

**Annual Report** 

### Applied Research And Communications Fund 2021 Annual Report

Applied Research and Communications Fund 5, Alexander Zhendov St., 1113 Sofia, Bulgaria Tel.: (+359 2) 973 3 000 Fax: (+359 2) 973 3 588 e-mail: arc@online.bg www.arcfund.net

### **Table of Contents**

2021 HIGHLIGHTS	5
PART ONE: PROGRAM AREAS	7
INNOVATION.BG	9
INNOVATION.BG 2021	
SEVENTEENTH NATIONAL INNOVATION FORUM	
INNOVATIVE ENTERPRISE OF THE YEAR 2021	15
INNOVATION AND BUSINESS SUPPORT PROGRAM	17
ASSISTING SMES WITH INTERNATIONAL PARTNERSHIPS AND	
ENTERING NEW MARKETS	17
EEN NEW HORIZON	19
PROMOTING CONSTRUCTIVE CAPITAL IN BULGARIA	20
RESOURCE EFFICIENCY AND URBAN FARMING AS A BUSINESS MODEL	21
POLICY ADVICE	22
SCIENCE, TECHNOLOGY AND INNOVATION POLICY PROGRAM	25
LEADERSHIP IN RESPONSIBLE RESEARCH AND INNOVATION	25
ENCOURAGING ENERGY CITIZENSHIP AND MODIFYING ENERGY	
CONSUMPTION PATTERNS	28
APPLYING THE PRECAUTIONARY PRINCIPLE THROUGH	
PUBLIC PARTICIPATION	29
ENTERPRISE RESILIENCE THROUGH WORKPLACE INNOVATION	29
SAFER INTERNET PROGRAM	31
PART TWO: MANAGEMENT	35
INSTITUTIONAL DEVELOPMENT	36
LIST OF STAFF	37
PART THREE: FINANCIAL REPORT	38

### 2021 Highlights

Innovation.bg has been ARC Fund's flagship initiative since 2004. It encompasses the Innovation.bg report, the National Innovation Forum and the Innovative Enterprise of the Year contest.

- The Innovation.bg report provides annual assessments of the Bulgarian economy's innovation performance and of the innovation system's current status and development prospects. The main theme of Innovation.bg 2021 is "Building Innovation Recovery and Resilience in Bulgaria". The report analyses the policy of the Bulgarian government for supporting competitive businesses.
- The National Innovation Forum showcases the performance of top Bulgarian innovative companies. In its 2021 virtual edition, the Forum gathered more than 270 representatives of the policy, research and business communities to share views on Bulgaria's capacity for recovery and resilience through innovation over the second year in a row, marked by the COVID-19 pandemic.
- The Innovative Enterprise of the Year contest acknowledges innovative enterprises, which have developed new or have significantly improved their existing products, services or processes over the last three years. All contest finalists receive ARC Fund's Excellence in Innovation label.

### Innovation and business support

The Enterprise Europe Network at ARC Fund continued its support to Bulgarian SMEs to become more innovative, sustainable and resilient. Bulgarian companies entered into more than 260 negotiations on business, innovation and R&D partnerships across 27 B2B events. Local businesses expanded to new markets in the United Kingdom, Spain, the Philippines, Germany, Greece and Portugal. EEN advice lead to granting European Intellectual Property Rights (IPR) to BG clients.

Throughout 2021, ARC Fund delivered a series of capacity building and interregional learning events to boost the efficiency of national, municipal and European financial instruments for SMEs and innovations. As a recognizable partner to national and regional authorities, ARC Fund elaborated measures and recommendations for leveraging the efficiency of the National Innovation Fund, the Sofia Green Program and Sofia Municipality's Program for Sofia 2021–2027.

Tangible impacts in the SME support and policy improvement were achieved in the areas of green transition, smart technologies, urban farming, and digital transformation.

### Science, technology and innovation policy

In 2021, ARC Fund kept promoting the principles of responsible research and innovation (RRI), contributed to the application of the precautionary principle in public participation activities, enhanced responsible energy consumption and energy efficiency measures in households and contributed to increasing the resilience of enterprises in Bulgaria through fostering workplace innovations.

ARC Fund's activities were focused on the promotion and uptake of the RRI-AIRR¹ approach at the territorial policy level by enabling territorial actors to develop a more citizen-centered, open, transparent, responsible and inclusive governance. They engaged in a Europe-wide study to enhance scientific understanding and provide a robust monitoring system for RRI in research and research-funding organizations.

During the year ARC Fund worked for a more conscious and responsible energy consumption by households and for encouraging active energy citizenship as a tool for supporting the clean-energy transition process across Europe.

ARC Fund also assisted Bulgarian SMEs in introducing workplace innovation practices to improve business results and create a more satisfying and motivating environment for their employees.

#### Safer Internet

In 2021, ARC Fund further expanded its activities for protecting children online. The Internet Hotline for fighting illegal and harmful content and conduct online received and processed over 15,000 reports on abuse of children online. The Safer Internet team developed and implemented a number of educational methodologies for the prevention of cybercrimes and online abuse of children as well as for ameliorating children's online literacy.

Adapting to the unprecedented pandemic situation, ARC Fund held numerous webinars on online safety, engaging teachers, parents and children, as well as several live trainings for teachers and relevant professionals.

The Safer Internet team developed and implemented a number of educational methodologies for the prevention of cybercrimes and online abuse of children as well as for ameliorating children's online literacy. Aproximately 1,500 children, 200 teachers, 270 parents and 1,160 professionals were involved in various trainings and awareness raising events, both face-to-face and online. The international Safer Internet Day event attracted over 20,000 viewers.

RRI-AIRR - Responsible Research and Innovation – Anticipation, Inclusiveness, Reflexivity and Responsiveness

### **PART ONE:**

**PROGRAM AREAS** 

### Innovation.bg

Innovation.bg is the flagship initiative of ARC Fund.

- The Innovation.bg 2021 zooms in on the dynamics of foreign direct investment flows in Bulgaria, including those made by innovative companies, and on the investments, related to the advancement of the ICT sector. The report analyses the policy of the Bulgarian government for supporting competitive businesses in the context of the burgeoning global challenges.
- The National Innovation Forum is a platform bringing together the government, the business community and research organizations to discuss ways of enhancing the performance of Bulgarian companies and boosting the innovation potential of the economy.
- The Innovative Enterprise of the Year contest is open to participants from all sectors
  of the industry nationwide. The Innovative Enterprise of the Year award acknowledges innovative enterprises, which have developed new, or have significantly improved
  their existing products, services or processes over a period of three years.

### Innovation.bg 2021

Innovation.bg is the Applied Research and Communications Fund's program for shaping the national innovation policy agenda. Through its three key components, ARC Fund provides expertise, policy-oriented and impact assessment know-how.



Since 2004, the *Innovation.bg* report has been a comprehensive annual performance assessment tool, which provides independent analysis of the national innovation system and the innovation performance of the Bulgarian economy. The report assesses the degree of business innovation activity, based on the understanding of the types of innovation and the degree of novelty of innovation products and processes. Bulgaria's innovation potential is evaluated in five major fields:

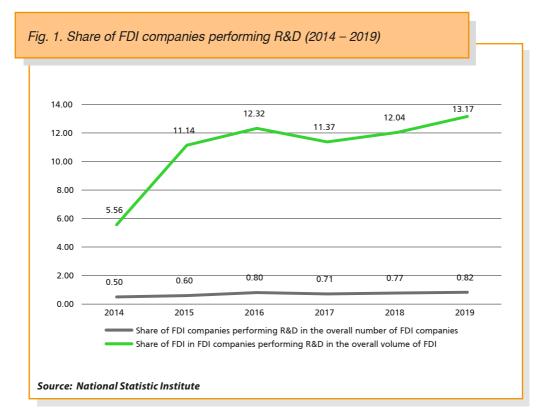
- 1) **Gross Innovation Product**, i.e. performance of the national innovation system, main innovation targets and challenges enterprises face.
- 2) Entrepreneurship and innovation networks, which reviews the setting up of new enterprises and the participation of Bulgarian producers in national and international value chains for the development of new products and services.
- 3) Investment and Financing of Innovation, which considers the role of foreign direct investment and the transfer of foreign R&D products and knowledge as well as the

available instruments for R&D investment.

- 4) **Human capital for innovation,** i. e. availability of human resources capable of adopting foreign and/or creating local innovations in the economy.
- 5) Information and communication technologies (ICT), i.e. ICT infrastructure as a R&D catalyst.

Innovation.bg 2021: Building Innovation Recovery and Resilience in Bulgaria highlights the dynamics of foreign direct investment flows in Bulgaria, including those made by innovative companies. The number of

companies with direct foreign investment has been significantly reduced by about 4,300, or more than 23% in five years. On the other hand, there has been an increase of 17.4% of the total volume of investments for the same period, which reached EUR 25 billion in 2019. At the same time, there has been an increase in FDI companies, engaged in research. However modest their number (only 38), the growth in investments in 2014–2019 is significant – over 2.5 times. Investments in FDI companies, which report to the NSI that they carry out research and development, rose from 5.5% in 2014 to 13.17% in 2019.



Foreign investment for the sole purpose of reducing costs is not sustainable and can easily leave the country. That is why it is necessary for the Invest Bulgaria Agency (IBA), the Ministry of Economy and local authorities to negotiate and know the conditions under which already existing foreign investments can move along the value chain and engage in research.

After 14 years of EU membership, Bul-

garia enters the programing period 2021–2027 with unenviable positions in terms of innovation potential, digitalization of business models and spread of green technologies, compared to the EU average and the rest of CEE countries. A number of challenges in the business environment remain unresolved and Bulgaria is still classified as a country, poor in financial and human capital.

The latest edition of the European Innovation Scoreboard (EIS) shows that Bulgaria remains in the group of **modest** (or emerging) innovators with an improvement of 6% compared to 2014, along with ten other Member States, whose innovation index has grown by less than 10%. In comparison, the innovation potential of European economies has improved by an average of 12.5% over the same period. Bulgaria fails to meet its national target of moving to the higher category of moderate innovators and achieve an R&D spending level of 1.5% of GDP. Thus, the country's lag behind the European average continues to widen.

The crisis year of 2020 marked a significant increase in the patent activity of Bulgarian inventors. The national Patent Office issued the record 216 Bulgarian patents (after the last one in 2000), which reconfirms the trend of growing patent activity that started in 2015. While the introduction of process innovations by SMEs in Bulgaria has been almost constant over the last eight years (between 16% and 19% of the total number

of SMEs), product innovations are more closely linked to patent activity.

The number of scientific publications with the participation of scientists from Bulgaria continued to grow in 2020. The Bulgarian presence in the Scopus database increased with 7,021 new documents, which is a growth of 17% compared to the previous year, ranking the country 55th among a total of 240. Within Eastern Europe, Bulgaria ranks 11th (23 countries in total) both in terms of the number of documents referred to in the database and the H-index, which assesses both the productivity and relevance of publications.

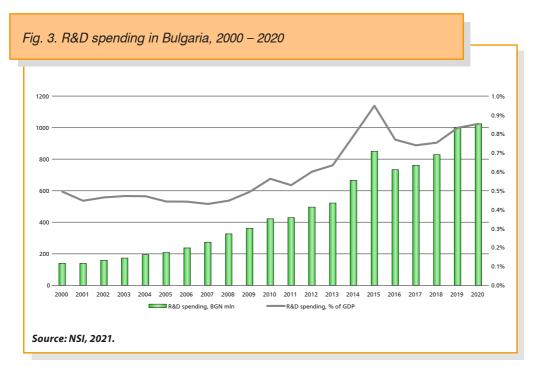
The impact of the COVID-19 crisis on the SME sector seems significant. The decline in number of SMEs and number of people, employed by SMEs, is -4% and -4.4%, respectively, against the average European levels of -1.3% and -1.7%. An even greater annual drop of -6.2% was registered in terms of value added, generated by SMEs (-7.6% for the EU-27).

