

National Research and Innovation Policy

The **Enterprise Europe Network** – Bulgaria (EEN) and ARC Fund's flagship initiatives – the ***Innovation.bg* report**, **National Innovation Forum** and **National Contest for Innovative Enterprise of the Year**, were in the core of the innovation and business support activities in 2016. The Enterprise Europe Network provided expert support to Bulgarian enterprises to innovate and go international or to do joint research with EU partners.

In 2016, over 90 companies received in-depth consultations and EEN advisory services. Seven events focused on smart specialization topics such as green innovations, design and creative industries, cluster policies, and 9 brokerage events and company missions with 20 participant companies were co-organized. These activities resulted in 15 successful international partnership agreements and 3 positively evaluated EU projects of clients. The EEN digital services have a wide outreach, they are highly appreciated and used by over 13,000 clients in Bulgaria.

Experts at ARC Fund were granted license by the A.T.Kerney's IMP³rove Academy to assess the innovation management processes of Bulgarian companies following the IMP³rove methodology. More than 30 companies received in-depth assessment and advice. The efficiency and ARC Fund's quality work and expert approach were acknowledged by the IMP³rove Academy as good practice.

As a host to the National Contact Point (NCP) for SMEs in the *Horizon 2020* NCP network, ARC Fund's expert team consulted more than 20 SMEs in their application process to the SME Instrument. It also took part in the H2020 national roadshows organized by the Ministry of Education and Science in 2016.

The team worked on analysing and improving two financial instruments for innovation support within the INTERREG

Europe projects, namely InnoBridge and ESSPO. InnoBridge gathers partners from 8 regions and ARC Fund is playing an advisory role to the Sofia Fund for Innovations supporting cultural and creative industries. In the ESSPO project, ARC Fund provides expert support to the National Innovation Fund, with particular focus on designing impact assessment and monitoring instruments for the Fund. The ESSPO project gathers partners from 6 regions for mutual learning activities aiming to boost regional innovative development.

Innovation.bg is ARC Fund's overall program for shaping the national innovation policy agenda. It combines several components, which offer expertise, policy building and impact assessment know how.

Since 2004, the *Innovation.bg* report has offered a comprehensive annual performance assessment tool, which provides independent analysis of the national innovation system and the innovation performance of the national economy, based on an original survey and other micro studies. *Innovation.bg* applies its own original methodology to assess the degree of business innovation activity, based on the understanding of the types of innovation and the degree of novelty of the introduced innovation products and processes.



The annual report *Innovation.bg* provides a reliable assessment of the innovation potential of the Bulgarian economy and of the status and potential for growth of the Bulgarian innovation system. It makes

recommendations for improving the public policies for innovation in Bulgaria and in the EU, building on the most recent theoretical and empirical studies in the world and taking into account the specific economic, political, cultural and institutional framework in which the country's innovation system operates. Over the past 12 years, *Innovation.bg* has made a number of policy recommendations for improving the country's innovation policy and practice, which have been supported by business and academia. The lack of specific and sustainable actions by the Bulgarian government – despite their commitment to the process at the highest political level – reveals a serious institutional deficit in the implementation of relevant policies in the field.

Innovation.bg 2016 analyses the status and potential for growth of the national innovation system based on five groups of indicators:

- aggregate innovation product;
- entrepreneurship and innovation networks;
- investment and financing for innovations;
- human capital for innovation;
- information and communication technologies.

In the focus of *Innovation.bg 2016* were the country's **talents and the potential to identify, develop and attract talents; the potential to manage them appropriately**

and to develop national and regional competences on that basis. Innovation is a function of creativity, out-of-the-box thinking, imagination, passion and perseverance of people who have the potential to generate ideas and have the knowledge to convert them into successful new products and business models.

The “talent” challenge is the phenomenon of our time that needs to be addressed at various levels: in social groups, companies, national economies. However, in the conditions of relatively closed and detached national innovation ecosystems – in the framework of which processes are developing on the principle of communicating vessels – it is always better if pillars of the system interact and are mutually supportive instead of becoming barriers or obstacles to the activities of the other participants in the innovation process, or to the development of the system as a whole.

In this sense, when the goal is to create an environment which is favourable to talent growth and within whose framework talents are then motivated to remain and develop, many divergent and interlinked factors need to be made the subject of a targeted and sustainable policy. The policy should focus both on well-developed pillars of the system, which can provide for achieving excellence in one field or another, but also on the periphery and its less developed units, so as to maintain high standards and a reservoir for intellectual capital reproduction.

The policy model will encompass factors which:

- have indirect impact and create the general conditions for growing, attracting and developing talents;
- enable economic agents to make use of such conditions or, conversely, turn them into an asset that remains unused or is used in the framework of another system;
- allow businesses to make talents the driving force in the innovation process.

