
PART ONE

Program Areas

Science, Innovation and Information Society

Innovation.bg 2013



The annual *Innovation.bg* report provides a reliable assessment of the innovation potential of the Bulgarian economy and the state and development capacity of the national innovation system. It puts

forward recommendations for improving public policy in the field of innovation by drawing on the latest theoretical and empirical research, while taking into account the specific economic, political, cultural, and institutional framework in the country. For a ninth consecutive year, the report raises the awareness of the importance of innovation as a factor for setting national priorities in support of the future development of the country.

The report is intended for decision-makers in the public sector and representatives of innovative Bulgarian businesses. Following the methodology established by preceding editions, *Innovation.bg 2013* examines the dynamics in the performance of the national innovation system on the basis of five groups of indicators, including:

- Overall innovation product;
- Entrepreneurship;
- Investment and financing of innovation;
- Human capital for innovation;
- Information and communication technologies (ICT).

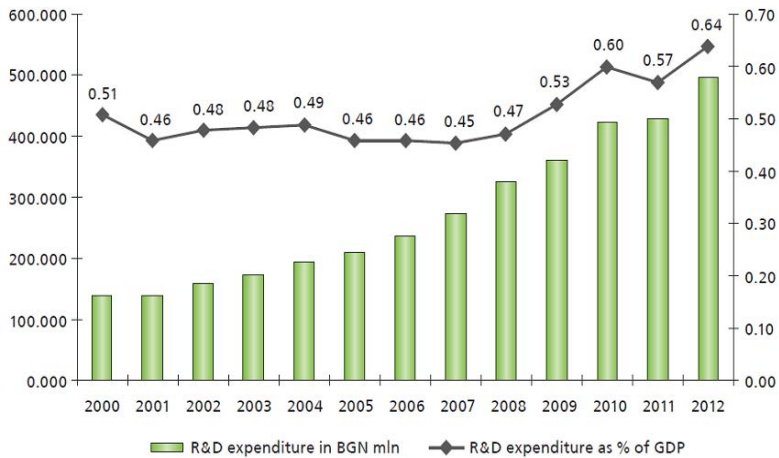
As with last year's report, *Innovation.bg 2013* pays special attention to the development of the Bulgarian ICT sector and its contribution to the economic growth of the country. The report highlights that, in the last decade, Bulgaria and the ICT sector have become a successful model not only with respect

to outsourced call centers, software development and hardware production, but also in providing an environment favorable to R&D and innovation which meets the needs of multinational companies. The regular Broadband Coverage Study, which ARC Fund has conducted for a third consecutive year, revealed that almost the whole population (98%) resides in places where basic broadband access is available, and that Bulgaria is among the top performers in the EU under this indicator. Capitalizing on the national advantages for digital growth could be jeopardized in the short term unless the advances made by business are not supported by a government policy of expanding public e-services, encouraging the upgrading the e-skills of the public, and enhancing e-inclusion.

In addition, this year's edition of *Innovation.bg* focuses on the innovation potential of the pharmaceutical sector, which has been identified as one of the priority sectors for Bulgaria, and on whose basis smart specialization at regional and national level should be developed. Despite the on-going economic and financial crisis, the sector features relatively high and rising levels of patent activity, exports, capital investments and labor productivity. The pharmaceutical sectoral analysis revealed that companies in Bulgaria produce generic pharmaceuticals and are oriented towards the low-cost end of the market. Furthermore, the local pharmaceutical industry does develop low-cost innovations, although they have relatively small R&D budgets, which prevents them from engaging in high-tech and costly specialization. The complex role of public authorities in the pharmaceutical sector involves the creation of a competitive environment which would guarantee that citizens have access to cutting-edge and safe medicines at acceptable prices.