United States Patent Office Ukraine Canada Australia of America Federation Japan 30 6 - Computer technology 4 - Digital 1 - Electrical machinery apparatus, 10 - Measurement pumps, turbines Audio-visual technology 14 - Organic fine chemistry 33 - Furniture, games 28 - Textile and paper machines Source: WIPO IP Statistics Data Center, 2021.

Fig. 2. Patent activity of Bulgarian patent holders in foreign patent offices, main technological areas, 2000 – 2019, number

In 2020, **R&D** spending marked a timid increase of 2% on an annual basis (against the background of a minimal decline in GDP), which is almost entirely the result of private sector efforts. Thus, R&D spending as a share of GDP in 2020 amounted to only 0.85% - significantly below the 1.5% set in

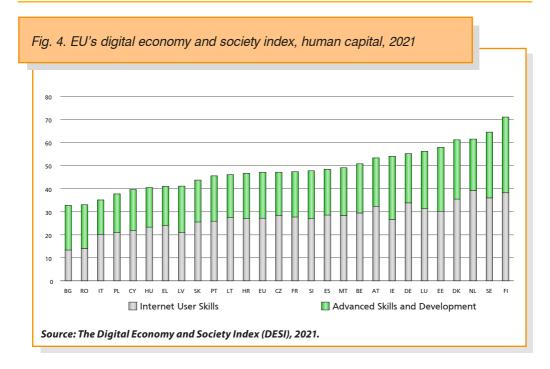
the strategic and program framework of the country for the seven-year period. Bulgaria has a long way to go to catch up over the next seven years, particularly against the background of the new and even more ambitious plans of the EU's innovation leaders.



In terms of the human resources, Bulgaria will face an increasing shortage and widening discrepancies between skills supply and demand over the next programing period. Deteriorating talent development indicators will hamper both the practical implementation of measures and the effective use of EU financial resources. The digital skills of the population in Bulgaria continue to be among the lowest in Europe, which further delays e-government and the adoption of Industry 4.0 technologies by enterprises.

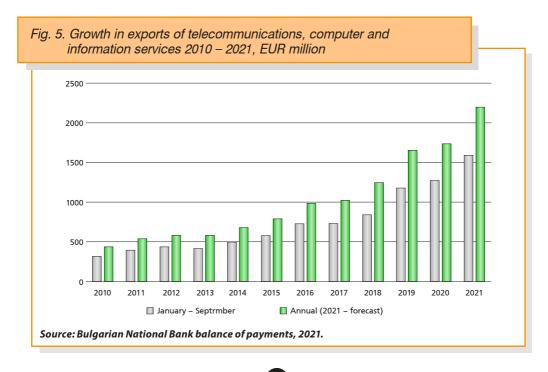
One of the indicators that gives **early signals for rapid improvement** is the share of enterprises that use technologies with built-in artificial intelligence. Bulgaria ranks 8th according to this indicator with just over 31% (compared to an average of 25% for the European Union) of non-financial

companies with more than 10 employees on average per year using at least 2 technologies with Al. Similarly, Bulgarian companies, which are currently integrated into international value chains, have no choice, but to optimize and automate their business processes not just concurrently, but in advance of their partners. According to these indicators, Bulgaria exceeds the average European levels, which is partly due to relocation of some European production to the country - automotive electronics and other related auto parts, railway carriages, lifting machines, domestic appliances. The automation of business processes with built-in artificial intelligence is used almost twice as much in Bulgaria (20%) as averagely in Europe (12%).



ARC Fund strove to **expand the scope of** *Innovation.bg* by developing a methodology for evaluating the innovation potential of Bulgarian regions according to the S3 priorities, and **fully digitalizing** the build-up and

presentation of the final results of the Innovation.bg report, the Innovative Enterprise of the Year contest, and the National Innovation Forum (e-Innovation.bg platform).



#### Seventeenth National Innovation Forum

Held for a seventeenth year in a row, the National Innovation Forum gathered more than 270 representatives of the policy, research and business communities to share their views on Bulgaria's capacity for recovery and resilience through innovation over the past challenging year. The event was held in a 3D virtual setting, which was custom-designed and animated by MP Studio, the award winner for Innovation in the Creative Industries in 2017. The Forum was supported by the Enterprise Europe Network - Bulgaria, tthe Executive Agency for SMEs at DG GROW of the European Commission and Konrad Adenauer Foundation's Sofia Office

During the Forum, **Dr. Ognian Shentov**, Chairman of ARC Fund, noted that the EU reconfirmed its priorities for digital transformation as a basis for a more ecologically- and socially-oriented approach for solving global challenges. He emphasized that to position itself convincingly on the international technological leaders' investment map, Bulgaria needs a significantly

different approach, followed by a series of breakthroughs. He pointed out that no few Bulgarian innovative companies have the potential to turn into the future "unicorns".

The Director of Konrad Adenauer Foundation's Sofia Office **Thorsten Geissler** underlined the key role of innovations in generating economic growth and prosperity and pointed out that innovations need to be sustainable, accounting for Earth's limited resources. He accentuated on the significance of educational innovations as a condition for future success.

The President of Bulgaria Rumen Radev reminded that in 2021 Bulgaria performed best in the Global Innovation Index (ranking 35th out of 132 countries) since 2013. The country also ranks first in Europe by number of women, employed in science and technologies. He noted that the country needs to mobilize the scientific potential of the leading universities, research institutes and centers of excellence and competence.



17th National Innovation Forum, Sofia, 7 December 2021

#### Innovative Enterprise of the Year 2021

Since 2004, Innovative Enterprise of the Year awards have been given to Bulgarian companies, successfully integrating innovations or scientific achievements in their practice and improving their long-term performance.

Companies are assessed by area of impact of the innovation by an expert group and an external jury. In its 2021 edition, Sofia Tech Park joined as a co-organizer of the contest.



Digital award ceremony of the Innovative Enterprise of the Year 2021



Twenty-one out of 90+ applicant companies from various sectors of the economy reached the final stage of the competition. Awards were given in eight innovation areas. The winners were selected by a 21-member jury, composed of representatives of public authorities, funding organizations, the business, academia and the media. The companies' cutting-edge innovations were assessed, based on a set of indicators

such as high quality and novelty of the innovation, impact on national and world markets, environment and society, efficiency of the business model. Apart from the awards in a number of categories, all finalists are granted the **Excellence in Innovation**<sup>®</sup> label of the Applied Research and Communications Fund.

Award winners in the 2021 edition of the contest:

**Cupffee Ltd.** – for its edible biodegradeable wafer cups for hot and cold beverages

**Orenda Group Ltd.** – for its 100% natural mineral sunscreen lotion with invisible zinc

Omnio Ltd. – for its Al-based platform operating a fraud and anti-money laundering alert system

Atlas Agro Science Ltd. – for its 100% organic liquid plant stimulant, based on waste water sediments

**CMYK Ingredients JSC** – for its liquid fermented herbs and spices

**ZenHold JSC** – for its interactive VR for trainings, based on videos of real locations, ordered by clients

**Spark Vision Ltd.** – for its smart glasses for blind people, helping them to read and recognize objects

**Iris Solutions Ltd.** – for its application, enabling receipt of direct transfers in merchants' digital channels

A Data Pro Ltd. – for its analysis of the interest of news readers and social network users to various topics

### **Innovation and Business Support Program**

In 2021, ARC Fund's work in the area of innovation and business support was focused in the following fields:

- Supporting SMEs to establish international partnerships and enter new markets. To respond to its clients' need to face the challenges of the ongoing pandemic, ARC Consulting, as Enterprise Europe Network (EEN) – Bulgaria's coordinator, digitalized most of its services, holding its key events online or in a hybrid format, but still managing to support Bulgarian companies in their negotiations on business, innovation and R&D partnerships and expansion to new markets abroad.
- Consulting SMEs. ARC Fund continued to consult SMEs in the top areas of interest: Access2Finance focusing on the Horizon Europe and EIC calls as well as access to new markets and international partnerships. In 2021, over 140 Bulgarian companies benefited from the EEN team's services and expertise, which resulted in concluding 9 international collaboration agreements and research partnerships.
- Efficiency of policy and financial instruments for SMEs and innovation. In 2021, ARC Fund continued its series of online capacity building and interregional learning events to foster the efficiency of national, municipal and European financial instruments for SMEs and innovations. The key policy areas were: urban farming, constructive capital in Bulgaria, and support to SMEs for innovation and resilience. ARC Fund stared elaborating measures and recommendations to leverage the efficiency of the National Innovation Fund, the Sofia Green Program and the Program for Sofia 2021–2027.

### Assisting SMEs with International Partnerships and Entering New Markets

#### Access2Finance

In 2021, nine SMEs, start-up companies, clusters and associations benefited from the in-depth consultation on Access2Finance by the Enterprise Europe Network team as an advisory source to EU and EEA funding programs, including Horizon Europe, EIC Accelerator, InvestEU, Women TechEU, ERDF and EEA Norway grants.

#### **New Markets**

While the COVID-19 pandemic continued to pose unprecedented problems to businesses, it also opened up new opportunities for them. As brokerage events were held mainly online, it became much easier to set

up international partnerships across the entire business community. As a result, over 70 Bulgarian SME and cluster representatives took part in 27 specialized brokerage events and business missions in the EU, Norway, Ukraine, Turkey, and Qatar. Among the top European and global events, co-organized by the EEN team, were: Smart Agrifood Summit, Med2Meet, Digital Enterprise Show 2021, Tech4Smart Cities, Smart Manufacturing Matchmaking 2021. As a follow-up, Bulgarian SMEs entered into over 260 negotiations on business and innovation partnerships in key domains, such as healthcare, green and blue growth, creative industries, Al, mechatronics and Industry 4.0.

In 2021, over 140 companies received extensive advisory services by EEN. Nine research partnerships under Horizon Europe, the European Innovation Council and ERDF were enabled or granted a contract. EEN clients expanded their markets across the EU and gained new markets in the United Kingdom and the Philippines.

ARC Fund's Excellence in Innovation label, introduced 5 years ago and granted to the finalists of the Innovative Enterprise of the Year contest, is widely used by more than

100 Bulgarian innovative companies as a valuable promotional tool while entering new markets and business partnerships.

Regular updates on how to access new markets were published in EEN's monthly e-newsletter Vesti with over 800 subscribers. Among the most popular posts in 2021 were the presentation of the Access2Market EU portal, webinars and guides by the EU SME Center and EU–Japan Center, market analysis and calls to join foreign accelerator programs.



### Success stories on air at the National Radio

For the fifth year in a row, the EEN team produced a program, dedicated to innovation, aired by the Bulgarian National Radio. In a series of broadcasts, innovators and entrepreneurs shared their challenges and achievements during the continuing COV-ID-19 pandemic. Among them were the 2020 contest finalist Press Start and the start-up Gamifinno, which received the Innovative Enterprise of 2020 award.

Among the 2021 success stories were:

ADMA TranS4MErs, which builds on the work of ADMA, the European Advanced Manufacturing Support Center. The initiative supports ambitious SMEs on their digital transformation journey by delivering assistance with digital competencies (hinged to core technologies such as high-performance computing, artificial intelligence, and cybersecurity) and training in advanced skills in digital technologies.

