

Go-Lab Project

The Go-Lab project opens up remote science laboratories, their data archives, and virtual models (online labs) for large-scale use in education. The project targets students (10 to 18 years old) by offering the opportunity to perform personalized scientific experiments with online labs, and teachers enabling dissemination of best practices in pedagogy and offering support in a web-based interface and community framework. At the same time, the Go-Lab project helps lab-owners to promote their scientific activities providing open interfacing solutions to easily plug-in their online labs, construct their virtual didactic counterparts, and share them in the federation of online labs.

The Go-Lab project will offer students an access and use of scientific instruments (remote and virtual laboratories) for investigations (e.g. remote use of telescopes), access to research data and archives, use of advanced tools for data acquisition and analysis, structured learning spaces, as well as facilities and support communication and collaboration on scientific topics. This should encourage students to engage in scientific activities, acquire appropriate skills, and experience the culture of doing science by undertaking active guided experimentation carried out on top-level scientific facilities.

For teachers the Go-Lab project offers pedagogical and technical plug (ease of integration), play (ease of use), and share (ease of consolidation) methodologies and infrastructures in order to integrate online labs into regular classroom activities. This will allow teachers to prepare learning activities with help of a facility to compose particular learning spaces, to access resources facilitating the design of realistic and engaging activities, and to adopt, enrich, and modify these learning activities through an online community. Further, practice sharing and mutual support will be an integral part of community activities.

The resources of the Go-Lab project are contributed by the large scientific organizations, universities and research institutions, as well as commercial companies. The Go-Lab project will offer technical solutions for these lab-owners to put their real experiments online and create a virtual community stimulating dialogue between scientists and students, thus, increasing visibility and attraction of contributing parties among their stakeholders. This innovative approach will also bring scientific experiments at a new level allowing conducting remote studies involving multiple participants (e.g. international research teams).