 (VES11). The objective of the EUPRO Programme was and still is to promote the integration of Czech research and development into the network of EU institutions, especially in the form of participation in the EU research and development Framework Programmes. The main objective of the EUPRO Programme is to provide support in preparation and participation of principal investigators from the Czech Republic, with a special focus on organisational aspects of this preparation. The NICER III Project (National Information Centre for European Research) followed up on the previous projects supported by MEYS. The EUPRO II Programme is announced each year in the form of a repeated single-tier public tender in research, development and innovation.

Anticipated amount of support for the entire duration of the programme (CZK thous.):

Period	2011	2012	2013	2014	2015	2016	2017	Total
Support Amount	26 000	43 485	64 000	84 000	80 000	60 000	40 000	**397 485**

Graph 27: A graph showing evaluation of the last public tender
(Amount of specific support provided through the public tender: CZK 78 091 thous.)



Source: Research, Experimental Development and Innovation Information System

More information about the programme, including contacts, can be found at:
http://www.tc.cz
http://www.msmt.cz/mezinarodni-vztahy/vyzkum-a-vyvoj-1/program-eupro-ii-le

6.14.4 The INGO II (LG) Programme

The INGO II (LG) Programme 2011 - 2017

The INGO II 2011 – 2017 Programme continues the work of the INGO (LA) Programme and was launched in 2011. The objective of the INGO II (LG) Programme is to promote the participation of Czech scientific institutions in research programmes conducted by top international non-governmental organisations and the participation of Czech scientists in the management bodies of international scientific organisations. The programme is divided into two sub-programmes.

The objective of the INGO II – INFRA Programme is to promote and simplify the cooperation of Czech scientific institutions with top European and other international non-governmental research organisations by providing the funds for fees related to their participation in international research and development non-governmental organisation projects and by supporting the research they conduct.

The objective of the INGO II – POPLATEK *(Fee)* Programme is to promote the representation of Czech scientists in management bodies of specialised international associations. The INGO II – POPLATEK *(Fee)* Programme does not support regular membership of individuals or institutions.

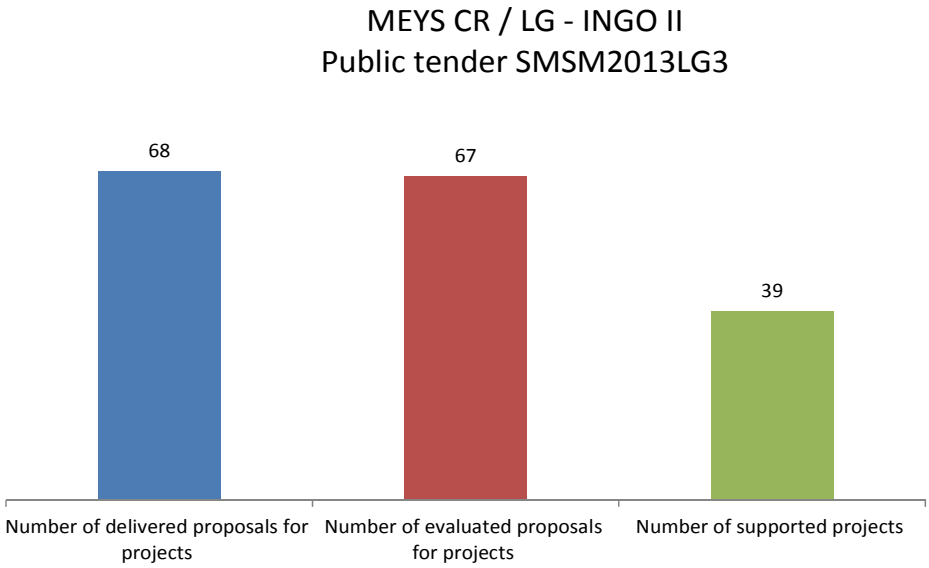
The INGO II (LG) Programme supports basic research programmes whose implementation period does not exceed three years. Applicants for specific public fund support can be public universities, public research institutions and other research organisations. The INGO II Programme is announced each year in the form of a repeated single-tier public tender in research, development and innovation. Cooperation of the Czech Republic with the Pierre Auger Observatory in Argentina is also supported under the INGO II Programme.

