

Go-Lab

Global Online Science Labs for Inquiry Learning at School

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Beneficiary Number	Beneficiary name	Beneficiary short name	Country
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2	Ellinogermaniki Agogi Scholi Panagea Savva AE	EA	Greece
3	École Polytechnique Fédérale de Lausanne	EPFL	Switzerland
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17	University of Glamorgan	UoG	United Kingdom
18	Institute of Accelerating Systems and Applications	IASA	Greece
19	Núcleo Interactivo de Astronomia	NUCLIO	Portugal

Contributors

Name	Institution
Diana Dikke	IMC
Nils Faltin	IMC
Elio San Cristobal Ruiz	UNED
Miguel Rodriguez Artacho	UNED
Henny Leemkuil	UT
Georgios Mavromanolakis	EA
Denis Gillet	EPFL
Evita Tasiopoulou	EUN
Jennifer Palumbo	MENON
Effie Law	ULEIC
Constantinos Manoli	UCY
Sven Manske	UDE
Panagiotis Zervas	CERTH
Olga Dziabenko	UDEUSTO
Danilo Zutin	CUAS
Margus Pedaste	UTE
Angelos Alexopoulos	CERN
Fraser Lewis	UoG (USW)
Christine Kourkoumelis	IASA
Rosa Doran	NUCLIO
Claudio Dondi (peer-review)	MENON
Lars Bollen (peer-review)	UT

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Executive Summary

The Go-Lab project aims at providing students the opportunity to gain hands-on experience in science by conducting experiments using modern laboratory equipment and at motivating them for making scientific carrier in the future. The project targets both individual stakeholders (school teachers, instructional designers, researchers, and students) and organizational stakeholders (schools wanting to use inquiry learning methods in the everyday teaching practice and lab owners, such as research institutions, universities, and private companies, wanting to provide access to their labs). Further, European and worldwide associations and initiatives active in the fields of STEM and inquiry learning, as well as political decision makers are addressed in order to get support in implementation and mainstreaming of the Go-Lab approach.

WP9 concentrates on the dissemination of the project and its results among the identified target groups by using online and offline dissemination channels and activities (tasks T9.1, T9.2). Further, in scope of WP9 cooperation with external organisational stakeholders is built up, such as research institutions and projects, but also worldwide associations having influence in the research, academic and professional communities (task T9.3). Standardization initiatives are addressed with technologies developed in the framework of the project (task T9.4). Finally, WP9 aims at mainstreaming Go-Lab results transforming project outcomes in suitable products for different target groups and creating recommendations for the introduction of online labs in schools (tasks T9.5 and T9.6).

The work of WP9 in the first project year addressed mostly the tasks T9.1, T9.2, and T9.3. After Go-Lab target groups have been identified (see [Section 2.1](#)), a dissemination and exploitation strategy has been defined in order to successfully promote Go-Lab among these groups and to ensure sustainability of the project results. The dissemination strategy synchronizes dissemination activities with other activities of the project, as well as with foreseen milestones and results, in order to ensure their timely promotion (see [Section 2.2](#)). The exploitation strategy considers the main project results (Go-Lab Portal, Inquiry Learning Applications, and Teacher support materials) and comprises both syndicated exploitation of these results by the consortium and individual exploitation by particular project partners (see [Section 2.3](#)).

Further, WP9 created an online infrastructure (including project website and social media channels) and a set of print dissemination materials to promote the project (see deliverable "D9.1 – Project Website and Dissemination Materials", M6). By the end of the first project year, the project website has been visited by 1,460 people (unique visitors). The social media channels count 58 community members (45 Facebook, 6 Google+, 7 LinkedIn) and 29 followers (23 Twitter, 4 YouTube, 2 SlideShare). 34 people receive the quarterly project newsletter¹ (see [Section 3.1](#)). These numbers are expected to increase as soon as tangible results are available and first schools are actively involved in the project.

Finally, the project has conducted 98 Go-Lab presentations and online lab demonstrations at scientific conferences and teacher trainings and events, 41 workshops and round table discussions (including 25 Visionary Workshops (WP6) and 9 Participatory Design workshops (WP3)), 2 Summer Schools (WP7), 2 online events, and was represented at 5 conferences and fairs with a booth or distributing leaflets. In total, more than 6,200 stakeholders have been reached². 10 scientific publications (6 full and 2 short conference papers, 1 journal paper, and 1 PhD thesis) were published. (See [Section 3.2](#) and [Annex A](#) for details)

¹ All figures represent project external stakeholders (consortium members are excluded); all figures as of 16th October 2013

² All figures as of 16th October 2013

This deliverable represents, firstly, the defined dissemination and exploitation strategy. Secondly, it describes online and offline dissemination channels, as well as activities, which have already been conducted and those planned for the second project year. Possibilities of cooperation with external stakeholders are defined. Further, Key Performance Indicators are described and applied to measure the effectiveness of the Year 1 dissemination and allow to measure the progress in coming years. In the last section, the main dissemination and exploitation activities of the Year 1 are summarized and a dissemination plan for the Year 2 is defined. [Annex A](#) provides detailed information on offline dissemination activities and number of participants for each of them. [Annex B](#) represents print dissemination materials updated in months 6 - 12 (thus, not represented in the deliverable “D9.1 – Project Website and Dissemination Materials”, M6). This deliverable will be yearly updated shifting the focus from general dissemination to exploitation preparation following the project development phases.

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1 Introduction

The Go-Lab project (Global Online Science Labs for Inquiry Learning at School) aims to support inquiry learning at schools in European countries giving students the opportunity to gain hands-on experience in science by conducting experiments using modern laboratory equipment by themselves and deepen their knowledge in fundamental science. To achieve this aim, Go-Lab creates technical infrastructure providing access to a set of online labs from worldwide renowned research organizations and institutions, and supports pedagogical, methodological, and technical aspects of introducing inquiry learning in schools. Further, the project creates the teacher community by offering workshops introducing the use of virtual experimentations and remote labs, as well as inquiry-based teaching techniques, allowing instructors to upgrade their current practices.

The Go-Lab project targets 1,000 schools to be involved in the project pilots and evaluation. These schools are expected to implement the Go-Lab approach and use the Go-Lab Portal and online laboratories to extend classroom activities with live demonstrations and experimentations conducted by the students themselves. Thus, the main target group of the project is school teachers, who are introduced to the project and trained in using online labs, participate in the conception and implementation of inquiry learning scenarios, and contribute best practices, showcases, experience reports, and evaluation results back to the project. These teachers collaborate with the project consortium and with each other sharing opinions and methodologies and being multipliers for the Go-Lab approach and project results.

Further stakeholder groups targeted by the Go-Lab project are instructional designers and researchers wanting to enrich their teaching and research field with inquiry learning methods, as well as students wanting to use online labs in their (self-regulated) learning activities. Moreover, the Go-Lab project aims to attract organizational stakeholders, such as online lab owners, educational providers, as well as research institutions and projects as implementation, research and dissemination partners. Involving European and worldwide associations active in the fields of STEM, inquiry learning, and teacher training, as well as political stakeholders, is important for the project as they might support implementation of inquiry-based learning at schools and mainstreaming of the project approach.

WP9 concentrates on the dissemination of the project, its approach and results among the identified target groups by using online and offline dissemination channels and activities (tasks T9.1, T9.2). Further, cooperation with external organisational stakeholders will be built up, such as research institutions and projects, but also worldwide associations having influence in the research, academic and professional community (task T9.3). Standardization initiatives will be addressed with technologies developed in the framework of the project (task T9.4). Finally, WP9 aims at mainstreaming Go-Lab results transforming project outcomes in suitable products for different target groups and creating recommendations for the introduction of online labs in schools (tasks T9.5 and T9.6).

This deliverable defines the dissemination and exploitation strategy to successfully promote Go-Lab among target groups and to ensure sustainability and exploitation of the project results ([Section 2](#)). Further, the deliverable represents online channels and their reach during the first project year, as well as offline dissemination activities that have been conducted ([Section 3.1](#), [Section 3.2](#), and [Annex A](#)). Key Performance Indicators are described and applied to measure the effectiveness of the dissemination and to plan corrective actions, if needed ([Section 3.3](#)). In the last section, the project's dissemination and exploitation activities of the Year 1 are summarized and a dissemination plan for the Year 2 is defined ([Section 4](#)).

2 Dissemination and Exploitation Strategy

The dissemination strategy of the Go-Lab project implies accurate identification of the target groups and their interests, definition of dissemination goals, selection of appropriate communication channels, synchronization of stakeholder communication with other project activities to make project messages timely and informative, as well as the use of synergy effects arising from the joint work of WP9, WP6 (Community Building and Support), and WP7 (Large-scale Pilots). The exploitation strategy considers interests of the identified target groups and planned exploitable results (in the sense of methodology, software, and supportive materials) defining a plan for successful transfer of these results, their sustainability (incl. standardization) and exploitation. This plan covers both syndicated exploitation by the consortium and individual exploitation by the project partners.

2.1 Target groups characterization

The Go-Lab project targets several groups of stakeholders aiming not only at providing project-related information and training to these target groups, but also at motivating them to become active participants of the Go-Lab community contributing to the development of the project (e.g., feedback given by teachers, and access to online labs provided by external lab owners). Go-Lab target groups and their interests are briefly described below.

2.1.1 Individual stakeholders

The most important target group of the project is **school teachers** interested in extending their current teaching methods with inquiry learning activities. In order to assist teachers in using Go-Lab methods and infrastructure, the project offers visionary workshops informing them about the Go-Lab approach and collecting open feedback about it, training workshops aiming at practice-oriented scenarios that can be implemented at schools, as well as evaluation workshops gathering best practices and experience reports after the implementation. Further, Teacher Support Program and Teacher Professional Development Program provide support to the teachers and guide them during the implementation of inquiry learning in the classroom.

Another target group is **scientific researchers** and **instructional designers** who may want to use the Go-Lab approach and technical infrastructure to extend (online) learning programs they create with practical experimentations and simulations. Methodological outcomes of the Go-Lab project may also be used by the researchers in parallel and follow-up projects. Although there are no specific trainings offered by the project for these stakeholders, they may get support in using the Go-Lab Portal, as well as use support materials and scientific publications.

Students, in their turn, use the Go-Lab infrastructure in their learning activities in and out of class. The main idea of the Go-Lab project is to provide students with the possibility to use online labs while also being guided by the teacher, for example, in scope of a practice session. However, the Go-Lab Portal can be interesting also for those students wanting to deepen their knowledge in particular science areas additionally to the school program.

