

# BULGARIA

## Country Outline

- GDP: 42.010 mil. euros / - GDP Per capita: 5.800 euros
- Areas of marked S&T specialisations: ICT and Informatics, Pharmaceuticals, Mechatronics and Clean Technologies, Health Life and Biotechnology Industries, New Technologies in Creative and Recreational Industries

## Contact Information

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## National Flag



**Introduction:** *Please provide a short introduction paragraph of your country by focusing on Science, Technology and Innovation.*

The declining trend in the overall, but primarily public funding of research in Bulgaria stabilized in the mid-nineties as it did in most other transition countries. However, in the Bulgarian case, unlike that of other countries, it remained at this low level of R&D intensity of 0.5% GDP rising only slightly over the last couple of years. Today it is at 0.65% with a public funding contribution of 0.24% of GDP, less than a quarter of a percentage.

It is essential for Bulgarian public funding in research and innovation to become more in line with what countries of the size and level of development of Bulgaria spend as a percentage of GDP on R&D. The current low level in public funding of research in Bulgaria is not sustainable. The present government is committed to raise the total percentage of GDP spent on R&D from its current level of 0.68% to 1.5% in 2020. That implies an annual increase of 20% over the next five years.

On a more positive note, unlike the situation in Romania, Bulgaria's formal membership of the EU in 2007 did result in a sustained positive trend in overall research investment. The public sector, including higher education, saw its R&D intensity further decline from 0.36% in 2009 to 0.24% in 2013. That is a figure lower than in any other European MS, and lower than in any other country in the world with a comparable GDP.

Given the fact that public funding of R&D has been declining over the last three or five years such target seems at first sight not very realistic. However, the strategic meaning of setting targets, even if they appear at first sight unrealistic, is as "ex-ante conditionality" condition: the Bulgarian government will need to maintain this target in order to keep European structural funding flowing. If ultimately impossible to become realized, the government will have to enter negotiation with the EC in order to change the target. In this way, the target will force authorities to pay more attention on how to raise further both public and private R&D investment in the long term outlasting future elections and changes in governments.

Such a long term commitment will have to be based, in view of the Peer Review on a public policy and communication agenda with lasting all-party parliamentary consensus and a pact with the relevant forces of society at large to prioritise research and innovation over the next five to ten years. Otherwise governments will find it difficult to sustain their reforms and build trust in the science system and among investors. Such a Bulgarian consensus for innovation as national priority seems also a pre-requisite to avoid fragmentation and disconnection with other structural change measures.

Short term volatility, within a framework of restrictive public means, contributes to an atmosphere of mistrust between stakeholders. The lesser the resources, the more there is likely to be discussion, dispute and even envy with those who have received some of those limited resources. At the same time, the limited access to public resources leads to a tendency to over-regulate the access to those relatively scarce resources, to push for continuously changes in policy focus, etc. Many such cases were highlighted to the Panel of experts by various interlocutors during their first field visit.

In the short term, increases in public funding will have to be accompanied by a new and more effective implementation, evaluation and coordination structure. The Council for Smart Growth created on May 12th 2015 and now headed by the PM, is a good step in the right direction and towards implementation. Particularly its involvement of both academia and business leaders, and designed openness to co-operation with international experts and high profile representatives of the Bulgarian diaspora would foster a lasting impact, also on the public policy and communication agenda. Aimed at coordinating policy in the field of science and innovation, the Council should be in a position to integrate all activities in this field, urge the implementation of the IS3, and concentrate on efforts to remove barriers that prevent the eco-system from welcoming creative and innovative people in Bulgaria. A relatively small state, Bulgaria cannot head for excellence in every field. However, re-launching its research and innovation ecosystem should also be seen as an opportunity where Bulgaria can win reputation by consequently choosing quality when tailoring domestic and international inspiration.

On the technical side, government has started to put things on the right track by setting up an inter-ministerial structure under the Council of Ministers (administrative network), mirroring the Smart Growth Council, by a regional network for a place-based implementation of the IS3 and by planning an independent agency with a professional multi-level funding competence (PARI). All of this needs to be integrated in a national roadmap underpinned by a financial back-up for 5-8 years. The panel supports this implementation-driven approach of connecting the relevant policy fields both horizontally and vertically.

## **1. Policies and Strategies in Science, Technology and Innovation**

One of the main strategic goals Bulgaria has set in the process of her accession to the European Union is enhancing the competitiveness of Bulgarian industry and improving its ability to withstand the competitive pressure of the European and world markets.

