

Technology Transfer and Business Support

KNOW-HUB



The project *Enhancing Regional Competences in Strategic Management of Innovation Policies* (KNOW-HUB) was funded under the INTERREG IV program of the European Union. It aimed to improve the capacity of European regions in designing and implementing their Smart Specialization Strategies for Research and Innovation (RIS3) through the exchange of experiences. This three-year project, finalized at the end of 2014, involved 13 organizations from 10 European regions that shared good practices and solutions for better regional policies on innovation.

ARC Fund was the methodological leader of the peer review process -- an exchange of study visits for the in-depth exploration of recent innovation policies and instruments. The reviews helped in identifying challenges and good practices to be shared among regions. ARC Fund, in partnership with the Lower Austria and Wielkopolska regions, designed all guidelines, question-

naires and templates to structure the reviews in a coherent way. It also carried out a two-day training workshop in Sofia for all partners so that they could gain a better understanding of the methodology and apply it in the coupled regions.

During the KNOW-HUB Final Conference in Bilbao, jointly held with the AGORADA event of EURADA in November 2014, the peer reviews were acknowledged by all partners as one of the most useful stages for regional asset identification and knowledge transfer within the project. The KNOW-HUB peer reviews differ in terms of their scope, timeframe and participatory formats from the reviews of the Smart Specialization Strategies (S3) Platform by providing more detailed snapshots of the regions.

ARC Fund also coordinated the work on the Repository of Good Practices, published on the KNOW-HUB website. Of the 40 practical examples identified within the peer review round, those 20 which were considered most transferable and mature were published on the website.

All KNOW-HUB practitioners from the 10 EU regions were involved in a series of Mutual Learning Circles seminars to discuss key issues, challenges and experiences by presenting case studies and good practices. The knowledge exchanged was used in designing implementation plans that were customized for each region and which included specific measures towards smart specialization.



KNOW-HUB Final Conference in Bilbao, November 19-20, 2014



Study visit to Lower Austria region, October 9-10, 2014

In all project activities, ARC Fund closely collaborated with Gabrovo Municipality, the Bulgarian region within the KNOW-HUB project. ARC Fund also supported the local initiative of the municipality to screen the economic performance of local companies in order to identify the key competitive advantages of the region.

In 2014, ARC Fund initiated an additional study visit to the Lower Austria region to explore its policies and instruments on cluster development and management, as well as for SME support services. The delegation included representatives of the Bulgarian Cluster of Mechatronics and Automation, the Ministry of Economy and Energy, Gabrovo Municipality as a KNOW-HUB partner, as well as Mehatronika, a company from Gabrovo which was the

winner in the National Contest Innovative Enterprise of the Year 2013.

The KNOW-HUB project maintains: a web site www.know-hub.eu that features a smart encyclopedia on regional innovation strategies and instruments, a repository of good practice examples, a blog and newsletter on important activities related to the smart strategies and policy instruments in the EU, short video lectures on regional innovation, and a library of selected publications and reports.

KNOW-HUB delivered two practical guides focusing on the knowledge and good practices identified within the project, as well as wiki-articles selected by the pool of experts mobilized within the project.



Screenshot of the KNOW-HUB Website

European Transport Network Alliance

The overall objective of the European Transport Network Alliance (ETNA Plus) project is to foster innovation in transnational cooperation activities within the transport sector. This is done with a focus on promoting the active participation of new actors and regions in EU research calls and projects. European Union National Contact Points are key players in this mechanism, but their role has been complemented and enhanced by other relevant stakeholders and knowledge hubs such as ARC Fund.