2.1.2 Organizational stakeholders

Owners of online laboratories outside the project consortium (**online lab owners**), such as universities, research organizations, and commercial companies, can be involved in the project providing access to their online labs via the Go-Lab Portal. Main interest of this target group in cooperation with the project (if providing access free of charge) is to increase the awareness about their institutions and scientific activities among teachers and students, as well as in the scientific community. Further, the access to the online labs could be provided at a charge, thus, contributing to the sustainability of both the Go-Lab project and the external online labs.

Educational providers (besides schools, e.g., universities and training organizations) might be interested in including inquiry learning activities in their educational programs. In the first place, usage of online labs can extend eLearning and blended learning programs, as well as Massive Open Online Courses (MOOCs). Thus, educational providers can use the Go-Lab Portal to get access to the online labs, as well as to obtain apps and templates to be integrated in their own environments.

If an organization provides both educational programs and online laboratories (which is the case, for example, by universities), we are talking about a **combined provider**. Such institutions might be interested in mutual exchange of online lab usage time, as well as in the exchange of supporting tutoring services, using the Go-Lab Bartering Platform. This exchange can be conducted as bartering, but also on a financial basis.

2.1.3 Other stakeholders

European and worldwide associations active in the fields of STEM and inquiry learning (e.g., GOLC, IEEE, inGenious, and Scientix) as well as professional development and teacher training initiatives (e.g., Comenius/Grundtvig Programme) are addressed in order to use synergies arising from the organization of joint events and trainings, as well as from the use of mutual dissemination infrastructure. These organizations can be used as multipliers promoting the Go-Lab Portal and online labs and facilitating Go-Lab implementation in European schools.

Political stakeholders (e.g., Educational Ministries of involved countries) are targeted by the project as they can provide support for the schools at institutional level, for example, as regional support programs to integrate inquiry learning in regular classroom activities. This may include both organizational and financial support, e.g., to finance online lab usage in case of commercial labs. Furthermore, grants for teachers wanting to participate in the Go-Lab workshops can be arranged.

General public is addressed by the project to increase the awareness about the inquiry-based learning and its implementation at schools, as well as about the project itself.

2.2 Dissemination strategy

Dissemination activities constitute an essential part of the Go-Lab project being indispensable for sustainable implementation of the project results. The dissemination strategy of the Go-Lab project implies early involvement of the target groups in the project activities enabling the integration of external stakeholders' requirements and feedback into the project work. Thus, the Go-Lab dissemination activities concentrate on the creation of a user base outside the project (targeting primarily school teachers) and a cooperation network of online lab owners, educational providers, research and dissemination partners, as well as political decision makers. Following sections concentrate on the definition of the dissemination goals and strategy, taking into account the whole project planning, milestones, and expected results.

2.2.1 Dissemination goals

The overall aim of the project dissemination activities is to increase the awareness about the project and its results among the target groups, and to motivate them to implement the Go-Lab approach and use its technical infrastructure in school education. The Go-Lab project defines the following communication goals for its online and offline dissemination activities:

- Promote the Go-Lab project, its approach, and technical infrastructure among the identified target groups
- Promote the Go-Lab events, such as visionary, training and evaluation workshops among teachers and research community

- Make the Go-Lab results (the Go-Lab Portal, implementation methodology, and best practices) available for the stakeholders
- Motivate school teachers to use online labs in their classroom activities
- Motivate teachers, instructional designers, and other “power users” to contribute their experience reports and best practices back to the project
- Motivate online lab owners and educational providers to actively participate in the project activities providing access to their online labs and extending educational programs
- Motivate political decision makers to support and mainstream inquiry learning in European countries
- Facilitate the discussion of Go-Lab related topics in the web, online and offline teacher communities, as well as on conferences and workshops
- Establish connections to potential research and dissemination partners

In order to reach these goals, the Go-Lab project uses online and offline dissemination channels establishing contact to the identified target groups. The online activities include not only creation of the own communities, groups, and content sharing channels, but also presence of the project in relevant external communities and networks, contribution to the blogs of other projects and organizations, as well as initiation of discussions and online campaigns (see [Section 3.1](#)). The offline activities include organization of workshops and events, participation in conferences, events offered, e.g., by the cooperation partners, as well as contribution to print media (conference proceedings, scientific journals, trade journals, etc.).

Thus, the Go-Lab project takes a proactive position promoting inquiry learning and motivating the stakeholders to implement this approach in schools and other educational institutions. Apart from dissemination activities coordinated by WP9, personal activities of the project partners in social networks and direct contacts to teachers and potential partners are indispensable to make consortium members opinion leaders in their networks.

2.2.2 Activity synchronization

The dissemination and exploitation activities of WP9 are closely connected to the work and results from other work packages, including, for example, promotion and follow-up activities accompanying workshop organization, promotion of inquiry learning methods to prepare implementation of the Go-Lab infrastructure and tools, dissemination of pedagogical innovations, promotion of the Go-Lab Portal and lab applications, etc. The following paragraphs briefly describe activities and results planned by the pedagogical, technical, and community clusters that will be supported by the project dissemination activities. This aims to create a reasonable dissemination plan corresponding to the research, development, implementation, evaluation, and community building activities of the project.

The Go-Lab project aims at recruiting 1.000 schools (involving 2,000 teachers and 20,000 students) during the project time (particularly, during three school years). This will be done in three implementation phases: in the Phase A (M16 – M21) 100 schools, in the phase B (M25 – M33) 400 schools, and in the Phase C (M37 – M45) 500 schools will be recruited. These numbers include 100 innovative schools (in the use of technologies and in the application of innovative STEM practices) and about 100 remote and rural schools, ensuring that different types of schools are represented in the pilot sample.

The implementation work is accompanied by the community building activities conducted in WP6. These include Visionary Workshops (conducted in months M3 – M8 in Austria, Belgium, Cyprus, Estonia, Germany, Greece, The Netherlands, Portugal, Spain, and the UK), Practice Reflection Workshops (M13 – M21 and M25 – M33 in each of the 10 main piloting countries, M25 – M33 also in Bulgaria, Italy, Poland and Romania), and Summative Workshops (M37 – M40 in each of the 14 countries participating in large-scale piloting). Thus, the Visionary

Workshops are conducted in the starting phase of the Go-Lab project, whereas Practice Reflection and Summative Workshops align to the Implementation Phases A, B, and C.

The results from pedagogical and technical clusters are promoted supporting their implementation during the project time and preparing their exploitation after the project finish. These results are, for example, curriculum analyses (M12), inquiry classroom scenarios (M18, M36), Go-Lab Portal mock-ups (M6, M9), learning spaces and services Specifications (M06, sM09, M12, M18), Go-Lab Portal pilot, initial, and final versions (M12, M24, M36), specifications and releases of learning analytics and scaffolding services (M18, M24, M33, M36), etc. Further, guidelines and recommendations for the introduction of online labs in schools will be made available for the public.

2.2.3 Dissemination phases

Following the general project plan and the project milestones, the dissemination work can be divided into four main phases:

Dissemination Phase 1 (M1 – M9)

- *Project activities and results:* first Go-Lab spaces and services specifications (inquiry cycles overview, cognitive scaffolds, interface), learning spaces specification, specifications of inquiry learning apps, as well as Go-Lab Portal Prototype are available. Visionary Workshops have been conducted.
- *Dissemination activities:* creation of the project website, blog, social media channels, and print dissemination materials; dissemination of the first specifications and mock-ups via the website; support of the Visionary Workshops (e.g., creation of workshop flyers, announcements on the website); announcement of Go-Lab news in the online channels; getting started with active use of the project blog and social media.

Dissemination Phase 2 (M10 – M24)

- *Project activities and results:* curriculum analyses, preliminary classroom scenarios, requirements analyses and services specifications, as well as the Go-Lab inventories (scientific organizations and universities) are available; Go-Lab Portal (pilot and initial versions) is released; evaluation and validation “dashboard” tool is available. Implementation Phase A is running; Practice Reflection Workshops in 10 countries are being conducted.
- *Dissemination activities:* dissemination of the project results via online channels; support of the workshops and implementation activities (e.g., dissemination materials, announcements); press release; creation of an official project video or a smart show; creation of workshop videos to be made available online; active use of the project blog and social media (e.g., publishing of short scientific notes, initiating discussions, etc.); contributions to external websites and blogs, publishing of scientific papers, participation in conferences and exhibitions.

Dissemination Phase 3 (M25 – M40)

- *Project activities and results:* Go-Lab classroom scenarios handbook is available; inquiry learning apps, Go-Lab services, and final version of the Go-Lab Portal are released; Go-Lab inventory (external and partner organizations) is available; evaluation of the Go-Lab Portal initial version is done. Implementation Phases B and C are running; Practice Reflection and Summative Workshops are being conducted.
- *Dissemination activities:* dissemination of the project results via online channels; conducting webinars; support of the workshops and implementation activities; publishing of scientific papers and participation in conferences and exhibitions; dissemination of the implementation and evaluation results, experience reports, and best practices

(contributed also by external stakeholders, e.g., most active teachers and the so-called “power-users”); promoting the Go-Lab Bartering Platform.

Dissemination Phase 4 (M41 – M48)

- *Project activities and results*: sustainable version of the Go-Lab Portal is released; integrated validation and evaluation report and recommendations are available; recommendations for the introduction of online labs in schools are available. Implementation Phase C is completed.
- *Dissemination activities*: general dissemination activities (see Phases 2 and 3); dissemination of implementation recommendations; preparation of the project results exploitation (the Go-Lab Portal, particular online labs, cognitive scaffolds, Bartering Platform, pedagogical scenarios and guidelines, etc.); support of the teacher community ensuring its sustainability after the project time; ensuring cooperation sustainability (e.g., accessibility of external labs via the Go-Lab Portal and Bartering Platform).

WP9 realizes the described activities in close cooperation with all project partners, primarily the national coordinators having direct contact to the local target groups, as well as Work Package leaders having overview of the latest project results. The WP9 leader invites project partners to provide overviews of planned activities to ensure their timely promotion, to provide workshop results and impressions, experience reports and best practices, and to motivate external stakeholders to do so. The project partners may request additional dissemination materials, as well as support in the organization of the project workshops and events, creation of workshop videos and handouts, and any other support, by the WP9 leader. Publishing scientific papers and conference presentations are not coordinated by WP9; however, the information is collected by the WP9 leader to be disseminated in the project online dissemination channels and to be documented in the yearly deliverable on dissemination activities of the project.