Anticipated amount of support for the entire duration of the programme (CZK thous.):

Period	2011	2012	2013	2014	2015	2016	2017	Total
Support Amount	30 000	48 352	140 000	175 000	190 000	165 000	75 000	**823 352**

Graph 28: A graph showing evaluation of the last public tender

(Amount of specific support provided through the public tender: CZK 267 814 thous.)



Source: Research, Experimental Development and Innovation Information System

More information about the programme, including contacts, can be found at:
http://www.msmt.cz/mezinarodni-vztahy/vyzkum-a-vyvoj-1/program-ingo-ii-lg
http://www.auger.org

6.14.5 GESHER/BRIDGE (LJ) – Programme of International Cooperation in R&D between the Czech Republic and the State of Israel

The GESHER/BRIDGE Programme is a programme of international cooperation in applied research and experimental development between the Czech Republic and the State of Israel. It was designed specifically to fulfil the programme of the Agreement between the Government of the Czech Republic and the Government of the State of Israel on bilateral cooperation in the support of industrial research and development in the private sector, which was signed in Prague on 30 March 2009. The programme commenced in 2010. The duration of the programme has been set until 31 December 2016.

The goal of the GESHER/BRIDGE (LJ) Programme is to provide institutional support to projects and to promote international bilateral cooperation of companies in both countries in applied and industrial research, and experimental development in the areas of:

- Information and communication technologies,

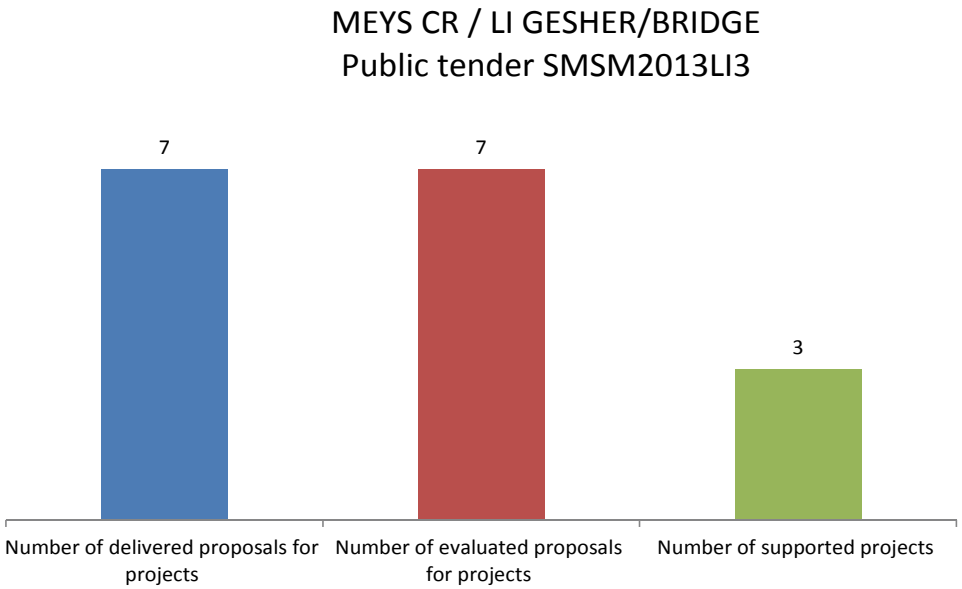
- Sustainable and clean technologies,
- Organic agriculture and food processing technologies,
- Biotechnology and medical technology,
- Mechanical engineering (new materials, nanotechnology, cybernetics and robotics).

The GESHER/BRIDGE Programme is announced in the form of a repeated single-tier public tender. The Ministry of Education, Youth and Sports is the programme administrator and support provider. CzechInvest, the Investment and Business Development Agency, is the implementation agency.

Anticipated amount of support for the entire duration of the programme (CZK thous.):

Period	2011	2012	2013	2014	2015	2016	2017	Total
Support Amount	20 000	40 000	60 000	60 000	60 000	40 000	20 000	**300 000**

Graph 29: A graph showing evaluation of the last public tender
(Amount of specific support provided through the public tender: CZK 15 434 thous.)