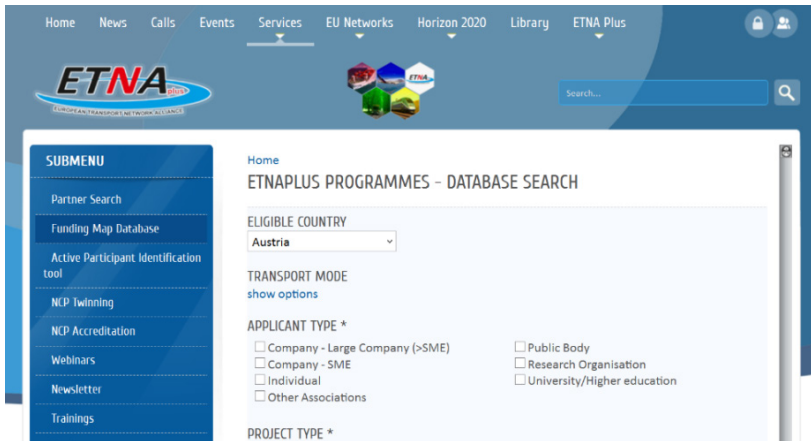
In 2014, the ETNA Plus project partners developed tools and services to facilitate more diverse participation in Hori-

zon 2020 transport calls and other relevant funding sources. These included

- **an on-line funding map database** that provides information on national and cross-border instruments which fund transport research and collaboration;
- **an active participants identification tool** that features the profiles and contacts of the most active organizations in the FP7 and *Horizon 2020* programs;
- **ETNA Plus Webinars**, which were half-day online meetings focused on transport RD&I funding at the international level;
- **an ETNA Plus Newsletter** that provided a periodic summary of project activities and relevant news on the EU transport

- research and innovation landscape;
- **organizing an ETNA Plus Academy** which focused on proposal building amongst small groups of stakeholders that were willing to submit proposals in *Horizon 2020* transport calls in 2015; and
- **organizing brokerage events** focused on building project proposal partnerships for *Horizon 2020*.

The project website (www.transport-ncps.net) features all relevant information in the field of transport, such as: news, factsheets, newsletters, open calls, a partner search tool, and training materials.



Screenshot of the ETNA Plus website

Enterprise Europe Network – the European Network for Entrepreneurship Support

Since its launch in early 2008, the Enterprise Europe Network (EEN) has continued to grow as the world's largest business support network. Its main focus is on helping small and medium-sized companies (SMEs) seize the unparalleled business opportunities within the European Union's (EU) Single Market. The network's database contains over 13,000 business and technology offers from over 50 countries.

At the same time, the Enterprise Europe Network serves as a direct link between small and medium-sized enterprises and European institutions. The EU runs numerous programs that offer financing and support to SMEs, but complex procedures often discourage entrepreneurs. One of EEN's goals is to help businesses and entrepreneurs find partners and apply to the most suitable programs.



EEN-Bulgaria Nodes

The EEN brings together close to 600 business development organizations across Europe, including: business promotion agencies, chambers of commerce, regional development agencies, university technology centers, and non-profit business consultancies. Over 4,500 internationalization experts and technology transfer practitioners offer a wide range of business and innovation support services to enterprises and help them find international partners, develop successful innovative technologies or participate in European R&D projects.

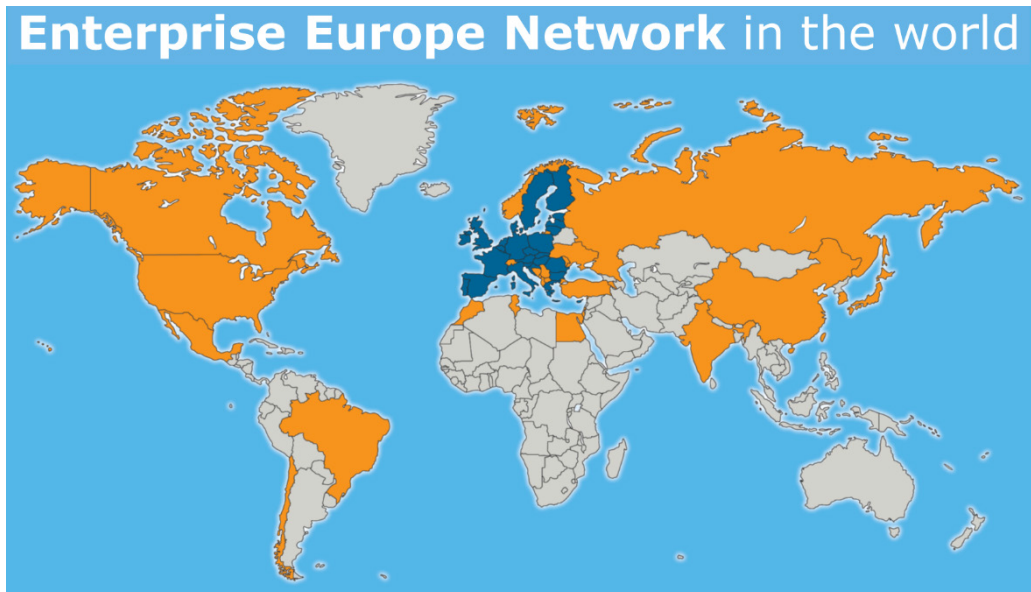
Since the launch of the network 6 years ago, the Applied Research and Communications Fund has served as the National Coordinator of the EEN – Bulgaria. In 2014, the network