Investment and Financing for Innovation

Figure 1. R&D expenditures in Bulgaria



Source: NSI data, 2013

During the period examined in the Innovation.bg 2013 report, several positive trends shaped the national science and innovation landscape. Bulgarian researchers continued to perform relatively well in the Seventh Framework Program of the EU for the period 2007-2013. If the number of successful projects is compared to national GDP, as well as to R&D expenditures for the duration of the entire program, the country ranks respectively 5th and 3th in EU27. This is a testament both to the determined activities of Bulgarian scientists as well as to the relatively low GDP and R&D expenditures in the country. In addition, in 2012, Business Expenditure on R&D increases. Another positive development is the announcement of the Sixth Funding Session of the National Innovation Fund at the end of 2012, after it has ceased to support new projects following the economic and financial crisis.

Against this backdrop, Bulgarian governments have focused their efforts on securing short-term fiscal stability and shelved the measures geared at strengthening the national competitive advantages and fos-

tering sustainable economic growth based on advanced technological knowledge and high-quality human capital. As noted in previous editions of the report, and as reflected in the policy recommendations, several sizable challenges threaten to undermine the potential of the country's innovation system. These include:

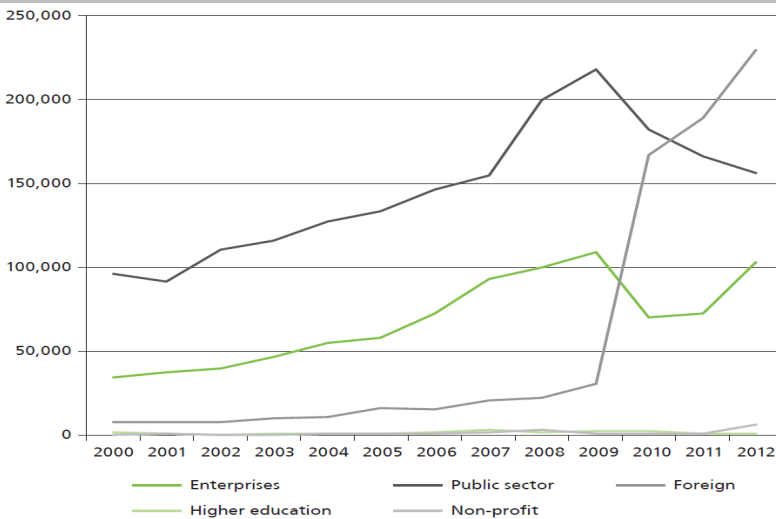
- A low level of R&D investments compared to Gross Domestic Product (0,57% of GDP in 2012), guaranteed mostly by external sources without a clear-cut government commitment for direct funding (subsidies, grants) or indirect promotion (tax incentives) of innovation;
- A high concentration of R&D expenditures in one region of the country;
- A severed link between science, education and business with declining values of research contracts commissioned by companies to research organization;
- The continuing inability of the government, and other stakeholders, to promote open innovations and knowledge transfers between public R&D institutions and the private sector;

- Low level human capital investments and a slow increase in the number of researchers.

With the draft Innovation Strategy for Smart Specialization 2014 – 2020, developed by the Ministry of Economy and Energy, Bulgaria confirmed its intention to achieve increased R&D expenditures. These include the desire to reach 1.5% of GDP by 2020 – a national objective also declared with the adoption of the National Reform Program 2011 – 2015. However, the announcement of the ambitious objective was not followed by targeted measures to increase

public expenditure for research and to support business in the implementation of innovation projects. The continuous decline in public R&D expenditure is compensated only by the growing investments stemming from foreign sources. Without such, R&D expenditures by all institutional sectors in Bulgaria would have shrunk to 0.34% of GDP for 2012. For the first time since the outburst of the crisis there was a considerable increase in business investment in R&D, mainly in the form of co-funding under European programs.

Figure 2. R&D expenditures by institutional sector, BGN thousands



Source: NSI data, 2013

National Innovation Policy

The political messages and priorities in the field of research, technological development and innovation have been distilled in the drafts of the Operational Programs “Innovations and Competitiveness” and “Science and Education for Smart Growth”, as well as in the Innovation Strategy for Smart Specialization. Although these strategic documents entail almost all innovation support mechanisms in the country during the next programming period from 2014-2020,

they are not perceived by the relevant stakeholders as a genuine expression of increased political will. The three documents maintain divisions in the design and delivery of science, technology and innovation policy among various ministries, and do not build the necessary bridges across these connected and overlapping fields.