2.3 Exploitation strategy

The Go-Lab project aims at introducing inquiry learning methods and tools in school education, giving access to online labs via an integrated web portal, creating new learning scenarios and implementation recommendations, as well as supporting teachers in extending their practices with inquiry learning activities. To achieve this, dissemination and exploitation activities have to be integrated into the daily project work directly from the beginning of the project. Whereas dissemination activities have started already in the first months of the project, the exploitation needs more time to be planned and carried out. This section describes planned exploitable results, as well as a general strategy for making them sustainable and exploitable. In the second project year, also individual exploitation plans for particular project partners will be created.

2.3.1 Planned exploitable results

Exploitable results of the Go-Lab project include the Go-Lab Portal, Inquiry Learning Applications, and Teacher Supporting Materials.

The Go-Lab Portal provides access to remote and virtual laboratories (plug technology/ lab-owner services), a single entry point to relevant repositories and communities (share technology & smart gateways/ cloud services), offers scaffolding and learning analytics services allowing learning support mechanisms in the forms of individual scaffolds, group recommendations, as well as supervision support for teachers. Booking services for online lab usage time and tutorial support, as well as features allowing exchange of services between users via a virtual currency will be available (Bartering Platform/ add-on services).

The Go-Lab Portal provides Inquiry Learning Spaces allowing conduction of learning activities with online labs and supportive components. They can be adopted according to the subject

domains, class level, scaffolding requirements, histories, dynamic contexts and inquiry learning process stages, as well as spoken languages (localization). Further, simple Inquiry Learning Apps able to interoperate with the core Go-Lab services will be the main mean for providing the necessary support. An App Composer will allow teachers to find, configure and create (if missing) resources compatible with their scenarios and aggregate them with a few clicks (thus, forming Inquiry Learning Spaces containing a lab, usage and scenario instructions, support tools, etc.). This Inquiry Learning Apps and Spaces are stored in the Online Lab Repository allowing easy search for online labs and additional resources.

Apart from the software solutions, the Go-Lab project creates inquiry classroom scenarios describing possible ways of including Go-Lab experimentation spaces in wider classroom settings, e.g., structuring the lesson around an online lab, establishing offline and online collaboration between students, considering future career paths in course planning. Moreover, Go-Lab will create user guidelines for the teachers including indicative inquiry learning scenarios, easy guides for the use of the Go-Lab Portal, main characteristics of the Online Lab Repository, etc. Finally, a guideline summarizing experience gained in the project on how to effectively introduce remote and virtual labs in schools will be created.

To summarize the above, planned exploitable results include:

1. Go-Lab Portal (incl. Services)
 - a. Online Lab Repository
 - b. Bartering Platform
 - c. App Composer
2. Inquiry Learning Apps and Spaces
 - a. Inquiry Learning Applications
 - b. Inquiry Learning Spaces
3. Teacher supporting materials
 - a. Classroom scenarios handbook
 - b. Guidelines and supporting materials for teachers
 - c. Recommendations for the introduction of online labs in schools

These results will be exploited by the consortium as a whole solution, which will be kept sustainable after the project time. Also, its parts (e.g., particular technologies, services, and pieces of software) will be exploited by the project partners, for example used as base technology in succession scientific projects or in commercial products.

2.3.2 Syndicated exploitation

The Go-Lab consortium will provide the Go-Lab Portal including its sub-systems, services, as well as online labs during and after the project time. In order to assure this, a special group within the consortium responsible for the sustainability of the Portal will be established (these will be, first of all, partners, who are members of European and worldwide associations, such as GOLC and IEEE). During the third and fourth project years, a sustainability model considering interests of the project partners and external lab owners will be created. Further, classroom scenarios and teacher recommendations will be provided to the educator community as Open Educational Resources (OER). Also after the project time, teacher trainings and support will be offered (e.g., in cooperation with Comenius/Grundtvig Programme).

Go-Lab will contribute its technologies to standardization initiatives, such as the Standards Committee of the IEEE Education Society. Already in the second project year, Go-Lab will create an advisory group within the project responsible for the identification of potential standards and normalization procedures, and clarify the requirements and procedures of the standardization bodies. Concrete actions leading to creation of new standards as well as responsibilities within the project will be specified during the preparation activities.

2.3.3 Individual exploitation

Besides the syndicated exploitation strategy, which will be followed by the consortium as a whole, individual exploitation plans (IEP) for each project partner will be created. These individual plans can differ widely, as they depend on the nature of each organisation, thus, determining which results can be exploited and how. Each IEP will contain a short description of the partner organisation, its core business and its relation to the Go-Lab project, a list of planned and achieved exploitable results for the partner, characterization of addressed target groups and their benefits in context of Go-Lab, an exploitation plan considering Go-Lab results transfer and own use of the results by the partner, as well as a report on exploitation activities that have already been conducted. The first versions of the IEPs will be created during the second project year and will be annually updated until the end of the project.

3 Report on Dissemination Activities (Year 1)

This section provides a description of dissemination channels and materials used by the Go-Lab project and reports on dissemination activities conducted in the first project year. These include online dissemination activities (e.g., publishing announcements in social media channels and online press-releases in newsletters of partner organizations) and offline dissemination activities (such as organisation of workshops, presenting Go-Lab at conferences, and publishing scientific papers). The last sub-section provides Key Performance Indicators representing the reach of project dissemination activities.

3.1 Online Dissemination

The Go-Lab Project uses its own and external online dissemination channels to promote the project and to attract stakeholders to active participation in its activities. Go-Lab takes a proactive position by providing information on the website and in the project's social media channels, and by addressing its target groups via websites, blogs and in communities mostly used by the stakeholders (e.g., teacher communities, regional communities, inquiry learning related websites, practitioner communities, etc.). This section describes projects' own dissemination channels and provides an overview of external online channels that are used.

3.1.1 Project website and blog

The project website (www.go-lab-project.eu) is the main dissemination channel used by the project, as it reaches all identified target groups. It provides general information about the project, its research activities, online laboratories, workshops, and important results, and serves as a connecting point for the social media channels. Further, after the Go-Lab technical infrastructure is developed, the project website will be linked to the Go-Lab Portal and will allow navigating in the Online Lab Repository, thus, being the main entrance to all Go-Lab platforms, services, and resources. Finally, the project website establishes connection to offline dissemination activities promoting them and providing print materials, scientific papers, and official deliverables for download. Contact information of consortium partners (organizations and persons working for the project) can also be found on the website.

A detailed description of the Go-Lab website including description of the website structure and navigation, main content types, as well as Content Management System is provided in the deliverable "D9.1 - Project Website and Dissemination Materials" (M6). In the time period between M6 and M12 the following updates have been made:

- Each text page (e.g., workshop announcements and news articles) can be shared in social media or sent by e-mail using the buttons on the bottom of the page.
- Consortium partner pages now contain not only partner descriptions, but also several showcases representing selected projects and results. Further, each partner page now contains contact information of particular persons working for the project (buttons linking to the social media profiles and web pages). (See Figure 1)
- New external partner pages represent cooperation partners of the project (e.g., schools implementing Go-Lab and contributing best practices and showcases, external online lab providers, etc.). Currently, 2 external partners are represented (<http://www.go-lab-project.eu/external-partner>)
- The footer of the website now contains links to general pages: [newsletter registration form](#), [downloads area](#), [FAQ](#), [contact form](#), and [legal notice](#).
- Most of the pages now contain a "quick links" box allowing easy navigation to frequently seen pages (e.g., workshops, news, contact, etc.)

Showcase: ROLE Project and ROLE Widget Store

Responsive Open Learning Environments ([ROLE](#)) is a European collaborative project with 16 internationally renowned research groups from six EU countries and China. ROLE technology is centred on the concept of self-regulated learning supporting (lifelong) learners in constructing their Personal Learning Environments according to their learning goals, experiences, and preferences. ROLE provides a psycho-pedagogically sound framework for supporting individual composition of learning services and learning tools and resources and allowing users to plan their learning process, search for the resources independently, learn and then reflect on their learning process and progress. ROLE aims at empowering each user to generate new tools and functions according to their needs, and can help them to establish a livelier and personally more meaningful learning context and learning experience.

In the ROLE Project, IMC AG developed (among other tools) the [ROLE Widget Store](#) providing a repository for education related applications (widgets) to create flexible Personal Learning Environments based on open technologies. This includes a wide range of tools, support in finding applications for a specific learning goal (e.g. by a community, automatic recommenders, and predefined compilations of applications), as well as simple mechanism to add widgets to a PLE. Widgets allow flexible mash ups by providing, on the one hand, a small set of functionalities and on the other hand, the possibility to communicate with other widgets. [D. Dahrendorf, D. Dikie, N. Faltin (2012): Sharing Personal Learning Environments for Widget Based Systems using a Widget Marketplace]

Partner Telephone: +49 681 94750
 Partner Fax: +49 681 9476530
 Partner Social Media: Yiwei Cao
 Diana Dikie

googleplus 0 | Share 0 | Tweet 0 | Share This New | Email 0

Figure 1: Go-Lab website: consortium partner page connected to social media channels

At the end of M9, the project news blog (<http://www.go-lab-project.eu/news>) has been launched. The main purpose of this blog is to inform stakeholders about the latest news (e.g., new developments, teacher materials available, impressions from past events, etc.). Notes on scientific outcomes of the project (e.g., pedagogical aspects, methodologies, and classroom scenarios), implementation results (scenarios created by teachers, experience reports, best practices, and showcases), as well as particularities of technical realizations (e.g., requirements, specifications, and implementations) can also be published on the blog.

This online resource aims at facilitating the discussion between different target groups (teachers, instructional designers, and researchers in the first place) and to provide information on the current progress of the project, which might be unavailable in other resources as yet or in detail. The blog is a part of the project website, thus, the content is managed centralised by IMC. Consortium partners contribute short articles (which can be, e.g., literature tips, scientific paper abstracts, discussion topics, etc.) to be published on the blog. Comment functionalities to allow discussion of particular topics are available.

In order measure the dissemination rate of the website and to collect general information about the users, the project website has been connected to Google Analytics. In the period from the 4th September to the 16th October 2013 the website was visited by 1,460 unique visitors (according to the DoW, at least 100 unique visitors in the first project year were planned) coming from Greece (8%), Estonia (8%), United States (7%), United Kingdom (6%), Portugal (5%), Germany (5%), Spain (5%), Belgium (4%), Switzerland (4%), Netherlands (4%), and other countries. 67% of visitors are new, and 33% are returning visitors.