AgroHub.BG is the Bulgarian Digital Innovation Hub for agriculture. Within it, ARC Fund is partnering with representatives of the agribusiness, research organizations, ICT companies and other stakeholders, aiming to provide combined expertise in inventorying the business needs, strengths and weaknesses, and to match them with technological solutions and financial opportunities. The hub plays a strategic role in building skills and finding innovative solutions for Bulgarian farmers and representatives of the agrarian sector by covering all stages of the product life cycle.

#### Intellectual property

In 2021, ARC Fund continued to act as an EU IP Helpdesk Ambassador for Bulgaria. An example in this regard is the advisory service provided to Bulbera, a software development company, striving to develop an IP strategy from the perspective of internationalization and optimal protection of its economic interests abroad. With EEN's support, the company successfully filed an application and was granted an EU trademark registration in April 2021.

#### **EEN New Horizon**

Following an election process, the EEN-Bulgaria Coordinator continued its 5-year mandate in the Steering and Advisory Group (SAG) Bureau – a body commissioned to liase with DG Grow and EASME/EISMEA on behalf of the SAG.

The September 2021 EEN Annual conference, which gathered nearly 1,000 participants, was devoted to the transition of the Network to a thoroughly new client-focused paradigm. The high-level policy panel "Reinforcing the Network's role in the regional

innovation ecosystems in view of the new Cohesion Policy" brought together DG Grow, DG Regio, EISMEA, SAG Bureau and Germany and Sweden's Network representatives. The discussion highlighted the need for synergizing the policy instruments between DG Grow and DG Regio. ARC Consulting's representative highlighted how an integrated client-centered approach and an excellent integration into the regional innovation ecosystem can leverage its impact well beyond the EEN's core services.



2021 Enterprise Europe Network Annual Conference, Connecting competences with the regions: reinforced role for the Network

Ulla Engelmann, Acting Director, Networks and Governance, DG GROW, European Commission; Anke Wiegand, Head, Innovation I Funding I Financing Unit, Berlin Partner for Business and Technology GmbH; Daniela Tchonkova, Program Manager, ARC Consulting. Deploying in synergy SME support policy instruments, EEN's services and stakeholder involvement was pointed out as key to success for client SMEs, policy-makers and the Network.

In late 2021, the European Commission reconfirmed ARC Consulting's expertise in the field of innovation, technology transfer, SME support and sustainable development by extending the period in which it will lead the Enterprise Europe Network in Bulgaria until 2025.

### Promoting Constructive Capital in Bulgaria

On 28 September 2021, at a **policy forum** with the participation of the Bulgarian President, ENN – Bulgaria, CSD and ARC Fund presented their **Action Agenda for Promoting Constructive Capital in Bulgaria**. The forum was part of the Bulgarian presidency of the Three Seas Initiative and was supported by the Center for International Private Enterprise (CIPE) in Washington D.C.

The Action Agenda provides a comprehensive analysis of the EU and national strategic documents and consultations with local authorities and business stakeholders

across Bulgaria's six planning regions. It highlights the importance of addressing rule of law gaps to unlock constructive capital investments for economic growth and technological transformation. It also pays special attention to recommendations and potentials in the fields of digitalization, green technologies, innovation and entrepreneurship. As Bulgaria remains last in the EU in terms of eco-innovation activities, digitalization of its economy would directly contribute to achieving sustainability and resource efficiency.



Ruslan Stefanov, Manager, ARC Consulting, Rumen Radev, President of Bulgaria, Kim R. Holmes, Vice Chairman, CIPE, Jeffrey Lightfoot, Program Director, Europe, CIPE, Dr. Ognian Shentov, Chairman, ARC Fund, Sofia, 28 September 2021

### Resource Efficiency and Urban Farming as a Business Model

In 2021, ARC Fund continued to promote urban farming (UF) at both the institutional and the social level through the CityZen initiative, which explores the benefits of urban agriculture for better sustainability, resource efficiency and prosperity of cities and regions. A series of digital and hybrid events was held to exchange experience and good practices between European and local partners. The scenario exploration

system and design thinking tools proved to be particularly useful for gathering new ideas. Land scarcity, lack of UF regulations and potentials for new policies and business models were among the topics where practical solutions were sought by devising policy measures. CityZen success cases on educational UF activities, civil initiatives and specific business models were showcased to stakeholders in a Good Practices Week.



Participants in the 2nd CityZen Accelerator and 1st Action Camp event, Thessaloniki, 4-5 November 2021

A Bulgarian CityZen pilot was additionally awarded a contract to design Do-it-Yorself (DIY) kits for vertical urban gardens to be placed in 6 demo locations in public, business and residential buildings. The kits were created in a living lab process by a wide selection of experts and citizens. The positive feedback by the early adopters showed clear added value of UF activities to working and living ambience. It motivated ARC Fund, the Sofia Development Association (SDA) and Sofia Green at the Sofia Municipality to foster future UF support meas-

ures by raising awareness and regulatory changes.

ARC Fund's team provided UF recommendations to the Plan of Sofia 2021–2027, developed by Sofiaplan – a municipal enterprise for spatial and strategic planning. As a result, UF was included among the eligible activities for socializing neigborhoods and bringing new functions to green areas. UF is also presented in the Sofia Chooses Green call for 2022.



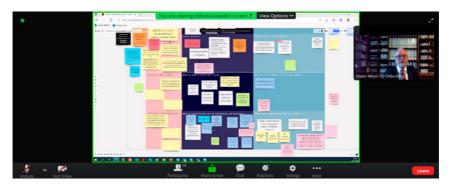
Installation of demo vertical gardens at Sofia Green, Sofia Lab at SDA, Sofia Tech Park, COOP supermarket, a Sofia Library branch and a residential building, Sofia, October 2021.

### Policy Advice

In 2021, ARC Fund continued to work with national and regional authorities (notably, the Ministry of Education and Science, the Bulgarian SME Promotion Agency, and the Science and Education for Smart Growth Operational Program) to develop, implement and monitor the national and regional innovation policy framework and financial instruments. Representatives of ARC Fund became members of the Consultative Board at the newly established State Agency for Research and Innovation (SARI).

Under the Effective Financial Instruments in Support of SMEs initiative, ARC Fund hosted

an international peer review of the National Innovation Fund (NIF), organized by Adam Mickiewicz University Foundation, Poznan Science and Technology Park, Poland; the Municipality of Gabrovo, Bulgaria; Science Park Foundation, Tartu, Estonia; and Weserbergland RDC, Hameln-Pyrmont, Germany. Each peer review session covered: 1) pandemic challenges as well as practices and tools, dedicated to identifying the needs of SMEs; 2) selection of target groups (affected by COVID) and analysis of their needs. The policy recommendations, based on this effort, will lie at the core of an Action Plan for upgrading the National Innovation Fund.



Exploiting Miro canvas for gathering ideas during the peer-review workshop, 3 November 2021

**Smart specialization** continued to be a key topic. After successfully developing the Smart Specialization Strategy for the next programing period 2021–2027 jointly with the Ministry of Economy, ARC Fund, through ARC Consulting, was given mandate by the Growth and Innovation Directorate of the European Commission's Joint Research Cent-

er to support two Ukrainian regions for finalization of their S3 strategies, namely the Khmelnytsky and Kharkiv regions. The main task of the team was to develop robust analyses of the regional assets and local sources of competitive advantages in order to identify smart specialization priorities and to develop a strategy for their exploitation.

# Science, Technology and Innovation Policy Program

The Science, Technology and Innovation Policy (STIP) Program facilitates public, multi-actor deliberative processes on societal challenges, stemming from research and innovation. In 2021 the activities focused on:

- Responsible Research and Innovation (RRI) and Anticipation, Inclusiveness, Reflexivity and Responsiveness (AIRR). ARC Fund integrated RRI principles at the organizational level through experimental implementation of an ethical governance system. The uptake of RRI-AIRR approach was promoted at the territorial policy level to enable a more citizen-centered, open, transparent, responsible and inclusive governance. Efforts were made to enhance the scientific understanding and provide a robust monitoring system for RRI in research and research funding across the EU.
- Conscious and responsible energy consumption. ARC Fund worked to advance the household energy use shift and encourage active energy citizenship as a tool for supporting the clean-energy transition process across Europe.
- Strengthening the precautionary principle. Support was provided for active and productive citizen participation in public deliberation and use of the precautionary principle.
- Resillience through workplace innovations. ARC Fund helped Bulgarian SMEs improve business results and achieve a more satisfying and motivating environment for employees through introducing workplace innovations.

### Leadership in Responsible Research and Innovation

Over the past decade, Responsible Research and Innovation (RRI) was established as a practical concept for anticipating and assessing the potential implications of research and innovation. A major premise of the RRI approach is that researchers, policy-makers, civil society organizations, individual citizens, businesses, etc. work together to attain better alignment of both processes and their outcomes with the values, needs and expectations of society. The concept and its areas of application continue to evolve.

Since 2019, ARC Fund has worked actively to integrate the principles and practices of RRI in territorial governance of research and innovation. The initiative Leveraging Leader-

ship for Responsible Research and Innovation in Territories supports the design of policies that are anticipatory, inclusive, reflexive and responsive. ARC Fund coordinated five research organizations and four organizations, representing and/or supporting territorial authorities (municipalities of Sofia and Thalwil, city of Sabadell and the region of Western Macedonia) in conducting a thorough assessment of RRI relevance to territorial governance in different policy areas (support for innovation; digital transition and new skills; youth employment and entrepreneurship; sustainable urban development; transition towards a low-carbon economy; smart specialization in the circular economy, active aging and intelligent design in industry).

In collaboration with Sofia Development Association (SDA), ARC Fund produced a report, containing detailed stakeholder profiles and good practice examples, based on in-depth interviews and a focus group. The report provides a summary of stakeholder needs, interests, power and influence from an RRI perspective and analyzed the relationships and interdependencies between them.

An analysis of 10 national and 5 municipal strategic documents and a participatory workshop were conducted to assess the relevance of the RRI-AIRR approach for selected policy areas in Sofia municipality (support for innovation; digital transition and new skills; youth employment and entrepreneurship; sustainable urban development) and territorial policies at large.



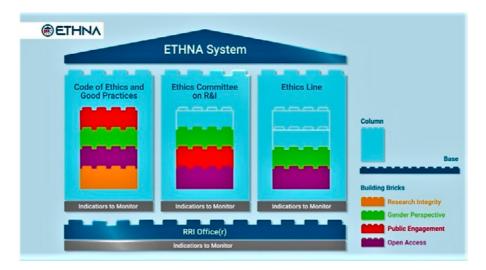
RRI participatory workshop in Sofia, 15 July 2021

The findings and conclusions drawn from the analytical work and data collection were used for conducting the RRI audit for Sofia Municipality. The audit report assesses the state-of-the-art regarding the application of RRI-AIRR principles by the municipal government in the four policy areas and proposes strategic priorities for improving territorial governance through a streamlined integration of the RRI-AIRR approach in the overall policy-making process. RRI-AIRR principles are relatively well embedded in policy documents and plans in the chosen areas. Some RRI keys (public engagement, open access, gender equality) are better known and more adequately reflected in the policy areas in comparison to other keys (science education, research ethics). Public bodies, responsible for policy implementation (in particular in the areas of digital transition and sustainable urban development) pursue and rely on broad public engagement, inclusiveness, foresight scenarios, and transparent and accountable governance.