in Bulgaria consisted of 14 partner organizations located in the cities of Sofia, Plovdiv, Sandanski, Stara Zagora, Vratsa, Yambol, Dobrich and Ruse.

ARC Fund maintains the internet portal of the Enterprise Europe Network - Bulgaria, which is designed to provide business information and advice, as well as technolo-

gy transfer, innovation and consultancy services. The portal operates according to the priorities set by EEN's program at the European level. Each partner maintains its own regional portal of the network.

During 2014, the activities of EEN – Bulgaria were focused on the ICT sector, which is seen as the basis for the faster development of the entire economy. Traditional sectors such as machine building, mechatronics and automation, textiles, and food and beverages were also prioritized. A special focus was put on collaboration with the business clusters in Bulgaria. ARC Fund's membership in the Cluster of Mechatronics and Automation and the Association of the Business Clusters in Bulgaria helped it achieve this mission. Through its expertise in project management, intelligent specialization and technology transfer, ARC Fund offers capacity building support to proven clusters situated in Sofia. The Enterprise Europe Network at ARC Fund also cooperates with clusters in organizing company missions and brokerage meetings.



The website of the Enterprise Europe Network – Bulgaria

Brokerage Meetings, Business Missions and Seminars

ARC Fund organizes annual business and technological brokerage events that focus on various economic sectors, including: engineering, machine building, ICT and green products and services. These meetings facilitate pre-arranged contact between businesses and research organizations looking for commercial, technological and other project partnerships. Such partnerships are often built around international projects where support is provided by European funding programs.

In 2014, the Applied Research and Communications Fund co-organized International Brokerage Events in the field of information and communication technologies at the Mobile World Congress (Barcelona, February 2014) and CeBIT (Hannover, March 2014). Both are major international events in the mobile communications and ICT industry. ARC Fund facilitated the participation of eight Bulgarian ICT companies at these events, where they visited exhibitions and participated in a number of parallel events, professional consultations in the fields of industrial property, and sessions on project financing. They also conducted fruitful negotiations with potential suppliers

of new products and technologies.

To respond to the interest expressed by Bulgarian companies, the Enterprise Europe Network at ARC Fund, together with its international EEN partners, organized four more brokerage events, which focused on machine building (Hannover Messe, Germany), sports technologies (Sheffield, United Kingdom), e-government and e-health (Vienna, Austria) and cluster management (Iasi, Romania). During the events, eight more Bulgarian companies and organizations were supported in submitting their partnership profiles and pre-arranging their b2b meetings.

In March 2014, the Applied Research and Communications Fund, together with the Bulgarian Industrial Association, a partner organization in EEN – Bulgaria, organized a brokerage and business meeting entitled Industry MatchMaking-IMM 2014. This event, held for the second time, took place at the Inter Expo Center-Sofia as part of international specialized exhibitions focusing on metallurgy, automation, mechatronics and transport. The forum presented an excellent opportunity for Bulgarian companies and organizations to establish valuable business contacts,

conduct technology transfer activities, and participate in EU-funded competitiveness and innovation projects. The companies shared experiences and ideas, showcased their achievements, and learned more about the news and trends in leading sectors of Bulgarian industry.

During the European SME Week, which took place from September 29 to October 5, 2014, the Enterprise Europe Network at ARC Fund and the National Agency for Regional Development of Serbia organized a business mission of Serbian enterprises in Sofia. The mission was attended by 18 Bulgarian and Serbian

companies with over 40 business and technology offers. These offers fell within the production, energy and service industries. The companies shared experiences and discussed ways of introducing workplace innovations into their business, such as in their organizational structure, human resources management, internally guided decision-making, and customer and supplier relationship management. The business mission was organized around a number of sessions and short presentations of the participating organizations, followed by bilateral meetings designed to spread existing innovative practices among participants.