Figure 2 represents the number of unique visitors who accessed the website (04.09.-16.10.2013). The peaks on the chart can be explained with the visits by the consortium members (9th – 13th September, during the General Assembly – most visitors of the website come from Brussels), dissemination activities conducted in Estonia (16th – 20th September – most visitors come from Estonia), as well as dissemination activities in Switzerland and Greece, particularly, CERN Open Days (28th-29th September) and Greek Teachers Programme "Bringing CERN to the School Classroom" (27th September).



Figure 2: Visits of the Go-Lab website (04.09 – 16.10.2013)

The traffic sources are represented as follows: 45% direct traffic, 30% search traffic, and 25% referral traffic (redirection from other websites). Most of the users (63%) land on the homepage; the other frequent landing pages are pages announcing workshops (e.g., if users are redirected from partners' websites). Concerning the use of the social media, most of the social referrals come from Facebook (63% of social referrals) and Twitter (28%). The contents are mostly shared by e-mail (70% of sharing actions), Facebook (18%), and Twitter (11%).

3.1.2 Social media channels

In order to support communication between the project (represented by particular consortium members) and the users, Go-Lab provides social media groups and pages, as well as content sharing channels on the following social media platforms:

- Facebook Group: www.facebook.com/groups/golab.project
- Facebook Page: www.facebook.com/GoLabProject
- Google+ Group: plus.google.com/u/0/communities/103544792011493828793
- LinkedIn Group: www.linkedin.com/groups?gid=4946895&trk=myg_ugrp_ovr
- Twitter Channel: twitter.com/GoLabProject
- YouTube Channel: www.youtube.com/user/GoLabProject
- SlideShare Channel: www.slideshare.net/GoLabProject
- Flickr Channel: www.flickr.com/photos/go-lab-project

Facebook, Google+, and LinkedIn groups³ are used to publish the latest project news and announcements, as well as to facilitate the discussion between the project members and external stakeholders on project relevant topics. Additionally to the main project groups, an Estonian Facebook group⁴ and a Facebook group for Go-Lab Summer School participants⁵ are available. Announcements are also published in project external groups, e.g., National Science Teachers Association (Netherlands)⁶ and Science Teacher Network⁷ groups on LinkedIn. Social sharing platforms (YouTube, SlideShare, and Flickr) are used to provide videos, presentations, and photos in the web, sharing, commenting, and discussing them. Twitter distributes project messages and news in the form of micro content containing mostly the main topic and a link.

³ There is also a Facebook page: this is a kind of „landing“ page on Facebook providing information about the project. This page can be „liked“ and „shared“, whereas a group can only be „joined“, which is not necessarily communicated to the contacts of the new member.

⁴ Estonian Facebook group: <https://www.facebook.com/groups/golabe>

⁵ Facebook group for Summer School participants: <https://www.facebook.com/groups/615756051790568>

⁶ National science teachers association: http://www.linkedin.com/groups/National-Science-Teachers-Association-1791816?home=&gid=1791816&trk=anet_ug_hm

⁷ Science teacher network: http://www.linkedin.com/groups?home=&gid=3087275&trk=anet_ug_hm

Currently, the project Facebook page counts 158 “likes” (mostly from Spain, Germany, Portugal, USA, and Switzerland) and its average reach per post is 103 users. The main Facebook group has 73 members (45 of them are project externals). The Google+ and LinkedIn groups currently have 17 (6 external) and 20 (7 external) members accordingly. The Go-Lab Twitter channel has 31 (23 external) followers and follows 33 members (individual and organisational); SlideShare (5 followers, 2 of them project extern), Flickr (no followers), and YouTube (4 followers; not known if project extern) are not actively used yet. We expect these numbers to increase as soon as tangible results are available and first schools are actively involved in the project⁸.

Figure 3 represents the popularity of the project social media channels by external users (not consortium members). As 100% the all external social media group members and followers of the social media channels are taken.

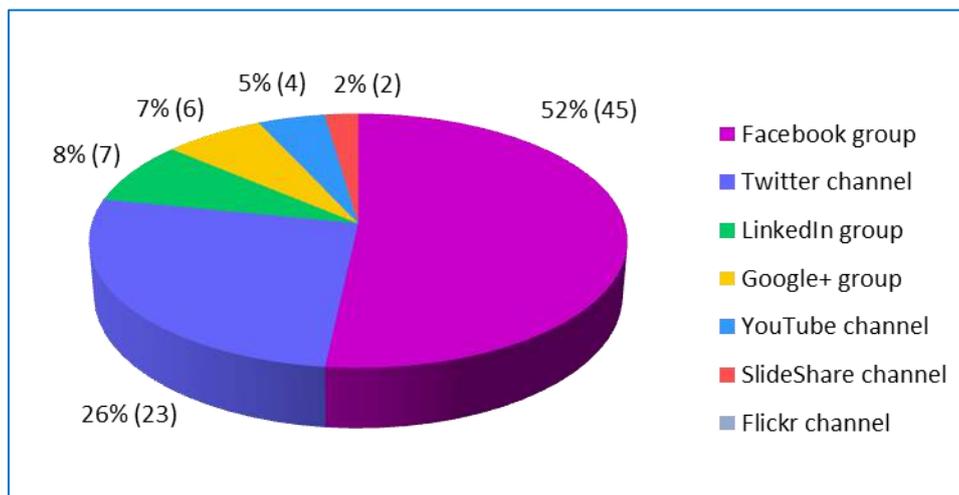


Figure 3: Popularity of project social media channels by external users

Go-Lab publishes its contents in the social media channels several times a week announcing upcoming events and publishing pictures and impressions from past events. Currently, project Facebook page counts 10 posts (on this page only main information is published, e.g., partner presentations and online lab demos), Facebook group – 69 posts, Google+ group – 46 posts, LinkedIn group – 7 posts, YouTube channel – 14 shared videos (no own uploads), SlideShare channel – 1 presentation, Flickr channel – 4 albums (48 pictures)⁹. The content is contributed by the project partners. In the Facebook group, one discussion was started by a project external member. Participant involvement is expected to increase with the beginning of Go-Lab implementation in pilot schools.

3.1.3 Project newsletter

A quarterly newsletter informs interested stakeholders by e-mail about the latest project achievements, new scenarios, technical developments, new features, upcoming and past workshops and events, as well as cooperation and participation possibilities, new partnerships with projects and organizations, etc. The first project newsletter has been sent at the end of M9. The newsletters are also available for download in the Downloads area of the website (<http://www.go-lab-project.eu/download-material>).

The newsletter registration form is available on the project website: <http://www.go-lab-project.eu/newsletter>. Importantly, this registration form helps to gather information about the stakeholders interested in the project, such as country, business sector, occupation, etc., which can be used to make the newsletter content more target group specific. As of 16th October

⁸ All figures as of 16th October 2013

⁹ All figures as of 16th October 2013

2013, there are 34 project external recipients of this newsletter. Most of the recipients come from Spain (59%), followed by Netherlands (9%), Germany (6%), and Portugal (6%). 59% of the recipients work in Education, Training and Library sector, Science and Research (18%), and Engineering (9%), followed by Information Technology (6%) and Telecommunications (3%).

Figure 4 represents the recipients of the Go-Lab newsletter by country and business sector.

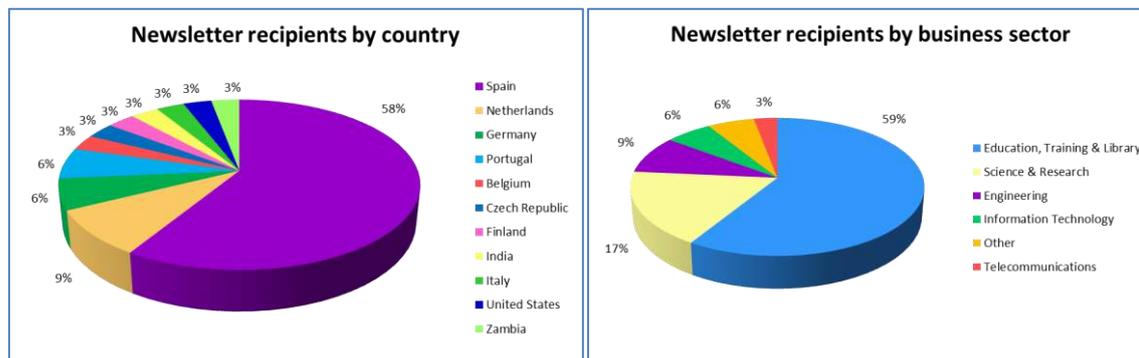


Figure 4: Newsletter recipients by country and business sector

3.1.4 Online press-releases

Besides its main dissemination channels, the Go-Lab project uses also other online dissemination media. In the first project year, the project used the possibility to make announcements in consortium and cooperation partners' newsletters, for example, in the three-monthly electronic newsletter published by CERTH (with about 5,600 recipients) and in the bi-monthly newsletter that is sent by the regional support center for science teachers to schools in the eastern part of the Netherlands (with about 300 recipients). In the beginning of Year 2, announcements in inquiry learning related blogs, online magazines, teacher and researcher communities, discussion forums, etc. are foreseen. Here, examples are the participation in the inquiry-based learning community (<http://www.inquirybasedlearning.org>) and registering and publishing announcements at www.elearningeuropa.info. A list of target group specific online resources will be created.

3.2 Offline Dissemination

The offline dissemination activities of the Go-Lab Project include the organization of small scale focused activities like local workshops and presentations for teachers and large scale dissemination events like summer schools, project presence at international conferences, symposia and workshops, organising round tables and public discussions, publishing papers in conference proceedings, international journals and magazines, as well as international promotion of the project and its results (e.g., in countries outside the EU).

In order to communicate the project's work to the target audiences, various dissemination materials have been created in different languages (see [Section 3.2.4](#)). Further, an official project video and small demo-videos are planned to be produced; some of the workshops will be recorded and made available as additional dissemination and training material. Scientific papers and project deliverables are downloadable on the project website.

3.2.1 Conferences, workshops, and public events

In the first project year, the Go-Lab project was represented at multiple conferences conducting workshops and presenting scientific papers. More than 6,200 stakeholders (an approximate number based on partner estimations) has been addressed by more than 100 conference

workshops, presentations, and project booths¹⁰. Approximately a half of these dissemination activities took place in scope of events organized by cooperation partners (Discover the Cosmos Project, Comenius/Grundtvig Programme, inGenious coordination body, etc.). The following paragraphs represent dissemination activities conducted by Go-Lab in scope of conferences and fairs, as well as workshops and events organized particularly for the Go-Lab project; Section 3.2.2 provides an overview of activities conducted in cooperation with other projects and initiatives.

