

2010

Annual Report



Applied Research and Communications • Fund •

Applied Research and Communications Fund 2010 Annual Report

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Introduction

Mission and vision

In 2010, ARC Fund continued its activities in **incubating** social, business and technological **innovations, providing** research-based **policy solutions** and **facilitating the development of a knowledge-based society**. ARC Fund expanded significantly the community it serves and accomplished important milestones in transforming itself from a **premier Bulgarian** policy and research institute to an **emerging international think and action tank** in the field of innovation, technology transfer and information society.

Policy impact in Bulgaria

ARC Fund continued to inform and advise policy makers in Bulgaria with the objective of improving the national position with respect to the European Commission's 'Europe 2020' strategy for improving smart, sustainable and inclusive economic growth. This included formulating the national target for gross expenditures on research and development (R&D) at 1.4 – 2.0 percent of GDP, informing the national e-Governance strategy and strengthening the broadband program, among others. On a more operational level, ARC Fund's policy analyses and other activities contributed to the work of the Ministry of Economy, Energy and Tourism (including the report, *The Bulgarian Economy – Current Situation and Strategy for Development*), the Ministry of Education, Youth and Science (the report on *Policy Recommendations on Higher Education, Science, Technology, and Innovation (STI) in Bulgaria and support to the new university rating system*), the Ministry of Interior (through the Safer Internet Hotline), the Ministry of Transport, Information Technologies and Communications (MTITC), the Communications Regulation Commission and other public institutions. Last, but not least, to sustain its policy impact in the years to come, ARC Fund has been involved in training sessions delivered to emerging young political leaders through the Bulgarian School for Politics.

Impact on firm level

Throughout 2010, ARC Fund delivered services to more than 150 companies by providing information on European Union (EU) programs and funding opportunities, as well as providing consulting, matchmaking, internationalization and business optimization services. ARC Fund's international activities in 2010 included collaborative efforts with institutions and organizations in China, Germany, Italy, Japan, Spain, Sweden, the UK and Turkey. For example, ARC Fund assisted Spesima, the 2004 Innovation Award Winner (see page 16) in signing contracts with a company from Turkey as well as assisting Bianor (the 2009 and 2008 Innovation Award Winner) in signing two contracts with German companies. ARC Fund provided services to companies in the following sectors: transportation, manufacturing, ICT, tourism, health, aviation and management consulting. ARC Fund helped more than 10 companies and research institutes

in Bulgaria to find partners and submit proposals to the EU's Seventh Framework Program (FP7). Among the exemplary services provided by ARC Fund at firm level, was the facilitation of the development of a piece of software, developed on demand, that optimized the work of a Bulgarian-Italian company and shortened a critical path in its service delivery by more than seven times.

International impact

ARC Fund continued to play an instrumental role in strengthening Bulgaria's integration into the European Union through its national leadership of several structural networks and initiatives of the European Commission. These included the **Enterprise Europe Network, ERAWATCH** and the Regional Innovation Monitor (**RIM**), **INSAFE** and **INHOPE**. ARC Fund established itself as a **trustworthy and regular reference hub** for the European Commission and its institutions for data and information on the Bulgarian innovation system and information society. It also served as an **independent monitoring and analyses provider** on Bulgaria for the international community, a **reliable partner** for internationalization of European enterprises as well as an **effective safeguard** to modern online threats to children.

ARC Fund served not only **Bulgarian and EU stakeholders** but also those from the **Western Balkans** and the **Commonwealth of Independent States (CIS)**. Most recently, ARC Fund expanded its reach to **China** by embarking on a foresight study of EU-China cooperation in research in environmental studies, which will help inform the strategic decisions of the European Commission on EU-China relationships in the future.

ARC Fund provided significant support to its counterparts from the **Western Balkans** in various ways, such as by improving and promoting closer scientific and technological (S&T) cooperation opportunities between the EU and the Western Balkan Countries (Albania, Bosnia and Herzegovina, FY Republic of Macedonia and Serbia) in the area of Surface Transport and capacity building for banning and phasing out asbestos in FY Republic of Macedonia, Bosnia and Herzegovina and Serbia. These activities also consisted of hosting experts from the Western Balkans on study visits which explored the Bulgarian practice of protecting children on the internet.

ARC Fund's involvement in CIS countries is primarily through the **Network of Business Incubators and Technology Parks in Eastern Europe and Central Asia (ECAbit)**, where it has served as a coordinator since 2008. ARC Fund extended its policy and advocacy outreach to Moldova and Azerbaijan in 2010 by assisting both governmental agencies and NGOs.

Web 2.0 and media outreach

ARC Fund pioneered new media outreach channels as early as 1996, through the Bulgaria Online portal. It continued its activities in this area from 2001 (Bulgaria Development Gateway) to 2010 when it rolled out Facebook tools for awareness raising, public advocacy and civic activism in the areas of innovation and information society. ARC Fund's most widely supported cause on Facebook concerns the establishment of a register of sexual abusers of children in Bulgaria (more than 4,800 members in

the cause). The eBulgaria2020 community established on Facebook reached close to 1,000 members by the end of 2010. Among them are members of the *Parliamentary Committee on Transport, Information Technology and Communications*, other former and current members of parliament, directors of public agencies and directorates in ministries, business associations, industry leaders, key journalists from the sector (including specialized press), civil society organizations, academic IT experts and others. About 20% of the members are active in the group by posting, commenting and 'liking', the content of the group. The **eBulgaria 2020 group has been cited by journalists as a news source** and it serves as an instrument for increasing transparency in policy making (e.g. in two cases during the competition for the post of Director of the *e-Governance Directorate* at MTITC, several applicants submitted their programs for discussion by the members or raised questions and participated in the internal group's debates).

There have been around **two hundred instances** of traditional and online media coverage of ARC Fund in 2010, including interviews with staff members, participation in radio and television programs and references to opinions or published reports both in Bulgarian and English. The Sixth National Innovation Forum and the *Innovation.bg* 2010 report accounted for about a third of the coverage.

The journal SIGNAL, published by the Armed Forces Communications and Electronics Association (AFCEA International) – one of the leading non-profit organizations of this kind - credited the overall experience of ARC Fund in the field of innovation and ICT research and policy. The article *Bulgaria's High-Technology Industry Emerges from the Cocoon of Communism*, published in the November volume, uses ARC Fund's analyses as one of the main sources of independent empirically-based policy expertise.

Human capital

In 2010, ARC Fund blended a diverse range of personal and professional backgrounds, experiences and competencies in forming a truly globalized working environment that attracted entrepreneurial human capital. ARC Fund employed talented young graduate students from universities from the European Union and the USA, mid-career engineers and economists, and established researchers and professors. About 40 % of the staff either hold or are pursuing a PhD degree. Members of the staff have obtained working experience in countries like Russia, Ukraine, Turkey, Syria, Jordan and Japan. In 2010, the ARC Fund staff spoke nine languages, including Russian, Korean, Chinese and Japanese; included three experts from Korea and the USA; taught at three universities; and served as independent evaluators to the European Commission and national contact points (NCPs) for various FP7 programs.



PART ONE
Program Areas



Science, Innovation and Information Society

In 2010, ARC Fund continued to affect change in Bulgarian society through its portfolio of services in support of policy design and assistance in their implementation. In the areas of research, development, innovation and information society, ARC Fund provided a comprehensive annual policy report on innovation, fed the ERAWATCH and RIM with standardized reports on the regional and national innovation system focusing on R&D and provided analyses of priority ICT policy areas.

Innovation.bg



The annual *Innovation.bg* report provided a reliable assessment of the national innovation system, status-quo and innovation potential of the Bulgarian economy. It recommended innovation policy improvements in Bulgaria and the EU, based on the latest theories and empirical evidence. For the sixth consecutive year, the report constituted an important part of the process of raising awareness of the role that innovation plays as a national competitiveness factor. It also served to inform and shape the development of national priorities supporting the implementation of the new EU 2020 Strategy and in particular the Innovation Union, one of the seven flagships of this strategy.

The *Innovation.bg* report provided an analysis of the state-of-the-art of the national innovation system and outlined recommendations on how to improve innovation policy. The report was structured along five main themes:

- gross innovation product;
- entrepreneurship;
- investment and financing of innovation;
- human capital for innovation;
- information and communication technologies.

The 2010 edition of the report examined the impact of the global financial and domestic economic crisis on innovation activity in the Bulgarian economy and

suggested possible directions for Bulgarian innovation policy to take over the next decade.

Innovation.bg 2010 presented an updated **Innovation Index of Bulgarian enterprises**. The Index is a composite measure of innovation activity of enterprises based on the annual sociological surveys of the business sector conducted by the Enterprise Europe Network – Bulgaria. The report was reviewed and approved by the Expert Council on Innovation established by ARC Fund in 2003.

Based on a time-series of the innovation index, 2010 could be considered the year

of innovation in Bulgaria. Among the main reasons for this statement are that:

- (1) the 2008-2009 financial crisis significantly altered the economic map of the world, marked the end of two decades of continuous economic growth and created unprecedented opportunities for the repositioning of national economies;
- (2) Bulgaria weathered the crisis in relatively fine general macroeconomic shape but now needs to turn this advantage into a good macroeconomic platform by modernizing its public administration and developing long-term growth policies and priorities;
- (3) The European Union consolidated its institutional development and the newly elected European Commission initiated the negotiations on EU policy and budgeting for the period up to 2020. The year was bound to be a hard one for the Bulgarian economy, but it is now a good time to formulate Bulgaria's 2020 goals and to prioritize both market and

social innovations as effective means to achieve them.

