

## **Building bridges to bring science closer to society.**

### **'20 years is nothing'<sup>1</sup>**

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*"A society that values order above all else will seek to suppress curiosity,  
but a society that believes in progress, innovation and creativity will they will cultivate,  
recognizing that the inquisitive minds of their people constitute their most valuable asset."  
Ian Leslie*

*Curious: The desire to know and why his future depends on it*

#### *Introduction*

Science and technology are part of everyday life; despite this, it has remained for a long time as a strange fact to the community, to the non-expert public, as if it were alien to it. Few realize that the world of science is the one that helps explain life, the world and the facts that we all star or perceive and of which, conscious or not, we are part of. There was, for many years an extended situation of disinterest in scientific issues. Currently, work is underway for a change. The society that bases its well-being on the developments of science seems to turn its back on scientific culture; the number of students interested in science studies decreases year after year. It is difficult for someone to choose a career related to contents that feel very far away. It is, therefore, necessary to bring science to society and awaken its interest.

In 1998, a group of professionals convinced that society must know, understand and see in science and technological innovations, social processes that can sustainably improve their living conditions, met in Buenos Aires, Argentine, and founded Solydeus. This non-governmental non-profit organization, has the mission of promoting and developing activities in science, technology and innovation for the formation of responsible citizenship; creating and working in a new way of communicating science, which is closely linked to the treatment of our problems, while at the same time being involved in the extension of knowledge that allows the exercise of citizenship to be increased.

This work is a brief review that describes and shows the path traveled by the institution in the last 20 years; the developed actions, the actors involved, the spaces covered, the links with associations, the international networks, the collaboration agreements are described, without

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<sup>1</sup> '20 years is nothing' makes reference to part of the song (Tango) Volver, written by Alfredo Lepera and interpreted by Carlos Gardel [https://www.youtube.com/watch?v=dQr\\_PKgvkHI](https://www.youtube.com/watch?v=dQr_PKgvkHI)

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losing sight of the socio-political context in which it takes place, conceived within the framework of a CTS perspective.

The promotion of school participation in national and international science fairs, the use of a knowledge space in the Buenos Aires International Book Fair, the organization of Youth Meetings to share research projects related to environmental issues, the development talks, participation in the Night of the Museums, the implementation of training workshops for teachers, as well as the establishment of numerous links of collaboration with national and international institutions, public and private, which contribute for knowledge to be distributed in society, are some of the actions carried out by Solydeus Foundation; some of which are described below. To develop its programs, Solydeus creates networks and alliances with public and private sector agents, nationally and internationally. Solydeus is a founding member of the Network for the Popularization of Science and Technology in Latin America and the Caribbean, RedPOP-UNESCO, an organization to promote the social appropriation of science in the region. At a local level, the Solydeus Foundation is a founding member of the Argentine Association of Museums and Science Centers of Argentina AACEMUCYT.

#### *The International Book Fair of Buenos Aires*

The International Book Fair is held annually in Buenos Aires in the month of April, it lasts nineteen days and takes place in the Rural Land. The program of this Fair is extensive, there are multiple educational and cultural activities dedicated to specific and general public. Year after year new features such as spaces dedicated to children and young people with activities of a cultural nature are incorporated into the Fair. In 1994 the proposal arises to organize in this international exhibition a specific space for young people to motivate them to awaken their curiosity and interest in science and technology. Both exhibitions and cultural productions are carriers of knowledge and have considerable informative potential. Motivating the public that visits an exhibition to approach the knowledge of science and technology leads to the path of democratization of said knowledge.

Since its foundation, Solydeus organizes and coordinates the EXPLORA ZONE: a place of dialogue and meeting between the public and the scientists, where researchers and disseminators announce and show how science and technology is present in everyday life. The agenda of the activities includes experiments, demonstrations, talks and workshops of institutions of the national scientific system such as the Faculty of Exact and Natural Sciences of the University of Buenos Aires, the Balseiro Institute of the National University of Cuyo, the National Council of Scientific Research and Techniques, CONICET, The Museum of Natural Sciences Bernardino Rivadavia, among others. By means of simple experiments, with more complex techniques or manipulation of instruments, the visitors of the EXPLORA ZONE, participate actively, find answers to some questions, investigate, explore and discover the fascinating world of science (Fig.1).

About 1.2 million people attend the Book Fair annually; in the last years EXPLORA ZONE has a flow of visitors of the order of 20,000 people who participated in the different activities.

Similarly Solydeus organizes annually the Knowledge Space in the Children's Book Fair that takes place Buenos Aires.

#### *National and international science fairs*

Science Fairs are social spaces promoted for the exhibition of science, technology and innovation projects that contribute to the development and deepening of knowledge as a social construction.

They constitute an original modality for the promotion of science and technology, considering that it is a public space where students expose their research work.