On the left: company presentation during the business mission of Serbian enterprises in So-fia, organized by the EEN in September 2014; on the right: bilateral meetings between mission participants.

In its role as the coordinator of the national EEN consortium, ARC Fund regularly organizes intra-consortium activities, and stakeholder meetings within the framework of the Innovation Business Club and the Association of Business Clusters. It also organizes information days and capacity-building seminars which focus on accessing EU funding for the 2014 - 2020 period, as well as intellectual property protection and business internationalization.

In 2014, the Enterprise Europe Network experts at ARC Fund provided numerous consultations on business internationalization, technology transfer and EU program participation to over 150 new organizations (in addition to previously registered network clients). More than half of these were small and medium-sized enterprises. There were 40 Bulgarian companies that partici-

pated in brokerage meetings and business missions organized by EEN in Bulgaria and abroad, which resulted in over 140 business and technology cooperation contacts between local and foreign companies.

The Enterprise Europe Network will continue to support Bulgarian entrepreneurs over the new 2014-2020 programming period. The Applied Research and Communications Fund has been chosen by the European Commission as a reference point for the SME Instrument – a new financial instrument under Horizon 2020 aimed at highly innovative small and medium-sized European enterprises. For that purpose, an ARC Fund expert has been trained and certified under the IMP3rove Academy – a proven international methodology for assessing and improving the innovation management of companies.



Top left: seminar Opportunities for Development and Financing of Innovation in SMEs (July 10, 2014); top right: participants in ARC Fund's Innovation Business Club meeting Social and Green Innovation: Cross-Sector Collaboration and Clustering (October 8, 2014); bottom left: seminar IPR and Competitiveness of the European SMEs (October 29, 2014); bottom right: Mr. Simon Cheetham, head of SME IPR Helpdesk in China and Southeast Asia and lecturer at the seminar (October 29, 2014).

ICT for AgeingWell

In 2014, the Applied Research and Communications Fund continued its activities within the **ICT for AgeingWell** thematic network, funded by the Competitiveness and Innovation Program of the European Union. The aim of the **AgeingWell** network is to build and animate a European network focused on improving the quality of life of elderly people by stimulating the market uptake of ICT solutions in this area.

Life-expectancy in Europe is longer than ever. This is largely due to economic growth and advances in health care. **ICT for AgeingWell** solutions are essential tools for improving the quality of life of this aging population. A number of similar initiatives exist at the European, national and region-

al levels, but they are often not integrated.

Therefore, the aim of the **AgeingWell** Network is to create a community that will bring together key initiatives in the field of ICT for an aging population. It seeks to improve communication and cooperation in order to identify, develop and exploit synergies between these initiatives through the exchange of good practices and the dissemination of information to stakeholders across Europe. In 2014, ARC Fund focused its activities on the promotion of the network and the opportunities this niche creates for the ICT industry.

Together with other partners in the network, ARC Fund took part in the interna-

tional eHealth Forum 2014 held in Athens on May 12-14. The workshop ICT Solutions for Independent Living in Your Own Home, organized by **AgeingWell**, was part of the official program of the forum. Over 40 stakeholders, including health and ICT researchers, developers and providers of assistive technologies, and end-user organizations discussed the impacts of such solutions on the quality of life of the elderly population and the related opportunities for their healthcare providers.

Experts from ARC Fund participated in the peer review of 40 good practices in telemedicine and e-health, as well as in the compilation of a Guidelines Handbook. This handbook was designed to be a working tool to support ICT and healthcare stakeholders in their development of ICT solutions for an aging European populace. The project's publications are publicly accessible on the network portal www.ict-ageingwell.net.

Additionally, ARC Fund contributed on a regular basis to the development of the Knowledge Center of the portal.

ARC Fund engaged *Interconsult Bulgaria* as a key associate member of the network. *Interconsult Bulgaria* was an Innovation Hub awardee in the 2013 National Contest for Innovative Enterprise of the Year, and is interested in this rapidly emerging niche area.