The report *'Innovation.bg 2010: The Innovation Policy of Bulgaria: Opportunities for the Next Decade'*, highlighted the possibilities that 2010 presented for critical decision-making and the mobilization of enterprise and innovation activity and human and intellectual capital in the achievement of economic recovery from the crisis as well as contributing to sustainable growth. For Bulgaria this means the need to update the current National Innovation Strategy, providing linkages and guidelines for the development of science and the economy, and a clear commitment to its implementation at the highest level of government. The report challenged the myths in Bulgaria that there is no linkage between academia and business and that the businesses do not invest in R&D. The report also challenged the way entrepreneurship is usually measured and assessed. Website: www.arcfund.net

Sixth National Innovation Forum

On March 01, 2010, the Applied Research and Communications Fund, Enterprise Europe Network – Bulgaria, the Ministry of Economy, Energy and Tourism, and the World Bank Mission to Bulgaria participated in the Sixth National Innovation Forum under the auspices of the Prime Minister of the Republic of Bulgaria, Mr. Boyko Borissov. This forum, entitled 'Science, Technology and Innovation: Policies for Growth in the Next Decade', focused on the role and importance of innovation as a driver of economies and the health of the innovation system in Bulgaria. The World Bank, national ministries, the Bulgarian Parliament, municipalities and the private sector were represented in the discussion panels at this event.

The National Innovation Forum is a unique annual event for Bulgaria, aimed at uniting the efforts of all stakeholders and interested parties to discuss the innovation environment in the country and to propose measures for their optimization.

The event focused on improving the degree of cooperation between companies and academia within the country and between Bulgarian and foreign organizations, in order to stimulate the national economy and enhance the competitiveness of businesses. It was reiterated that this was to be done by a serious reform in academia, including reforms in the academic career development system, the financing of higher education and the



Prime Minister Boyko Borissov speaking at the Sixth National Innovation Forum, held on 1 March 2010

Bulgarian Academy of Sciences and by strengthening its governance systems.

During the forum, the findings of the annual report on the innovation development in Bulgaria – Innovation.bg 2010, were presented and discussed. The winners in the National Contest for Innovative Enterprise of the Year were awarded.

This high level forum highlighted a number of issues which are essential for the economic convergence of Bulgaria with European Union averages and outlined the requirements for the creation of a healthy business environment that would attract innovative foreign investment, reduce structural unemployment and stimulate the knowledge economy in Bulgaria. It was noted that improving Bulgaria's absorption capacity for EU structural funds would help improve business conditions in the country. The good practice of several municipalities

(like Gabrovo) in the absorption of EU funds was discussed.

The *Innovation.bg* report pointed out that a higher percentage of enterprises undertook innovative activities in 2009 compared with 2008 (71% and 43% respectively). This was partially attributed to the accession of Bulgaria to the European Union and the steps which Bulgarian businesses had taken to improve their competitiveness within the European single market. Other potential contributing factors to this positive trend were that businesses had brought themselves in compliance with European legislation as well as responded to the global financial and domestic economic crises by improving their competitiveness through innovation.

In summary, the forum participants indicated the steps necessary for the realization of Bulgaria's full innovation potential.

These steps included the need to:

- Update the current National Innovation Strategy;
- Further institutionalize and implement the existing Regional Innovation Strategies;
- Reignite the National Innovation Fund;
- Provide government co-financing for EU funded projects of national importance (similar to FP7 co-financing);
- Improve the legislative framework

through impact assessments and reduce the administrative burden on businesses through increased e-Government;

- Create a stable economic environment so that business can discern the risks stemming from their innovation activities;
- Have a clear high-level policy commitment to support the innovation agenda.

Website: www.arcfund.net

Annual Innovation Award

The award in the 'Innovative Enterprise of the Year' contest is given annually to Bulgarian enterprises which have successfully developed and/or introduced innovations or to Research and Technological Development (RTD) organizations for their research that has increased the efficiency of business performance and/or has led to a sustainable economic impact. The innovation

performance of companies is evaluated by an independent jury on the grounds of data provided by the companies and in-depth technology audits of the applicants.

Applicants are evaluated against a special methodology by an expert panel and a jury in two categories: (1) innovative small company (up to 50 employees), (2)



Winners of the 'Innovative Enterprise of the Year' contest at the Sixth National Innovation Forum, 1 March 2010

innovative medium and large company (over 50 employees).

a statuette made by the sculptor Petko Arnaudov.

The winner in each of the two categories receives an honorary diploma and

Website: www.arcfund.net

European Research Area

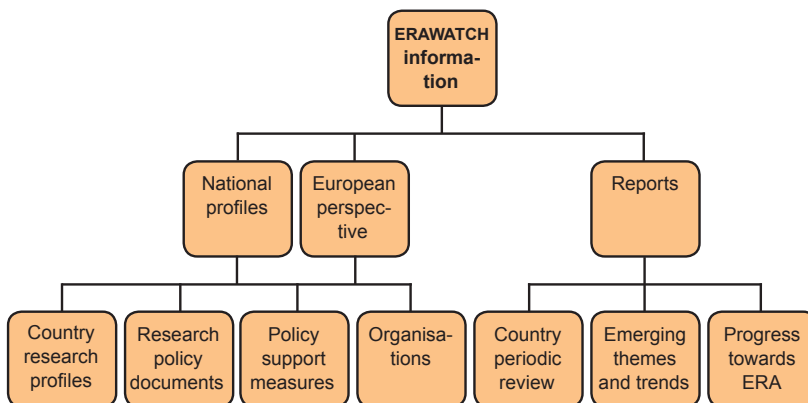
ARC Fund has been the national contact point of the **ERAWATCH** (ERA – European Research Area) initiative since its inception in 2004. This is a pan-European initiative jointly carried out by the European Commission's Directorate-General for Research and the European Commissions Joint Research Centre - Institute for Prospective Technological Studies (JRC-IPTS). The initiative is aimed at collecting and using precise data in the formation of various policies contributing to the realization of the European Research Area. It provides structured and comprehensive information about national and regional research policies, players, organizations and programs. The ERAWATCH online service has been developed in

collaboration with CORDIS. Currently ERAWATCH covers 49 countries in total: 27 of which are EU Member States, and the remainder which consist of countries associated with the European Community's Research Framework Program as well as the main trading partners of the EU.

ARC Fund continued its work on ERAWATCH as a national correspondent for Bulgaria. In this capacity, it produced an annual report, country profile and completed online templates which focused on national and regional research policies, organizations and actors.

Website: www.cordis.europa.eu/erawatch/index.cfm

Figure 1. Structure of the main ERAWATCH instruments for dissemination of research policy information



ERAWATCH: Baseload research inventory service IV

For the fourth year, ARC Fund provided information about the Bulgarian national and regional research systems. The country profile focused on the main mechanisms for developing research policies in Bulgaria, the most important political documents, a reflection of Bulgaria's EU membership, the regional dimension of research activities and the activities of the main institutions involved in research. In 2010, some new aspects of the research policy were added and analyzed, including the labor market for researchers, the orientation and instruments for achieving the internationalization of science and technology (S&T) cooperation, and the identification of policy measures to solve the grand challenges on Bulgarian society through transnational R&D cooperation. A special section of the profile was devoted to

recent research policy developments in Bulgaria, such as the declared national goal for raising the R&D funds to levels of between 1.5% and 2.0% by 2020, the elaboration of a Draft of the National Reform Program 2010-2013 (November 2010), the adoption of a National Roadmap for Research Infrastructures (September 2010), the amendment in the Law on Scientific Research Promotion (October 2010), the two evaluations of the universities and the creation of a new rating system in 2010, the launch of the JEREMIE and JESSICA funds (July 2010), and the passing of the new Law on the Development of the Academic Staff (May 2010, amended in October and December 2010).

Website:
www.cordis.europa.eu/erawatch/index.cfm

ERAWATCH Country Report 2010: Bulgaria

In 2010, ARC Fund developed the annual *ERAWATCH Country Report 2010 for Bulgaria*. The report reviewed the performance of the national innovation system and made an assessment of recent policy changes. It also focused on the interactions between national policies and the European Research Area. According to the report, Bulgaria faces a chronic shortage of public financing for R&D and what funds there are appear to be stretched across an oversized institutional structure inherited from the days of centralized planning. The outdated legal and institutional framework related to innovation and research, as well as the lack of long-term national financial planning of research, obstructs the promotion of private investment in

R&D and the achievement of the national R&D investment objectives. Still, several changes have occurred in the research policies of Bulgaria between 2009 and 2010, including the policy decisions for setting the target for an increase of R&D expenditure, for the establishment of large scientific and research centers, the launch of a more effective monitoring and evaluation system of funded projects under the National Science Fund, and the introduction of a procedure for Bulgaria's future participation in European infrastructures. Regarding education policy, a new Law on the Development of the Academic Staff (LDAS) was adopted and the first university rating system was introduced with the intention to serve as a tool for

discretionary funding by the state according to universities' achievements.