ARC Fund's team supported the Municipality of Gabrovo in the application of a novel approach to territorial decision-making, focusing on cross-actor collaborations among local research and innovation (R&I) actors. A Public and Stakeholder Engagement Plan was developed, supporting the implementation of the Smart Specialization Strategy of Gabrovo for the period 2022–2027. Several online mutual-learning workshops were held to discuss the application of RRI keys into territorial decision-making, the challenges related to this process, and potential strategies for integrating the RRI framework into policymaking at the local and regional level.

In 2021, ARC Fund continued to enhance its own RRI capacity and to champion it as a guiding principle of Bulgarian R&I organizations. Along with universities and research institutes from Austria, Bulgaria, Denmark, Estonia, Germany, Portugal, Spain and Norway, ARC Fund acts as one of the six Living Labs implementing and testing an original ethics governance system for grounding good RRI practices in higher education institutions, research and innovation funding bodies, and research-conducting organizations. The part-

nership has set up an ETHNA Office to develop a Code of Ethics and Good Practices, a Gender Equality and Non-Discrimination Policy, an Open Access Policy, Guidelines on Public Engagement and establishment of a Research Ethics Board. In July 2021, ARC Fund experts participated in a workshop on public engagement and governance and a workshop, entitled "Leveraging a gender equality agenda in research and innovation performing organizations" and organized a workshop on ethics.



Structure of the ETHNA System

ARC Fund also acted as Bulgarian country correspondent for the Scientific Understanding and Provision of an Enhanced and Robust Monitoring System for RRI. Contributing to the Europe-wide study of research funding organizations, ARC Fund performed a detailed analysis of the National Science Fund and the Ministry of Education and Science. A number of strategies and other policy documents were reviewed from the perspective of RRI, including the National Strategy for Development of Scientific Research in the Republic of Bulgaria 2017–2030, the National Plan for Development of the Open Science Initiative in the Republic of Bulgaria, the Innovation Strategy for Smart Specialization 2014-2020, the National Roadmap for Research Infrastructure 2017–2023, the Strategy

for Development of Higher Education in the Republic of Bulgaria for 2014–2020, the Law on Scientific Research Promotion, the Rules of the National Science Fund, and the Regulations for monitoring and evaluation of research activities, carried out by universities and research organizations.

ARC Fund also examined four research performing organizations: the University of Plovdiv, the National Academy of Art in Sofia, the University of Ruse, and the International Business School in Botevgrad. The analysis focused on the overall strategic priorities of the institutions; the place of RRI in their strategic documents; structures, policies and practices, support to the uptake of RRI; and inspirational or innovative good practice examples.

### Encouraging Energy Ctizenship and Modifying Energy Consumption Patterns

ARC Fund remains committed to the goal of motivating a more conscious and responsible energy consumption of households in Europe. Through the Act4Eco platform households receive information on the measures they could implement to save energy and reduce their carbon footprint. The platform is actively promoting such new patterns and has reached an audience of

almost 900 consumers from Bulgaria and more than 13,000 consumers globally. Its Facebook group has 260 Bulgarian members, forming a community with a sustained interest in energy efficiency, who discuss their energy consumption habits through online polls and learn about practices and advice on how to reduce their energy consumption at home.



The Act4Eco platform

In June 2021, an online policy seminar on the efficiency of the national/local-level energy policy interventions aimed at shifting consumer behavior towards increased energy efficiency was held, which was attended by 25 Bulgarian energy experts. They deliberated on the available policy instruments, identified policy options for promoting consumer behavior change, and proposed measures to increase the impact of such energy policy interventions. The event was part of a series of national-level seminars organized in Belgium, Denmark, Greece, Finland, Ireland, Italy, Lithuania, and Portugal.

As follow-up, a list of challenges and policy recommendations was formulated and presented in July and August 2021 at two

EU-level policy seminars, co-hosted by ARC Fund. The events provided a forum to around 50 energy stakeholders to elaborate on and validate the identified challenges and to further discuss policy solutions to tackle these challenges. Focus was placed on the ways to encourage consumers to take action for increasing the energy efficiency of their homes and reducing energy consumption. ARC Fund coordinated the development of nine policy briefs, summing up the policy seminar findings and conclusions.

ARC Fund is part of the European initiative Proactive Strategies and Policies for Energy Citizenship Transformation, which deals with the various aspects of energy citizenship across Europe. Partners from Belgium, Bulgaria, France, Germany, Hungary, Ireland, Latvia, Spain and The Netherlands work with communities, businesses and decision-makers to explore ways of involving citizens in the clean energy transition.

Apart from energy citizenship cases from Bulgaria, ARC Fund also collects examples from other Southeast European countries: Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Serbia, and North Macedonia.

### Applying the Precautionary Principle Through Public Participation

In 2021 ARC Fund continued its participation in a co-creative process to identify stakeholder needs and ideas in terms of guidelines and tools to support the application of the precautionary principle. The aim of this process is to develop a guidance document, targeted at policy-makers and public authorities in the field of risk and innovation governance at the EU level.

Along with partner organizations from the EU, ARC Fund participated in a series of stakeholder-need identification workshops. The findings were used to develop guidelines on the application of the precautionary principle, based on three broad themes: participation; organization and production of expertise; and extent of application. ARC Fund contributed by developing the chapter on participation, building upon its solid track record in promoting public participation.

ARC Fund worked on defining the conditions that cultivate active and productive citizen participation in public deliberation, together with 12 organizations, involved in the Inclusive Science and European Democracies (ISEED) initiative. Through a combination of theoretical analysis, empirical research, and small-scale experiments, the initiative studies how current practices of citizen participation in science could help European societies overcome the obstacles to democratic participation and decision-making. It introduces the concept of "deliberative participation," designed to enhance both the quality and the legitimacy of political decision-making, and to establish new forms of knowledge-based democratic governance, complementary to political representation.

### Enterprise Resilience Through Workplace Innovation

In 2021, ARC Fund conducted a study on the role of workplace innovation in small and medium-sized enterprises in Bulgaria. Workplace innovation practices aim to more actively engage employees in decision-making processes, encourage the autonomy and flexibility of staff members in performing their operational activities, foster the development of employees' potential through formal and informal trainings and/or increase collaboration among departments and teams within organizations. These improve business results, create a more satisfying and motivating work environment, and increase the resilience of enterprises in times of crisis. The COVID-19 pandemic demon-

strated the vital role of workplace innovation for both individual enterprises and the economy at large.

Most EU countries have policy mechanisms that foster this type of innovation. In Bulgaria, though, such mechanisms are few and are coupled with widespread lack of awareness among stakeholders. ARC Fund identified national public support measures to encourage workplace innovation in SMEs, which are particularly vulnerable in times of crisis due to limited resources and limited access to knowledge. The policy recommendations were summarized in a report presented at a series of webinars, engaging a number of

stakeholders: six universities, five employer and industry organizations, five ministries and government agencies, non-governmental organizations, media representatives and over 100 SMEs. Participants agreed on the benefits of workplace innovations and underlined the need for closer collaboration among all stakeholders.

### Safer Internet Program

## sofenet.bg

ARC Fund has been the coordinator of the **Bulgarian Safer Internet Center** (SIC) for 17 years. The organization operates a Hotline for

reporting online content that is illegal and harmful to children and supervizes a Helpline, operated by its partner Parents Association. The Center is a member of the International Association of Internet Hotlines (INHOPE) and of the European Network of Safer Internet Centers (Insafe), now integrated as the Better Internet for Kids network, and is Bulgaria's representative in the EU Kids Online and Global Kids Online research networks. SIC is also a member of the European Crime Prevention Network (ECPN) and the Radicalisation Awareness Network (RAN). A member of the Safer Internet Center's Youth Panel represents Bulgaria in the Childen's Council of the Eurochild network. The Bulgarian SIC was granted a Quality Certificate by the International Association of Internet Hotlines INHOPE in 2018 and is Trusted Partner of Facebook and Trusted Flagger of Google.

In 2021, ARC Fund further expanded its activities for protecting children online. The **Internet Hotline** for fighting illegal and harmful content and conduct online received and processed over 15,000 reports on abuse of children online.

The Safer Internet team developed and implemented a number of **educational methodologies** for the prevention of cybercrimes and online abuse of children as well as for ameliorating children's online literacy. Aproximately 1,500 children, 200 teachers, 270 parents and 1,160 professionals were involved in various trainings and awareness raising events, both face-to-face and online. The international Safer Internet Day event attracted over 20,000 viewers.

In 2021, the Safer Internet Center performed a wide range of activities in the field of protection of children online despite the unprecedented pandemic situation. The program's team provided a number of trainings and awareness raising events online and, when it was possible, some face-to-face events and trainings in strict compliance with all anti-pandemic prevention measures and requirements. SIC's Hotline reported about online sexual exploitation of children and verifies and transferes cases for further legal action to the national Cybercrime Unit at the General Directorate for Combating Organized Crime. Via the Helpline, trained psychologists consult children, parents and teachers about problems and incidents with children on the Internet.

In 2021, the Hotline received and took action on 15,694 reports, 15,276 of them being reports, related to child sexual abuse materials, 8 – on erotic or nude content, involving children, and 24 – on child grooming. 2,540 of the reports were directed to the law enforcement authorities (the mentioned Cybercrime Unit), 13,046 were referred to other INHOPE member Hotlines, 3 were directed to other Bulgarian institutions, and in 2 cases the Center asked for the removal of the online content. During the year, the Helpline provided 256 consultations on various issues ranging from cyberbullying through security settings to the use of the

Internet and digital devices by minors. Of those consultations, 11 concerned online content potentially harmful to children, 5 concerned privacy settings, 9 were related to data privacy, 5 – to online reputation issues, 25 – to various aspects of digital and media literacy, 28 reported cases of cyber bulling, 2 concerned sexual harassment, 1 was on sexting, 7 – on sextortion, and 9 were on e-crimes.

In addition to the direct protection and support of children facing online risks, as well as the involvement in research, concerning online safety and victimization of children and young people, ARC Fund has developed and has been implementing various educational methodologies for the prevention of cybercrimes and online abuse of children. Being recognized as a center of excellence in the field of child protection on the Internet, ARC Fund participates in various national and international activities and working groups for developing strategies and proposals for legislative measures, social service procedures and practices. It conducts regular trainings of children, teachers, parents, care-givers and social workers and is involved in various awareness raising activities.

ARC Fund's experts participate in an international working group, formed by the **European Crime Prevention Network** to prepare a more structured and evidence-based strategy for the prevention of crimes against children.

ARC Fund regularly participates in working and training meetings of the **Radicalization Awareness Network**, presenting its expertise and sharing knowledge and practices with other organizations. ARC Fund also became a Trusted Partner of Facebook and a Trusted Flagger of Google. Intervention and support in cases of incidents and risks for children online are important priorities, but the Safer Internet Center also places a major focus on prevention.

In 2021, ARC Fund published a methodology guide for training young people for peer trainers on topics, related to the prevention of sexual exploitation of children online. The methodology was presented to stakeholders at an online conference, organized by the Know-How Center of the New Bulgarian University, as well as to the members of the Learning Action Partnership for Prevention of Child Sexual Exploitation Coalition during its summer meeting. ARC Fund also participated in the development of three tools, which address media and information literacy (MIL) competences, described in the UNESCO global framework for assessment of MIL - an online game for young people, a peer-to-peer methodology and a storytelling guide. The tools help young people to develop their critical thinking and express their opinion and ideas for solving social problems.

