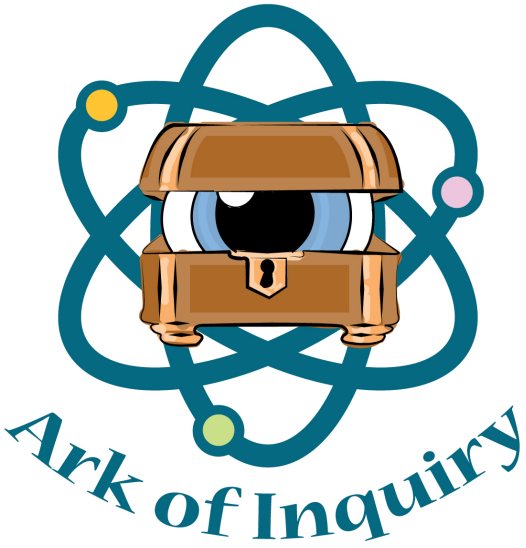

Publishable summary

Project title: Ark of Inquiry:
Inquiry Awards for Youth over Europe
Grant Agreement: 612252
Period: 01/03/2014—28/02/2018
Coordinator: University of Tartu
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Project website: www.arkofinquiry.eu
Portal of materials: www.arkportal.eu

European Union's
Seventh Framework Programme

Publishable summary of the Ark of Inquiry project

Executive summary

In the Ark of Inquiry project, a pedagogical framework was developed to select inquiry-based activities that also support or could be adapted to support Responsible Research and Innovation (RRI). Therefore, RRI was defined in a broader context and different scenarios were developed for adapting existing activities to focus on RRI but also to use them more widely across different age groups. The selected activities and tools for adapting learning materials and assessing inquiry skills were collected in the Ark of Inquiry platform (http://arkportal.eu/). This makes the outcomes of the project widely available across Europe. The platform brings together different communities around inquiry-based learning (IBL) activities – learners and supporters (teachers, university students, researchers, staff of museums, and universities). To support teachers, the Ark of Inquiry project provided face-to-face teacher training equipping the teachers with skills of supporting and motivating their pupils in their inquiry (IBL) activities. The training materials are available through the Ark of Inquiry web-site (http://arkofinquiry.eu). The outcomes of the projects have been implemented and studied at large scale. The main findings of the evaluation studies have been published in a special issue of the journal Science Education International (http://www.icaseonline.net/seiweb/, Vol 28, Issue 4).

The partners of the Ark of Inquiry project have developed a project-specific pedagogical framework and related scenarios to support linking the IBL approach (also referred to as inquiry approach in the project) with RRI. The framework has been used in carefully selecting IBL activities for a repository that could be used by teachers in teaching pupils at ages from 7 to 18. To support teachers in adopting IBL, a three phase training model has been developed and used in teaching more than 1000 teachers. Thus, we can say that teachers are at the core of the Ark of Inquiry project. However, it is often not a simple task to train teachers and to support them in using a complex IBL approach, and even more so when we aim to link it with the RRI approach.

Indeed, we can conclude that the Ark of Inquiry project has fully completed its objectives.

Project context and main objectives

"Ark of Inquiry: Inquiry Awards for Youth over Europe" is a project on teacher training, oriented towards raising science awareness, particularly that of youth aged 7 to 18, of Responsible Research and Innovation (RRI).

The overall goal of the Ark of Inquiry project is to create a "new science classroom", which provides more challenging, authentic and higher-order learning experiences and opportunities for pupils to participate in scientific practices and tasks, using the discourse of science and working with scientific representations and tools in order to build a scientifically literate and responsible society through Inquiry-Based Science Education (IBSE).

Inquiry, which refers to "the diverse ways in which scientists study the natural world and propose explanations based on the evidence derived from their work" (National Research Council, 1996, p. 23), is at the core of the Ark of Inquiry project. Numerous research reports (e.g., Abd-El-Khalick et al., 2004; Bartos & Lederman, 2014; Capps, Crawford, & Constas, 2012; NRC, 2012) have indicated that learners can similarly benefit from this scientific approach through their engagement in learning activities centred on inquiry, and the resulting outcome is the development of inquiry learning. Inquiry learning has been defined in the current project as 'an approach to learning that involves a process of exploring the natural or material world, and that leads to asking questions, making discoveries, and rigorously testing those discoveries in the search for new understanding' (NRC, 2000, p. 2) and more specifically as a process of discovering new relations, with an approach where the learner formulates hypotheses and then tests them by conducting experiments and/or making observations (see Pedaste, Mäeots, Leijen, Sarapuu, 2012). The main aim of inquiry learning is the improvement of transferable skills needed for making discoveries rather than simply discovering new relationships (Mäeots, Pedaste, & Sarapuu, 2009).