Website:
www.cordis.europa.eu/erawatch/index.cfm

Table 1: Effectiveness of knowledge triangle policies

	Recent policy changes	Assessment of strengths and weaknesses
Research policy	Decrease of public spending for R&D and negative effect of the crisis. Enacted Law for Amendment and Supplement of the Law for Promoting Scientific Research (LPSR)	The LPSR provides for the building of large research centers and for better functioning of the NSF. These changes come, however, with a reduction of public funds for R&D.
Innovation policy	A national GERD goal has been declared for 2020: 1.4% – 2.0% of GDP	While adopting a national R&D goal has been a major breakthrough it comes against the backdrop of a lack of updated National Innovation Strategy and the ceasing of operation of the National Innovation Fund.
Education policy	Changed policy on academic career promotion (new Law on the Development of Academic Staff). The university rating system was launched but public financing was reduced	Career development and university ratings are critical for the proper functioning of the system. However, these are just policy texts, which still have a long way to go for effective implementation and enforcement. Part of the text of the new law was rendered unconstitutional, which stopped the procedures for habilitation and obtaining of PhD degrees. The first ranking of the universities, which is intended to support the discretionary allocation of public resources according to achievement, did not take into consideration the specifics of different universities.

Table 1: Effectiveness of knowledge triangle policies (Continuation)

	Recent policy changes	Assessment of strengths and weaknesses
Other policies	Both 2010 and 2011 budgets envisage a cut in resources for R&D, innovation and education. Delays in the absorption of European funds persist.	Considerable weaknesses result in the continuing delay of the Operational Programs (OPs) implementation, including delays of state and regional bodies' payments to business, and increasing uncertainty for realizing business investment programs combined with no increase of the public financing of R&D and innovation. There are reports that beneficiaries experience difficulties in securing co-financing for the implementation of projects under the Competitiveness and Innovation Program of the EU (CIP) and other EU-funded programs.

Source: ERAWATCH Country Report 2010: Bulgaria

Regional Innovation Monitor

The Regional Innovation Monitor (RIM) is an initiative of the European Commission's Directorate General for Enterprise and Industry. It describes and analyzes innovation policy trends across EU regions. The RIM presents an overview of regional innovation support measures, policy documents and organizations. It is an online benchmarking tool for innovation policy approaches and trends at the regional level and a platform of communication for innovation stakeholders.

In 2010, ARC Fund elaborated and updated the profiles of the six Bulgarian planning regions within the Regional Innovation Monitor platform. It presented information for each region on its economic develop-

ment, research, technological development and innovation potential as well as its trends, governance, and policy. Additionally, the major research-related organizations in the region and regional research policy documents were presented in detail.

For most of the regions, the analysis on the structure and operation of the regional innovation system showed an insufficient supply of innovations due to the lack of critical mass of research and academic organizations. It also highlighted that the prevalence of SMEs and micro firms with a restricted capacity for purchasing and adapting innovations which negatively affects the innovative performance of the regions. Website: www.rim-europa.eu

Unlocking Bulgaria's Hidden Growth Potential

In March 2010, the Ministry of Education, Youth, and Science of Bulgaria requested support from the World Bank for work on the development of policy recommendations regarding Higher Education, Science, Technology, and Innovation (STI) in Bulgaria. ARC Fund worked with the World Bank in focusing on science, technology and innovation. This work was anchored around four pillars:

1. competitiveness and innovation evaluation;
2. providing recommendations for improving the efficiency and effectiveness of domestic and European R&D funding;
3. enhancing the performance of STI programs and instruments;
4. Organizing a forum and a series of technical workshops to consult about the different recommendations.

ARC Fund was contracted to support this work given their experience and expertise in Bulgaria's research, development and innovation system. This work investigated Bulgaria's R&D quality and potential to scale-up public R&D spending and EU funding. The operational functioning and performance of key government programs and instruments in the STI area were assessed. To this end, ARC Fund was recruited to review and provide recommendations for improving the efficiency and effectiveness of R&D spending and absorption of EU funding and to analyze and make proposals to improve the performance of programs and instruments to support the commercialization of public and private research and innovation. These activities consisted of the production

of four technical reports corresponding to the second and third pillars above. These four reports included:

- a) Innovation policy & public spending: This note provided a description of current policy responsibilities in the area of science, technology and innovation and of the allocation of innovation-related expenditures between ministries, agencies, and R&D-performing institutions including the Bulgarian Academy of Sciences (BAS) and universities in Bulgaria.
- b) Capacity to absorb EU funds: This note presented an assessment of bottlenecks in Bulgaria's capacity to absorb EC funds provided under the Structural Funds and under the EU competitive funds FP7 and CIP.
- c) Review of innovation instruments: This note reviewed the operation and performance of the National Innovation Fund and the National Science Fund, including eligibility criteria, organization of the call for proposals, selection criteria and the peer review process, counterpart requirements, monitoring and evaluation arrangements.
- d) Framework to assess BAS restructuring: This note developed a framework to examine the implications of the proposed restructuring of the Bulgarian Academy of Sciences (BAS) and clarified the performance metrics to be used in evaluating the restructuring options of research and development institutes.

These notes were presented to the World Bank in June of 2010.

Support for policy development in the field of information society

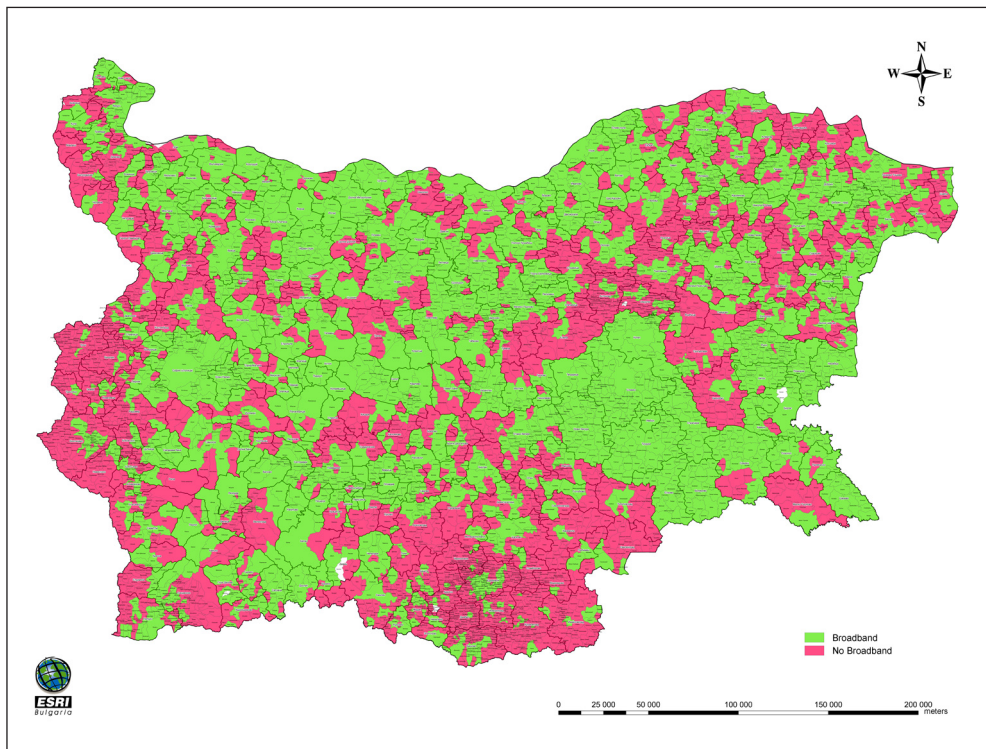
- The *Ministry of Transport, Information Technologies and Communications* (MTITC) has utilized ARC Fund's policy research and expertise for **shaping national policy on improving broadband infrastructure in underdeveloped and rural regions.**

ARC Fund implemented an innovative methodology, studying access to broadband internet and socio-economic development on the village/town level for the entire country.

According to ARC Fund's survey, at least **91.5% of the country's population lives in a location with at least one broadband internet provider** (speed range above 1 Mbps and

monthly rate of up to 30 BGN). **42% of all settlements have at least one broadband provider, including all of the towns** in the territory of the country. Approximately the same proportion (**41%**) of the locations in rural areas has at least one broadband provider and these account for 82.5% of the entire rural population of the country. At least one broadband provider operates in 26% of the settlements in mountain areas but this is where 81% of the mountain area population of the country lives.

MTITC has used ARC Fund's data to identify both those regions that are eligible for the implementation of projects funded under the *Regional*



Development OP¹ and the present situation in the country regarding access to the internet in general. The data, collected by ARC Fund, challenges the existing information on the availability and type of internet access, and significantly improves the coverage and the reliability of official data available within respective state authorities (*Commission on Regulation of Communications, MTITC*).

The Ministry credited ARC Fund's research and policy recommendations in various ways. For example, the Ministry used the results in official presentations of the Broadband Initiative at the national and EU level and implemented some of ARC Fund's recommendations when drafting the *E-Governance Strategy* in July 2010 and later adopted in December 2010 (e.g. improving some of the measurable indicators set up by the Strategy; setting up a priority for open standards within "Stimulating the use of e-services" goal; underlying the requirements for e-accessibility according to the Web Accessibility Initiative; unification of domain-names of public administrations).

The Commission on Regulation of *Communications* acknowledged ARC Fund's research by using some of its results to improve their own data on broadband coverage, types of internet access and other metrics, in the annual report on communication market development and regulation, prepared for the European Commission, DG Information Society and Media.

- **Methodology for selection and monitoring of pilot broadband regions**

¹ The OP provides for spending roughly EUR 20 Min. on projects aiming at improving broadband infrastructure in these regions in next three years.

