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# Foresight and Public Engagement in Research and Innovation

## *EnVision2020*

The year of 2014 marked the final year of the EnVision2020 project and two years of work by the consortium. ARC Fund's activities for the year included

- The testing and launch of the first part of the project's Online Key Technologies Survey, which took place from January to March 2014. The survey assessed the deployment potential of advanced key energy technologies identified as important in the European Union's Strategic Technology Plan (SET-Plan). There were 222 respondents to the survey and ARC Fund undertook an in-depth analysis of the results with the support of external experts.
- The testing and launch of the second part of the projects Online Key Technologies Survey, which was initiated in March and ran until May 2014. The survey was regionally focused, with parts for each of the target regions, and based on the results of the key energy technologies workshops that were held in each territory in 2013. A total of 160 responses were obtained for the second part of the online survey.
- ARC Fund sent the results of the survey, along with a report template, to the project partners in May so that they could conduct their own analysis.
- The finalization of the energy technologies roadmapping methodology, which served as a basis for the roadmapping activities in the seven target areas. The methodology encompassed a detailed presentation of the steps needed in order to produce the roadmaps. The first draft of the methodology was developed between January and March. Following its presentation to the project partners in Potenza, Italy in March, and several rounds of revisions following this, the document was finalized and disseminated in June. After that, ARC Fund conducted a simulation training session on its use at the EnVision2020 5th Transnational Meeting in Thessaloniki, Greece at the end of June.
- Writing a paper focusing on the foresight methodology of the project, in cooperation with the Sofia Energy



*Presentation of the Energy Technologies Roadmapping Methodology, March 27th, Potenza, Italy.*

Agency (SOFENA). The paper, titled *Application of the Foresight Approach for Energy Planning at Municipal Level in Southeast European Cities and Regions*, explained how forward-looking methods can be applied in Southeast Europe in order to support the development of municipal-level strategies for diversifying and greening the energy mix in the target territories. The paper was officially presented to an audience of energy experts during the International Energy Forum on June 18–20, 2014 held in Varna, Bulgaria. The forum is an annual event organized by the Scientific and Technical Union of Power Engineers in Bulgaria. Additionally, ARC Fund developed a paper entitled *Future-Oriented Approach for Identifying Options for Greening the Municipal Energy Mix in Southeast European Cities - the Case of Sofia, Bulgaria*. It was published in the Fifth Volume of the *Research Papers Journal* of the

International Business School (IBS) in Botevgrad, Bulgaria. At the beginning of 2014, 500 copies of this journal were disseminated.

- Developing a template for the collection and presentation of good financial practices for the introduction of new forms of energy. It was first presented to the consortium in March 2014. After feedback from the project partners, the final version of the template was disseminated in May. Additionally, from July through October, ARC Fund developed the content structure for the final *EnVision2020* report, aiming to codify the knowledge generated within the project. This report was sent to the partners in the beginning of October for input and finalization.

The project successfully culminated in the development of key energy technology roadmaps for all target regions and cities which can be used for planning a greener energy future.



*Energy Technologies Roadmapping Training, June 29th, Thessaloniki, Greece.*

The project Parliaments and Civil Societies for Technology Assessment (PACITA) was another of ARC Fund's successful endeavors in 2014. During the year, it completed two large-scale technology assessment pilot activities, implemented to demonstrate the application of TA methods to complex issues that could benefit from policy intervention. The first one applied the Scenario Workshop methodology in order to solicit opinions about needed policy changes and issues related to the application of technology-based solutions to problems associated with aging. The second was based on the World Wide Views method, which was deployed to facilitate citizens' consultations on issues related to sustainable consumption. Both events were noted as being particularly timely and were also organized along with a sequence of similar events in a number of European countries.