Besides fostering pupils' engagement with inquiry, the Ark of Inquiry project seeks to create a new generation of pupils who are able to benefit from the implementation of Responsible Research and Innovation practices in their everyday life. Responsible Research and Innovation (RRI) is defined as a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view on the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products (in order to allow a proper embedding of scientific and technological advances in our society) (Towards Responsible Research..., 2011). Such approaches can bridge the gap between the scientific community and society and help to prepare pupils for participating in different roles in the European research and innovation process.

To this aim, the project's objectives are the following:

1. We aim to develop a pedagogical framework that promotes pupils' awareness of RRI and increases their awareness and understanding of conducting 'real' science.

2. We aim to collect existing inquiry activities and environments from various national and international projects that are related to RRI aspects and make them widely available through the Ark of Inquiry platform.
3. We aim to build a large community consisting of 1100 trained teachers and at least 100 science and teacher education students and 50 researchers from universities and science centres across Europe, who will support learners' inquiry activities and award their performance.
4. We aim to train at least 1100 teachers to support pupils' inquiry activities in a manner that attracts pupils' interest and motivation towards science and RRI.
5. We will develop instruments and collect data for evaluating the success and efficacy of the project to ensure that the pedagogical framework, the collected inquiry activities and the supporting community are all working to improve youth awareness of RRI.
6. We aim to make the inquiry activities available through a large-scale implementation of the Ark of Inquiry in Europe in order to bring together inquiry activities, learners and supporters (teachers, university students, researchers, and staff of science centres, universities and museums).
7. At least 23 000 pupils and 1100 teachers will participate in the project. To ensure a sustainable application of the Ark of Inquiry project beyond the end of the project, various dissemination activities will be planned.

Outcomes of the project

Based on the objectives initially set for the Ark of Inquiry project, the following outcomes have been achieved during by the end of final period the project:

1. We have developed a **pedagogical framework** that promotes pupils' awareness of RRI and increases their awareness and understanding of conducting 'real' science. In addition to describing the inquiry approach and the evaluation, award and support systems used in the project, we have also tested, refined and implemented these materials during our pilot and implementation phases and teacher training sessions. Final versions of the materials that form the pedagogical framework have been published in Deliverable 1.7.

2. A **collection of existing inquiry activities** and environments (more than 1000 in total in 14 different European languages) from various national and international projects that are related to RRI aspects has been established and made widely available through the **Ark of Inquiry platform** (www.arkportal.eu).

3. A **growing community** of teachers who motivate and support learners has been established. A list of community members along with the **general framework of building the community** (16 activities) has been published in Deliverable D3.3. More than 200 teachers have registered in the Ark of Inquiry portal (also referred to as platform in the project).

4. Many teachers have participated in **51 teacher trainings**. The training programme is based on specific training (three phases: A: Teachers as Learners,

Phase B: Teachers as Thinkers, and Phase C: Teachers as Reflective Practitioners) and support materials developed since the beginning of the project. The **training materials** have been translated into various partner languages and adapted according to local needs. Supportive **web-based materials** are available on the project website (https://sisu.ut.ee/ark/web-based-materials) for all community members and supporters working with the Ark of Inquiry activities.

5. **Methodology and instruments for evaluating the success** and efficacy of the project have been developed and the final version of the methodology and instruments have been published in Deliverable D5.2. The **results of the evaluation** have been published in Deliverable D5.4 and in a special issue of the journal **Science Education International** (http://www.icaseonline.net/seiweb/index.php?option=com_content&view=article&id=146:volume-28-issue-4-2017&catid=41:archive-2011-2014&Itemid=119).