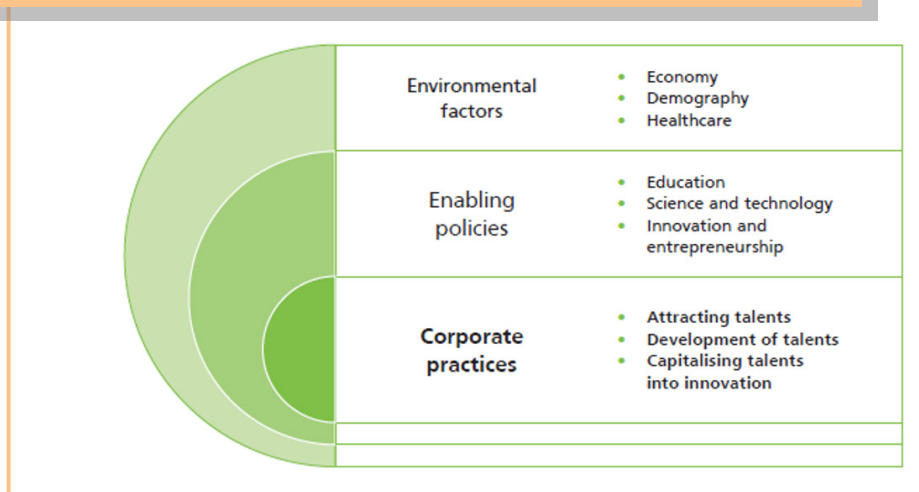
Six years after the launch of the *Europe 2020 Strategy* of the European Commission in June 2010 and in the middle of its implementation, contradictory results have been achieved both at European and national levels: faster developments against climate change, tentative progress in education and a pronounced slowdown in employment and investment in research.

In the remaining four years until 2020 the country has to double R&D expenditure as a share of GDP in order to achieve its goal of 1.5%. Several other countries with comparable goals have achieved similar results: Greece (achieved 70% of the target

1.2%), Croatia (56% of the 1.4% target), Latvia (46% of the 1.5% target) and Slovakia (74% of the 1.2% target). Romania has the largest gap, reporting only 0.38% costs for R&D as a share of GDP against the ambitious goal of 2%.

The lack of substantiated and consistently implemented policies in these fields, which should equally engage the public and private sectors, causes pronounced imbalances and fluctuations of the indicators of innovation potential, thereby leading to the unenviable positions of the country in the comparative analysis of European countries.

Figure 1. A model of promoting innovation-oriented talent-based business behaviour



Source: Applied Research and Communications Fund.

Twelfth National Innovation Forum “Innovation powered by talent” and the National Contest “Innovative Enterprise of the Year”

On December 7, the Applied Research and Communications Fund, ARC Consulting, Enterprise Europe Network – Bulgaria, the Representation of the European Commission in Bulgaria, the Design for Europe and Joint Innovation Center of the Bulgarian Academy of Sciences with the support of Directorate General GROWTH of the European Commission, the Executive Agency for SMEs, set up

by the European Commission, held the **Twelfth National Innovation Forum “Innovation Powered by Talent”**.

Dr. Ognian Shentov, Chairman of the Board of the Applied Research and Communications Fund, opened the Forum by outlining the significant role of the private sector in developing the national innovation eco-system. This trend is illustrated by



Opening of the Twelfth National Innovation Forum – from left to right: President Rosen Plevneliev, Dr. Ognian Shentov, Ambassador Michael Forbes

the growing number of alumni of the “Innovative Enterprise of the Year” award, which is a positive sign for the innovative potential of the Bulgarian economy.

The **President of Republic of Bulgaria, Mr. Rosen Plevneliev**, acknowledged the positive developments powered by Bulgarian innovative companies, especially in three high-technology sectors: ICT, outsourcing and the automotive sector, which have created over 70,000 jobs in the last few years. Mr. Plevneliev also highlighted the favourable environment for start-ups in Bulgaria, created by the European Investment Fund and the accelerators Eleven and Launchub, which play a key role in attracting innovations, talents and knowledge in Bulgaria.

Mr. Ruslan Stefanov, Coordinator of the *Innovation.bg* group at the Applied Research and Communications Fund, presented the main highlights in the *Innovation.bg 2016 report* on “Innovation powered by talent.” *Innovation.bg* defines

three groups of conditions necessary for the establishment of a shared ecosystem for growth and attraction of talents: a) general factors featuring all trends in economy, demography and healthcare; b) policies supporting education, life-long learning, science and technology, innovation and entrepreneurship; c) corporate practices for attracting and growing talents, capitalization of talents into innovations, applying international good practices for talent management.