In the framework of public-private partnership between MTITC, ARC Fund, ICT Cluster and ESRI Bulgaria Ltd. a new approach was developed for **the selection and monitoring of pilot regions, where broadband infrastructure will be built**. It is based on the innovative methodology elaborated by ARC Fund, which relies on the integration of sociological studies' results with large-scale databases from various public sources. Using GIS software, the methodology provides for the selection of regions across administrative borders, based on authentic socio-economic development, a perspective which was missing in all previously available studies. **After the initial selection of 19 pilot regions, MTITC put forward the use of this approach**, planning to set up an online platform which will use this approach and data, collected by ARC Fund, in order to map for the first time the existing private and public communication infrastructures throughout the country. This will help to ensure more effective public spending on new infrastructure only where it does not currently exist and include a way for increasing its cooperation with the Ministry of Agriculture and Food, which will spend €5MM for promotion of ICT-support centers in rural areas.

- Using ARC Fund's findings that R&D expenditures are underreported in general, and in the ICT sector in particular, the Ministry of Economy, Energy and Tourism (MEET) has set an ambitious goal of **reaching 1.4 to 2.0 % of GDP for R&D expenditures in 2020** against the initial suggestion of the Ministry of Education, Youth and Science (MEYS) of 0.6 %. This goal has already been approved by the Council of Ministers and is in-



Mr. Julian Nikolov, Director, Economic Policy Directorate, MEET

cluded in the formulation of national policies in line with the *Europe 2020* priorities. ARC Fund was credited by Mr. Julian Nikolov, Director of the Economic Policy Directorate, MEET at the closing Policy Forum, held on July 31, 2010.

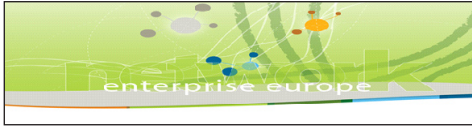
MEYS based their estimation on official data for R&D spending, while ARC Fund data-mining and further primary research on R&D spending within the ICT branch suggested that R&D spending in the private sector is under-reported or unaccounted by 2 to 5 times at the National Statistical Institute (NSI). This would mean that, contrary to the belief of MEYS, at least in the ICT sector, the private sector invests and produces significantly higher amounts of R&D than reported. This was later confirmed from qualitative studies for other sectors. MEET acknowledged the studies of

ARC Fund, backed up with additional analysis of the competitiveness of the Bulgarian economy, and changed the initial target between 1.4 – 2.0%. ARC Fund, MEET and NSI agreed to work on a common agenda to gradually increase R&D reporting and to direct innovation oriented measures towards high-growth and high value added sectors and companies in the national economy.

- ARC Fund participation in all important public debates on national IT policy improves the **transparency of decision making**. The eBulgaria2020 community established on Facebook reached close to 1,000 members by the end of 2010. Among them are members of the *Parliamentary Committee on Transport, Information Technology and Communications*, others are former and current members of parliament, directors of agencies and directorates in state authorities, business associations, industry leaders, key journalists from the sector (including specialized press), civil society organizations, academic IT experts and others. The **eBulgaria 2020 group has been cited by journalists as a news source** and it serves as an instrument for increasing transparency in policy making (e.g. in two cases of an open competition for the post of Director of the *e-Governance Directorate* at the MTITC, several applicants submitted their programs for discussion by the members or raised questions and participated in the group's debates)

Technology transfer and business support

Enterprise Europe Network – EEN



In 2008, the two largest networks of the European Commission providing advice to businesses (European Network of Innovation Relay Centers and the Network of Euro Info Centers) joined efforts and merged into a new initiative of the EC named the Enterprise Europe Network. The Network is the main instrument of the European Commission in implementing its policy to support small and medium-sized enterprises (SMEs), laying special emphasis on innovation as a key driver of competitiveness. EEN is represented in Europe by 557 information and consulting centers with over 4000 experienced professionals. The network provides its services to companies and research organizations without sectoral restrictions or preferences.

The European Commission considers the Enterprise Europe Network (EEN) to be an important European and national public service in the sphere of innovation, technology transfer and the promotion of small and medium-sized enterprises at European and national levels. It provides SMEs with services for international collaboration, for developing innovations and/or participating in technology transfer, and for participating in joint research projects with the financial support of the EC framework programs (FP7 and the

Competitiveness and Innovation Program (CIP). In addition to this range of services, the Bulgarian network further offers country-specific support for businesses by helping them to take advantage of the Operational Programs (OPs) under the Structural Funds in Bulgaria.

The opportunities of the single market still remain under-exploited by Bulgarian SMEs. It is the mandate of the Enterprise Europe Network-Bulgaria to help the small businesses internationalize, innovate and tap into new opportunities for growth and development. The provision of high quality business and innovation support services, delivered in close proximity to local SMEs and designed to meet the needs of the Network's clients, underpins our ambition to establish the Enterprise Europe Network as the number one reference point for the Bulgarian SMEs in internationalization and innovation matters.



It is very important for the network in Bulgaria to link the needs of its clients up with the latest policy developments at



Map of the coverage of the EEN contact points in Bulgaria by Province

European level. By virtue of the nature of the network, SME and innovation policies retain their central role in shaping the majority of support services. The network's activities also reflected major political headline priorities and are inspired by the most important policy developments, such as Europe 2020 and, in particular, the Innovation Union Flagship Initiative.

The Network in Bulgaria consists of 13 partnering organizations in 8 cities, is coordinated by ARC Fund, and covers the whole territory of the country.

Evolution and continuity marked the year of 2010 for the Enterprise Europe Network in Bulgaria. Three years after its launch, the network's regional structures have been consolidated and provide a solid foundation for partners to deliver on the key aspects of the Network's mandate to help SMEs make the most of the single market. As in previous years, the focus was to help the internationali-

zation of Bulgarian SMEs via business partnerships, to encourage and support innovation via technology transfer and modern innovation support services, and to facilitate access for SMEs to research programs and funding.

ARC Fund maintains the internet portal of the Network in Bulgaria, www.enterprise-europe-network.bg, which is the leading Bulgarian portal for business information and advice, technology transfer and innovation, consultancy and information on how to participate in national and European funding programs, especially in terms of technological development, research and marketing of new products and technologies. Each partner maintains its own, regional portal of the Network. The Internet Portal of the Bulgarian node of the Enterprise Europe Network and the regional sites has been visited more than 11 million times in the last 3 years.

Website: Enterprise Europe Network

The activities of EEN – Bulgaria are complemented by a diversified portfolio of ac-

tivities focused on different sectors like ICT, transport, creative industries, and tourism.

Brokerage event for clusters and companies in the field of Information and Communication Technologies

For the past 12 years the Applied Research and Communications Fund, has organized annual business and technological brokerage and matchmaking events in various economic sectors, including engineering, machine building, ICT, energy efficiency and renewable energy sources. These types of pre-arranged meetings allow for contact between businesses and research organizations in search of business, technology and project partnerships (for international projects in European funding programs, participation in joint projects can take place under different EU programs and initiatives, such as EU framework programs, operational programs under the EU structural funds, programs such as Intelligent Energy, etc.).

The preparation, format and program for ICT CLUSTER MATCH 2010, held in the town of Plovdiv from September 29 – October 1, 2010, was new for this type of event in Europe. The aim of the ICT CLUSTER MATCH 2010 was to allow for clusters and component companies, research, and consulting nongovernmental organizations to discuss business opportunities and technological partnerships on the basis of previously ex-

changed information. The shape of the event allowed the exchange of contact information, technology and business profiles, presentations and promotional material between the participating clusters and companies.

The novelty, which was introduced in the preparation, organization and conduct of the event, is associated with an individual approach to analyzing, systematizing, and offering information and advice to a cluster on funding opportunities for joint international projects such as projects under the EU Framework Programs, including the Competitiveness and Innovation Framework Program and OP Competitiveness (specifically under Priority 2). The consultants of Enterprise Europe Network – Bulgaria, together with specialists from the Ministry of Economy Energy and Tourism (MEET) developed and provided clusters with systematic information on the general and specific objectives of the above listed programs. This included the requirements for the documentation necessary, and the steps in preparing and submitting project proposals by cluster consortia, as well as information regarding the implementation stages of projects.

FutureMatch

The Enterprise Europe Network Bulgaria organized a technology brokerage event in ICT during the biggest European exhibition in the field – Ce-

BIT, from March 2-6, 2010, in Hannover, Germany.

CeBIT is the world's leading fair for infor-



The FutureMatch ICT technology brokerage event in Hannover, Germany, 2-6 March 2010

mation and communication technologies (ICT) in Europe.

Despite the economic crisis and the restricted financial resources of the companies to attend international exhibitions, **FutureMatch 2010** and the efforts of the EU's largest mechanism for supporting SMEs – Enterprise Europe Network, attracted more than **400 participants** from **46 countries** and **1,359 bilateral meetings** were held during the event.

The ARC Fund consultants from the Network supported the participation of **five innovative** Bulgarian companies in the brokerage event. They presented several new technological solutions like software for improvement of mobile sales team efficiency, an intelligent platform

for the modernization and development of information systems, a mobile surveillance system and an integrated business software solution for management and control of hotels, chains of hotels and property management companies. The presented technologies provoked very high interest and more 80 meetings were held.