While the European Commission has stated its intentions to make regional competitive advantages a priority, and foster the

implementation of a specific set of measures for their development, the Innovation Strategy for Smart Specialization has been drafted at the national level. Furthermore, European funds remain the principal source of funding for Bulgaria's innovation policy, which can result in misalignments of funding and national objectives and priorities. The number of staff engaged in R&D is an additional challenge, particularly in some of the suggested priority sectors.

Innovation.bg 2013 highlights the disparity in the remuneration of scientists and experts on national and geographic grounds for projects funded under European research programs. Even though such projects generate "European added value", the European Commission places the participants from the new Member States at a disadvantage and thus encourages brain drain. Some measures for changing the existing practices could include applying a single payment scheme regardless of nationality, and the establishment of an administrative liaison office in Brussels to help support applications from Bulgaria. This is the standard practice of nearly all countries, as well as of a number of municipalities, associations and companies.

The policy recommendations put forward in previous editions of *Innovation.bg* continue to hold true in 2013. The lack of concrete and sustainable actions by Bulgarian governments, in spite of their involvement

in the process at the highest political level, is indicative of the institutional deficiency in the development and application of policies in this field. During the planning of the next EU programming period 2014-2020 particular attention should be placed on the following reforms and measures:

- Merging the numerous government units responsible for the implementing and funding R&D and innovations into a single administrative structure;
- Adopting an integrated national strategy with a focus on the interaction between science, education and innovation, and with a limited number of priorities and dedicated funding;
- Providing national co-funding for Bulgarian organizations which have succeeded in attracting funds for research and innovations from the European Framework Programs;
- Prioritizing the implementation of projects funded under the JEREMIE program and Techno Park Sofia;
- Focusing on measures for encouraging innovation among low-tech micro and small enterprises;
- Prioritizing measures for technological and innovation development in traditional sectors such as tourism, textiles, construction and agriculture;
- Promoting measures in support of a culture of innovation (museums, international forums, school and student projects, etc.).

Ninth National Innovation Forum & Contest for Innovative Enterprise 2013

On December 5th, 2013, Applied Research and Communications Fund and Enterprise Europe Network – Bulgaria organized the Ninth National Innovation Forum "Innovation and Sectoral Competitiveness". The forum traditionally receives support from the Representation of the European Commission in Bulgaria. As in previous years, the forum was structured around the findings of the annual report on the innovation develop-

ment in Bulgaria *Innovation.bg 2013* and the national contest for Innovative Enterprise of the Year. The unique character of the National Innovation Forum stems from the fact that it unites the efforts of and brings together all stakeholders to discuss the innovation environment in the country and to propose optimization measures.



Ninth National Innovation Forum, from left to right: Mr. Rosen Plevneliev, President of the Republic of Bulgaria; Dr. Ognian Shentov, Chairman, Applied Research and Communications Fund; and Mr. Ognian Zlatev, Head of EC Representation in Bulgaria

Mr. Ognian Shentov, Chairman of the Applied Research and Communications Fund, opened the Ninth National Innovation Forum and outlined several thematic fields with crucial importance for the competitiveness of the country, such as the need for a radical improvement of the public policies in innovation but also in education, health care and rule of law. Mr. Shentov however emphasized that the accumulation of a critical mass of innovative companies and leaders only partly compensates the deficiencies of the Bulgarian public policies and innovation ecosystem.

The President of Republic of Bulgaria, Mr. Rossen Plevneliev, sketched out number of persisting problems of the national innovation system: (a) unintegrated approach towards designing and implementing public policies in the field; (b) inconsistency between existing strategic documents; (c) lack of a national mechanism for coordination between relevant stakeholders; (d) instability and frequent shifts in the national strategic priorities.

Mr. Ognian Zlatev, Head of EC Representation in Bulgaria, noted that against the backdrop of a shrinking EU budget for the next programming period the EU Commission and Parliament dedicated a historically large amount of resources for research and innovation, for which Bulgarian scientist and innovative businesses can compete on an equal footing.