A teaching methodology guide on the development of critical thinking and fostering tolerance through the improvement of digital and media skills in high schools was also published in 2021. The methodology incorporates the perspective of professional teachers, including feedback from an online meeting with teachers who had piloted lessons from the draft guidebook at their schools. It consists of 10 lessons on the various types of digital and media skills (communication skills, information assessment skills, etc.) related to emotional intelligence and critical thinking as prevention mechanisms to far-right messages online and far-right radicalization among youth. In 2021, ARC Fund's experts also upgraded and completed three methodological guidebooks for countering anti-Roma manipulation and disinformation:

 a basic methodology guidebook on how to detect and tackle fake news, disinformation and manipulation, addressing general societal issues and anti-Roma manipulation in particular;

- a practical guidebook for capacity building of Roma leaders, activists, mediators, Roma and pro-Roma, which will equip the target Roma multipliers with the needed specific methods and tools to detect, monitor and counteract fake news and anti-Roma disinformation that accelerate anti-gypsyism;
- a practical guidebook for school teachers on the ways young people can identify and counter hostile narratives, disinformation, manipulation and fake news, generating racists stereotypes and inciting hostility against Roma people.

Aproximately 1,500 children, 200 teachers, 270 parents and 1,160 professionals (educational experts, teachers and school psychologists, social workers, health mediators, Roma and pro-Roma activists, among others) were involved in trainings and awareness raising events, both in person and online.

Between May and July 2021, strictly adhering to the anti-pandemic measures, ARC Fund's experts provided five face-to-face trainings on how to detect and tackle fake news, disinformation and manipulation, addressing in particular anti-Roma manipulation, for Roma leaders, activists, mediators, Roma and pro-Roma NGO's. Two trainings were provided (in Varshets) for a group of trainees from Northern Bulgaria and another two (in Hisarya and Bansko) for another group of trainees from Southern Bulgaria. Another practical training on how to cooperate with each other on raising awareness about fake news and misinformation for both groups took place in Bansko as well.

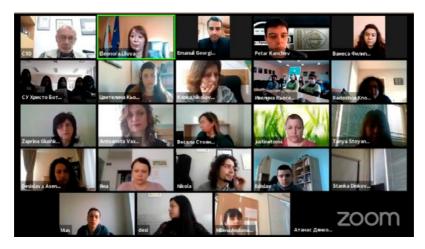
In 2021, ARC Fund also provided two trainings for teachers from all over the country on how to detect and tackle fake news, disinformation and manipulation and how to help students develop information assessment skills – the first one was provided online and

the second three-day training was delivered live in October in Bankya.

A model for improving the digital and media literacy of students of all age groups through the existing curriculum through a holistic approach focused on competences, developed by SIC's team, had been applied at High School No 90 in Sofia. The model included modules on systematic work with parents and on the creation of a school community. Teachers from the school attended a series of trainings on the updated holistic model and developed their own teaching plans. ARC Fund's experts supervised the lessons, the majority of which were conducted online because of the lockdown, and provided feedback. In 2021, a guide for teachers on how to develop digital and media literacy in students through the holistic model was published. In November 2021, a face-to-face training for more than 60 teachers on the holistic model for development of the digital and media literacy of students was provided.

Since 2010, the Bulgarian Safer Internet Center has been working actively on youth participation through maintaining its **Youth Panel** – a team of young volunteers, aged 14–18. The Youth Panel planned and hosted the main event for the Safer Internet Day in Bulgaria on 9 February 2021, which was dedicated to the topics of fake news, disinformation and misinformation. The event took place online and was livestreamed for the general public, reaching more than 20,000 viewers. The online event engaged children and professionals who provided recommendations on the ways to recognize fake news, disinformation and misinformation online.

An ARC Fund expert was invited as a panelist at the Voice It 2021 Youth Forum, organized by the National Network for Children and the Megaphone Youth Network in November. The forum included live discussion with a small number of participants, which were livestreamed to broaden the outreach. In 2021, the Voice It Forum was dedicated to fake news, misinformation and ecology.

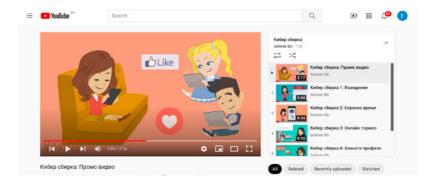


The main online event of the Safer Internet Day in Bulgaria reached more than 20,000 people, 9 February 2021

In 2021, two members of the Bulgarian SIC's Youth Panel, who are also part of the Megaphone Youth Network, maintained by the National Network for Children, as well as the Network's Reporters Initiative, completed the two-year Megaphone program successfully and were certified by the NNC. One of them also represents Bulgaria in the Eurochild Children's Council as she has been elected with the majority of the votes of the young people, involved in the Reporters Initiative. In 2021, the elected girl participated in a number of international online forums.

In 2021, ARC Fund had a representative on the team, created by the Coalition for Media Literacy at School (of which it is a founding member) to compile a guide for teachers, developing media literacy in students through online teaching. ARC Fund experts participated in two online teacher trainings on the topic and two other relevant conferences, organized by the Coalition.

Adapting to the unprecedented pandemic situation, ARC Fund held numerous webinars on online safety issues, engaging audiences of teachers, parents and children. The Safer Internet team also created a series of five educational animation videos for children on online safety topics, which have more than 2,100 viewers on the Bulgarian SIC's You Tube channel.



The Safer Internet Program's team created a series of animation educational videos for children on online safety topics

**PART TWO:** 

**MANAGEMENT** 

# **Institutional Development**

ARC Fund is a not-for-profit organization acting for the public benefit. Up to 2017, ARC Fund was registered at the Sofia City Court and the Central Register of Not-for-Profit Legal Entities at the Bulgarian Ministry of Justice. In 2018, following amendments to the national legislation, ARC Fund was re-registered in the public Commercial Register and Register of Not-for-Profit Legal Entities at the Registry Agency under the Minister of Justice.

Not-for-profit legal entities acting for the public benefit are obliged by the Bulgarian law to conform to a number of additional rules, inter alia, to draw up and submit annually an activity report and financial statements for entry in the public Register.

In 2006, ARC Fund established ARC Consulting EOOD – a wholly-owned company, designed to better leverage the organization's expertise. The company provides consultancy services in the field of innovation and ICT. It also develops and implements national and international projects under the EU Framework Programs for research, technology development and demonstration, as well as under the Cohesion and Structural Funds. ARC Fund and ARC Consulting form the ARC Fund Group.

In 2021, the ARC Fund Group employed a staff of twenty-one permanent employees and a number of part-time consultants and advisors. The ARC Fund Group team is a blend of young, well-educated and highly motivated people and experienced experts, renowned for their professionalism and high-quality work.

In 2021, the ARC Fund Group worked on the implementation of 23 projects and 4 service contracts, supported by the Executive Agency for Small and Medium-sized Enterprises (EASME) of the European Commission, the

National Innovation Fund, DG Justice and Consumers of the European Commission, the Research Executive Agency of the European Commission, the Interreg Europe program, the European Regional Development Fund, the Norway National Agency (ER-ASMUS+), EEA and Norwegian Financial Mechanisms for 2014-2021, OAK Foundation, the Innovation and Networks Executive Agency of the European Commission, DG Migration and Home Affairs of the European Commission, the National Operational Program for Good Governance, the Active Citizens Fund, the Konrad Adenauer Foundation, the Ministry of Regional Development and Public Works, the United Nation's Children's Fund (UNICEF), Leibniz Institute for Media Research and the Belgian research company Applica.

ARC Fund is managed in accordance with the principles of good governance, accountability and transparency. These principles are applied through:

- execution of annual audits since 1992;
- individual project audits;
- publication of Annual Reports in Bulgarian and English;
- regular updates of the organization's website to inform the public about ongoing projects and events;
- child-protection policy, which contains an ethical code, principles and rules for working with children;
- publications in the media to enhance the impact of policy recommendations and increase public awareness of the causes the ARC Fund supports.

# **List of Staff**

#### **Board of Trustees**

Dr. Ognian Shentov, Chairman

Vladimir Yordanov, Deputy Chairman

Dr. Inko Razpopov, Member of the Board

Lyubomir Christov, Member of the Board

# Senior Management

Nikolay Badinski, Executive Director

Zoya Damianova, Program Director

Ruslan Stefanov, Coordinator, Innovation.bg Group and Manager, ARC Consulting

Ventsislav Benov, Business Development Manager

# Innovation and Business Support Program

Daniela Tchonkova, Program Manager

Prof. Teodora Georgieva, Senior Fellow

Denitsa Marinova, Project Manager

Dr. Fani Koleva, Senior Analyst

Konstantin Uzunov, Analyst

Maya Tsaneva, Communications Officer

#### Science, Technology and Innovation Policy Program

Zoya Damianova, Program Manager

Marko Hajdinjak, Senior Analyst

Desislava Asenova, Project Manager

Blagovesta Chonkova, Project Manager

Adriana Dimova, Project Manager

#### Safer Internet Centre

Georgi Apostolov, Program Manager

Petar Kanchev, Analyst

Dr. Emanuil Georgiev, Analyst

Lubomir Sirkov, Analyst

# Finance and Administration

Milena Momchilova-Boyadzhieva, Financial Manager

Tsvetoslava Kioseva, Financial Officer

Daniela Zain, Accountant

Tsvetomir Avramov, Project/Financial Officer

Petar Lozanov, Project/Financial Officer

Mariana Yankova, Administrative Secretary

# **PART THREE:**

**FINANCIAL REPORT** 



# **Applied Research And Communications Fund (the Group)**

**Consolidated Annual Financial Statements** 

31 December 2021

# **Independent Auditors' Report**

To the Board of Trustees of the APPLIED RESEARCH AND COMMUNICATIONS FUND

## **Report on the Consolidated Financial Statements**

We have audited the consolidated financial statements of the Applied Research and Communications Fund and its consulting arm ARC Consulting EOOD (together referred to as "the Group"). These comprise the consolidated statement of the Group's financial position as of 31 December 2021 and the consolidated statements of comprehensive income, changes in equity and cash flows for the year then ended, as well as a summary of significant accounting policies and other explanatory notes.

### **Opinion**

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of the Group as of 31 December 2021, its financial performance and its cash flows for the year then ended in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union (EU).

### Basis for expression of opinion

We have performed our audit in accordance with the International Standards on Auditing (ISA). Our responsibilities as per these standards are further described in the Auditor's Responsibility section of our report. We are independent from the Group in accordance with the Code of Ethics for Professional Accountants of the International Ethics Standards Board for Accountants (The IESBA Code) along with the ethical requirements of the Law on the Independent Financial Audit (LIFA), applicable to our audit of consolidated financial statements in Bulgaria. We have also complied with our other ethical responsibilities as per the requirements of LIFA and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

# Other information, different from the consolidated financial statements and the auditor's report

The Group's management is responsible for other information. Other information comprises the report on the activity prepared by the management in accordance with Chapter Seven of the Law on Accountancy of the Republic of Bulgaria, but excludes the consolidated financial statements and our auditor's report.

Our opinion regarding consolidated financial statements does not comprise this other information and we do not express any form of conclusion about its reliability, unless it is explicitly stated in our report and to the extent to which it is stated.

In auditing consolidated financial statements, our responsibility is to read the other information and thus to assess whether this other information is substantially inconsistent

with consolidated financial statements or with our knowledge obtained during the audit, or in another way appears to contain material misstatement. If, based on the work we have performed, we conclude there is material misstatement in this other information, we are required to report this fact.

We have nothing to report in this respect.