In the first project year, the Go-Lab project conducted 40 presentations, organized 6 workshops, round table discussions, and online events, and was represented with a booth at 5 conferences. These activities were conducted in 14 European countries, as well as in Australia, China, and Taiwan, and attracted about 2,900 participants. Go-Lab presentations, demonstrations, and workshops that took place in the first project year can be summarized as follows:

- Multiple conference presentations on Go-Lab topics and keynote speeches mentioning Go-Lab project reaching more than 1,800 stakeholders
- Multiple “hands-on” demonstrations of HYPATIA online lab for about 580 participants
- Two Go-Lab project introductions for Estonian teachers involving about 270 participants
- Go-Lab booth and online labs demonstration at CERN Open Days, where more than 2,000 Go-Lab leaflets were distributed to the visitors
- Five Go-Lab booths at conferences and events
- "European Strategy for Particle Physics" round table discussion in the European Commission with about 50 participants
- Go-Lab Round Table “Supporting Inquiry and Problem Based Learning with Online Labs and STEM Apps” at ICWL2013 conference in Taiwan involving 28 participants
- Go-Lab workshop at the 9th Joint European Summer School on TEL: "Designing and evaluating inquiry-based learning spaces integrating online laboratories" with about 20 participants
- Special Track "Standard on Networked Smart Learning Objects for Online Laboratories: IEEE-SA P1876" at EDUCON conference involving about 30 participants
- Alice Virtual Visit (CERN) for about 45 participants
- Go-Lab webinar for European teachers for 12 participants

Figure 5 represents Go-Lab dissemination activities by type and participants number:

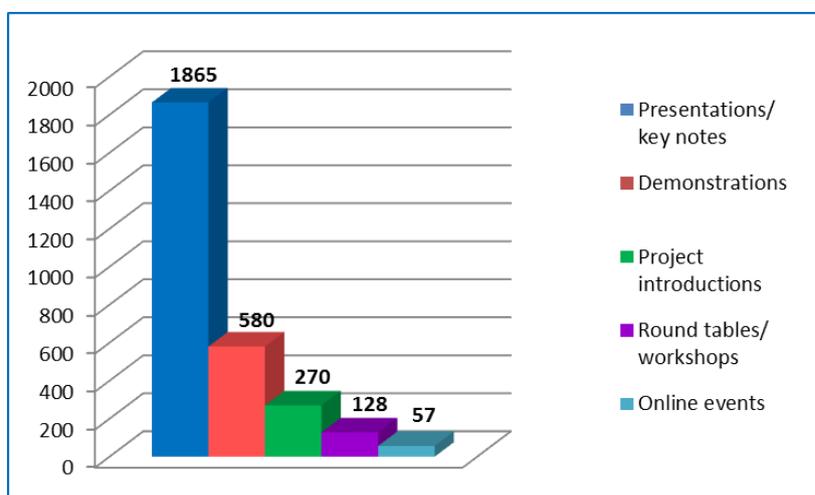


Figure 5: Go-Lab dissemination activities by type and participants number

¹⁰ A detailed list of dissemination activities is provided in Annex A.

In addition, work packages 3, 6, and 7 organized series of events with strong contribution to dissemination of the project:

- WP3: 9 Participatory Design Workshops in Greece, Switzerland, Estonia, United Kingdom, and Cyprus involving 195 teachers and 43 students
- WP6: 25 Visionary Workshops in 9 countries (Austria, Cyprus, Germany, Estonia, Spain, France, Greece, Netherlands, Portugal) with 490 participants
- WP7: Two Summer Schools "Best Practices in Inquiry-Based Science Education" involving 19 participants and "Go-Lab: Global Online Science Labs for Inquiry Learning at School" involving 29 participants in Greece

These events are reported in the deliverables of the respective work packages. Impressions from the events and pictures that have been taken are published in the project blog and social media channels (e.g., [Go-Lab Summer School 2013: Impressions](#)).

3.2.2 Synergy actions with external stakeholders

The Go-Lab project aims at cooperating with projects, organizations and associations active in the fields of STEM education, online labs, inquiry-based learning, Technology Enhanced Learning (TEL), as well as teacher professional development and training. The goals of this cooperation are:

- Dissemination of the project and its results by means of joint outreach events (workshops, presentations, exhibitions, etc.) for teachers, scientists and other interested parties, joint community building and teacher support activities (e.g., teacher trainings and public demonstrations), publishing scientific papers and press-releases in online and offline media, as well as mutual promotion in the web.
- Ensuring sustainability of the project results by establishing contacts to associations and networks of online lab providers and users and having contact to school teachers and other educators (e.g., GOLC - Global Online Laboratory Consortium, inGenious - European Coordinating Body in STEM, ECSITE - European Network of Science and Museum, and Scientix - The community of science education in Europe).

In the first project year, multiple Go-Lab presentations and workshops targeting school teachers were organized by Go-Lab in cooperation with cooperation with other initiatives. These can be summarized as follows:

- About 30 teacher trainings, workshops, and presentations in cooperation with Discover the Cosmos project that took place in Portugal and Switzerland involving more than 1,800 participants
- About 20 presentations for scientists and educators in cooperation with Discover the Cosmos project for about 1,270 participants
- Four teacher trainings in cooperation with Comenius/Grundtvig Programme in Greece, Portugal, and Finland reaching about 100 participants
- Three Go-Lab workshops in scope of inGenious events in Spain and France involving about 80 participants

Besides it, Go-Lab introductions for teachers organized in Estonia (see Section 3.2.1) were supported by Estonian Physical Society and Estonian Association of Teachers.

Figure 6 represents Go-Lab dissemination activities organized in cooperation with other projects (by type and participants number):

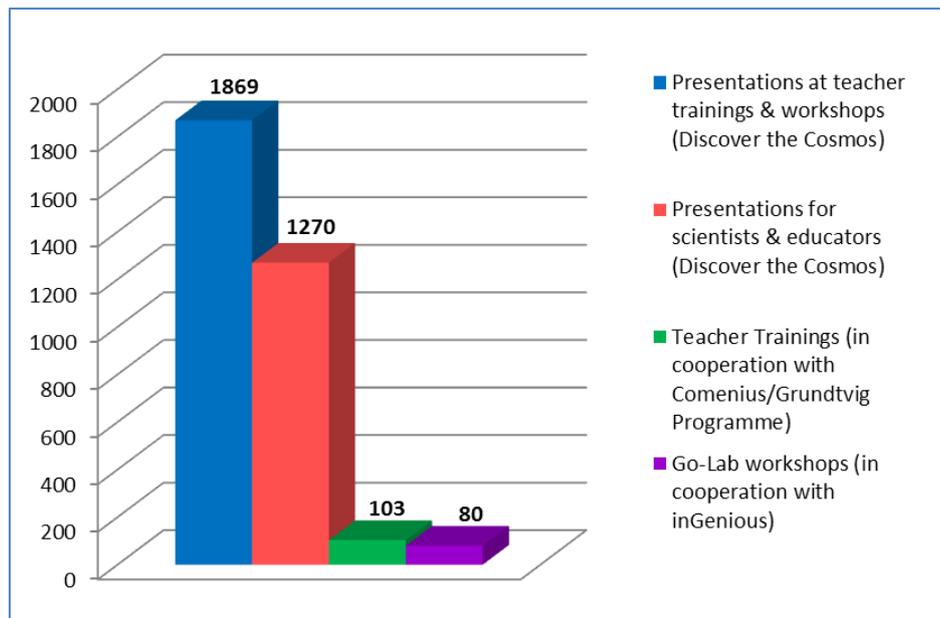


Figure 6: Go-Lab dissemination activities in cooperation with other projects

In the second project year, WP9 (together with WP6) plans establishing contacts to other networks and associations. Ministries of Education in Austria, Belgium, Cyprus, Greece, Portugal, Spain, and Switzerland, will be contacted in order to get support for the dissemination and implementation of the project. Local communities will be also involved. These activities will be conducted and reported by the WP7.

3.2.3 Publications in journals and conference proceedings

As a research project, Go-Lab seeks to have a significant impact on international research in the areas of technology enhanced and inquiry-based learning, as well as STEM and school learning in general. In the first project year, Go-Lab published eight scientific papers in conference proceedings (six full papers and two short papers), one paper in the Science Journal (Association for the Advancement of Science, Washington), as well as one PhD thesis (related to the Go-Lab Portal technical implementation):

- Bogdanov, E.; Advisors: Gillet, D.; Salzmann, C.: Widgets and Spaces: Personal & Contextual Portability and Plasticity with OpenSocial. In: EPFL, 2013
- De Jong, T.; Linn, M. C.; Zacharia, Z. C.: Physical and Virtual Laboratories in Science and Engineering Education. In: Science 19 April 2013: Vol. 340 no. 6130, p. 305-308. Publisher: American Association for the Advancement of Science, Washington, 2013.
- Gillet, D.: Personal Learning Environments as Enablers for Connectivist MOOCs. In: Proceedings of the 12th International Conference on Information Technology Based Higher Education and Training, Antalya, Turkey, October 10-12, 2013.
- Gillet, D.; Bogdanov, E.: Cloud-Savvy Contextual Spaces as Agile Personal Learning Environments or Informal Knowledge Management Solutions. In: Proceedings of the 12th International Conference on Information Technology Based Higher Education and Training, Antalya, Turkey, October 10-12, 2013.
- Gillet, D.; de Jong, T.; Sotiriou, S.; Salzmann, C.: Personalised Learning Spaces and Federated Online Labs for STEM Education at School: Supporting Teacher Communities and Inquiry Learning. In: Proceedings of the 4th IEEE Global Engineering Education Conference (EDUCON), Berlin, Germany, March 13-15, 2013.
- Govaerts, S.; Cao, Y.; Vozniuk, A.; Holzer, A.; Garbi, C.; Zutin, D.; San Cristóbal Ruiz, E.; Bollen, L.; Manske, S.; Faltin, N.; Salzmann, C.: Towards an Online Lab Portal for

- Inquiry-based STEM Learning at School. In: Proceedings of the 12th International Conference on Web-based Learning (ICWL 2013), Kenting, Taiwan, October 6-9, 2013.
- Li, N.; Gillet, D.: Identifying Influential Scholars in Academic Social Media Platforms. In: Proceeding of the International Conference on Advances in Social Networks Analysis and Mining (ASONAM), Niagara Falls, Canada, August 25-28, 2013.
 - Salzmann, C.; Gillet, D.: Smart device paradigm Standardization for Online Labs. In: Proceeding of the 4th IEEE Global Engineering Education Conference (EDUCON), Berlin, Germany, March 13-15, 2013.
 - Sancristobal, E.; Orduña, P.; Tawfik, M.; García, F.; Dziabenko, O.; López-de-Ipiña, D.; Salzmann, C.; Gillet, D.; García-Zubia, J.; Martínez-Mediano, M.; Díaz, G.; Castro, M.: Widget and Smart Devices. A different approach for online learning scenarios. In: Proceedings of the 4th IEEE Global Engineering Education Conference (EDUCON), Berlin, Germany, March 13-15, 2013.
 - Vozniuk, A.; Govaerts, S.; Gillet, D.: Towards portable learning analytics dashboards. In: Proceeding of the International Conference on Advanced Learning Technologies, Beijing, China, July 15-18, 2013.