Source: Research, Experimental Development and Innovation Information System

More information about the programme, including contacts, can be found at: http://www.czechinvest.org/1program-geshermost

6.14.6 Antarctic Cooperation

Argentina

The Treaty implementation bodies are, on the Czech side, the Ministry of Foreign Affairs in cooperation with the Ministry of Education, Youth and Sports and on the Argentine side the National Antarctic Directorate at the Ministry of Foreign Affairs, International Trade and Worship. The Treaty provides the legal framework for both parties to develop cooperation on the Antarctic territory, in the area of science, technology, logistics and environmental protection. The Treaty enables exchanges of scientific and technical personnel, participation in joint science programmes, joint use of scientific equipment and research laboratories and sharing scientific information.

Chile

The Treaty implementation bodies are the Ministry of Education, Youth and Sports on the Czech side and the Ministry of Foreign Affairs, working through the Chilean Antarctic Institute, on the Chilean side. Under the Treaty, the parties pledged to cooperate in the following areas in particular: preparation of joint scientific and technical projects, exchange of information in areas of common interest, support of education and professional human resource training, improvement of transport in Antarctic areas.

The contracting parties anticipate that cooperation will develop on the basis of the Treaty primarily in areas such as physics of the atmosphere, cosmic rays, meteorology, geology, geophysics, palaeontology, oceanic and terrestrial environmental protection, glaciology, biology and medical science, with a focus on uncovering changes of global importance which can be observed in Antarctica, and observation and monitoring of such changes.

More information about the programme, including contacts, can be found at:
http://www.msmt.cz/mezinarodni-vztahy/vyzkum-a-vyvoj-1/antarkticka-spoluprace

6.15 Institutional Support

The objective of the Institutional Support for the Support of Participation in International Cooperation in Research and Development Programmes (supplementary financing) is to contribute a certain part of financing from the government budget of the Czech Republic to research institutions which successfully participate in international cooperation research and development projects, provided that public financing of this share is allowed and that the projects are supported from the government budgets of other states or from the European Union budget or are supported by other international organisations.

The goal of the programme is to motivate Czech research teams to a greater degree of participation in community programmes and to contribute through the Czech participation to returning the maximum amount of funds for research and development back to the Czech Republic. At the present time supplementary financing is provided for the following programmes:

- **7A** – 6th Framework Programme of the European Union for Research, Technical Development and Promotional Activities;
- **7B** - Community Programme on the Conservation, Characterisation, Collection and Utilisation of Genetic Resources in Agriculture;
- **7C** - Research Programme of the Research Fund for Coal and Steel;
- **7E** – 6th Framework Programme of the European Union for Research, Technical Development and Promotional Activities;
- **7F** - Financial mechanisms ERA/Norway;
- **7G** - Seventh Framework Programme of the European Atomic Energy Community (Euratom) for Nuclear Research and Training Activities;
- **7H** - Joint Technology Initiatives (JTI).

The procedures of institutional support of international cooperation projects in research and development are administered by the Ministry of Education, Youth and Sports, Department of Research and Development.

6.16 Contacts

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http://www.czechinvest.org/

CONCLUSION

The present publication brings information about the current system of public support of research and development in the Czech Republic. The system is still administratively cumbersome and difficult to work with, despite repeated efforts to simplify it. The complexity of the system has a negative impact on, among other things, the timely and correct distribution of funds, especially from the EU Structural Funds and also the Czech state budget chapters.

The situation in the Czech Republic began to approach the situation in the EU in terms of R&D&I support and other R&D&I entry indicators, but this process slowed down significantly after the financial crisis in 2009. The situation with R&D&I results has been very similar. Especially in the last few years the number of results has increased, both publications and applications, but very few of these are truly excellent. The greatest weakness remains the transfer of R&D&I results into innovation and practice. The low number of implemented results significantly affects the overall contribution R&D makes to the Czech economy, making it relatively low, compared to input.

Currently, both positive and negative impacts of the 2008 R&D&I Reform, which gave a different direction to many aspects of the R&D&I system, have started to be apparent. In 2011 the International R&D&I Audit, the results of which are already available, was completed and specific steps regarding the R&D&I system are being taken. The process of change, however, is significantly complicated by many external factors, starting with the impact of the financial crisis and steps taken to reduce the state budget deficit, which resulted in a reduced growth rate of the overall and government budget for R&D&I expenditures (the 2008 Reform anticipated 8 % annual growth), and finally slow and interrupted drawing of support from Structural Funds, which due to their volume play a significant role in the area of R&D&I – not only in the period ending in 2015, but also going forward (condition of sustainability for R&D&I OP centres etc.).