# Supplementary reporting requirements laid down in the Law on Accountancy of the Republic of Bulgaria

In addition to our responsibilities and reporting in compliance with ISA, in reference to the report on the activity we have followed the procedures supplementing ISA requirements as per the Instructions of the professional organisation of certified public accountants and registered auditors in Bulgaria – Institute of Certified Public Accountants (ICPA) – issued on 29 November 2016 and endorsed by its Managing Board on 29 November 2016. These are procedures on verification whether such other information is present and on examination of its form and content, designed to assist us in forming an opinion on whether this other information contains the disclosures and reports laid down in Chapter Seven of the Law on Accountancy.

# Opinion in reference to Art. 37, Para. 6 of the Law on Accountancy of the Republic of Bulgaria

On the grounds of the procedures implemented, our opinion is that:

- a) The information included in the report on the activity for the financial year for which consolidated financial statements were prepared corresponds to the consolidated financial statements.
- b) The report on the activity was prepared in compliance with the requirements of Chapter Seven of the Law on Accountancy.

## Management's responsibility for the Consolidated Financial Statements

The management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the European Union, and for such internal control as the management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

During the preparation of consolidated financial statements, the management is responsible for evaluating the ability of the Group to continue its operation as a going concern, disclosing, when applicable, issues related to the assumption about a going concern and using the accounting basis on the grounds of the assumption about a going concern, unless the management has the intention to liquidate the Group or to suspend its activity, or has no other alternative but to take such action.

#### Auditor's responsibility

We aim to obtain reasonable assurance that the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report containing our auditor's opinion. Reasonable assurance is a high degree of assurance, but is not a guarantee that an audit performed in accordance with ISA shall in all cases reveal material misstatement if such misstatement is present. Misstatements may arise as a result of fraud or error and are considered material if it would be reasonable to expect that, independently or in aggregate, they could impact the economic decisions of consumers taken on the basis of these financial statements.

As part of the audit complying with IAS, we use professional judgment and keep professional skepticism throughout the audit. We also:

- identify and assess the risks of material misstatement in the consolidated financial statements, whether due to fraud or error; we design and perform audit procedures in response to these risks, and we obtain sufficient and appropriate audit evidence, so as to provide basis for our opinion. The risk of not revealing material misstatement which is due to fraud, is higher than the risk of not revealing material misstatement which is due to error, as fraud could vary from secret arrangement, through forgery, intentional omissions, and statements aiming to deceive the auditor, to internal control neglect or circumvention;
- consider internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control;
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and the related statements made by management;
- make a conclusion about the appropriateness of the accounting basis used by management on the grounds of the assumption for a going concern and the audit evidence obtained about whether material uncertainty is present concerning events or circumstances which could cause significant doubts about the ability of the Group to continue operation as a going concern. In case of finding such material uncertainty, we are obliged to draw attention in our auditor's report to the disclosures in the consolidated financial statements relevant to that uncertainty, or, in case these disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, due to future events or circumstances the Group could suspend its operation as a going concern;
- evaluate the overall presentation, structure and content of the consolidated financial statements, including disclosures, and whether consolidated financial statements present the fundamental transactions and events in a reliable manner.

Stoyan Donev

Registered Audito 1909

стриран одитор

27 July 2022

Sofia

(all amounts in BGN thousand)	Note	For the year	ar ending:
	_	31 December 2021	31 December 2020
Assets			
Property, plant and equipment	5	13	34
Intangible assets	6	19	19
Investment property	7	36	37
Total non-current assets		68	90
Trade and other receivables	8	333	350
Cash and cash equivalents	9	2	5,138
Deferred expenses	_	37	
Total current assets	-	3,037	5,488
Total assets	-	3,105	5,578
Equity	-	1,900	1,938
Liabilities			
Payables to partners and suppliers	10	88	2,760
Deferred financing	11	1,117	880
Total current liabilities		1,204	3,640
Total liabilities		1,204	3,640
Total equity and liabilties		3,105	5,578

These consolidated financial statements were approved by the Board of Trustees on 26 July 2022. They were signed on behalf of the Board of Trustees by:

Nickolay Badinski Executive Director 26 July 2022

Initialled for identification purposes in reference to the audit report:

909 Донев Регистриран одитор

Stoyan Donev Registered Auditor 27 July 2022

4

(all amounts in BGN thousand)	Note	For the year ending:		
		31 December 2021	31 December 2020	
Revenues from grants financing	12	1,057	1,034	
Cost of sales	15	(962)	(946)	
Gross profit		95	88	
Other operating income		389	354	
Administrative expenses	15	(518)	(493)	
Impairment losses			(20)	
Revenue from operating activities		(34)	(71)	
Financial income		1	2	
Financial expenses		(4)	(4)	
Net financing costs	13	(3)	(2)	
Profit before income tax		(37)	(73)	
Income tax expense	14	(1)	(1)	
Net profit for the period		(38)	(74)	
Other comprehensive income		-	-	
Total comprehensive income		(38)	(74)	

These consolidated financial statements were approved by the Board of Trustees on 26 July 2022. They were signed on behalf of the Board of Trustees by:

Nickolay Badinski Executive Director 26 July 2022

Initialled for identification purposes in reference to the audit report:

Стоян Донев

Регистриран одитор

**ИЗСЛЕДВАНИ** 

Stoyan Donev C Registered Auditor 27 July 2022

(all amounts in BGN thousand)	Note	For the year	•
Cash generated from operations		31 December 2021	31 December 2020
Profit before income tax		(37)	73
Depreciation		31	73
(Increase)/decrease of trade and other		17	282
receivables		17	202
(Increase)/decrease of trade and other		(2,556)	2,755
payables			
(Increase)/decrease of deferred financing		124	242
(Increase)/decrease of deferred expenses		(37)	_
Net cash from operating activities		(2,458)	3,213
Income tax paid		(1)	(1)
Net cash generated from operating activities	i	(2,459)	3,212
Cash flows from investing activities			
Payments for acquisition of property, plant and		(9)	(25)
equipment		(0)	(20)
Net cash used in investing activities		(9)	(25)
Cash flows from financing activities			, ,
Interest and commissions paid		(3)	93
Net cash used in financing activities		(3)	93
Net increase/(decrease) in cash and cash		(2,471)	3,280
equivalents		,	
Cash and cash equivalents at the beginning of		5,138	1,858
the year			
Cash and cash equivalents at the end of the year	9	2,667	5,138

These consolidated financial statements were approved by the Board of Trustees on 26 July 2022. They were signed on behalf of he Board of Trustees by:

ARC

Nickolay Badinski Executive Director 26 July 2022

Initialled for identification purposes in reference to the audit report:

Стоян Донев

Stoyan Donev Registered Auditor 27 July 2022

022

(all amounts in BGN thousand)	Note	Retained earnings
Balance as of 1 January 2020  Net profit for the year		<b>2,013</b> (74)
Other changes		(1)_
Balance as of 31 December 2020		1,938
Balance as of 1 January 2021		1,938
Net profit for the year		(38)
Other changes		
Balance as of 31 December 2021		1,900

These consolidated financial statements were approved by the Board of Trustees on 26 July 2022. They were signed on behalf of the Board of Trustees by:

FUND

Стоян Донев

стриран одитор

Nickolay Badinski Executive Director 26 July 2022

Initialled for identification purposes in reference to the audit report:

Stoyan Donev Registered Auditor 27 July 2022

#### 1. Background and activities

The Applied Research and Communications Fund (ARC Fund), is a European think-and-action tank in the area of innovation, business support and technology transfer, established in 1991. ARC Fund provides:

- advice and advocacy on science- and evidence-based national, regional and local level innovation policies and strategies;
- research and analyses of development trends and policy options for supporting entrepreneurship and innovation for smart specialisation and industrial transformation;
- innovative educational methodologies for building digital and media literacy in young people and for creating a safer internet environment;
- public-private partnership and foresight know-how for addressing specific issues of innovation-based competitiveness, digitalisation and green transformation.

The consolidated financial statements of ARC Fund for the year ended 31 December 2021 comprise the ARC Fund and its consulting arm ARC Consulting EOOD (together referred to as "the Group").

ARC Fund owns 100% of the share capital of its consulting arm ARC Consulting EOOD. The company offers consulting services in the fields of innovation and information and communication technologies, as well as advisory services in the design and implementation of international projects. ARC Consulting EOOD is a limited liability company established in the Republic of Bulgaria and registered by Sofia City Court under file No 9428/2006 on 28 August 2006.

As of 31 December 2021 the Group has 29 employees.

These consolidated financial statements were approved by the ARC Fund's Board of Trustees on 26 July 2022.

#### 2. Accounting policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

#### 2.1. Basis of preparation

These consolidated financial statements have been prepared in accordance with the IFRS, as adopted by the EU. The financial statements have been prepared under the historical cost convention.

The consolidated financial statements comprise the financial statements of the ARC Fund and its consulting arm as of 31 December each year. The financial statements of the consulting arm are prepared for the same reporting period as those of the parent Group, using consistent accounting policies. For consolidation purposes, the financial information of the Group has been combined on a line-by-line basis by adding together like items of assets, liabilities, income and expenses.

All intra-group balances, income and expenses and unrealised gains resulting from intra-group transactions are eliminated in full. Unrealised losses are also eliminated, but considered an impairment indicator of the asset transferred. The consulting arm is fully consolidated from the date of acquisition, being the date on which the Group obtains control, and continue to be consolidated until the date that such control ceases. The accounting policies of the consulting arm have been changed where necessary to ensure consistency with the policies adopted by the Group.

Consulting arms are all entities (including special purpose entities) over which the Group has the

Applied Research and Communications Fund (the Group)
Notes to the Consolidated Annual Financial Statements, 31 December 2021
(all amounts in BGN thousand, unless otherwise stated)

power to govern the financial and operating policies generally accompanying a shareholding of more than one half of the voting rights. The existence and effect of potential voting rights that are currently exercisable or convertible are considered when assessing whether the Group controls another entity.

The purchase method of accounting is used to account for the acquisition of entities by the Group. The cost of an acquisition is measured as the fair value of the assets given, equity instruments issued and liabilities incurred or assumed at the date of exchange.

Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date, irrespective of the extent of any non-controlling interest. The excess of the cost of acquisition over the fair value of the Group's share of the identifiable net assets acquired is recorded as goodwill. If the cost of acquisition is less than the fair value of the net assets of the entity acquired, the difference is recognised directly in the income statement.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the synergies of the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill forms part of a cash-generating unit and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal of the operation. Goodwill disposed of in this circumstance is measured based on the relative values of the operation disposed of and the portion of the cash-generating unit retained.

#### Transactions with non-controlling interests

Non-controlling interests represent the portion of profit or loss and net assets not held by the Group and are presented separately in the income statement and within equity in the consolidated balance sheet, separately from parent shareholders' equity. Disposals of non-controlling interests result in gains and losses for the Group that are recognised in the income statement. Acquisitions of non-controlling interests are accounted for whereby the difference between the consideration and the book value of the share of the net assets acquired is recognised in goodwill.

The preparation of the financial statements in accordance with IFRS requires the management to make estimates and assumptions. The management relied on their own judgment when applying the accounting policy of the Group. The elements of the financial statements whose presentation includes higher degree of judgment or subjectivity and for which the assumptions and judgments have higher influence are separately disclosed in Note 4.

New and amended standards - adopted by the Group:

New and amended standards and interpretations mandatory for the first time for the financial year beginning 1 January 2021 are not early adopted by the Group because the management of the Group believes that they are not currently relevant to the Group, although they may affect accounting for future transactions and events.