A full and updated list of the Go-Lab publications, as well as papers for download, is available on the project website: <http://www.go-lab-project.eu/publications>.

3.2.4 Dissemination Materials

To support the offline promotion activities of the project, WP9 created dissemination materials to be distributed by the consortium members among external stakeholders, e.g., in scope of conferences, workshops, and other events:

- *Go-Lab project leaflet* contains general information about the project, outlining benefits for the teachers, lab owners, and students as the main target groups, and describing selected showcases of online labs (Faulkes Telescopes and Hypatia Online Lab). This leaflet is available in 8 languages: English, German, Spanish, Portuguese, Greek, Estonian, Dutch (new), and French (new).
The English version of the leaflet was provided in the deliverable D9.1 (Attachment A); the leaflets in all eight languages are downloadable on the project website: <http://www.go-lab-project.eu/download-material>. 1,000 copies of the leaflet (in English) were printed and distributed to the project partners; other versions will be printed in quantity requested by the partners and distributed at the beginning of the second project year.
- *Go-Lab project business card* is a small card providing project information in several bullet points and the link to the website. (Updated, see [Annex B](#)) 1,000 copies were printed and distributed to the project partners; more exemplars will be printed on request of the partners.
- *Go-Lab roll-ups* are available in two design variants that can be used to present the project on conferences and exhibitions. (Updated, see [Annex B](#)) In the first project year, one roll-up was produced; more roll-ups can be produced in the second project year.
- *Workshop Flyer template* is provided to allow easy and fast creation of flyers promoting particular workshops organized by the project consortium members. This template contains several design variants for the cover side and a standard reverse side with a field to enter content. The content is contributed by the consortium partners and is quickly added to the flyer by IMC; after the flyer is finalized, it can be printed by the consortium partners. (See D9.1, Attachment B: sample flyers)
- Besides print materials, *pens with URL-print and small 3D-puzzles with logo-print on the box* as give-aways for conferences and fairs will be available in December 2013.

During the project time, further materials, such as target group specific leaflets containing information about the project and cooperation possibilities, as well as flyers for the Go-Lab Portal and showcases of online labs will be created.

3.3 Key Performance Indicators

This section describes Key Performance Indicators (KPIs), which are used to measure the efficiency of the project dissemination activities in order to keep overview of the current status and to define (corrective) activities for the future periods. The evaluation is conducted to the end of each project year starting with the Year 1.

3.3.1 Online Dissemination

The following KPIs describe the project presence in the web and the usage degree of the project social media:

K1.1: Project website unique visitors

The reach of the project website is measured based on the unique visitor number. The DoW defines minimum numbers of 100, 3,000, 5,000, and 7,500 unique visitors for each project year respectively. The KPI is measured with Google Analytics.

K1.2: Links to the Go-Lab website

This KPI provides the number of online resources, in which the link to the Go-Lab project website is placed. The KPI is measured using alexa.com.

K1.3: Project audience

This KPI provides the number of recipients of project announcements and includes number of newsletter registrations on the project website, number of social media group members on Facebook, Google+, and LinkedIn, and followers on Twitter, YouTube, SlideShare, and Flickr (all numbers excluding project partners).

K1.4: Project Engagement

This criterion describes the own use of the social media providing the number of resources uploaded and shared on the content sharing platforms, as well as the number of discussions started by the project in groups.

The KPI includes number of discussions started by the project in Facebook, Google+, and LinkedIn groups, number of posts on the Facebook page, number of tweets and retweets made by the project on Twitter, number of videos uploaded and added to the playlist on YouTube, number of presentations uploaded to SlideShare, and number of albums uploaded to Flickr.

K1.5: Audience Engagement

This KPI describes users' activity and provides the number of discussions, comments, likes, and shares for the project website and each social media channel.

The KPI includes number of discussions started by external stakeholders in Facebook, Google+, and LinkedIn groups, number of likes of the Facebook page, number of "retweet" and "favorite" actions on Twitter, number of shares of the website content (via e-mail and social media), and number of likes, comments, and shares of the content posted on YouTube, SlideShare, and Flickr.

Table 1 represents five KPIs defined for the measurement of online dissemination efficiency. The table provides planned values for each project year (beginning with the Year 2) and achieved values for the Year 1. For each KPI, the first row provides a planned value for a period (also marked with cursive), and the second row – the actually reached value.

Table 1: KPIs measuring online dissemination efficiency

Nr.	KPI	Target source	Year 1	Year 2	Year 3	Year 4
K1.1	Project website unique visitors	DoW	100 <i>per year</i>	3,000 <i>per year</i>	5,000 <i>per year</i>	7,500 <i>per year</i>
			1,460	-	-	-
K1.2	Links to the Go-Lab website	Own target setting; +5% to previous year	-	21 <i>per year</i>	22 <i>per year</i>	23 <i>per year</i>
			32	-	-	-
K1.3	Project audience	Own target setting; +5% to p.y., -10% drop off	-	127 <i>per year</i> (236 cum.)	133 <i>per year</i> (345 cum.)	140 <i>per year</i> (450 cum.)
			121	-	-	-
K1.4	Project Engagement	Own target setting; +2% to previous year	-	481 <i>per year</i>	491 <i>per year</i>	501 <i>per year</i>
			236	-	-	-
K1.5	Audience Engagement	Own target setting; av. 2 actions/ new member	-	254 <i>per year</i>	266 <i>per year</i>	280 <i>per year</i>
			243	-	-	-

Estimated planned values are calculated as follows:

K1.1: According to DoW.

K1.2: Achieved value Year 1 = 32; 32 – 19 (consortium partners' websites) – 3 (project social media) = 10 links in 6 months. Thus, realistic estimation for a year is 20 links. Estimation for each following year includes 5% increase compared to previous year (own target setting).

K1.3: Achieved value Year 1 = 121; Estimation for each following year includes 5% increase compared to previous year (own target setting); 10% drop off rate is considered. Thus, planned value for each following year can be calculated as follows:

$$K1.3(N) = K1.3(N-1) * 1,05;$$

$$K1.3(N, \text{cumulative}) = K1.3(N) + K1.3(N-1, \text{cumulative}) * 0,9.$$

Figure 7 represents expected audience growth in the coming project years:

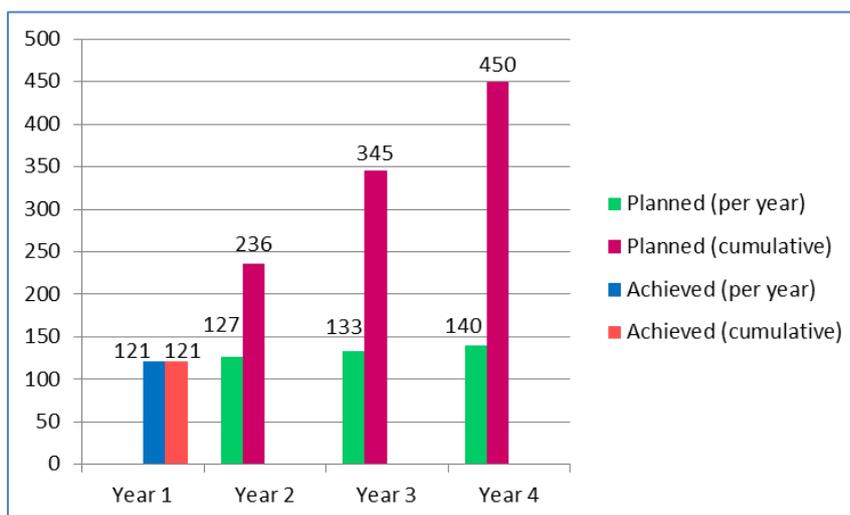


Figure 7: Expected grows of the project audience (number of members)

K1.4: Achieved value Year 1 = 236; this value has been reached in 6 months. Thus, realistic estimated value for a year is $236 \times 2 = 472$. Estimation for each following year includes 2% increase compared to previous year (own target setting).

K1.5: Achieved value Year 1 = 243 actions; this value has been reached with audience = 121 (see K1.3). Thus, average activity per member is $243/121 = 2$ (actions per member). This value is valid for new community members, whereas those members being in an online community for some time are usually not as active. Thus, a minimum value of the audience engagement for each following year is $K1.5(N) = K1.3(N) \times 2$.

3.3.2 Offline Dissemination

The following KPIs describe offline dissemination activities of the project:

K2.1: Project Events

This KPI provides the number of events conducted by the Go-Lab project (e.g., presentations, workshops, round tables, etc.) and the number of involved participants. This KPI does not include events organized by WP3 (Participatory Design workshops), WP6 (Visionary Workshops), and WP7 (Summer Schools).

K2.2: Cooperation Events

This KPI provides the number of events organized in cooperation with other projects and initiatives (such as Go-Lab presentations at teacher trainings conducted by other projects) and number of participants, who have been involved in these events. This KPI does not consider Go-Lab workshops and other events devoted exclusively to Go-Lab, as they refer to the K2.1.

K2.3: Publication Number

This KPI provides the number of publications, including publications in conference proceedings, (online) journals and magazines, books, as well as dissertations and thesis on Go-Lab. The DoW defines the goal of 10, 25, 35, and 45 publications in each project year respectively.

Table 2: KPIs measuring offline dissemination efficiency

Nr.	KPI	Target source	Year 1	Year 2	Year 3	Year 4
K2.1	Project Events	<i>Own target setting; constant</i>	<i>Events/ Participants</i>	51/ 2,900	51/ 2,900	51/ 2,900
			51/ 2,900	-	-	-
K2.2	Cooperation Events	<i>Own target setting; constant</i>	<i>Events/ Participants</i>	61/ 3,322	61/ 3,322	61/ 3,322
			61/ 3,322	-	-	-
K2.3	Publication Number	<i>DoW</i>	<i>10 per year</i>	<i>25 per year</i>	<i>35 per year</i>	<i>45 per year</i>
			10	-	-	-

Estimated planned values are calculated as follows:

K2.1: Own target setting: at least the same results as in the first project year have to be reached (any growth can hardly be planned, as the project has already reached very high numbers).