6 studies were conducted with the following main findings:

Study 1: teachers profitably used the instruments developed during the project by becoming desginers, which allowed them to adapt the different materials to their own context;

Study 2: the teacher training course conducted during the project encouraged teachers to take a positive stance towards inquiry learning and increased their sense of efficacy in applying it;

Study 3: the teacher training course format supports the development of pre-service teachers' inquiry competence;

Study 4: inquiry learning can give teachers the opportunity to develop Responsible Research and Innovation, when pupils are given the responsibility for making decisions in the different phases of an inquiry;

Study 5: the Ark of Inquiry activities are a useful resource and can be well adapted to the teaching of 21st century skills and RRI;

Study 6: inquiry learning activities, overall, are able to elicit the interest of pupils and have the potential to increase pupils' interest towards learning and studying science subjects and contents.

6. During the **large-scale implementation 1060 schools, 2479 teachers, 36 710 pupils and 363 education professionals used the Ark of Inquiry activities in their classrooms.** A series of implementation activities were performed in all 12 countries of the project consortium and beyond reaching 29 more countries (such as Albania, Croatia, Serbia, and more).

7. In Year 4 consortium partners participated in **80 events** in which the Ark of Inquiry project was promoted or discussed. **Cumulatively**, the project has participated in **296 events and distributed over 27 500 dissemination materials** since the launch of the project (in hard copy and electronically). Including website traffic as an indicative indicator, this has resulted in the **outreach** to at least **38 600 teachers/teacher educators**; **6400 scientists** (including STEM researchers); **6000 staff of science centres/museums**; **2200**

policy-makers; **6900 media and the public at large** (including parents); **3100 science/teacher education students** and **13 000 pupils**.

The most important event for the final year of the project was its Final Conference, held 20 November 2017 at UNESCO HQ in Paris, France, for optimal visibility among key, high-level stakeholders. Throughout diverse discussions and panel presentations, the conference presented the project's key findings as encapsulated in its Final Recommendations and Guidelines document (D7.6).

The Ark of Inquiry partners issued 61 publications in the project's fourth and final year, an over 100% increase over the previous year's publication activity. Concerning the goal to publish 10 scholarly articles in peer-reviewed, open access publications over the lifetime of the project, two publications were produced in Year 3 and another 21 publications were produced in Year 4, totalling 23 publications, more than double the original goal.

Impact of the project

The Ark of Inquiry project aimed to support formal and informal science education in schools as well as through science centres and museums and research institutions. In our project we provided science teachers with in-service training that guided them to integrate formal and informal activities in learning sciences. Through the Ark of Inquiry project, their pupils were engaged in inquiry activities in schools, science centres and museums. These helped them experience the way scientists work and think. This impact will sustain beyond the project and will be disseminated through the growing community of the Ark of Inquiry platform. Thus, in general the project has already had an impact in four aspects as planned:

1. Implementing Inquiry Based Science Education (IBSE) on a large scale. 1152 teachers have been trained in 12 countries all over Europe and will be able to implement IBSE in their classrooms. Materials and ideas developed within the project are expected to be used by the people who have been involved in the Ark of Inquiry network to educate further numbers of science teachers. In addition to the supportive materials and trainings, the teachers will hopefully continue to have a dialogue with the research institutions, science centres and museums researchers and educators across Europe they met during the Ark of Inquiry implementation activities and teacher trainings.

2. Raising youth awareness of Responsible Research and Innovation. Pupils continue to experience inquiry activities that help them understand how scientists work in conducting Responsible Research and Innovation. Their awareness should lead them to more informed choices when continuing their studies or starting a career in a STEM field.

3. Equipping future citizens with skills and knowledge. Future citizens should be equipped with the skills and knowledge needed for engaging in research and innovation in a responsible manner. For this reason, we did not only choose activities related to scientific investigation but also to managerial issues, such as establishing research groups, applying for awards or presenting findings to different members of society. All of this helps pupils acquire scientific skills in a broader sense. Even without this added value, inquiry activities provide learners

with general inquiry knowledge and skills, including skills needed for self-regulation (planning, monitoring and evaluating).

4. Building a scientifically literate society. The Ark of Inquiry project aims at building a scientifically literate society of teachers and through them, new scientifically literate generations. Integrated community, thorough in-service courses and support materials spread the basic knowledge about IBSE and helped teachers to learn autonomously, from both success and mistakes, experience subject boundaries and interdisciplinary/transdisciplinary approaches and consider the difference between girls' and boys' interests. Teachers' cooperation was promoted and we encouraged them to share their experiences with each other during the Ark of Inquiry implementation activities and teacher trainings. The teachers who were involved in the supporting community will also serve as ambassadors of scientific literacy, IBSE and STEM beyond the scope and community of the current project. Disseminating the approach and results of the Ark of Inquiry beyond the scope of the project should help reach an even wider implementation of IBSE in Europe and world-wide.