**Fig. 1:** International Book Fair of Buenos Aires and the EXPLORA ZONE

Solydeus promotes the participation of students in national and international science fairs, presenting research projects in various areas of human knowledge, in particular in science and technology themes (Fig.2). As member of international networks, annually Solydeus sponsors national projects participation in Fairs like ISEF (The Intel International Science and Technology Fair), ExpoSciences International MILSET (International Movement for Scientific Recreation and Technology), MOSTRATEC (Brazilian Science and Technology Exhibition), CIENTEC, and other meetings like the World Youth Congress on climate change, Education and New Technologies Symposium, Expocambio School ORT Buenos Aires, Scientific Camp AMPIMPA, Youth Camp “Rio plus 20” Sustainable Development Forum. In sum, since 2003, more than 300 students and 150 teachers have participated in International Exhibitions and Fairs sponsored by Solydeus.



**Fig. 2:** Argentine students participate in international science fairs sponsored by Solydeus Foundation

### *Youth congresses*

Solydeus Foundation organized local instances of participation of young people with scientific projects.

In 2014, the Solydeus Foundation promotes the First International Meeting of Young People in Science, Technology and Innovation (ENJOCITI), developed in Argentina. ENJOCITI was a joint initiative of the Solydeus Foundation, the San Ignacio School and the Scouts of Science Program, and was held in the city of Tandil, province of Buenos Aires, Argentina. The development of the Meeting meant a shared effort of the entire educational community, involving and integrating families, research institutions and companies throughout the region. The meeting counted with the participation of 60 national and international projects presented by students from Argentina, Brazil, Colombia, Mexico, Peru, Spain and Turkey; the international groups belonging to institutions linked to MILSET (International Movement for Scientific Recreation and Technology). The projects were evaluated by specialists and their results were a contribution for the students, and their tutors, for the growth of their research.

Since 2016 Solydeus Foundation organizes, jointly with the Argentine Museum of Natural Sciences MACN, the Youth Committed to the Environment Meeting. This meeting with a scientific congress modality offers young people from all over the country a space to socialize their works around topics related to the different environmental problems addressed in the classrooms, to make proposals and reflections about them, allowing to establish concrete and achievable commitments in favor of a sustainable development that integrates bases in which the repercussions and advantages of taking care of natural resources are given. It provides a formative space for dialogue, reflection and awareness about the problems that affect our quality of life and the conservation of nature (Fig. 3).

From 11 projects in 2016, 22 in 2017, in this year edition, to be developed in September, there are more than 30 projects presented.



**Fig. 3:** The Second Youth Committed to the Environment Meeting was held in Buenos Aires in September 2017.

*Museum of Natural Sciences Bernardino Rivadavia. Night of the Museums*

In the Night of the Museums, an annual night celebration to explore the art exhibited in museums, galleries and cultural spaces from a different perspective, the Argentine Museum of Natural Sciences "Bernardino Rivadavia" opens its doors to the public with a special programming. The night of the museums offers the opportunity to position the MACN as a space open to a large number of non-traditional audiences who discover it for the first time, while for those who already know it, it becomes a different opportunity to enjoy their heritage. From the programming that includes artistic shows, and scientific outreach activities, visitors discover what is happening in the museum what their functions are, what their researchers are dedicated to, what is the scientific production that is developed here and what It is the role of CONICET in the Institution. The contribution of Solydeus is made possible through various interventions, stand-up, puppets, demonstrations, storytelling, are other ways to communicate scientific work to a non-expert public (Fig. 4 left). Special activities allow us to attract new audiences that come specifically to watch shows or participate in outreach activities. In 2017, 11,000 visitors were registered.



**Fig. 4: (left)** Night of the Museums in the National Museum of Natural Sciences. **(right)** Solydeus Foundation is Embassy of Peace

*Among others*

In 2008 the Solydeus Foundation is recognized as EMBASSY OF PEACE within the framework of the campaign "Awakening Conscience of Peace", for carrying out activities educational activities addressing environmental and social issues considered in the UN Millennium Development Goals (Fig4. right).

This committed to develop annually specific projects with schools to promote the culture of peace in our children and youth. In 2009 we worked on three specific projects: "Awakening awareness of peace", "Educating in values" and "We are from the same team". Twenty schools from all over the country participated, including Antarctica. From 2009 to 2012, they participated in the Parliament for Peace, which takes place in the Senate of the Nation and with outreach activities at the Book Fair.

## *Conclusions*

These are just some of the many actions carried out by Solydeus Foundation members who collaborate by contributing work, ideas and projects. There are many organizations and institutions that have joined the activities developed. These ties allowed an institutional growth and extended a network of national and international contacts. The result of the path traveled is satisfactory and commits us to look for new models to improve in the task of arriving with the knowledge of science and technology to society for the formation of a critical and reflective citizenship.

Solydeus has the challenge to awaken the curiosity of children and young people for their contribution as citizens to the progress of society. Curiosity motivated some of the most important discoveries in history. Inquisitive minds are the greatest value of a society that believes in progress, innovation and creativity.