K2.2: Own target setting: at least the same results as in the first project year have to be reached (any growth can hardly be planned, as the project has already reached very high numbers).

K2.3: According to DoW.

4 Summary and Year 2 Planning

The work of WP9 in the first project year was focused on the elaboration of dissemination strategy, on the development of an infrastructure to conduct online dissemination activities and on the creation of the offline dissemination materials to promote Go-Lab during various presence events like conferences and workshops. The project website was developed representing the project and consortium, providing an overview of available online labs and workshops offered for the teachers. Further, the website provides communication tools like contact and newsletter registration forms, as well as integrated social media allowing to share content and to contact the consortium members. Social media groups on Facebook, Google+ and LinkedIn as well as social media channels like Twitter, YouTube, SlideShare and Flickr offer the possibility to stay in contact with multiple stakeholders and attract attention to the project.

Multiple events (conference presentations, workshops, round table discussions, booths, and summer schools) were organised to address teacher and researcher communities. The Go-Lab project has been promoted in 16 European countries and in Australia, China, and Taiwan, targeting both representatives from European communities and stakeholders around the world. In sum, more than 100 presentations and online lab demonstrations have been conducted; two summer schools and 41 workshops and round tables have been organised. By means of these activities a total number of about 6,200 stakeholders has been reached. In addition, 5,900 stakeholders received information about the Go-Lab project per e-mail (newsletters of project partners and external networks). Finally, ten scientific publications were published.

For the second project year Go-Lab is planning participation in multiple conferences (publishing and presentation of scientific papers, organisation of workshops and round table discussions), for example, [FIE](#), [REV](#), [EC-TEL](#), [EDULEARN](#), [MCCSIS](#), [EDUCON](#), [IMCL](#), [EMINENT](#), [COSPAR](#), and [Online Educa](#). Further, the project will organize a Summer School "Go-Lab: Global Online Science Labs for Inquiry Learning at School" in Greece (July 2014) and participate in Summer Schools of other projects, e.g., [ESERA Summer School 2014](#) and inGenious Summer School. The project will also be represented at ATLAS outreach meetings, CERN National Teacher Programmes, eTwinning and inGenious project events, as well as Discover the Cosmos and Comenius/Grundtvig teacher trainings. Series of Visionary Workshops and Participatory Design workshops will be organized.

WP9 will focus on increasing general awareness about the project, its approach and results, and on building of target group specific communities of teachers, online lab and educational providers, associations and networks, as well as political stakeholders. The focus will be set on, firstly, the attraction of teachers by means of teacher workshops, trainings and summer schools organised by the consortium, and keeping in touch with these teachers providing support and materials; secondly, contacting networks of teachers, online lab providers, scientists, and museums in order to build long term cooperation and use them as multipliers of the project results; finally, the organisation of public demonstrations of the Go-Lab online labs to provide hands-on experience of using online labs to the stakeholders.

The Go-Lab project will concentrate its efforts also on attracting organisational stakeholders like online lab owners, research institutions, and educational providers as contributors able to support and promote the project, as well as on involving educational ministries and other political decision makers into the process of Go-Lab implementation in European school education and mainstreaming of the project approach. Communities of stakeholders will be supported by means of available social media channels and personal contacts, and by means of the Go-Lab Portal, which will be used as a central communication and collaboration platform of the project.

Annex A: Overview of dissemination activities (Year 1)

Activity	Type	Date	Country	Nr. of participants	Link
Go-Lab workshops, round table discussions, and online events					
Go-Lab workshop at the 9th Joint European Summer School on Technology Enhanced Learning: "Designing and evaluating inquiry-based learning spaces integrating online laboratories", Cyprus	Workshop	28.05.13	Cyprus	20	http://www.prolearn-academy.org/Events/summer-school-2013
Special Track "Standard on Networked Smart Learning Objects for Online Laboratories: IEEE-SA P1876" at EDUCON conference, Germany	Workshop	14.03.13	Germany	30	http://www.educon-conference.org/educon2013/
"European Strategy for Particle Physics" round table discussion in the European Commission	Round table	06.06.13	Belgium	50	http://home.web.cern.ch/images/2013/06/strategy-update
Go-Lab Round Table at ICWL2013 conference: Supporting Inquiry and Problem Based Learning with Online Labs and STEM Apps	Round table	09.10.13	Taiwan	28	http://icwl2013.tajen.edu.tw/RoundTable.html
Go-Lab webinar with EU teachers	Online event	23.04.13	Online	12	-
ALICE First Virtual Visit	Online event	28.05.13	Online	45	http://alicematters.web.cern.ch/?q=ALICE_virtual_visit
Go-Lab workshop in inGenious workshop, Tours, France	Workshop/ inGenious	02.03.13	France	25	Link (Click)
Go-Lab workshop in inGenious Academy, Madrid, Spain	Workshop/ inGenious	09.03.13	Spain	25	Link (Click)
Go-Lab workshop at inGenious Summer School, Barcelona, Spain	Workshop/ inGenious	24.08.13	Spain	30	Link (Click)
Go-Lab presentations, online lab demonstrations, and booths					
Go-Lab "hands-on" HYPATIA demonstration at the International Fair of Thessaloniki CERN Pavillion	Demonstration	13-14.9.13	Greece	300	-
Go-Lab "hands-on" HYPATIA demonstration	Demonstration	02.09.13	Greece	30	-

Go-Lab "hands-on" HYPATIA demonstration at the Sofia science festival	Demonstration	10.05.13	Greece	250	-
Go-Lab kiosk at CERN Open Days 2013	Demonstration	28.-29.09.13	Switzerland	>2,000 flyers	http://opendays2013.web.cern.ch/
Keynote Speech at REV conference, Australia	Keynote speech	06.02.13	Australia	100	http://www.rev-conference.org/REV2013/program.htm
Keynote Speech at Exp.at'13 Conference: "Online Engineering and Business Processes", Portugal	Keynote speech	19.09.13	Portugal	60	http://paginas.fe.up.pt/~expat/
Presentation of the paper "Towards portable learning analytics dashboards" at ICALT conference, China	Paper presentation	15.07.13	China	20	http://www.ask4research.info/icalt/2013/files/ICALT2013%20Final%20Program1.pdf
Presentation of the paper "Personalised Learning Spaces and Federated Online Labs for STEM Education at School: Supporting Teacher Communities and Inquiry Learning" at EDUCON conference, Germany	Paper presentation	14.03.13	Germany	30	http://www.educon-conference.org/educon2013/
Presentation of the paper "Smart device paradigm Standardization for Online Labs" at EDUCON conference, Germany	Paper presentation	15.03.13	Germany	30	http://www.educon-conference.org/educon2013/
Presentation of the paper "Widget and Smart Devices. A Different Approach for Online Learning Scenarios" at EDUCON conference, Germany	Paper presentation	15.03.13	Germany	20	https://grasp.epfl.ch/#item=asset_7735
Presentation of the paper "Towards an Online Lab Portal for Inquiry-based STEM Learning at School" at ICWL conference, Taiwan	Paper presentation	07.10.13	Taiwan	19	http://icwl2013.tajen.edu.tw/files/Agenda0902.pdf
Presentation of the paper "Cloud-Savvy Contextual Spaces as Agile Personal Learning Environments or Informal Knowledge Management Solutions" at ITHE conference, Turkey	Paper presentation	11.10.13	Turkey	12	http://www.ithet.boun.edu.tr
Presentation of the paper "Personal Learning Environments as Enablers for Connectivist MOOCs" at ITHET conference, Turkey	Paper presentation	11.10.13	Turkey	12	http://www.ithet.boun.edu.tr
Go-Lab presentation at the International Summer School on Educational Technology 2013, Beijing Normal University, China	Presentation	19.-23.7.2013	China	40	http://ksei.bnu.edu.cn/SummerSchool2013/Introduction.html
Go-Lab project introduction for Estonian teachers, Estonia	Presentation	21.03.13	Estonia	150	-

Go-Lab project introduction for Estonian physics teachers, students, and university staff, Estonia	Presentation	01.07.13	Estonia	120	-
"Bringing the Future to the Hands of Students" at European Week of Astronomy and Space Science 2013, Turku, Finland	Presentation	07.08.13	Finland	45	http://users.edu.turku.fi/mihanski/EWASS/
Astronet 2 (Go-lab was presented as a best practice example on how astronomy can contribute for science education), Heidelberg, Germany	Presentation	17.06.13	Germany	50	http://www.eso.org/public/events/special-evt/astronet2013/
Go-Lab presentation at the Universe Awareness Meeting, Heidelberg, Germany	Presentation	September 2013	Germany	50	http://www.unawe.org/events/workshop2013/
Go-lab presentation at the ATLAS outreach meeting	Presentation	12.02.13	Greece	60	-
Go-lab presentation at the 5th IPPOG meeting, Greece	Presentation	03.04.13	Greece	30	-
Go-lab presentation at the ATLAS outreach meeting	Presentation	18.06.13	Greece	60	-
Go-lab presentation at International Conference on New frontiers of Physics, Greece	Presentation	02.09.13	Greece	120	http://indico.cern.ch/conferenceDisplay.py?confid=198153
Go-lab presentation at the ATLAS outreach meeting	Presentation	08.10.13	Greece	60	-
ISE Visionary workshop at the University of Dublin	Presentation	06.11.12	Ireland	10	
Go-Lab presentation at Linq 2013 Conference	Presentation	17.05.13	Italy	25	http://www.learning-innovations.eu/2013/conference
Presentation of Go-Lab to a network of innovative schools	Presentation	February 2013	Greece	15	-
Presentation of the project to the representatives of Confindustria (confederation of Italian industry)	Presentation	February 2013	Italy	1	-
Go-Lab presentation at the World of Clusters, Padova	Presentation	September 2013	Italy	20	http://web.oapd.inaf.it/clusters/index.html
Conference presentation "Innovatie platform onderwijs Nederland", Netherlands	Presentation	11.04.13	Netherlands	6	http://www.ipon.nl/
Communicating Astronomy with the public	Presentation	September 2013	Poland	50	http://www.communicatingastronomy.org/cap2013/
Presentation at "Projects" at FASCINIO 2012 - Science Fair, Cascais, Portugal	Presentation	15.12.12	Portugal	100	http://nuclio.org/blog/fascinio-2012/
"Pesquisa de Asteroides Leva Investigação Científica às Escolas Portuguesas" at I Encontro Internacional da Casa das Ciências, Lisbon, Portugal	Presentation	22.03.13	Portugal	100	http://www.casadasciencias.org/iencontrointernacional/comunicacoes.html
Presentation at "Projects" at Festa das Estrelas - End of the school year conference by NUCLIO, Cascais,	Presentation	29.06.13	Portugal	100	http://nuclio.org/blog/festa-e-noite-das-estrelas-2013/