A plan for use and dissemination of foreground

The project has already disseminated its outcomes through many dissemination activities and publications. The list of the most important ones of them is provided below. However, the dissemination of the foreground continues through the activities of all project partners. In addition, the partners plan to use the findings in their follow-up projects and studies. New opportunities were identified collaboratively in the final meeting of the project consortium and the partners work towards preparing new applications.

List of scientific publications

M. Pedaste, L. Siiman, B. de Vries, M. Burget, T. Jaakkola, E. Bardone, M. Brikker, M. Mäeots, M. Lind, K. Veermans (2015). Ark of Inquiry: Responsible Research and Innovation through Computer-Based Inquiry Learning. In: *Proceedings of the 23rd International Conference on Computers in Education*, Asia-Pacific Society for Computers in Education.

M. Pedaste, Editorial, *Science Education International*, 28(4): pp. 244-245.

B. De Vries, I. Schouwenaars, H. Stokhof (2017). Turning Teachers into Designers: The Case of the Ark of Inquiry, *Science Education International*, 28(4): pp. 246-257.

A. Filippi, D. Agarwal (2017). Teachers from Instructors to Designers of Inquiry-based Science, Technology, Engineering, and Mathematics Education: How Effective Inquiry-based Science Education Implementation can result in Innovative Teachers and Students, *Science Education International*, 28(4): pp. 258-270.

M. Papaevripidou, M. Irakleous, Z. C. Zacharia(2017). Using Teachers' Inquiry-oriented Curriculum Materials as a Means to Examine their Pedagogical Design Capacity and Pedagogical Content Knowledge for Inquiry-based Learning, *Science Education International*, 28(4): pp. 271-292.

E. Bardone, M. Burget, K. Saage, M. Taaler (2017). Making Sense of Responsible Research and Innovation in Science Education through Inquiry-based Learning. Examples from the Field, *Science Education International*, 28(4): pp. 293-304.

E. Ahokoski, M. Korventausta, K. Veermans, T. Jaakkola (2017). Teachers' Experiences of an Inquiry Learning Training Course in Finland, *Science Education International*, 28(4): pp. 305-314.

G. Silm, K. Tiitsaar, M. Pedaste, Z. C. Zacharia, M. Papaevripidou. Teachers' Readiness to Use Inquiry-based Learning: An Investigation of Teachers' Sense of Efficacy and Attitudes toward Inquiry-based Learning, *Science Education International*, 28(4): pp. 315-325.

M., Burget, E. Bardone, M. Pedaste (2016). Dimensions of Responsible Research and Innovation. In: *Proceedings of INTED2016 Conference: 10th annual International Technology, Education and Development Conference* (INTED 2016): pp. 1008–1013.

M., Burget, E. Bardone, M. Pedaste (2017). Definitions and Conceptual Dimensions of Responsible Research and Innovation: A Literature Review, *Science and Engineering Ethics*, 23(1): pp. 1—19.

E. Bardone, M. Lind (2016). Towards a phronetic space for responsible research (and innovation), *Life Sciences, Society and Policy*, 12(5): pp. 1—18.

M. Pedaste, B. de Vries, Z. C. Zacharia, T. Jaakkola, S. Sotiriou, L. Siiman, M. Mäeots, M. Papaevripidou, G. Mavromanolakis (2014). Ark of Inquiry: A European project for the widespread dissemination of inquiry activities through a network of universities, schools, science centres and museums. In: *Enhancing Inquiry-based Science Education and Teachers' Continuous Professional Development in Europe: Insights and Reflections on the PROFILES Project and other Projects funded by the European Commission*. Edited by C. Bolte and F. Rauch Berlin: Freie Universität Berlin (Germany) / Klagenfurt: Alpen-AdriaUniversität Klagenfurt (Austria): pp. 291-295.

M. Irakleous, M. Papaevripidou, Z. C. Zacharia. Teachers' participation roles in inquiry-oriented professional development programs. In: *Proceedings of ESERA 2017: Research, practice and collaboration in science education*, ESERA (European Science Education Research Association), Forthcoming.