New standards, amendments and interpretations issued, but not effective for the financial year beginning 1 January 2021 are not early adopted by the Group. They are not relevant to the Group, although they may affect accounting for future transactions and events.

# 2.2. Foreign currency transactions

### 2.2.1. Functional and presentation currency

Items included in the financial statements of the Group are measured using the currency of the primary economic environment in which the entity operates ('the functional currency"). The functional and presentation currency in these consolidated financial statements is "Bulgarian lev" or "BGN".

#### 2.2.2. Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the statement of comprehensive income.

## 2.3. Property, plant and equipment

AAll property, plant and equipment are stated at historical cost less depreciation, less impairment losses, if any. Historical cost includes all expenditure that is directly attributable to the acquisition of the items.

Subsequent costs are included in the assets carrying amount or recognised as a separate asset, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably.

Depreciation commences from the date the asset is available for use. Land is not depreciated as it is deemed to have an indefinite life. Assets under construction are not depreciated as not yet available for use.

The Group uses straight-line depreciation method. Depreciation rates are based on the useful life of the different types of property, plant and equipment as follows:

Group	Accounting rates	Tax rates
Buildings	25 years	25 years
Machinery and equipment	5 years	5 years
Facilities	25 years	25 years
Computers	2 years	2 years
Vehicles	4 years	4 years
Fixtures and fittings	6.67 years	6.67 years

Property, plant and equipment is depreciated from the day following the acquisition date and for internally generated assets – from the day following the date of entering into use.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

## 2.4 Intangible assets

Intangible assets acquired by the Group are presented at cost, less accumulated amortisation and impairment.

Subsequent expenditures

Subsequent expenditure on capitalised intangible assets is capitalised only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure is expensed as incurred.

Amortisation is charged to the income statement on a straight-line basis over the estimated useful lives of intangible assets usually for 4–5 years.

#### 2.5. Financial assets

The Group classifies its financial assets in the following categories: at fair value through profit or loss, loans and receivables, held-to-maturity investments, and available-for-sale financial assets. The classification depends on the purpose for which the investments were acquired. The management determines the classification of its investments at initial recognition and re-evaluates this designation at every reporting date.

Financial assets at fair value through profit or loss

Financial assets at fair value through profit or loss are financial assets held for trading. A financial asset is classified in this category if acquired principally for the purpose of selling in the short term. Assets in this category are classified as current assets.

For the purposes of these financial statements short term means a period within 12 months. During the year, the Group did not hold any investments in this category. The Group does not possess such financial assets as of 31 December 2021.

#### Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for maturities greater than 12 months after the balance sheet date. These are classified as non-current assets. The Group's loans and receivables comprise "trade and other receivables" and "cash and cash equivalents" in the balance sheet. Loans and receivables are carried at amortised cost using the effective interest rate.

#### Held to maturity

Held-to-maturity investments are fixed-maturity investments that the Group's management has the positive intention and ability to hold to maturity. These securities are included as non-current assets except for securities, reaching maturity within 12 months from the balance sheet date and which are recognised as current during the reporting period. During the year, the Group did not hold any investments in this category.

#### Available for sale financial assets

Available-for-sale financial assets are non-derivatives that are investments acquired with the purpose to be owned for a non-fixed period of time and which can be sold when the Group needs recourses or at change of interest rates. They are included in non-current assets unless the management intends to dispose of the investment within 12 months of the balance sheet date or to use them as a source of working capital. In this case the investments are classified within current assets. During the year, the Group did not hold any investments in this category.

The Group assesses at each balance sheet date whether there is objective evidence that a financial asset or a group of financial assets is impaired. Impairment testing of trade and other receivables is described in Note 2.7.

#### 2.6. Inventory

Inventories are stated at the lower of cost and net realisable value. Inventories are expensed using the weighted average method. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses.

#### 2.7. Trade and other receivables

Trade receivables are recognised initially at fair value and subsequently measured at amortised cost (using effective interest method) less provision for impairment. A provision for impairment of

trade receivables is established when there is objective evidence that the Group will not be able to collect all amounts due according to the original terms of receivables.

Significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy or financial reorganisation, and default or delinquency in payments (more than 30 days overdue) are considered indicators that the trade receivable is impaired. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate. The carrying amount of the asset is reduced through the use of an allowance account, and the amount of the loss is recognised in the income statement within "selling and marketing costs". When a trade receivable is uncollectible, it is written off against the allowance account for trade receivables. Subsequent recoveries of amounts previously written off are credited against "selling and marketing costs" in the income statement.

# 2.8. Cash and cash equivalents

Cash and cash equivalents includes cash in hand, deposits held at call with banks, and other short-term highly liquid investments with original maturities of three months or less as well as bank overdrafts. Bank overdrafts are shown within current borrowings in current liabilities on the balance sheet.

#### 2.9. Investment property

Investment property is property held either to earn rental income or for capital appreciation or for both, but not for sale in the ordinary course of business, use in the production or supply of goods or services, or for administrative purposes. Investment property is measured at cost on initial recognition and subsequently at fair value with any change therein recognised in profit or loss.

Cost includes expenditure that is directly attributable to the acquisition of the investment property. The cost of self-constructed investment property includes the cost of materials and direct labour, any other costs directly attributable to bringing the investment property to a working condition for its intended use and capitalised borrowing costs.

When the use of a property changes such that it is reclassified as property, plant and equipment, its fair value at the date of reclassification becomes its cost for subsequent accounting.

## 2.10. Borrowings

Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently stated at amortised cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognised in the income statement over the period of the borrowings using the effective interest method.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

Borrowing costs are recognised as an expense in the period in which they are incurred.

#### 2.11. Deferred tax

Deferred income tax is provided in full, using the liability method, on all temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. Deferred income tax is determined using tax rates that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred income tax assets are recognised to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

#### 2.12. Employee benefits on retirement

In accordance with article 222, para. 3 of the Bulgarian Labour Code, in the event of termination of a labour contract after the employee has reached the lawfully required retirement age, regardless of the reason for the termination, the employee is entitled to a compensation as follows: 2 gross monthly salaries in all cases and 6 gross monthly salaries if the employee has been engaged with the Group for at least 10 years.

As of 31 December the Group has not accounted for those potential obligations.

#### 2.13. Revenue recognition

Revenue comprises the fair value of the consideration received or receivable for the sale of goods and services in the ordinary course of the Group's activities. Revenue is shown net of value-added tax, returns, rebates and discounts and after eliminating sales within the Group.

The Group recognises revenue when the amount of revenue can be reliably measured, when it is probable that future economic benefits will flow to the entity and when specific criteria have been met for each of the Group's activities as described below. The amount of revenue is not considered to be reliably measurable until all contingencies relating to the sale have been resolved. The Group bases its estimates on historical results, taking into consideration the type of customer, the type of transaction and the specifics of each arrangement.

#### Sales of services

Revenue from time and material contracts, typically from delivering certain services, is recognised under the percentage-of-completion method. Revenue is generally recognised at the contractual rates. For time contracts, the stage of completion is measured on the basis of labour hours delivered as a percentage of total hours to be delivered.

Revenue from fixed-price contracts for delivering certain services is also recognised under the percentage-of-completion method. Revenue is generally recognised based on the services performed to date as a percentage of the total services to be performed.

If circumstances arise that may change the original estimates of revenues, costs or extent of progress toward completion, estimates are revised. These revisions may result in increases or decreases in estimated revenues or costs and are reflected in income in the period in which the circumstances that give rise to the revision become known by the management.

#### Revenue from grants and contributions

Grants from financing bodies are recognised initially as deferred income when there is reasonable assurance that they will be received and that the Group will comply with the conditions associated with the grant. Grants that compensate the Group for expenses incurred are recognised in profit or loss on a systematic basis in the same periods in which the expenses are recognised. Grants that compensate the Group for the cost of an asset are recognised in profit or loss on a systematic basis over the useful life of the asset.

#### Interest income

Interest income is recognised on a time-proportion basis using the effective interest method. When a receivable is impaired, the Group reduces the carrying amount to its recoverable amount, being the estimated future cash flow discounted at the original effective interest rate of the instrument, and continues unwinding the discount as interest income. Interest income on impaired loans is recognised using the original effective interest rate.

# 2.14. Dividend distribution

The Group does not distribute dividends.

#### 3. Financial risk management

#### 3.1. Impact of the general economic environment

Impact of the ongoing global crisis

In 2020 and 2021, the global economy was severely hit by the COVID-19 pandemic. As a result of constraints on the free movement of people and goods and the rise of unemployment, all EU member states, including Bulgaria, went into a recession. The shock of anti-epidemic measures was mitigated by a considerable slackening of cash and budgetary restriction both globally and in the EU. The Bulgarian government was no exception, although the measures it took were narrower in scope. As a result of its efforts, unemployment went down (to 4.5% in the last quarter of 2021) and the GDP level rose after a drop in the previous year (from -4.4% in 2020 to 4.2% in 2021). The development of the COVID crisis is expected to dominate global economic activity as the major factor for the next couple of years. The war in Ukraine, the gas and energy crisis in Europe and the ongoing de-globalisation trends will be the main instability factors in 2022–2023 in Bulgaria and Europe.

Risks for the Group are also heightened by the EU's transition to a new programming period and the ensuing delay of announcing new funding opportunities. On the other hand, the Group is implementing over 10 actions under the Horizon 2020 program (whose total budged equals EUR 80 billion), while the budget of its successor in the next 7-year programming period – Horizon Europe – amounts to the even higher EUR 95.5 billion. This fact is likely to have a positive effect on the Group's activities.

Due to rising gas and other energy source prices, in late 2021 inflation in Bulgaria reached nearly 8%, marking a peak after the global financial crisis in 2007–2008. This complicates the expense planning process for all entities in the Group, and therefore raises uncertainty. The Federal Reserve and the European Central Bank have clearly stated that high inflation will most likely have to be tackled by seriously raising key interest rates. The Federal Reserve is expected to introduce these measures before all, which would increase the value of the dollar against the euro.

While Bulgaria has continued with its Eurozone and Schengen bid, these processes are expected to continue facing difficulties and deviations from plan. In 2020, as a next step to adopting the Euro, Bulgaria joined ERM II – the EU's exchange rate mechanism – in order to advance economic convergence with the Eurozone. The latter, however, can only be limited due to the compounded economic conditions and domestic political instability that set in as early as in mid-2020. Bulgaria does not comply with the price stability criterion, as its inflation rate is considerably higher than the limit. Nevertheless, the country's leadership is still aiming to adopt the Euro in 2024, which is expected to enhance foreign investors' interest and possibly affect organisations such as the Group in a positive way. Over 50% of Group's funds are in Euro. Since 1 October 2020, the European Central Bank has been exercising direct supervision over the key credit institution in Bulgaria. The Group's bank accounts are in institutions present on this supervision list, which is an additional source of stability.

The short and mid-term prospects for Bulgaria's economic growth remain uncertain. This uncertainty is exacerbated by the political crisis in the country and the failure to from a stable regular government. Political turbulence continued to dominate the country in 2021 as well, leading to protests, a series of elections and two caretaker governments. The management is unable to predict all developments which could have an impact on the sector and wider economy, and consequently what effect, if any, they could have on the future financial position of the Group. However, the management's analysis shows that for the short to mid-term the risks are balanced and the general environment is likely to remain largely favourable for the development of the Group. The management will continue to monitor these risks on a regular basis and take all necessary measures to support the sustainability and development of the Group's business in the current circumstances.