Despite all the shortcomings of the R&D&I system there are ways to secure support for high-quality research projects and other research activities in the Czech Republic and to maintain and develop the standard of Czech research and development and in so doing to come closer to the level of the competitive European economies. Let this publication be your guide on this journey.

LIST OF ABBREVIATIONS USED

6.th FP	6th Framework Programme of the European Union for Research and Technological Development
7.th FP	7th Framework Programme of the European Union for Research and Technological Development
Act No. 130/2002	Coll., on the Support of Research, Experimental Development and Innovation from Public Funds and on the Amendment of Certain Related Acts (the Act on the Support of Research, Experimental Development and Innovation), as amended
AIP CR	Association of Innovative Entrepreneurship of the Czech Republic
AS CR	Academy of Science of the Czech Republic
CEI	Central European Initiative
CIP	Competitiveness and Innovation Framework Programme 2007 – 2013
COSME	Programme for the Competitiveness of Small and Medium Enterprises
COST	European Cooperation in Science and Technology
CRDI	Council for Research, Development and Innovation
CRP	Central Record of Projects in Research, Experimental Development and Innovations
CRRP	Central Record of Research Plans
CSO	Czech Statistical Office
DFG	Deutsche Forschungsgemeinschaft (German Research Foundation)
EC	European Commission
EC	Education for Competitiveness
EC	European Community
ECOP	Education for Competitiveness Operational Programme
EEA	European Economic Area
EIP	Entrepreneurship and Innovation Programme under the EU Competitiveness and Innovation Framework Programme (CIP)
EIT	European Institute of Innovation and Technology
Eligible costs	Cost that can be submitted for reimbursement. Other terms used: approvable costs, approved costs
EMBC	European Molecular Biology Conference
EMBO	European Molecular Biology Organisation
ENO	European Northern Observatory
ERA	European Research Area
ERC	European Research Council
ERCEA	European Research Council Executive Agency
ESA	European Space Agency
ESF	European Science Foundation
ESFRI	European Strategy Forum on Research Infrastructures
ESO	European Southern Observatory
EU	European Union

EU-27	All EU member states (EU-25+Bulgaria and Romania)
Eurostat	European Statistical Office
FP	Framework Programme of the European Union for Research and Technological Development
GA CR	Grant Agency of the Czech Republic
GDP	Gross Domestic Product
H2020	Horizon 2020
IC R&D&I	Research, Experimental Development and Innovation Information System
ICSR	International Cooperation in Science and Research
ICT	Information and Communication Technology
IN	Identification number
ISTC	International Science and Technology Centre in Russia
ITER	International Thermonuclear Experimental Reactor
JRC	Joint Research Centre
JTI	Joint Technological Initiatives
LPRD	Long-term Principle Research Directions
MA	Ministry of Agriculture
MD	Ministry of Defence of the Czech Republic
MEYS	Ministry of Education, Youth and Sports
MH	Ministry of Health
MI	Ministry of the Interior
MIT	Ministry of Industry and Trade
NICER	National Information Centre for European Research
NINET	National Information Network
NP R&D&I CR	National Research, Development and Innovation Policy of the Czech Republic
NRF	National Research Foundation of Korea
NSC	National Science Council of Taiwan
NUTS-2	Nomenclature of Territorial Units for Statistics Level 2
OECD	Organization for Economic Cooperation and Development
OP	Operational Programme
R&D&I OP	Operational Programme for Research, Research and Innovation
EI OP	Operational Programme Enterprise and Innovation
OPIS	MIT Operational Programme Information System
R&D	Research and development
REDI	Research, experimental development and innovation
R&D&I	Research and Development for Innovation
RFCS	Research Fund for Coal and Steel
RIA	Register of Information about Results
RPC	Record of Public Contracts in Research, Experimental Development and Innovation
SB	State Budget of the Czech Republic
SME	Small and Medium Enterprise

SMEs	Small and Medium Enterprises
SPS	Science for Peace and Security Committee
STCU	Science & Technology Centre in Ukraine
TA CR	Technology Agency of the Czech Republic
TC AS	Technology Centre of the Academy of Sciences of the Czech Republic
VAT	Value Added Tax

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