The Bulgarian Innovation Strategy provides the exact measures to achieve these goals based on the understanding that the industry's competitive advantage could be achieved by developing, implementing and disseminating innovation, providing leading competitive position in the international markets, meeting in advance new needs of national and international consumers.

The draft Innovation Strategy of the Republic of Bulgaria and its implementing measures has been developed with the support of the Government of the Netherlands under the PSO Pre-accession Programme.

The Innovation Strategy is the result of extensive research and analyses of a huge volume of information:

- Inventory of the Bulgarian national innovation system;
- Review of the regulatory framework, national strategy and policies on scientific and technological development and innovation;
- Scientific, technical and innovation potential of the national industry for the period 1998-2000 (a result of a survey);
- 10 examples of innovative Bulgarian companies;

## **2. National Programmes and Initiatives**

The National Reform Programme 2014 – 2020 emphasises that innovation policy is one of the key areas, which will improve the competitiveness of the Bulgarian economy and the development of the potential for growth in the post-crisis period. The Programme envisages:

- increased investments for R&D up to 1.5 % of GDP by 2020;
- expanded access to finance for SMEs;
- a targeted state policy to support innovation;
- adoption of a Law on Innovation and development of a new national innovation strategy and amendments to the Law on Investment Promotion to create incentives for investment in high-tech production and services;
- more efficient use of OP Competitiveness by speeding up the implementation of calls associated with technological modernisation of SMEs and large enterprises, projects for the advancement of applied research, establishment of R&D centres, development of clusters, etc;
- measures to improve the quality of scientific research, strengthen its applied orientation and improve science-business relations.

The National Development Programme Bulgaria 2020 foresees:

- support for the development of a high performance industrial base;
- encouragement of innovation and scientific research;
- development of human resources for the needs of innovative enterprises;
- advancement of the scientific and innovation infrastructure and environment stimulating cooperation between science and business;

- improvement of the regulatory framework for the agents of innovation processes, as well as more effective organisation and management of the scientific and innovation processes covering all stakeholders in the national scientific and innovation field.

The 2<sup>nd</sup> Ministerial Forum on Cultural Cooperation China - CEEC will be held in Sofia on 12-14 November 2015

### 3. Joint Activities with China in 2015

- Agreement for economic cooperation between the Government of Bulgaria and the Government of China, signed on 20 November 2006 in Beijing, into force from October 9 2007
- Agreement for mutual promotion and protection of investments between the Government of China and Bulgaria, signed in Sofia on June 27 1989, into force from August 24, 1995.
- Convention for avoidance of double taxation and prevention of fiscal evasion with respect to taxes on income and on capital between the Government of Bulgaria and the China, signed on November 6 1989 in Beijing, into force from 05.24.1990.

**Joint Committee meeting** Target participants - representatives of implementing ministries, universities and academies of sciences

- An Intergovernmental Joint Commission for Economic Cooperation (IJC) between Bulgaria and China was established in 1984. So far, 15 sessions of the IJC have been held. The 15th session of the IJC was held in Beijing in April 2014, co-chaired by Deputy Minister of Economy of Bulgaria and Assistant Minister of Commerce of China.

Joint activities with China in the economic field, January - September 2015:

- Bulgaria - China (Ningbo) Business Conference, Plovdiv, 18 September 2015
- Visit to Bulgaria of Chongqing delegation, led by Mr. Xiong Lin, Deputy Director of Chongqing Foreign Trade and Economic Relations Commission, Sofia, 6-8 September 2015.
- Visit to Bulgaria of Chinese business delegation, led by Mr. Huang Yongming, Vice Chairman, Shanghai Chamber of Commerce for Import and Export, Sofia, 25-28 July 2015.
- Inaugural meeting of the Association for agricultural cooperation between China and CEEC, Sofia, 25-27 June 2015.
- Participation of Deputy Minister of Economy of the Republic of Bulgarian in the China - CEEC Investment & Trade Expo, 8-12 June 2015, Ningbo, China. Bulgarian national pavilion was organized by the Bulgaria Small and Medium Sized Enterprises Promotion Agency at the trade exhibition during the EXPO.