Applied Research and Communications Fund (the Group)
Notes to the Consolidated Annual Financial Statements, 31 December 2021
(all amounts in BGN thousand, unless otherwise stated)

#### Impact on customers/borrowers

The debtors or borrowers of the Group may also be affected by the lower liquidity situation which could, in turn, impact their ability to repay the amounts owed. The operating conditions for customers may also have an impact on the management's cash flow forecasts and assessment of the impairment of financial and non-financial assets. To the extent that information is available, the management has properly reflected revised estimates of expected future cash flows in its impairment assessments.

#### 3.2. Financial risk factors

The risk exposures of the Group could be determined as follows: market risk (including currency risk, price risk and risk of future cash flow changes as a result of changes in market interest rate), credit risk and liquidity risk. The Group's management focuses on the financial risk and seeks to minimise potential adverse effects on the Group's financial performance.

#### 3.2.1. Market risk

#### Currency risk

The Group is not exposed to foreign exchange risk as most of its foreign transactions are denominated in EUR. The exchange rate of the BGN is currently pegged to the EUR.

The Group's management does not believe that the peg will change within the next 12 months and therefore no sensitivity analysis has been performed.

#### Price risk

The Group's management considers the price risk in the context of the future revenues that are expected to be generated in the operating activity of the Group.

#### 3.2.2. Interest rate risk

As the Group has no significant interest-bearing assets, the Group's income and operating cash flows are substantially independent of changes in market interest rates.

The Group analyses its interest rate exposure on a regular basis and addresses the underlying risk.

#### 3.2.3. Credit risk

Credit risk arises from cash and cash equivalents and deposits with banks and financial institutions.

The Group has established and implemented a policy which ensures that the sales of services and revenues from financing are provided to/by clients and organisations with appropriate credit history.

#### 3.2.4. Liquidity risk

In the context of its underlying business, the Group is able to maintain flexibility in funding and to use credit lines, overdrafts and other credit facilities, if necessary.

The table below analyses the Group's financial liabilities into relevant maturity groupings based on the remaining period at the balance sheet to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows. Balances due within 12 months equal their carrying balances as the impact of discounting is not significant.

As of 31 December 2020	Up to 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years
Trade and other payables	2,760	_	_	_
As of 31 December 2020	Up to 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years
Trade and other payables	88	_	_	_

#### 4. Critical accounting estimates and judgements

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The authenticity of accounting estimates and judgments is monitored regularly.

The Group makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below:

Useful life of property, plant and equipment

The presentation and valuation of property, plant and equipment requires the management to estimate their useful life and remaining value. The management assesses at the end of each accounting period the determined useful life of the property, plant and equipment.

Impairment of loans and receivables

Impairment of receivables is determined based on the management's expectations for the collectability of the loans and receivables. As at the date of preparation of the financial statements, the management reviews and assesses the existing receivables' balances for collectability.

#### 5. Property, plant and equipment

Cost	As of 31 December 2020	Additions	Disposals	As of 31 December 2021
Computers	109	9	18	100
Vehicles	144	-	-	144
Fixtures & fittings	18	_	1	17
Other assets	3	-	-	3
Total	274	9	19	264

Depreciation	As of 31 December 2020	Additions	Disposals	As of 31 December 2021
Computers	75	30	18	87
Vehicles	144	-	-	144
Fixtures & fittings	18	-	1	17
Other assets	3	-	-	3
Total	240	30	19	251

Carrying amount	As of 31 December 2020	Additions	Disposals	As of 31 December 2021
Computers	34	-	-	13
Vehicles	-	-	-	-
Fixtures & fittings	-	-	-	-
Other assets	_	-	_	_
Total	34	-	_	13

# 6. Intangible assets

Cost	As of 1 December 2020	Additions	Disposals	As of 31 December 2021
Software	18	_	-	18
Intellectual property	2	_	-	2
Total	20	-	-	20

Depreciation	As of 1 December 2020	Additions	Disposals	As of 31 December 2021
Software	-	_	-	-
Intellectual property	1	-	-	1
Total	1	_	-	1

Carrying amount	As of 1 December 2020	Additions	Disposals As of 31	December 2021
Software	18	_	-	18
Intellectual property	1		-	1
Total	19	_	-	19

# 7. Investment property

# For the year ending:

	31 December 2021	31 December 2020
As of 1 January		
Carrying amount at the beginning of the period	37	38
Depreciation charge	(1)	(1)
Carrying amount at the end of the period	36	37
As of 31 December		
Cost	54	54
Accumulated depreciation	(18)	(17)
Carrying amount	36	37

Investment properties are carried at cost, less accumulated depreciation and impairment.

# 8. Trade and other receivables

# For the year ending:

	31 December 2021	31 December 2020
Trade receivables	455	450
Less: impairment provision of trade payables	(131)	(111)
Trade receivables, net	324	339
VAT refund	-	2
Other	9	9
Total	333	350

The carrying amount of the trade and other receivables approximates their fair value.

# 9. Cash and cash equivalents

# For the year ending:

	31 December 2021	31 December 2020
Cash at hand	11	12
Cash in bank accounts	2,656	5,126
Total	2,667	5,138

### 10. Trade and other payables

# Short-term liabilities For the year ending:

	31 December 2021	31 December 2020
Salaries and social securities payables	8	5
Corporate tax payables	-	1
Other	80	2,754
Total	88	2,760

# 11. Deferred financing

Deferred financing related to projects:	For the year ending:	
	31 December 2021	31 December 2020
European Commission (EC) – REconciling sCience, Innovation and Precaution through the Engagement of Stakeholders (RECIPES)	14	2
EC - Inclusive Science and European Democracies (ISEED)	52	-
EC - Territorial Responsible Research and Innovation Through the Involvement of Local R&I Actors (TeRRitoria)	-	12
EC - PROactive Strategies and Policies for Energy Citizenship Transformation (EnergyPROSPECTS)	420	-
EC - Media Information Literacy "Village" to Empower Young People for Active Participation (MILagers)	6	13
EC - Resilient Youth against Far-Right Extremist Messaging Online (YouthRightOn)	-	11
EC - Ethics Governance System for RRI in Higher Education, Funding and Research Centres (ETHNA System)	100	144
EC - Challenging Anti-Gypsyism by Roma Empowerment for Countering Disinformation and Fake News in Bulgaria (Care for Truth)	-	12
EC – Leveraging Leadership for Responsible Research and Innovation in Territories (RRI– Leaders)	349	568
EC - Advanced Manufacturing Assistance and Training for SME Transformation (ADMA TranS4MErs)	159	110
Other	-	4
Total deferred financing related to projects	1,100	876
Deferred financing for acquisition of fixed assets	17	4
Total deferred financing	1,117	880

### 12. Revenues

Devenue from avente financia and other aveiant for vector	For the year	ar ending:
Revenues from grants financing and other project for respective periods are as follows:	31 December	31 December
	2021	2020
OAK Foundation - Men Care Campaign in Bulgaria (Phase II)	-	15
EC - Energy Conscious Consumers (ECO2)	44	169
EC - Protecting and Educating Children for Safer Digital Technology Use (Safer Internet 8)	185	-
EEA - Supporting workplace innovation among SMEs in Bulgaria: analysis and recommendations (Workplace Innovation)	19	-
EC/Ministry of Regional Development and Public Works – Bridging the Innovation Gap through Converting R&D Results into Commercial Success in a More Effective and Efficient way (InnoBridge)	-	12
EC/Ministry of Regional Development and Public Works – Efficient Support Services Portfolio for SMEs (ESSPO)	14	-
EC - Responsible Research and Innovation in Practice (RRI Practice)	-	1
EC - Leveraging Leadership for Responsible Research and Innovation in Territories (RRI- Leaders)	209	-
EC/Ministry of Regional Development and Public Works – Facilitating Macro-Regional Scope and Link up to Socio-Economic Actors of Research Infrastructure in the Danube Region (ResInfra)	5	-
EC - Inclusive Science and European Democracies (ISEED)	10	_
EC - Child Protection and Education for Safety and Success in the Digital Age (Safer Internet 7)	-	189
OAK Foundation - Holistic Model for Safer School and Community by Building Digital Era Competences (OAK - 2020 - 3)	53	100
EC - Territorial Responsible Research and Innovation Through the involvement of local R&I Actors (TeRRitoria)	60	97
EC - REconciling sCience, Innovation and Precaution through the Engagement of Stakeholders (RECIPES)	5	57
EC – PROactive Strategies and Policies for Energy Citizenship Transformation (EnergyPROSPECTS)	20	-
EC/Ministry of Regional Development and Public Works - Enhancing Scalable Innovations and New Business Models Based on Urban Farming Ecosystem Values (CityZen)	192	145
EC - Resilient Youth against Far-Right Extremist Messaging Online (YouthRightOn)	12	23
EC - Media Information Literacy "Village" to Empower Young People for Active Participation (MILagers)	7	12
EC – Ethics Governance System for RRI in Higher Education, Funding and Research Centres (ETHNA System)	67	28
EC - Challenging Anti-Gypsyism by Roma Empowerment for Countering Disinformation and Fake News in Bulgaria (Care for Truth)	22	12
Other projects	133	172
Total revenues from grants financing	1,057	1,032
Revenues from unconditional donations	_	_
Other		2
Total revenues	1,057	1,034

#### 13. Finance costs, net

Finance costs, net	For the year ending:			
rillance costs, net	31 December 2021	31 December 2020		
Interest income	1	2		
Interest, net	1	2		
Foreign exchange expense	(2)	(3)		
Foreign exchange, net	(2)	(3)		
Other financial expenses	(2)	(1)		
Other financial, net	(2)	(1)		
Finance costs, net	(3)	(2)		

#### 14. Income tax expense

The major components of income tax expense for the year ended 31 December 2021 and the period ended 31 December 2020 are:

	2021	2020
Current tax	(1)	(1)
Deferred tax		_
Income tax expense	(1)	(1)

The tax authorities may at any time inspect the books and records within 5 years subsequent to the reported tax year, and may impose additional taxes and penalties. The Group's management is not aware of any circumstances which may give rise to a potential material liability in this respect.

There are no tax checks performed in the recent years.

### 15. Expenses

Cost of sales for the Group includes:	For the year ending:		
	31 December 2021	31 December 2020	
Cost of sales for projects	962	946	
Administrative expenses	518	493	
Total expenses	1,480	1,439	

Cost of sales, administrative and other	For the year ending:			
expenses include:	31 December 2021	31 December 2020		
Expenses for materials	3	1		
Hired services	594	564		
Depreciation and amortisation	31	7		
Salaries and wages	719	735		
Social securities	94	107		
Other expenses	39	25		
Total expenses	1,480	1,439		

## 16. Related parties

The Group is related to the Center for the Study of Democracy, and thus is also related with its consulting arms.

During the period the following transactions and balances have occurred:

Related party	Transactions during the year	Janua Decer	•	31 Dec	ember	31 Dec	ember
		2021	2020	2021	2020	2021	2020
		Transa	ctions	Receiv	/ables	Paya	ables
Project 1 EOOD	Rental agreement	(117)	(100)	_	_	_	-
Vitosha Research EOOD	Consulting services	6	-	_	-	-	-
Center for the Study of Democracy	Consulting services	16	-	-	-	-	
		(95)	(100)	_	_	_	

Transactions with directors and other members of the management

The total amount of the remunerations and social contributions included in the expenses for external services is as follows:

	2021	2020
Board of Trustees and Directors	178	154

# 17. Events after the balance sheet date

There are no events after the balance sheet date of the Group that would require additional disclosures in the financial statements.