A scenario workshop is an event aimed at facilitating forward-looking discussions and in identifying policy alternatives in different contexts. ARC Fund hosted a scenario workshop on Telecare for Healthy Aging in June 2014. It addressed a number of issues related to aging societies, and explored solutions based on existing or emerging technologies, as well as gaps in existing policy regulations. Participants, including medical personnel, demographers and researchers, government experts, as well as non-profit organizations, were presented with three hypothetical scenarios for the provision of elderly care in the near future (the year 2030). Then they were divided into groups and asked to formulate what would be the ideal, yet likely, visions for how all stakeholders in the country could help tackle challenges related to aging and the provision of care to the elderly. They were also asked to elaborate the possible roles and applications for technological solutions in that process. Several visions were presented, which were then summarized and shared in order to support the preparation of a pan-European policy report on healthy aging. The report is due to be presented to the European Commission in 2015.

On October 25, 2014 ARC Fund organized the first citizens' consultation based on the World Wide Views method, which was proposed by the Danish Board of Technology. More than 100 citizens gathered for the day in each of 11 participating countries and debated issues related to sustainable consumption. Participants were chosen randomly in order to match as closely as possible the demographics of the general population, although no representativity could be claimed. At the event, each participant was handed a brochure about sustainable consumption and the pertinent challenges to its realization. Participating citizens were divided into 12 small focus groups. Their discussions were recorded and then analyzed in a detailed national report. Additionally, after each session participants were asked to vote on specific questions, and their votes were uploaded in real-time along with the votes from all other participating countries. The combination of all responses and the summaries of the discussions provided an ample basis for policy analyses. A joint report that considers the findings from all countries is due to be presented to the European Commission and disseminated to national decision-makers in 2015. It will detail specific recommendations based on the citizens' input. In preparation for the event, ARC Fund signed a partnership agreement with Bulgarian National Television, which became a media partner and provided live coverage.

ARC Fund is preparing to finalize the PACITA project in early 2015. Its team will take part in an international conference which will be held in Berlin in February 2015. ARC Fund will also welcome the entire PACITA consortium to Sofia in March and will host the official closure of a project that introduced the concept and practice of technology assessment in Bulgaria.

The PACITA project involves 15 partners from 13 EU countries and is supported by the Seventh Framework Program of the European Union. Technology assessment is considered a priority thematic area in the *Horizon 2020* program the results of PACITA could be drawn upon in the future.

### Engaging Society in Horizon 2020

The Engaging Society in *Horizon 2020* (Engage2020) project was launched in the autumn of 2013 and has a duration of 27 months. As part of the project team, ARC Fund helps to promote and facilitate the use of public engagement methods and instruments in research and innovation, with a focus on *Horizon 2020* program.

The Engage2020 consortium includes six organizations, and mobilizes experts and practitioners with competencies in the areas of technology assessment, foresight, science shops and other approaches for involving society in research and the development of innovation policies and processes. These organizations include the Danish Board of Technology Foundation, the Karlsruhe Institute of Technology (Germany), the University of Groningen (Netherlands), INVOLVE (UK) and DIALOGIK (Germany). Participation in this project is itself recognition of ARC Fund's capacity and dedication to public engagement in policy-making processes, and its commitment to develop more informed and democratically legitimate policies in the areas of science, technology and innovation.

ARC Fund's team is tasked with coordinating two of the major activities within the project. It is responsible for making a thorough overview of existing methods and tools in Europe and around the world that engage societal actors in research and innovation by

- developing an online survey that gathers the inputs of more than

- 250 experts on existing methods and tools for engagement;
- designing a factsheet template for collecting relevant information on different methods and tools used for societal engagement;
- completing a portion of the factsheets based on its experiences, as well as through a literature review; and
- coordinating the partners' work in completing the remaining factsheets. In October 2014, as a result of these efforts, a report entitled *Public Engagement Methods and Tools* was released, which aimed to spread participatory practices to a wider range of stakeholder groups. The document contains 57 factsheets covering various engagement methods and tools, and describes these approaches through the capture of various data streams. These include the Grand Challenges they address, the stakeholders that are involved, and their level of engagement in the method. The full text of the report is available at: <http://engage2020.eu/media/D3.2-Public-Engagement-Methods-and-Tools.pdf>.

ARC Fund also coordinates the development and publication of policy briefs, which include summaries of policy-relevant results developed within the Engage2020 project. In 2014, three policy briefs were released, and are available at: <http://engage2020.eu/results-description/>.