### 4. Others

EU Structural Funds. List of Operational Programmes in Bulgaria:

1. **"Transport and Transport Infrastructure" 2014-2020 - EUR 1,89 bln.**

2. "Innovation and Competitiveness" 2014-2020 - EUR 1,39 bln.
3. "Human Resources Development" 2014-2020 EUR 1,09 bln.
4. "Rural Development" 2014-2020 - EUR 2,91 bln.
5. "Environment" 2014-2020 - EUR 1,77 bln.
6. "Regions in growth" 2014-2020 – EUR 1,54 bln.
7. "Science and Education for Smart Growth" 2014-2020 – EUR 701 mln.
8. "Good governance" 2014-2020 - EUR 335 mln.
9. Not yet approved: "Program for Maritime Affairs and Fisheries" (2014 -2020) – EUR 113 mln.

[Description] In order to promote major MS organisations (Universities, Research Organisations, SMEs, etc.) to China, please fill out several major organisations as below:

List of leading research organizations:

Organisation Name	Detailed information
<p><b>Ministry of Education and Science</b>  <a href="http://www.mon.bg">http://www.mon.bg</a></p>	<p>Ministry of Education and Science            Knyaz Aleksandar Dondukov Boulevard 2A            Sofia 1000            Bulgaria</p>
<p><b>Ministry of Economy</b>  <a href="http://www.mi.government.bg/en">http://www.mi.government.bg/en</a></p>	<p>Ministry of Economy            8, Slavyanska Str., Sofia 1052, Bulgaria            tel.: +359 2 9407001            fax: +359 2 987 2190; +359 2 981 9970            e-docs@mi.government.bg</p>
<p><b>"Sofia Tech Park"</b>  <a href="http://sofiatech.bg/en/">http://sofiatech.bg/en/</a></p>	<p>"Sofia Tech Park" JSC is a state-owned company            Contact Information:            phone: +359 2 447 2880            fax: +359 2 447 2898            e-mail: office@sofiatech.bg</p>
<p><b>Bulgarian Academy of Sciences</b>  <a href="http://www.bas.bg/bulgarian-academy-of-science">http://www.bas.bg/bulgarian-academy-of-science</a></p>	<p>Bulgarian Academy of Sciences Address: 15th November #1 str, Sofia, 1040 Tel: (+359 2) 979 53 33; (+359 2) 979 52 23 Fax: (+359 2) 981 72 62</p> <p>Institute of Mathematics and Informatics  <a href="http://www.math.bas.bg/new/site/?lang=bg">http://www.math.bas.bg/new/site/?lang=bg</a></p> <p>Institute of Information and Communication Technologies  <a href="http://www.iict.bas.bg/EN/index.html">http://www.iict.bas.bg/EN/index.html</a></p> <p>Institute of Systems Engineering and Robotics  <a href="http://www.iser.bas.bg/index_en.html">http://www.iser.bas.bg/index_en.html</a></p>

<p><b>Agricultural Academy</b>  <a href="http://www.agriacad.bg">http://www.agriacad.bg</a></p>	<p>Agricultural Academy          ul. "Suhodolska" 30, 1373 Sofia, Bulgaria          +359 2 812 75 05</p>
<p><b>SOFIA UNIVERSITY ST. KLIMENT OHRIDSKI</b>  <a href="https://www.uni-sofia.bg/index.php/eng">https://www.uni-sofia.bg/index.php/eng</a></p>	<p>Rectorate, 1st floor          Phone: (+359 2) 9446 423, 9308 416, 9308 700, 9308 220, 9308 422          Fax: (+359 2) 9460 115          E-mail: <a href="mailto:intern@admin.uni-sofia.bg">intern@admin.uni-sofia.bg</a></p>
<p><b>University of Food Technologies</b>  <a href="http://uft-plovdiv.bg/index.php">http://uft-plovdiv.bg/index.php</a></p>	<p>University of Food Technologies (UFT)          26 Maritsa Blvd          4000 Plovdiv          BULGARIA            Tel.: +359 32 643 005          e-mail: <a href="mailto:intoffice@uft-plovdiv.bg">intoffice@uft-plovdiv.bg</a></p>
<p><b>Technical University, Sofia</b>  <a href="http://www.tu-sofia.bg">http://www.tu-sofia.bg</a></p>	<p>Technical University-Sofia          1000,          8 Kl. Ohridski Blvd          Tel: <a href="tel:+35929652111">+3592 965 2111</a></p>
<p><b>University of Mining and Geology "St. Ivan Rilski"</b>  <a href="http://www.mgu.bg/main.php?menu=1">http://www.mgu.bg/main.php?menu=1</a></p>	<p>The University of Mining and Geology "St. Ivan Rilski"          Studentski Grad, "prof. Boyan Kamenov" Street, Sofia 1700          Tel: +359 2 806030</p>