Mr. Ruslan Stefanov, Coordinator of Innovation.bg Group, presented the findings of the *Innovation.bg 2013* report and summarized that the current situation in the country with regard to innovation remains alarming. In this context, he highlighted important positive developments, such as the considerable increase R&D expenditures made by the Bulgarian business.

Mr. Thomas Bruns, Senior Commercial Officer in the U.S. Embassy in Sofia, made an overview of the main innovation absorption channels within the framework of US – Bulgarian relations (e.g. FDIs and trade and license

agreements) - and highlighted the growing investment interest on the part of technology intensive U.S. companies in the fields of biotechnologies and telecommunications.

Mr. Deyan Denev, chairman of the Association of Research-Based Pharmaceutical Companies in Bulgaria, presented the features of the innovation activity in one of the most innovative industries in Bulgaria - the pharmaceuticals.

Mr. Ivaylo Penchev, CEO of Walltopia Ltd. and awardee of Innovative Enterprise of 2012 prize, put the emphasis on the well-functioning secondary education for the development of competitive and innovative businesses in the country. This view was supported by the awardee of the National Contest in its 2010 edition – Mr. Stefan Deevski, CEO of AMK – Gabrovo. Mr. Deevski pointed at the possibilities of the private sector to proactively defy these trends by individual or coordinated initiatives.

Mr. Ventsislav Slavkov, Chairman of the Mechatronics and Automation Cluster, noted that given the special nature of innovation activity what is important is the institutional and business environment, and only after it comes the availability of effective mechanisms for direct support.

During the Forum, the President of Republic of Bulgaria, Mr. Rosen Plevneliev awarded the finalists in the National

Contest for Innovative Enterprise of the Year.

The contest has been open to all active Bulgarian companies that have successfully developed and implemented innovations within the past three years.²

The contest included the following fields:

- Market Leadership (innovative products recognized on the international market);
- Innovation Hub (process innovations implemented by a number of clients);
- Quality of Life (innovation for improved quality of life for users);
- Green Innovation (innovation in the field of sustainable and environmentally sound development);
- Sustainable Innovative Behaviour (continuous innovative activity in the last 6 years);
- Social Impact (innovation with positive impact on the development of innovation behaviour in society);
- Innovative Start-Up Enterprise (created within the past three years);

The winning companies were awarded in a special ceremony during the Ninth National Innovation Forum on December 5, 2013 in Sofia. The prizes were awarded by Mr. Rosen Plevneliev, President of the Republic of Bulgaria. The finalist in the field “Quality of Life” is AMET ltd – developer and producer of electronic medical equipment for their apparatus for cancer cells destruction.



Mr. Ruslan Stefanov, Coordinator of Innovation.bg Group, presenting Innovation.bg 2013 at the Ninth National Innovation Forum

² Since January, 2011.

The recognition for green innovation was given to DeConi International for their unique 3D Ecobus – a mobile module for green education of kids and adults. AMG Technology – a developer and producer of semiconductor technologies and integrated micro-electromechanical systems (MEMS) - was recognized for its Sustainable Innovative Behaviour. Robopartans Ltd is finalist for Social Impact for their school of robotics that promote the students' interest in Physics, Computer Science, Mathematics, Information and Communications Technology. For the first time this year a special category for innovative start-ups was set up. Three Bulgarian start-up companies were recognized. Playground energy Ltd. developed and produces playground toys that convert the kinetic energy of kids playing with them into sounds and lights,

thus stimulating their physical and mental activity. Hutgrip created software as a service system for management, control and prevention of industrial disruptions, and optimisation of production processes and resources. Ucha.se Ltd develops complex multimedia platform for online education that visualize and top up what students from 1st to 12th grade are taught in school.

The two companies prized in the contest “Innovative Enterprise of the Year” are Mechatronika – for their global market leadership in manufacture of machines for laminated tubes and tube filling automation, and Interconsult Bulgaria – leading software developer and consulting company with number of IT innovations implemented in clients from various industries across the world.