The immediate results from the meetings included a contract for new software development and the participation of Bulgarian SMEs in an FP7 research project. These are the first indicators that the FutureMatch added value for the companies. Other successful outcomes are expected.

Website:
www.b2match.eu/futurematch

Support for enterprise and business incubators in Eastern Europe and Central Asia

ARC Fund has coordinated the **Network of Business Incubators and Technology Parks in Eastern Europe and Central Asia (ECAbit)** since 2008. By its active participation in ECAbit, ARC fund provides additional internationalization opportunities for Bulgarian enterprises and extends its policy and advocacy outreach to governments from the Commonwealth

of Independent States. In 2010, ARC Fund assisted the Moldovian Agency for Innovation and Technology Transfer, Moldovian Technology Transfer Network and the Caspian Investment Centre (Azerbaijan) on both policy and project development. ECAbit gained increasing recognition both by the international incubator community and the governments from the ECA region



From left to right: Stefan Schandera (Regional Facilitator, InfoDev, World Bank), Elshan Musayev (President, Caspian Investment Centre, Azerbaijan), Intigam Babayev (Deputy Minister of Youth and Sport of the Republic of Azerbaijan), Mammad Musayev (Chair, National Confederation of Entrepreneurs, Azerbaijan) and Todor Yalamov (ECAbit Coordinator, ARC Fund) at the Advancing Innovation in ECA conference, held in Baku, Azerbaijan on 2-3 December 2010

as a reliable and valuable partner for local economic development.

The fifth regional ECAbit's conference, Advancing Innovation in ECA, was held in Baku on December 2-3, 2010 and focused on Investment readiness and business incubation infrastructure for youth entrepreneurship. It attracted more than 50 participants from 15 countries. The conference featured an infoDev training on investment readiness for incubator managers (current and prospect), train-

ing for pre-incubation and start-ups (for young Azerbaijani entrepreneurs) and a strategic discussion for ECAbit priorities in 2011. Probably the most significant policy impact of the conference was the decision of the government of Azerbaijan to launch a Youth Innovation Center as a pilot incubator for young entrepreneurs and the expectation of ECAbit to play an instrumental role in setting up the initiative in the country. More information on the conference could be found at: www.ecabit.org/?p=335

B-Creative

In 2010, ARC Fund continued its activity in the **'Business kit for Creative start-ups in IPR, Venture capital and Entrepre-**

neurial skills' (BCreative) project along with 8 partners from across Europe. The main activities of BCreative remain its fo-



The BCreative platform "How to Grow"

focus on overcoming the challenges that businesses in the creative industries (CI) (including advertising, architecture, art and antiques, crafts, design, designer fashion, film/video/photography, music/performing arts, publishing, software and computer games, television and radio) face in achieving their business goals. BCreative will make this assistance available through an online platform containing a toolkit that is tailored to the needs of companies in the sector. It will aid in overcoming challenges such as finding business partners and the sharing of expert business advice and in understanding the legal environment surrounding the protection of intellectual property. It will also help businesses acquire the necessary financing, business, and entrepreneurial skills to fully develop and bring their products and services to the market.

In 2010, the partners worked on finalizing the conceptual and technical details of the tools and began the migration of these tools onto the online platform. There are two planned phases for the rollout of the tools on the business kit platform. The tools which have been under development will be made available on the projects website throughout 2011.

The development of the tools had been based on an in-depth assessment of the existing needs of creative companies across Europe and the challenges they face in achieving their goals. In addition, by mapping what existing business support services companies use and why they use them, BCreative has built on previous successes (and will link to them) and will attempt to avoid failures in the development of a sustainable and effective platform for improving the opportunities for businesses in the creative industries. Once the platform and toolkit are deployed, the ways that the platform is used will be monitored using data capture techniques to create an iterative way of constantly improving it and tailoring it to the needs of stakeholders in the sector. Also in 2010, ARC fund investigated the possibilities for implementing an Innovation Voucher Scheme in support of the Creative Industries in Bulgaria.

TOUREG



The main objective of the Research Driven Cluster for Tourist Sector Competitiveness and Knowledge (TOUREG) was to improve the competitiveness and strategic position of the tourism sector and in particular tourist-oriented sectors in European regions. ARC Fund elabo-

rated an analysis of the situation of the services sector linked to tourism in the South West region of Bulgaria, and presented technology offers and requests of the SMEs in a Technology Map web-tool which helped to identify potential synergies, technology transfer opportunities and collaborations.

A report on synergies and complementary features on the tourist-oriented service sector titled, *Analysis of Regional Technological Trends – A Global Analysis and Differences among R&D Public Policies*, was prepared.

In aiming to support SMEs from the tourism sector in innovation activities, the TOUREG consortium developed a hand-

book on how to efficiently apply IT to the tourist sector and an itinerary for the generation of technology transfer.

To achieve the viability and continuity of the international cluster's activity, a joint Action Plan will be prepared which, in view of the preliminary analyses produced and of the priorities drawn up for action in all the regions taking part, includes actions of mutual interest. These actions are capable of being performed in the framework of other European initiatives, such as programs included in the 7th Framework Program and CIP.

Website:
www.tourisminnovation.eu

InterValue

InterValue aimed to establish knowledge, support and inter-regional cooperation mechanisms aiming for the exploitation of the R&D potential in South Eastern Europe. The objective is to help exploit academic research for the sake of R&D sustainability and regional development.

The adopted bottom-up approach allows interesting and valuable research to reach its market potential through a process of selection and promotion to relevant stakeholders. The focus is on two major cross-cutting sectors of major importance to the region (Information and Telecommunication Technologies and Energy/Environmental Technologies) and will allow for at least one other sector to be selected by each of the partners in the implementation phase. The methodology adopted by the project includes the following steps:

1. Identification of R&D results created by research centers in the region that have some market potential;
2. Creation of a transnational pool of experts that can offer their advice on market potential, technical feasibility, scientific relevance and funding opportunities;
3. Assessment by the experts of the market potential of selected R&D results;
4. Development of exploitation plans and valorization agreements for the most promising of the assessed R&D results and support of their valorization potential;
5. Systematically promote linkages between research and business through focused brokerage events.

These steps are complemented by a multilingual web 2.0 based knowledge suite, with complete methodological guides that clarify aspects to accomplish new product development and intellectual


InterValue Platform

Collaboration for the Valorisation of R&D

The INTERVALUE Platform supports the process of valorisation of research results. It is not only a meta-repository of R&D results, but also a collaborative space facilitating the interaction between researchers, companies and experts, improving the collaboration and knowledge sharing, and supporting a culture of innovation among them. [Learn more »](#)



R&D Repository



Providers from universities and research and technological institutions submit their research outcomes that lead to the development of new products, new production processes and new services.

[Visit the repository ▶](#)

Valorisation Plans



A network of experts help researchers to create valorisation plans for their R&D results covering technical feasibility, IP protection, market potential and funding potential.

[View the valorisation plans ▶](#)

IP Agreements



License agreements and new products developments are facilitated through on-line learning roadmaps, inter-regional brokerage events, newsletters and pilot applications funding.

[Learn more ▶](#)

property management. The web platform is available at

www.researchvalue.net

ARC fund identified 42 promising research results that will be assessed and many of them will be supported on their way to the market.

Switch4Food

“Services for Water and Integrated techniques for FOODindustry” (SWITCH4FOOD) aimed to identify and analyze best practices and knowledge (technologies/methodologies) of SMEs in the food industry for water use and wastewater to allow their exchange and transfer among the partnering countries.

The objectives of Switch4Food were to:

- Identify at least **10 best and common practices** in different sectors of food industries leading to the elaboration of guidelines;
- Share methodologies and local policy in order to transfer the experiences and practices from one region to others;
- Define local cooperation agreements with European Policy Statements (EPS) (at least **5 EPS signed pilot**

agreements for each region) to support SMEs to implement environmental actions;

- Identify new business opportunities thanks to a sustainability approach;
- Disseminate the completed activities, methodologies tested and the best practices through local and international workshops where more than 500 companies will be expected to attend which will be invited to join the Club approach;
- Facilitate the interaction among environmental consultants and SMEs of the food industry in order to filter and tailor the technical offers to SMEs' needs;
- Create fruitful future synergies among different actors: SMEs, the EEN Sector Group 'Environment and Agro-Food', environmental service providers

and local authorities. It means that the SMEs of clubs will be encouraged to participate in company-to-company visits (at least one for each region) organized inside of the Sector Group;

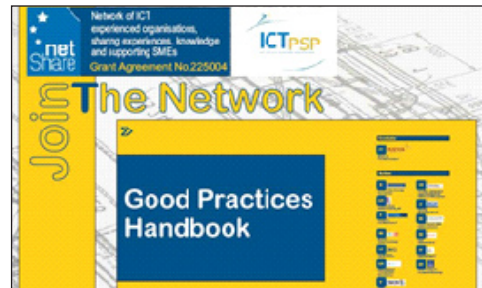
- Involve EEN partners in the promotion and diffusion of the methodologies and gained experiences, in training activities, and in the promotion of technologies and best practices identified.

The objectives will be achieved through awareness raising and training seminars, company visits and environmental audits, regular meetings of the companies, consultants and ESP providers participating in the established environmental clubs, promotional events and company-to-company visits.