Mr. Todor Tchobanov, Deputy Mayor of Sofia, presented recent municipal initiatives for fostering innovations. Sofia is the first Bulgarian city with its own Innovation Strategy for Smart Specialization, which aims to improve the quality of life in the region. The municipality also supports large scale events focused on innovations and digital growth and is a very active participant in OP “Science and Education for Smart Growth” 2014-2020 and EC framework programs.



The President Mr. Rosen Plevneliev

National Contest Innovative Enterprise of the Year 2016

The annual contest, held for 12th consecutive year, is the most renowned event in Bulgaria for promoting successful innovation and business models of Bulgarian enterprises. The contest has a significant role in discovering and bringing to public attention new champions and business players. It is a recognized best national practice for promoting innovations by the European Commission and the Enterprise Europe Network.

Following tradition, the awarding ceremony of the **National Contest Innovative Enterprise of the Year 2016** was held during the National Innovation Forum. The President of Republic of Bulgaria, Mr. Rosen Plevneliev, awarded the winners. The impact of their innovations was recognized in eight areas:

1. **“Innovation for market leadership”** – Electrosfera Ltd. and its brand Antelope Audio are world leaders in digital audio technologies. The company was founded in Bulgaria by Igor Levin (an American), who was the first to introduce the use of atomic clock in musical engineering as a radical innovation. The entire development and production cycle is carried out in Bulgaria. The newest product of the

company is Goliath, which is the world’s only audio interface with an atomic clock and maximum possible number of 68 channels for converting digital and analogue content. Electrosfera’s technologies are used by the largest sound engineering studios in the USA, Great Britain and Japan, by Grammy performers, and for sound recording of high-budget films.

2. **“Innovation in Creative industries”** – Doli Media Studio Ltd. is a premium venue that supports the most modern (and even experimental) technologies in the cinema for production and post-production of content. The studio is the only one outside Hollywood that provides simultaneous mastering, color correction and displaying of final film preview with a quality of a cinema projection. Combining the technologies Dolby Atmos Premium, ACES workflow and 4K DCI is a global challenge, overcome by the original know-how of the studio to achieve perfect quality of sound and vision.

3. **“Innovation in Talents Support”** – Software University (SoftUni Ltd.) was founded in 2013 as one of the solutions for the preparation of high-quality personnel for the IT industry in Bulgaria. The university applies the model “learning by doing” to train cadres

for the software industry and to support entrepreneurship. Over 120 000 people have been trained through the courses of the SoftUni network. SoftUni cooperates with accredited Bulgarian universities and more than 60 companies and NGOs.

4. **“Innovation management,”** in line with the IMP³rove methodology – Scale Focus is a leader in development and integration of software solutions, and management of data, information and processes. The company applies leading practices for innovation management like generation and application of new ideas, and innovation life cycles, to enhance the creativity of its employees for the development of new projects with market potential.

5. **“Green Innovation”**– „TANGRA“ Ltd is a producer of high efficiency energy saving ventilation systems and secondary usage (recuperation) of hot or cold air in ventilation or air conditioning installations with efficiency up to 94%. Their compact systems are especially suitable for school classrooms and have been successfully introduced in Portugal. The company is a leader on the Balkans and among the first in Europe to introduce energy recuperation in ventilation

systems. They export to over 15 countries.

6. **“Innovation for a better quality of life”** – Sintal MM Ltd applies the latest achievements in the area of inorganic materials science in the production of beryllium-free, patented CE approved nickel- and cobalt-based dental alloys for metal-to-ceramic constructions via powder metallurgy. The alloys are toxic-free, with a very high chemical purity, with nickel concentration 20 times lower than the standard level. The energy saving and ecological production uses 100% of the materials. The company currently exports to India, Hong Kong, Australia, Romania and Turkey.

7. **“Social Innovation”** – Proznanie Academy develops its own complete solution for distance education and interactive virtual classroom – VEDAMO. It provides educational services for all types of educational providers and users – for children in medical and institutional care, from vulnerable communities, refugee children and Bulgarian children abroad. In collaboration with partners they have successfully prepared Roma students for enrolling in pedagogical and medical nursing degrees. They currently teach Bulgarian



Awardees of the National Contest Innovative Enterprise of the Year 2016 together with the President Mr. Rosen Plevneliev (in the middle) and Dr. Ognian Shentov (right)

children living in Europe, Asia and Hawaii.

8. **“Innovative start-up”** – TICKEY Mobile Solutions Ltd. designs and develops mobile ticketing solutions for the public transport and mobility via universal e-ticket. They created a mobile ticketing app for Android and iPhone that allows for paying fares for public transport – buses, trams, trolleys, metro/underground by using the universal Tickey e-ticket. The modular web

based platform gives access to various features in the public transport system depending on the profile and role of the user. It offers the best price for the transport services based on the profile and role of the user, including combined tickets and discounts. The system is successfully integrated in Fal River Ferries, UK. In Bulgaria, Tickey Mobile system has been installed in several Sofia subway stations.