Discussion at the Ninth National Innovation Forum, from left to right: Mr. Thomas Bruns, Senior Commercial Officer in the U.S. Embassy in Sofia; Mr. Ruslan Stefanov, Coordinator of Innovation.bg Group, ARC Fund; Mr. Deyan Denev, chairman of the Association of Research-Based Pharmaceutical Companies in Bulgaria; Ms. Zoya Damianova, Program Director, ARC Fund; Mr. Ivaylo Penchev, CEO of Walltopia Ltd.; Mr. Stefan Deevski, CEO of AMK – Gabrovo; Mr. Ventsislav Slavkov, Chairman of the Mechatronics and Automation Cluster



The President of Republic of Bulgaria, Mr. Rosen Plevneliev, together with the winners in the National Contest for Innovative Enterprise of the Year 2013



*Ninth National Innovation Forum,
Sofia, 5 December 2013*

CCIC

The Complex Challenges – Innovative Cities (CCIC) project began in January 2012 as a partnership among 14 organizations from 10 different countries. It is supported by the INTERREG IVC program and the Bulgarian Ministry of Regional Development. The project is targeted at municipal and regional authorities across Europe, and explores the opportunities for successful and sustainable policy making on public sector innovation. As the only organization in the consortium that is not a public authority, ARC Fund has the unique role of providing expertise in the field of innovation and policy-making in science and technology from an analytical point of view.

In 2013, ARC Fund's major effort within CCIC was the completion of an analytical State-of-the-Art Report on Public Sector Innovation. The key objective of the report was to present an overview of how public sector innovation is made possible on the local and regional level. The team analyzed data collected through an online survey (with more than 850 respondents), and in-depth interviews with innovation stakeholders (practitioners, managers, innovation planners, policy and decision-makers, civil society leaders) from the countries participating in the consortium.

The State-of-the-Art Report highlights important trends in terms of how certain characteristics influence innovation thinking, involvement and decision-making. It analyses how innovation is being under-

stood in a public sector context, discussing a number of key opportunity factors, drivers and barriers to innovating and innovation diffusion. Particular attention is paid to innovation opportunities related to public procurement rules and procedures; to specific financial instruments used to support or resulting from innovation; to the specific relations with civil society actors, and to publicly owned enterprises as specific enablers and diffusers of innovation.

The results of the State-of-the-Art Report were presented to the partnering organizations and other stakeholders in September 2013 during an International Partners' Meeting in Italy. The report was used as an input for discussion among project partners and relevant local stakeholders, as well as to provide a general theoretical and empirical framework for an improved understanding of the process of innovating in the public sector. The full text of the report is available for download on ARC Fund's website and on that of the CCIC project.

Additionally, ARC Fund's team contributed to two thematic group seminars, which were organized to discuss two of the thematic foci of the project - public procurement and publicly-owned enterprises. ARC Fund's role during these seminars was to provide feedback to the discussions among the partners from the local and regional authorities based on its expertise in the field of innovation and policy-making in science and technology.

EVAL-INNO

In 2013, the 'Fostering Evaluation Competencies in Research, Technology and Innovation in the SEE Region' (EVAL-INNO) project continued to build on the accomplishments of 2012. In achieving its objective of improving national (i.e. in Austria, Bulgaria, Greece, Hungary, Montenegro, Serbia) and regional (South-eastern European) RTDI evaluation capacity and public procurement practices, it proceeded from its preparatory and theoretical stage, to its practical phase. ARC Fund, in its capacity

as the facilitator of these activities within Bulgaria, undertook the following activities:

- Identification of lecturers and the organization of the first Research, Technology Development and Innovation (RTDI) Evaluation Training Course from March 18th-22nd in Sofia, Bulgaria. Potential and current evaluation experts from scientific organizations attended, as well as RTDI program owners from managing authorities and public agencies;

- Provision of feedback to the institutional benchmarking methodology;
- Undertaking an institutional benchmarking exercise of the Academician Emil Djakov Institute of Electronics of the Bulgarian Academy of Sciences and provision of support to the Hungarian RTDI program benchmarking exercise;
- Development of a benchmarking report based on this exercise;
- Continued maintenance of the EVAL-INNO website, including the on-line database and wiki articles.