M. Papaevripidou, M. Irakleous, Z. Zacharia (2016). Designing a course for enhancing prospective teachers' inquiry competence. In: *Cognitive and Affective Aspects in Science Education Research*. Edited by K. Hahl, K. Juuti, J. Lampiselkä, A. Uitto, J. Lavonen. Springer.

M. Papaevripidou, M. Irakleous, Z.C. Zacharia (2016). Designing a course for enhancing teachers' understanding of inquiry-based teaching and learning. In: *Electronic Proceedings of the ESERA 2015 Conference. Science Education Research: Engaging Learners for a Sustainable Future*. Edited by J. Lavonen, K. Juuti, J. Lampiselkä, A. Uitto & K. Hahl. ESERA (European Science Education Research Association): pp. 2085-2092.

M. Pedaste, Ä. Leijen, K. Saks, T. de Jong, D. Gillet (2017). How to link pedagogy, technology and STEM learning?. In: *Workshop Proceedings of the 25th International Conference on Computers in Education*. Edited by Y. Hayashi, M. Mathews, T. Supnithi, W. Chen, J-C. Yang, A. F. Mohd Ayub, S. L. Wong A. Mitrovic, Asia-Pacific Society for Computers in Education, pp. 578-586.

List of scientific dissemination activities:

№	Type of activities	Title	Date	Place	Type of audience
1	Web sites/Applications	Ark of Inquiry activity portal	30/03/2016	arkportal.eu	Industry
2	Web sites/Applications	Ark of Inquiry project website	01/03/2014	www.arkofinquiry.eu	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias
3	Organisation of Conference	Final Conference of the Ark of Inquiry project	20/11/2017	UNESCO HQ, Paris, France	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias
4	Press releases	Newsletter from the Ark of Inquiry project	19/01/2015	n/a	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias
5	Organisation of Workshops	Ark of Inquiry summer school	14/07/2017	Marathon, Greece	Industry
6	Organisation of Workshops	SCIENTIX WEBINAR: RECOMMENDATIONS FOR TEACHERS FROM THE ARK OF INQUIRY PROJECT	19/12/2017	Online	Scientific community (higher education, Research) - Industry
7	Organisation of Workshops	Webinar on IBSE and RRI	06/09/2017	Online	Industry
8	Organisation of Workshops	Webinar on IBSE and RRI	21/09/2017	Online	Industry
9	Videos	Ark of Inquiry project video	17/06/2015	https://www.youtube.com/watch?v=y551h3ciE8Q&list=PLENNttkCiKx5QA4laiYHb7LCwZwjnj19L&index=11	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias
10	Videos	Ark of Inquiry project video 2	11/11/2015	https://www.youtube.com/watch?v=Z5SxZo9cJmE	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias
11	Oral presentation to a scientific event	Initial Results from the Pilot Phase of Ark of Inquiry project: Using Inquiry-based Science Education techniques to Foster RRI in Science Learning; Virtual Presentation, New Perspectives in Science Education 2016	07/03/2016	New Perspectives in Science Education 2016, https://www.youtube.com/watch?v=1_qFEhjbzFU	Scientific community (higher education, Research)
12	Exhibitions	Ark of Inquiry at the World Science Forum 2015	04/11/2015	Budapest, Hungary	Scientific community (higher education, Research) - Policy makers - Medias
13	Organisation of Workshops	Applying the EU?s Responsible Research and Innovation framework to create new science classrooms: Insights from the Ark of Inquiry	28/08/2017	Bangkok, Thailand	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias

		project and beyond; International Symposium Cracking the Code: Girls' Education in STEM			
14	Oral presentation to a wider public	Die Technologien des 21. Jahrhunderts und die Frage des verantwortungsvollen Umgangs	28/05/2014	Hall in Tirol, Austria	Scientific community (higher education, Research) - Industry - Civil society - Medias
15	Organisation of Workshops	Pre-service teacher workshop on AoI teacher training materials	27/11/2014	Nicosia, Cyprus	Industry
16	Organisation of Workshops	DNA Fingerprint Workshop	10/04/2015	Montpellier, FRANCE	Scientific community (higher education, Research) - Industry
17	Organisation of Workshops	Welcome to the Ark: Paper walkthrough of the evaluation instruments	26/05/2015	Arnhem, The Netherlands	Industry
18	Organisation of Workshops	Teacher Training STEM	12/01/2016	Diepenbeek, Belgium	Industry
19	Posters	Ark of Inquiry poster session, ECSITE Annual Conference	09/06/2016	Graz, Austria	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias
20	Oral presentation to a scientific event	eLearning Experts Conference	20/10/2016	Eisenstadt, Austria	Industry - Policy makers - Medias
21	Exhibitions	Inquiry science fair	30/05/2017	Vantaa, Finland	Industry
22	Flyers	Ark of Inquiry flyer	01/03/2014	n/a	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias
23	Flyers	Results from the Ark of Inquiry flyer	30/06/2017	n/a	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias
24	Flyers	Empowering Girls in Science Checklist	01/08/2017	n/a	Industry
25	Web sites/Applications	Facebook	01/03/2014	https://www.facebook.com/ArkofInquiry/	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias
26	Web sites/Applications	YouTube channel	01/03/2014	https://www.youtube.com/channel/UCMwt5a-e54j-MTnb5MlGCJw	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias
27	Oral presentation to a scientific event	Ark of Inquiry: Responsible Research and Innovation through Computer-Based Inquiry Learning	12/01/2015	Proceedings of the 23rd International Conference on Computers in Education	Scientific community (higher education, Research)
28	Oral presentation to a scientific event	How to link pedagogy, technology and STEM learning?	01/12/2017	Workshop Proceedings of the 25th International Conference on Computers in Education	Scientific community (higher education, Research)
29	Oral presentation to a scientific event	Dimensions of Responsible Research and Innovation	07/03/2016	Proceedings of INTED2016 Conference: 10th annual International Technology, Education and Development	Scientific community (higher education, Research)
30	Oral presentation to a scientific event	Teachers? participation roles in inquiry-oriented professional development programs	01/04/2017	Proceedings of ESERA 2017: Research, practice and collaboration in science education	Scientific community (higher education, Research)

31	Articles published in the popular press	Designing a course for enhancing prospective teachers? inquiry competence	01/07/2016	Cognitive and Affective Aspects in Science Education Research	Scientific community (higher education, Research)
32	Oral presentation to a scientific event	Designing a course for enhancing teachers? understanding of inquiry-based teaching and learning	01/01/2016	Electronic Proceedings of the ESERA 2015 Conference. Science Education Research: Engaging Learners f	Scientific community (higher education, Research)
33	Oral presentation to a scientific event	European Education Conference – Teaching Sciences in Schools with Creativity and Innovation: Transforming the Theory into Practice?	06/11/2017	Heraklioni Crete, Greece	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias
34	Oral presentation to a wider public	Annual Meeting of Estonian Math Teachers Association	18/03/2017	Tartu, Estonia	Industry
35	Organisation of Workshops	Chemistry is fun	19/05/2017	Berlin, Germany	Industry - Civil society
36	Oral presentation to a wider public	Ark of Inquiry Recommendations and Guidelines	20/11/2017	UNESCO HQ, Paris, France	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias
37	Web sites/Applications	Linked In account	01/03/2014	https://www.linkedin.com/groups/6921276	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias
38	Web sites/Applications	Twitter account	01/03/2014	https://twitter.com/ArkofInquiry	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias

Project partners

Ark of Inquiry project has been completed by 13 partners from 12 European countries:

- Project coordinator Tartu Ülikool (University of Tartu), Estonia;
- Ellinogermaniki Agogi Scholi Panagea Savva AE, Greece;
- Turun Yliopisto (University of Turku), Finland;
- Panepistemio Kyprou (University of Cyprus), Cyprus;
- UNESCO Regional Bureau for Science and Culture in Europe, Venice, Italy;
- Hogeschool van Arnhem en Nijmegen (HAN University), The Netherlands;
- Bundesministerium für Bildung (former Bundesministerium für Bildung und Frauen), (Austrian Federal Ministry of Education), Austria;
- Humboldt-Universität zu Berlin (Humboldt University), Germany;
- Bahcesehir Egitim Kurumları Anonim Şirketi (BEKAS), Turkey;
- Ecole de l'ADN (DNA Learning Centre), France;
- University Colleges Leuven-Limburg (former Katholieke Hogeschool Limburg VZW), Belgium;
- Kutató Tanárok Országos Szövetsége (Hungarian Research Teachers' Association), Hungary;
- SA Teaduskeskus AHHAA (AHHAA Science Centre), Estonia.

Ark of Inquiry