Website: www.s4food.eu

NET-SHARE

NET-SHARE creates, animates and manages a network of experienced ICT organizations throughout the EU for the popularizing and sharing of knowledge and good practices from ICT initiatives among local SMEs. An interactive handbook of over 45 good practices including three from Bulgaria (Saturn Engineering, Optix and the Mechatronics and Automation Cluster) was created to spread innovative services and approaches developed within the former eTEN program and by individual organizations. The handbook's practices cover microelectronics, embedded systems, microsystems, e-services and knowl-



The Net Share interactive Handbook of Good Practices

edge networks.

Website: www.net-share.eu

STAR-NET TRANSPORT

The aim of the Star-Net Transport project, implemented within the EC Seventh Framework Program, was to provide holistic support for the successful participation of European SMEs in Sustainable Surface Transport activities (such as haulage, logistics, ICT applications, naval technology, car building, railway transport and the economics of transport). Project partners provide sets of services on promoting call opportunities, assessing the technological state

of the potential SME applicants, identifying promising project ideas, developing and disseminating partner search profiles and assisting inclusion of Transport SMEs in project proposals under the Seventh Framework Program. For the year 2010, three Bulgarian SMEs were assisted to join project proposals within FP7.

Website: www.starnet-transport.eu

EU4SMEs

'EU Policies for SME's' (EU4SMEs) began in 2010 and is a project within the EEN which promotes the network as a reliable partner of the EC and provides vital feedback from SMEs.

The basic objective of the project is to facilitate consultations between the EC EU-accession country-based SMEs in order to include their opinions in the EU-level policy making process, thus ena-

bling the direct involvement of SMEs.

The action's aim is to raise the SMEs' awareness on forthcoming EU policies affecting their business, to promote the EC's valuable activities in performing wide consultations with affected economic actors, to give substance to ex-ante impact assessments, and to facilitate the participation of SMEs' in the consultation process.

TransBonus – Connecting Transport Researchers

In 2010, ARC Fund implemented the second phase of the TransBonus project, which was funded by the European Commission under the 7th Framework Program for Research and Technological Development (FP7).

The overall objective of TransBonus was to improve and promote closer Scientific and Technological (S&T) cooperation opportunities between Europe and the Western Balkan Countries (WBCs: Albania, Bosnia and Herzegovina, Former Yugoslav Republic of Macedonia and Serbia) in the area of surface transport. It further established an EU-Balkan transport network of researchers, universities, industrialists and experts among these countries in order to improve and enlarge the research capacity of Western Balkan centers of competence. This included improving linkages with research programs and human resources through trans-national placements of research staff and knowledge.

The objectives of the project were accomplished by:

- the creation of a database providing collaboration and technology profiles

for WBC and Bulgarian transport researchers;

- the promotion and awareness raising of funding opportunities available at the European level that can support international cooperation among WBC transport researchers;
- the provision of training and support for academics and researchers in the Seventh Framework Program in order to help them prepare for engagement with European programs;
- the setting up of a matching tool called "Project Lab" which facilitated the creation and preparation of effective project proposals and stimulated partnerships in surface transport;
- the implementation of expert study visits between the partners from the Western Balkans and EU partners to promote networking across Europe;
- stimulating partnering schemes and collaboration between researchers and business in surface transport stakeholders in the Balkans;

TransBonus had a very novel methodology, allowing the beneficiaries of the project not

only to acquire knowledge about FP7 and to be trained in project proposal development, but also allowing them to participate in an internal call for proposals, which resemble real FP7 calls, but on a smaller scale. This simulation showed transport researchers from WBCs that participation in FP7 is not as complicated as it looks and eligible organizations from the region should be more active.

A number of pre-proposals were submitted under the second internal call for proposals (the first one was launched in 2009) with a deadline of May 31, 2010. These pre-proposals were evaluated according to the FP7 evaluation guidelines and four of the proposals that passed the evaluation threshold of 10 points were selected for further project development during the workshop for project proposals development, organized in Sarajevo, Bosnia and Herzegovina from

July 7-9, 2010. The aim of the workshop was to bring together potential applicants, assist them in developing their ideas and in structuring the best four pre-project proposals from the internal call into project proposals that would be submitted under the calls of FP7, which were published at the end of July 2010.

Forty-six participants from universities, private companies and NGOs from Albania, Bulgaria, Greece, the Netherlands, Macedonia, Malta, Serbia and Bosnia and Herzegovina participated in the workshop.

Another TransBonus activity with a potential longer-term effect was the expert study visit, organized in the Netherlands from September 16-17, 2010. The objective of the event was to expand the scientific relationships and networking between the researchers from the WBCs and their Dutch colleagues. During the first day, partici-



Participants in the workshop on proposal writing for FP7, held in Sarajevo, Bosnia and Herzegovina on 7-9 July 2010

participants visited the Technical University Delft where they got acquainted with the transport research at the university, the Valorization Center and some of the on-going projects of the university. After that, they had the opportunity to go to the Dutch Road Authority where they watched a short documentary film about traffic management in the Netherlands and made a tour of the test center for traffic systems. On the second day, participants travelled to the Eindhoven University of Technology where they became acquainted with the current research of the staff and the laboratories they use to perform it. After that they went to the TNO Automotive where, after several presentations about the work and projects of the organization, they saw the lab and the test center.

The last TransBonus event in 2010 was organized in Sofia from December 6-8, 2010. The first day was dedicated to a regional workshop, titled "Transport Research and Business cooperation in SEE." Transport researchers from the partnering WBCs, including Romania, Turkey, Croatia, Slovenia, and representatives of businesses from Bulgaria, participated in the workshop. Most participants presented their research and/or projects they were currently working on and after that a discussion on the possibilities of cooperation between business and science representatives was made. The event also created good networking opportunities.

The second day was dedicated to an expert study visit to the premises of "Vagonoremonten zavod" – 99 AD – Septemvri. The enterprise was founded in 1941 as a railway-carriage repair workshop and is the only enterprise for the production and repair of wheel-sets in Bulgaria. Participants got acquainted with the activities of the factory and visited the workshop for the production of wheel axles.

The tangible results of the project are the following:

- A roadmap for research capacities and funding opportunities in WBC transport research;
- 150 researchers informed and directed towards FP7;
- 11 national Idea Generation Events (only 10 were planned initially);
- 63 new project proposal ideas (only 50 were planned initially);
- 5 events in the Balkan countries linking transport researchers and industry;
- The publishing of 26 PR research profiles (initially only 25 were planned);
- A workshop for project proposal development (additional activity, not planned initially)
- 5 projects submitted under the FP7 call for proposals, launched in 2010 (this result was not planned at all initially).

Website: www.transbonus.net

Capacity Building for Banning and Phasing out Asbestos in West Balkan Countries

In 2010, ARC Fund started the implementation of the **Capacity Building for Banning and Phasing out Asbestos in West Balkan Countries** project, which was funded by the Civil Society Facility Hori-

zontal Activities: Support to Partnership Actions "Environment, Energy Efficiency, Health and Safety at Work" of EuropeAid. The Gauss Institute from the FY Republic of Macedonia coordinated the project,

and the other partners included the Ecological Association HELIKS from Serbia and the Association for Development, Advancement and Promotion of Ecological Agriculture, Tourism and Environmental Protection from Bosnia and Herzegovina.

Contrary to the huge efforts of EU countries to phase-out asbestos-containing materials and to impose strong health and safety measures for workers and other persons who are in contact with asbestos-containing materials, there are very limited or almost no measures undertaken in this direction in Western Balkan Countries. Because of that, the overall objective of the project has been to strengthen the capacity of Civil Society Organizations from the Western Balkan Countries (WBC) in order for them to be able to deal with the asbestos issue in their countries.

The specific objectives of the project are:

- To create partnerships between Civil Society Organizations from the West Balkan Countries interested in dealing with the asbestos issue as well as partnerships with similar organizations from the European Union;
- To transfer know-how from EU Member States (especially New Member States) about their experience in dealing with the asbestos issue;
- To increase public awareness about the presence of asbestos containing materials and their harmful effect on human health;
- To lobby for prompt transposition and implementation of the EU Asbestos Directives into the national legislation of West Balkan Countries.

Since Bulgaria has experience both in dealing with asbestos and in transposing the EU asbestos directives, its role in the project is to provide data and to share its know-how with the other partners from the WBCs. One of the main activities of the project in 2010 was the Balkan conference, which took place from June 17-19, in Ohrid, FY Republic of Macedonia. Its aim was to transfer knowledge from the experienced EU Member State of Bulgaria to the Western Balkan Countries which were preparing to transpose the EU directives about asbestos into their national legislation. In addition to the transfer of know-how in the directives transposition, another goal of the Balkan conference was to build the capacity of the WBCs so that they can cope with the asbestos problem as soon as possible. Further steps that needed to be taken by the WBC's in order to achieve the goal of banning and phasing out asbestos were also discussed. Two Bulgarian experts from the Ministry of Environment and Water participated in the Balkan conference and presented the Bulgarian experience in dealing with the issue.

Furthermore, two Bulgarian experts, who have been dealing with the asbestos problem in Bulgaria for more than twenty years, were tasked with the preparation of a report, whose aim is to list the steps that were taken in the country in order to phase out asbestos and to present the Bulgarian action plan used to transpose and implement the EU asbestos directives.