The Evaluation Training in Sofia brought together participants from Bulgaria, Romania, Moldova and Greece and was executed by trainers from six countries (Austria, Bulgaria, Greece, Hungary, Montenegro and Serbia). In total, 35 trainees participated in the training. These trainees included both junior experts that attended in order to gain theoretical and practical knowledge, as well as senior experts that came in order to refine their expertise. In addition, Bulgarian lecturers participated in the remaining three EVAL-INNO training courses in Hungary (15-19 April 2013), Montenegro (17-21 June 2013) and Serbia (7-11 October 2013).

The EVAL-INNO partners also held a consultation workshop on the topic of public procurement in RTDI evaluations

in Athens, on 28-29 January, 2013. The objective of the workshop was to present and discuss the results of a comparative needs assessment study on the use of public procurement in innovation evaluation practices in the six partner countries. The workshop was attended by members of the EVAL-INNO consortium, national experts of the countries studied, experts from the European Commission, and experts from other interested SEE countries, as well as international organizations such as the World Bank. The RTDI institutional benchmarking activity was also conducted during the year. This was based on a methodology prepared by the project partner, Public Benefit Non-Profit Ltd. for the Development of Industry (IFKA) from Budapest, Hungary, as well as an external expert, and was refined by the project partners. This benchmarking activity aimed to compare, with the ultimate aim of improving, the innovation and research performance of the benchmarked organizations. In Bulgaria, the selected organization was the Institute of Electronics of the Bulgarian Academy of Sciences. Through a series of interviews, surveys and desk research, ARC Fund investigated the institute across three dimensions. These included the practices used to take societal needs on board, how the institute responds to these needs, and what impacts that this response has on society.



*The EVAL-INNO Evaluation Training Course,
March 18th-22nd Sofia, Bulgaria*



EVAL-INNO Benchmarking Report - Bulgaria

Regional Innovation Monitor Plus

Launched in 2010, the Regional Innovation Monitor (RIM) continues to be one of the flagship initiatives of DG Enterprise and Industry of the European Commission. It aims at supporting the sharing of intelligence on innovation policies across some 20 regions in 20 EU Member States. Building upon the experience and results from the first period from 2010-2012, the RIM Plus service strives to evolve towards providing practical guidance to regions on how to use the collected information, establish a network of regional experts with thematic specialization, and organize workshops that take into account the relevance and potential interest among regional innovation policy makers.

The core element of RIM Plus continues to be the online repository of regional innovation policy measures, policy documents, and organizations within the participating EU regions. On this basis, the project aims to further contribute to the development of more effective regional innovation policies, promote policy learning, and provide a unique

platform for sharing knowledge and know-how on major innovation policy trends.

In 2013, ARC Fund updated the profiles of the six Bulgarian planning regions, focusing on the latest changes and trends in the areas of economic development, research and innovation, institutional set-up and innovation policy governance. The profiles of featured regional organizations were complemented with some of the most recent innovation-related projects and support measures.

In order to allow for horizontal analysis, the elaboration of 30 standardized regional reports is foreseen on the basis of common methodological guidelines. In 2013, an in-depth regional report on the innovation potential of the North East region was produced, which outlined and analyzed the contemporary developments of regional innovation policy, taking into account the specific context of the region, as well as general trends at the national and EU level.

METRIS

For a third consecutive year, ARC Fund participated as a full member in Monitoring European trends in Social Sciences and Humanities (METRIS), a network of correspondents gathering insights and benchmarking the development of social science and humanities (SSH) in Europe. METRIS is an initiative of the Directorate General for Research and Innovation of the European Commission, whose aim is to become an entry and reference point for the social sciences and humanities landscapes in Europe.