The **AgeingWell** network is open to ICT providers, healthcare service providers, clusters and networks, insurance companies, investors, entrepreneurs, regions and municipalities. Launched in 2012, the network already has more than 80 associate members across the EU from the above-mentioned stakeholder groups.



Participants at the workshop “ICT Solutions for Independent Living in Your Own Home”, eHealth Forum 2014 in Athens

European Workplace Innovation Network

In 2014, ARC Consulting continued its partnership with the European Workplace Innovation Network (EUWIN) for a second year. EUWIN aims to help exploit the latent creative and productive potential of the European workforce through the promotion of innovative measures within European workplaces. According to a report by the European Agency for Safety and Health at Work entitled *Review of Workplace Innovation and its Relation*

with Occupational Safety and Health, these include changes in organizational practices related to the management, organization and deployment of human and non-human resources that lead to simultaneously improved organisational performance and increased employee satisfaction.

In support of this goal, on September 29th and 30th, ARC Consulting was the main organizer of an event as part of its

partnership with EUWIN. The event, entitled Advanced Workplaces for Advanced Business, was attended by business leaders and representatives of state and local institutions from across Europe. These included participants from Serbia, Romania, Bulgaria, UK, The Netherlands, France, Spain and Belgium.

The conference covered topics such as innovations in the workplace, and the ways these could help countries and regions become more competitive. The ways of spreading workplace innovations in Bulgaria were also discussed. During the conference, participants spoke about their experiences in integrating innovations into their workplaces, and how these innovative practices could be adopted in other contexts.

Some of the conference's conclusions were that

- workplace innovations are gradually being introduced in Bulgaria;
- innovations in the workplace are still

not subject to national innovation policy;

- time is needed to see the results of workplace innovations;
- it is important that there are companies which share the positive results of their workplace innovations, as it allows for others to see real world examples; and
- communication is needed between the government, academia and companies to discuss solutions to common problems with respect to workplace creativity and productivity.

ARC Consulting's participation in EUWIN also prompted the inclusion of a section in its annual flagship publication *Innovation.bg* that focused on workplace innovation in Bulgaria. The piece described specific workplace innovations successfully introduced in organisations in the country, as well as academic findings regarding the effects that cultural dynamics could have on the successful introduction of further workplace innovations in the future.

3rd EU Company Survey

The Third European Company Survey mapped business practices in establishments with 10 or more employees across the EU28, and in the Former Yugoslav Republic of Macedonia, Iceland, Montenegro and Turkey. Over 30,000 establishments were surveyed on topics comprising work organization, human resources practices, employee participation and social dialogue, and how these practices support "smart growth". Commissioned in 2014 by the European Foundation for the Improvement of Living and Working Conditions (Eurofound), ARC Fund carried out qualitative follow-up interviews and focus groups on the development of workplace innovation in Bulgarian companies. On-site visits aimed to study concrete examples of workplace innovations, the motives for their introduction, their implementation stages, and their results and impacts. Interviews and focus groups with both managers and employees captured the different motivations and perspectives of different actors.

The information gathered during the field work was used for the elaboration of case studies featuring concrete examples of workplace innovation in Bulgarian companies. According to the methodology of the study, workplace innovation practices were categorized in one or more of the following categories

- work organization practices,
- structure and systems,
- learning and reflection practices, and
- workplace partnership.

Boosting European Games Industry

In 2014, the focus of ARC Fund's activities within the Boosting European Games Industry (BOO-Games) project was on the transfer of a good practice from a partnering country with long traditions in the gaming sector, to Bulgaria, where the industry is less developed. The transfer has been executed through the implementation of a pilot action, whose objective was to support the gaming sector in the target country. In order to develop a sound concept for the pilot, ARC Fund capitalized on the project results from the previous two years. These included the *BOO-Games Regional Analysis* report, the *Boosting European Games Industry: Recommendations for 10 European Regions to Boost their Digital Gaming Industry* report, as well as the *Good Practices Guide* in addition to applying the know-how gained during the various thematic seminars held in 2012 and 2013. Inspired by three good practices from Asturias, Spain, ARC Fund proceeded with the pilot action execution by adding a separate gaming category Innovative Digital Game to the National Contest for Innovative Enterprises of the Year 2014. Digital gaming firms from across the country were invited to submit applications to the competition.