Website: <http://noforasbestos.net/>

Safer Internet for Children

In 2010, ARC Fund acted as the coordinator of the National Safer Internet Center (SIC) – part of the pan-European INSAFE network, and continued and expanded the scope of its activities aimed at creating a safer online environment for children and minors. Besides operating the **Bulgarian Hotline for reporting illegal and harmful Internet content** and conduct, which received and dealt with more than 100 reports per month, a substantial part of the activities were focused on awareness raising among children, parents and child carers, teachers and educators, law enforcement officers and magistrates.

An important part of the Safer Internet Center's activities was the training of major stakeholders in the field and of the various target groups.

ARC Fund established a close working partnership with the newly founded non-governmental International Cybercrime Investigation Training Academy (ICITA) in Bulgaria which was officially launched on May 31, 2010 with the support of the Ministry of Interior and the Supreme Justice Council. ICITA started training sessions for police officers, prosecutors and judges in the judicial (appeal) districts of the whole country with the aim to raise the capacity of Law Enforcement Agency (LEA) prosecutors and courts in combating computer-related crimes. ARC Fund participated in designing the agenda for the 4-day training sessions by including 3 presentations/workshops focusing on child sexual abuse online. During the period, SIC took part in 3 training sessions reaching out to more than 100 police officers, prosecutors



A training session on combating computer-related crimes against minors for police officers, prosecutors and judges from the Veliko Tarnovo Appeal District, held in Troyan from 2-4 December, 2010

and judges from the judicial (appeal) districts of Burgas, Sofia and Veliko Tarnovo. ARC Fund presented the Safer Internet Program of the EC, the role on the INSAFE (European Safer Internet Centers) and INHOPE (International Association of Internet Hotlines Operators) networks, the activities of the Safer Internet Center in Bulgaria, and acquainted them with a comparison of the national legislations in Bulgaria and other EU member countries. Additionally, ARC Fund laid out recommendations for amendments in the Bulgarian Legislation and the Penal Code as well as recommendations for introducing them into court practices and the implementation of new texts criminalizing the grooming of minors.

During the period, SIC hosted two study visits under two different groups of experts from non-EU countries who expressed interest in learning from the Bulgarian and the EC expertise in order to launch their own national Safer Internet Centers. From the 20th to the 23rd of June, 5 representatives of NGOs from Bosnia and Herzegovina and Serbia visited Sofia for a study visit to ARC Fund in the framework of a joint project with the Sarajevo office of Save the Children Norway. From the 13th to the 16th of September, SIC hosted a study visit attended by 2 representatives of NGOs from the Former Yugoslav Republic of Macedonia under the piloted non-EU experts study visits scheme of the EC. The visiting experts were acquainted with the objectives of the Safer Internet Program of the EC, the activities of the INSAFE and INHOPE networks and of the expertise of the Bulgarian SIC. They were trained how to establish and maintain a hotline and awareness center, acquainted with various tools and methods for awareness raising and for training the target groups. They also participated in a short training on *the Real and Virtual Violence Prevention*

interactive educational methodology developed by the Bulgarian SIC, which has been implemented in dozens of schools in the country, and handed the methodology guidebook used for the educational course to adapt and implement in their secondary schools.

ARC Fund was actively training school pupils and teachers in 2010 using *the Real and Virtual Violence Prevention by Interactive Education* methodology developed by ARC Fund and its main partner in SIC, Association Roditeli, and officially approved by the Ministry of Education. In 20 schools in Sofia, trained educators delivered more than 300 lessons as substitute teachers during free classes. After the first training in March, 2010 and a second one from June 28 until July 2, the school psychologists of all 40 municipal secondary schools in the second largest city of Varna were trained on the methodology and started delivering lessons under the supervision of the Prevention Directorate at Varna Municipality, which was covering all the expenses for the training sessions and the honoraria for the educators. In June, September and October the modular interactive lessons from the second volume of the methodological guidebook were tested in a number of schools and volunteers and educators started implementing the second level of the course consisting of an additional 25 lessons focusing deeper on developing emotional intelligence and non-aggressive behavior online and offline.

On September 30, in Senec, Slovakia, on the invitation of ERSTE Foundation and in the framework of the ACES project (<http://www.aces.or.at>), ARC Fund demonstrated *the Real and Virtual Violence Prevention* methodology by moderating two 3-hour workshops *Am I a Cyber-Bully?* with children and teachers from schools in Central and Eastern Europe.

Apart from the interactive educational course, ARC Fund organized or participated in online safety open lessons in schools around Bulgaria at the invitation of schools or municipalities in Sofia, Smolyan and Bansko.

In order to also reach the parents, on September 22, Bulgaria's Independence Day, and as an event connected to the European Mobility Week, ARC Fund organized a street competition in which more than 200 children and their parents took part in the discovery-tour Time Machine, under the slogan "Safe in the Street, Safe Online". The event was in the framework of various other street activities of many Bulgarian NGOs and under the auspices of the Mayor of Sofia, Mrs. Yordanka Fandakova. The family orientation game consisted in map reading and locating five given downtown landmarks. Upon arrival

at a landmark, the participants received a card, which pictured the way the landmark of interest looked in the past. When children-parent teams gathered all five cards, they had them bound together in a nice keepsake album. Children also received a magic folding cube and a game-book, featuring the online child defender character Flashboy, as well as a poster with the main rules of internet safety and stickers with the web-address of the Internet Hotline as prizes. Parents were handed an 'Are you ready to talk to your children about the Internet?' brochure, and those who had a first-grader this year also received a 'Welcome to School, Parents' booklet containing basic rules and advice for online safety.

Due to the active involvement of Varna Municipality and based on an official agreement signed by the Deputy Mayor,



The Time Machine competition, held in Sofia on 22 September 2010, attracted around 2,000 children and parents.

the Varna municipal peer group consisting of some 40 secondary school pupils was officially established as a new SIC Youth Panel. Unlike the previous Youth Panel from Sofia, the peer group in Varna is representative not only of the excellent students but involves all types and varieties of school children aged 15-17. The group is professionally coordinated by an experienced and skilled psychologist. During the training sessions of school psychologists in Varna, two meetings with the Youth Panel were organized and channels for further contacts were established. Two representatives of the Varna Youth Panel were selected and participated in the summer camp in Bran, Romania organized by the Romanian SIC in mid-July

In November, an annex to the Contract with Sofia University was signed for the

continued teaching of the course *Real & Virtual Violence Prevention* to university students. The Faculty of Philosophy also entered the program and after finishing the course, students of psychology and philosophy will be able to pass 90 hours of practicum internship working as educators in schools under the supervision of SIC team members.

From February 9th, the traditional Safer Internet Day, a large campaign “Think Before You Post” was started. The European TV spot of the campaign was broadcasted more than 1,000 times by 7 TV channels with a special emphasis on music and entertainment channels most popular among minors. Online banners of the campaign were placed on a dozen websites and at meetings with more than 3,000 school children the meaning of the campaign motto was discussed. This



Flashboy was the main actor during Famillathlon 2010, held in Sofia on 15 May 2010

raised the awareness of minors to the need of proper online behavior in order to minimize the risks of unwanted and harmful contact on the Internet.

A significant part of the work of the program team was dedicated to the development of new awareness resources and tools for the different target groups as well as organizing activities and events for disseminating them. As there is a lack of appropriate awareness material for small children, two new resources were developed – a game-booklet and a magic folding cube. Both display the character Flashko (Flashboy) – the hero of the Safer Internet Centre who was chosen by the children themselves in an online competition. The booklet "Flashboy: Mission Famillathlon" was printed out for the annual outdoor event for parents and children.

On May 15th, the UN Day of the Family, a whole day event was organized in Sofia under the auspices of H.E. the Ambassador of France in Bulgaria and the EC Office in Sofia. It was opened in the city center by Sofia city Mayor Mrs. Yordanka Fandakova and the start was given to a Bicycle Tour for parents and children to the South Park. Participants ranged from 4 to 54 years of age. From the central stage in the South Park, the youngest

and the oldest participants in the tour received their prizes and the Family Safer Internet Day was announced by the Deputy Chairman of the State Agency for Child Protection, Mr. Kalin Kamenov. There was a lot of music, presentations of dances, singing, and martial arts from groups of children from various schools. The children and their parents participated in competitions organized by more than a dozen sports federations and children's organizations. Most interest was attracted by the orientation competition "Little Europe" in which children had to run across the park to find the locations of the 27 capitals of the EU countries and receive a stamp. After collecting all stamps they received prizes including the awareness booklet *Flashboy: Mission Famillathlon*, magic folding cubes with the same Flashboy – the hero defender of the children online, and EU starred balls and toys. For the parents the booklet "Are you able to talk with your children about the Internet?" was distributed. A Safer Internet quiz competition from the stage on the theme "Think B4 U Post" brought additional prizes for the smartest answers. More than 2000 parents and children took part in the whole day.

Website:
www.safenet.bg/index.php?id=1388

Foresight Research

Since 2001, ARC Fund has been developing its institutional capacity in the field of foresight as a new tool in science and innovation policy development. Over the years, ARC Fund has contributed to more than a dozen projects at EU level, applying foresight methods in fields like research infrastructure, food quality and safety, participation of citizens in identifying future research priorities, environment and new energy sources.

In 2010, ARC Fund was engaged in two foresight activities at EU level. The first is aimed at identifying new issues for scientific research, which would be used in the development of the EU Eighth Framework Program after 2014. ARC Fund is also responsible for the foresight component of an EU-China cooperative project in research in environmental studies entitled **SPRING**. This project will inform the strategic decisions of the European Commission on EU-China relationships in this area.