In line with the overarching goal of the network to ensure the collection, regular updating, and analysis of SSH information at national and European level, ARC Fund prepared a country report focusing on new SSH policy developments in Bulgaria, governance set-up and coordination, thematic priorities at the national level, research infrastructures, state and private sector funding sources and research

performance. The country report highlights the lack of national policy that is focused exclusively on SSH research in Bulgaria and that the national research system depends primarily on public funding, distributed at the national level. In the lack of an integrated strategic research framework, even organizations with the most relevant expertise and research capacity elaborate their research agendas independently of governmental priorities - most frequently, based on available donor funding. Considering this, the following thematic research areas seem most attractive: competitiveness, innovation, crime, education, employment, health, migration and inequality.

The report also concludes that the systematic use of evaluation methods for evaluating the impact or efficiency of public sector programs, policies or strategies is limited. No significant attempts have been identified at the government level to integrate evaluation in policy development.

HR Management in Public Research Sector

In 2013, ARC Consulting, the commercial arm of ARC Fund, participated as a regional coordinator in the feasibility study for the development of a new certification mechanism for genuinely good HR management in the public research sector in Europe. Within its framework, interviews were carried out with diverse stakeholders in research performing and research funding organization in the following countries: Bulgaria, Greece, Romania, Slovenia, Albania, Bosnia & Herzegovina, FYR of Macedonia, Moldova, Montenegro and Serbia.

By collecting timely input by key stakeholders and developing a new certification mechanism, the European Commission strives to provide more attractive careers for researchers and thus reinforce the implementation of the Human Resources Strategy for Researchers. The round of interviews aimed at collecting country-specific evidence to support the following activities:

- Developing a certification process for good human resources manage-

ment in the public research sector;

- Designing architecture for the body/group of bodies that will carry out the certification;
- Developing scenarios for the practical setting up of the certification structure and the associated accreditation mechanism;
- Assessing the feasibility of the initiative, taking into account the existing national legislative frameworks and pointing out potential synergies with on-going EU and national policy initiatives.

The scheme will build on the experience gathered under the existing HR Strategy for Researchers/HR Excellence Award, and will be widely applicable, taking proper account of the different national contexts and legislative frameworks within which research organizations operate. Institutions that have successfully participated in the Human Resources Strategy for Researchers initiative should be well placed to obtain the quality label that will be awarded

through the new certification mechanism.

The publication of the final report summarizing the results from the EU-wide consultation is due at the beginning of 2014. An overall preliminary conclusion from the

conducted interviews is that R&D institutions in the aforementioned countries perceive challenges related to funding, infrastructure and human capital more pressing than improving HR management practices.

Open, Transparent, and Merit-Based Recruitment of Researchers

ARC Consulting assumed the role of country correspondent within the framework of another EU-wide assessment activity related to the management of human resources in public research institutions. The overall objective of the project on open, transparent, and merit-based recruitment was to analyze the current de facto and legal situation with regards to recruitment processes and practices of researchers within all EU27 Member States. ARC Consulting conducted a round of structured interviews at ministry level, and within universities and public research organizations, in order to:

- Gather information necessary to evaluate the level of openness of the recruitment procedure;
- Identify possible good practices and barriers for open recruitment;
- Systematize the perceptions of the benefits of open recruitment;
- Outline current or planned policies at national level promoting open recruitment;
- Assess the costs of adapting existing and/or introducing new legislation on more open recruitment.

The summarized interview results revealed that stakeholders perceive unattractive remuneration levels and outdated research infrastructure as the major obstacles to attracting and retaining researchers of high merit. Furthermore, it was highlighted that the pool of potential Bulgarian and international applicants in particular is limited. Although individual faculties have exchange partnerships with foreign universities and research teams participate in various international projects, integrated internationalization policies are rarely laid down in official documents. It is widely believed that the recruitment mechanism currently in place produces satisfactory results and improvements, in terms of openness, are not necessary.

The collected empirical evidence on recruitment requirements and practices in Bulgaria will contribute to: identifying possible legislative approaches at EU level to ensure more open, transparent, and merit-based recruitment systems; carrying out a detailed cost-benefit analysis; and formulating policy recommendations for legislative and non-legislative actions.