During the execution of the pilot, ARC Fund collaborated closely with the other project partners, who were supervising its implementation and evaluating its progress. It also worked with other relevant stakeholders, such as the participants in the Support for the Games Industry working meeting, held on June 13, 2014 at the premises of the EU Commission in Sofia. Attendees included gaming companies and start-ups, representatives of the Bulgarian Association of Information Technologies (BAIT) and IT students. The objective of the meeting was to further elaborate the concept of the pilot by incorporating the ideas of firms in the gaming industry, who were potential applicants to the gaming category in the current edition of the contest.

The Innovation Forum is organized annually,

which helps to ensure the sustainability of the BOO-Games inspired practice beyond the project's lifetime. Moreover, participation of gaming companies in such a high-level event resulted in

- boosting the game industry through its exposure and promotion among policy-makers,
- ensuring opportunities for cross-sector networking by providing a meeting point for the game sector with actors and stakeholders from other fields, and
- providing access to innovation knowledge and practices in various fields.

Furthermore, in 2014, ARC Fund participated in several gaming-related conferences and seminars:

- the Boo-Games International Conference on the exchange of good practices held on January 23, 2014 in Malta;
- Games Day 2014, held on April 3, 2014 at the University of Applied Sciences in Salzburg, Austria; and
- the Serious Game Development Workshop, organized on September 25 at the HKU School of Games and Interaction in Hilversum, the Netherlands.

ARC Fund also attended the final event of BOO-Games, which was organized within the framework of the LAUNCH Future Digital Gaming & Digital Conference 2014, held on November 21, 2014 at the Innovation Birmingham Campus. The Bulgarian partner was also in charge of inviting a relevant Bulgarian policy-maker to participate in the conference's panel discussion, entitled BOO-Games, An EU Perspective: The Regional and National Support for the Video Games Industry. The Head of the European Programs and Projects Department at the Ministry of Transport, Information Technology and Communications, Mrs. Totka Chernaeva,

accepted the invitation of ARC Fund. She represented Bulgaria during the discussion, whose primary objective was to exchange

experience and know-how on measures for support of the gaming sector with other policy-makers from Austria and Italy.

European Game Jam Learning Hub

The European Game Jam Learning Hub (JamToday) project, funded under the Competitiveness and Innovation Framework Programme of the European Commission, aims to support the creation and uptake of digital educational games in Europe. It will do this through the organization of “game jams”, where a diverse range of people, from artists, game designers, computer programmers, hobbyists and children gather to develop digital games over a predefined period of time. The project brings together 26 partners from 10 European countries, including the Netherlands, Germany, Belgium, the UK, Italy, Austria, Switzerland, Spain, France and Bulgaria.

The year 2014 was the first of three years of the JamToday project. While the second year of the project focuses its game jams on adopting healthier lifestyles and the third year focuses on support for learning mathematics, the improvement of ICT skills was firmly in focus in 2014.

On June 13–15, 2014, ARC Fund organized the ecaHack Game Jam, which brought

together school students, parents, industry associations, ICT trainers, developers and representatives from government institutions to discuss how ICT skills development could be achieved through the construction of games and mobile apps. The three day event consisted of a workshop on June 13th and a hackathon on June 14th and 15th using Scratch and App Inventor. The workshop and game jam served as a launching event for regular monthly events within the framework of Coder Dojo, aiming to develop the ICT skills of students.

The results and experiences of the game jams will be presented at three JamToday Festivals. The festivals will attract companies and digital gaming experts in order to help spread the knowledge developed during the project, as well as ensure that the developed games have an educational impact. All of these activities will be codified in reports, which will provide guidance for the organization of subsequent game jams within, and beyond, the duration of the JamToday project.



A game developer presenting his game at the JamToday conference (far left); from left to right: Mr. Nikolay Badinski, Executive Director of ARC Fund, Mr. John Biggar, Ambassador of Ireland to Bulgaria, Armenia and Georgia, and Ms. Adriana Dimova and Mr. Todor Yalamov of ARC Fund.