CIVISTI – Citizen visions on science, technology and innovation

In 2010, the Applied Research and Communications Fund worked with a diverse group of European Union Member States in the formulation of scientific and research policies to help take advantage of new and emerging research topics in science and technology in Europe. This project, titled **‘Citizen Visions on Science, Technology and Innovation’ (CIVISTI)** aimed at defining and communicating citizen visions of the future and transforming them into legislative policy priorities. At the heart of CIVISTI is the notion that science and research activities should have high societal relevance and that inputs from citizens can help place scientific and technological initiatives in a larger societal context. By mapping the innate hopes that European citizens have for science and technology and focusing these desires through panels of experts in science and technology policy, CIVISTI aimed to assist policy-makers in prioritizing scientific and research policies which improve the quality of life for their citizens

and democratic legitimacy of the EU. At the same time, they improve the competitiveness of European regions, countries and the continent itself within the global economy.

The CIVISTI project is aimed at identifying emerging and potential opportunities and challenges in European science and technology using a future oriented participatory process that combined citizen knowledge, experience and desires with the knowledge of research policy of experts and stakeholders. One of the main outcomes of CIVISTI was an improvement in democratic accountability by including citizens in the policy formulation process at the same time as they improve the effectiveness of science policy itself. CIVISTI accomplished this task by:

- Carrying out a first round of citizen consultations in order to look for the needs, visions and concerns of European citizens as to their expectations for science and technology in the future.

- Identifying and characterizing new and emerging issues for science and technology from the visions of the citizens through their examination by experts. This resulted in policy recommendations to achieve the citizen visions.
- Carrying out a second round of citizen consultations, in which citizen panels deliberated on the relevance of the expert recommendations to their desires and prioritized them.
- Subjecting the projects results and methodology to the scrutiny of an evaluation and advisory panel. This panel of highly qualified experts ensured the scientific quality of the projects results and communicated this information to the European Commission. This was done to ensure the validity and reliability of the projects conclusions so that the usefulness of the methods developed during the course of the project can confidently

be applied to citizen-centered foresight activities in the future.

From June 14th to 16th, 2010 ARC Fund hosted an expert and stakeholder workshop as part of the CIVISTI project. The experts and stakeholders present included natural and social scientists, policy-analysts, and researchers in public and private research institutes involved in research policy making and implementation. The workshop presented experts from all over Europe with future 'visions' that European citizens had (gathered earlier in the project) for improving the quality of life of Europeans through science, technology and innovation. There were 69 such visions, developed at an earlier stage in the project, which represented the desires of more than 150 citizens in seven European countries.

The experts and stakeholders at the workshop made recommendations for



Participants in the second consultation with citizens, 23 October 2010, Sofia, Bulgaria

the realization of these visions in the form of both research and innovation priorities and policies, as well as recommendations in non-scientific policy areas that may help to support such realization. This was done with a specific focus on the upcoming 8th Framework Program. On the first day of this two day process, over 100 recommendations were made, of which 30, chosen by the experts, were further elaborated on the second day. After the conclusion of the workshop, these 30 recommendations were quantitatively scored by the experts so that they could be presented to the citizens who originally developed the visions, in a prioritized way. A process called 'open space' was used in order to allow these experts to choose visions which were both intriguing and had the ability to become successful policy options. This approach was a test bed for determining a process that helped

translate citizen desires into effective research and policy options and was an innovation itself. The experts then gave constructive suggestions on how to best translate citizen views into science and research policy priorities.

Following this was the organization of a second round of citizen consultation meetings (CC2). The objective of the CC2 meetings in October, 2010 was to once again consult the citizen panels in order for them to validate and prioritize the 30 recommendations from the expert-stakeholder workshop. The result was a set of ranked S&T issues and recommendations, which citizens find most important for their future. Results from all national panels were aggregated and presented during a policy workshop in Brussels in January 2011.

Website: www.civisti.org

SPRING: Scoping China's Environmental Research Excellence and Major Infrastructure: Foresight, Potentials, and Roadmaps

SPRING aims to address the environmental implications of China's remarkable economic development and Europe's environmental challenges by the collaboration and knowledge sharing between European and Chinese researchers in order to develop strategies, a roadmap and a vision for ensuring the long-term viability of the Chinese and European economy by ensuring that environmental impacts of economic growth are minimized and/or reversed by shifting current production and consumption trends.

The main objective of SPRING is to create and provide a solid basis for future EU – China collaboration in the field of environment research. SPRING's goal is to identify common needs and opportunities,

analyze potential topics of research cooperation and initiatives, map competences and potentials of Chinese research and infrastructure, investigate strategic development plans and initiate roadmaps for future collaboration. SPRING also aims to analyze the hurdles, barriers and cornerstones that need to be addresses to enable better research engagement by EU researchers in China and vice versa. It will improve the visibility of research initiatives and strengths of Chinese regions to a wider audience in Europe.

In order to be able to identify the grounds for future collaboration between EU and China, one needs to analyze the state-of-the-art of environment foresight studies. Because of that, in the fall of 2010 ARC



The kick-off meeting of the SPRING consortium partners, held at Tsinghua University in Beijing, China on 27-29 March 2010

Fund worked out a template for screening relevant foresight exercises on environment carried out in China and Europe. This

work as well as scenario building activities, will be carried into 2011 and beyond.

RIFI: Research Infrastructures – Foresight and Impact

The RIFI initiative aimed at developing an integrated methodology for Research Infrastructure socio-economic impact assessment, that integrates foresight techniques to tackle long-term issues and “shape” the future impacts desired. The methodology is further tested and validated against a set of case studies on RI project proposals within the ESFRI and national roadmaps. For Bulgaria, the case studies addressed the Euro-Argo network of floats for ocean monitoring

and the Molecular Medicine Centre at the Medical University of Sofia. A Success Scenario Workshop was conducted to test the foresight approach and methods for anticipating and shaping long-term socio-economic impacts of RI on the host region. The coherent RIFI methodology of econometric, social and foresight methods will be further summarized in a handbook on RI impact assessment.

Website: www.rifi-project.eu



Participants at the International Foresight seminar on the future impacts of the Euro-Argo network on the Black Sea region, held in Sofia on 26-27 October 2010

Work with young researchers

ARC Fund continued to actively work with young people in science. In January, 2010, ARC Fund organized a one week training session for 50 bio-physicists – doctoral students, young researchers, and post-doctoral students from the Institute of Biophysics with the Bulgarian Academy of Sciences, and

the Biology and Physics faculties of St. Kliment Ohridski University of Sofia. The objective of the training was to introduce the participants to the research and innovation policy of the EU, and to build up capacity on innovation management; skills they would need as well in their research careers.



PART TWO
Administration and Management



Institutional Development

The Applied Research and Communications Fund is registered in the Central Register of NGOs of the Ministry of Justice as a public-benefit non-governmental organization. Legal not-for-profit entities for the public benefit are subject to stricter control on behalf of the government and have additional obligations to submit annual reports on their activity before the Central Register by May 31 every year. They are also subject to independent audit under the procedure of the Accountancy Act.

In 2006, ARC Fund registered ARC Consulting – a consulting company, 100% owned by ARC Fund, which aims to better leverage the organization's expertise on the market and to keep commercial and non-profit activities financially separate. ARC Consulting provides consultancy services in the field of innovation and ICT in the European Union, as well as in the preparation and implementation of national and international projects under the EU Framework Programs and the Cohesion and Structural funds. ARC Fund and ARC Consulting form the ARC Fund Group.

In 2010, the staff of ARC Fund Group consisted of 41 people. Thirty five of them hold expert or management positions, including part-time consultants, and six of them perform administrative and support functions. The personnel of ARC Fund Group is a mixture of young, well-educated and highly motivated people and seasoned experts, renowned for their professionalism and achievements in their respective field of activity.

ARC Fund Group is managed in accordance with the principles of good gover-

nance, accountability and transparency. The application of these principles is expressed in the:

- Execution of an annual audit.
- Individual project audits.
- Publication of annual reports in Bulgarian and English, which are publicly available in the Central Register of NGOs, and on ARC Fund's web site at www.arcfund.net.
- Regular uploading of information regarding projects and organized events on the website of ARC Fund in order to inform the public about its activity.
- Collaboration with the media to promote implemented projects and achieved results.

ARC Fund is divided into several programs reflecting the key subject areas of its activity. Each program designs and implements specific projects. Since its inception in 1991, ARC Fund has completed over 160 projects with the support of various programs of the European Commission, the World Bank, USAID, UNDP and others. ARC Fund's project orientation allowed the team to develop internal capacity and procedures for sound project management, abiding by the principles of good governance and transparency.

In 2010, ARC Fund Group worked on the implementation of 23 projects, commissioned by national and international governmental and public bodies. ARC Fund was the coordinator of 8 projects with international partners. For each project a consortium agreement, defining the rights, obligations and responsibilities

of each party in respect to the funding institution, the coordinator and the other partners, is signed. Every project is managed as a separate cost center, according to the requirements of the relevant funding institution. A project officer, usually a person who was personally involved in the development of a certain proposal, is appointed to every project in

order to coordinate it and to serve as a contact point.

In 2010, ARC Fund updated its Administrative and Financial Regulations aiming to enhance the effectiveness in managing its human and financial resources along with the adoption of the amendments in the Bulgarian labour legislation.

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PART THREE
Financial Report