Portugal					
Go-Lab presentation at National Scouts Meeting, Lisbon, Portugal	Presentation	09.07.13	Portugal	100	-
"Science Research invades Schools" at The XXIII National Astronomy and Astrophysics Meeting, Lisbon, Portugal	Presentation	19.07.13	Portugal	30	http://enaa2013.oal.ul.pt/programme/
Go-Lab presentation at Green Flag Day, Lisbon, Portugal	Presentation	27.09.13	Portugal	400	http://www.abae.pt/programa/EE/galardao/2013/
"Training teachers for the classroom of tomorrow" at The 9th International Conference: "Education for Sustainable Development", Lisbon, Portugal	Presentation	28.09.13	Portugal	35	http://www.learningteacher.eu/lisbon-saturday-sessions
Go-Lab presentation at the Learning Teacher Network Conference	Presentation	September 2013	Portugal	30	http://www.learningteacher.eu/lisbon-conference-2013
"Building the future of mankind in the classroom" at European Planetary Science Congress - EPSC 2013, London, UK	Presentation	09.08.13	United Kingdom	25	http://www.epsc2013.eu/
Go-Lab Booth at Route 2020 event in Saarbrücken, Germany	Booth & Flyers	03.07.13	Germany	no information	http://www.go-lab-project.eu/news/high-profile-visitors-go-lab-project-booth
Presentation at "Information and Technology Festival 2013" in Kavala, Greece	Booth & Flyers	15.-20.10.13	Greece	no information	http://www.i2fest.gr/
Conference "Twents meesterschap", Netherlands	Booth & Flyers	31.01.13	Netherlands	no information	http://www.utwente.nl/lerarenconferentie/
Conference "Digitale didaktiek", Netherlands	Booth & Flyers	15.05.13	Netherlands	no information	-
From teachers for teachers, Lisbon, Portugal (Presentation for Science on Stage teachers)	Booth & Flyers	10.05.13	Portugal	no information	http://nuclio.org/scienceonstage
Go-Lab presentations in cooperation with other projects and initiatives					
Teacher Training Course COMENIUS/GRUNDTVIG "Astronomy@MyPC", Turku, Finland	Comenius/Grundtvig	08.-12.07.13	Finland	50	http://nuclio.org/comenius/events/astronomymy pc/
Teacher Training Course COMENIUS/GRUNDTVIG "Astronomy@MyBackpack", Volos, Greece	Comenius/Grundtvig	29.07.-02.08.13	Greece	15	http://nuclio.org/comenius/events/astronomymy backpack/
Teacher Training Course COMENIUS/GRUNDTVIG "Astronomy@MyPC", Volos, Greece	Comenius/Grundtvig	29.07.-02.08.13	Greece	20	http://nuclio.org/comenius/events/astronomymy pc-2/

Teacher Training Course COMENIUS/GRUNDTVIG "Universe Quest", Cascais, Portugal	Comenius/ Grundtvig	29.10.-02.11.12	Portugal	18	http://nuclio.org/comenius/events/universe-quest-building-games-for-education/
"Astronomy with a Crescent Moon" - Public Outreach Session, Cascais, Portugal	Discover the Cosmos	27.10.12	Portugal	20	http://nuclio.org/blog/astronomia-em-crescente-2012-2013/
"Understanding the Universe" - Workshop for Schools, Cascais, Portugal	Discover the Cosmos	04.11.12	Portugal	50	http://nuclio.org/blog/conhecer-o-universo-20122013/
"Awesome Saturdays" - Activities for Children, Cascais, Portugal	Discover the Cosmos	05.11.12	Portugal	15	http://nuclio.org/blog/sabados-divertidos-unawe-portugal-20122013/
"Astronomy with a Crescent Moon" - Public Outreach Session, Cascais, Portugal	Discover the Cosmos	24.11.12	Portugal	20	http://nuclio.org/blog/astronomia-em-crescente-2012-2013/
Presentation for school teachers: Escola Secundária Alfredo da Silva, Portugal	Discover the Cosmos	27.11.12	Portugal	100	-
Presentation for school teachers: Escola do Alto dos Moinhos, Lisboa, Portugal	Discover the Cosmos	03.12.12	Portugal	100	-
Teacher Training Course "Turn off the lights and turn on the stars", Lisbon, Portugal	Discover the Cosmos	10.12.12	Portugal	25	http://nuclio.org/blog/apagar-as-luzes-e-acender-as-estrelas/
Presentation for school teachers: Escola Matias Aires	Discover the Cosmos	11.12.12	Portugal	100	-
Science Café, Cascais, Portugal	Discover the Cosmos	15.12.12	Portugal	40	http://nuclio.org/blog/astronomia-em-crescente-2012-2013/
"Awesome Saturdays" - Activities for Children, Cascais, Portugal	Discover the Cosmos	06.01.13	Portugal	15	http://nuclio.org/blog/sabados-divertidos-unawe-portugal-20122013/
"Astronomy with a Crescent Moon" - Public Outreach Session, Cascais, Portugal	Discover the Cosmos	19.01.13	Portugal	20	http://nuclio.org/blog/astronomia-em-crescente-2012-2013/
Presentation for school teachers: Seminário AEB, Águeda, Portugal	Discover the Cosmos	25.01.13	Portugal	100	http://www.colegiodosplatanos.com/index.php?id1=14&id2=4&id3=14
"Awesome Saturdays" - Activities for Children, Cascais, Portugal	Discover the Cosmos	26.01.13	Portugal	15	http://nuclio.org/blog/sabados-divertidos-unawe-portugal-20122013/
"Astronomy with a Crescent Moon" - Public Outreach Session, Cascais, Portugal	Discover the Cosmos	16.02.13	Portugal	20	http://nuclio.org/blog/astronomia-em-crescente-2012-2013/
"Understanding the Universe" - Workshop for Schools, Cascais, Portugal	Discover the Cosmos	21.02.13	Portugal	50	http://nuclio.org/blog/conhecer-o-universo-20122013/

TEDx Kids at Central Tejo, Lisbon, Portugal (TED talk to primary school kids and teachers)	Discover the Cosmos	25.02.13	Portugal	500	http://www.ted.com/tedx/events/7041
Presentation for school teachers: Escola Terrugem	Discover the Cosmos	04.03.13	Portugal	100	-
Presentation for school teachers: Escola Sec. Mães D'Água, Lisboa, Portugal	Discover the Cosmos	13.03.13	Portugal	100	-
Presentation for school teachers: EBS Sobral de Monte Agraço, Portugal	Discover the Cosmos	14.03.13	Portugal	100	-
"A Escola do Futuro" at I Encontro Internacional da Casa das Ciências, Lisbon, Portugal	Discover the Cosmos	22.03.13	Portugal	45	http://www.casadasciencias.org/iencontrointernacional/comunicacoes.html
"Universe Quest" at I Encontro Internacional da Casa das Ciências, Lisbon, Portugal	Discover the Cosmos	22.03.13	Portugal	25	http://www.casadasciencias.org/iencontrointernacional/comunicacoes.html
Science Café, Loulé Portugal	Discover the Cosmos	25.03.13	Portugal	40	-
PIN-ED (Presentation for medical doctors working with special needs kids)	Discover the Cosmos	26.03.13	Portugal	10	-
Presentation for school teachers: Escolas Doutor Júlio Martins, Chaves, Portugal	Discover the Cosmos	02.04.13	Portugal	100	-
"Awesome Saturdays" - Activities for Children, Cascais, Portugal	Discover the Cosmos	13.04.13	Portugal	15	http://nuclio.org/blog/sabados-divertidos-unaweportugal-20122013/
Science Café at Eco-Schools Cascais, Cascais, Portugal	Discover the Cosmos	17.04.13	Portugal	150	
"Understanding the Universe" - Workshop for Schools, Cascais, Portugal	Discover the Cosmos	18.04.13	Portugal	50	http://nuclio.org/blog/conhecer-o-universo-20122013/
Presentation for school teachers: Escola EB 2,3 da Galiza, Cascais, Portugal	Discover the Cosmos	19.04.13	Portugal	100	http://nuclio.org/blog/dark-skies-rangers-e-gam-em-cascais/
Science Café, Cascais, Portugal	Discover the Cosmos	20.04.13	Portugal	40	http://nuclio.org/blog/astronomia-em-crescente-2012-2013/
Presentation for school teachers: Colégio Integrado Monte Maior	Discover the Cosmos	14.05.13	Portugal	100	-
"Astronomy with a Crescent Moon" - Public Outreach Session, Cascais, Portugal	Discover the Cosmos	18.05.13	Portugal	20	http://nuclio.org/blog/astronomia-em-crescente-2012-2013/
Presentation for school teachers: Escola da Malveira, Sintra, Portugal	Discover the Cosmos	21.05.13	Portugal	100	-

Science Café, Aveiro Portugal	Discover the Cosmos	25.05.13	Portugal	40	-
"Afternoon at the garden" - activities for children, Cascais, Portugal	Discover the Cosmos	26.05.13	Portugal	100	-
Science Café, Cascais, Portugal	Discover the Cosmos	29.06.13	Portugal	40	http://nuclio.org/blog/astronomia-em-crescente-2012-2013/
"Understanding the Universe" - Workshop for Schools, Cascais, Portugal	Discover the Cosmos	02.07.13	Portugal	50	http://nuclio.org/blog/conhecer-o-universo-20122013/
Science Café, Coimbra Portugal	Discover the Cosmos	06.08.13	Portugal	40	-
"Understanding the Universe" - Workshop for Schools, Cascais, Portugal	Discover the Cosmos	11.08.13	Portugal	50	http://nuclio.org/blog/conhecer-o-universo-20122013/
Science Café, Vila-Nova de Gaia Portugal	Discover the Cosmos	03.09.13	Portugal	40	-
Teacher Training Course "Light Pollution", Lisbon, Portugal	Discover the Cosmos	14.09.13	Portugal	15	http://nuclio.org/blog/poluicao-luminosa-eficiencia-energetica-e-preservacao-do-ambiente/
"Understanding the Universe" - Workshop for Schools, Cascais, Portugal	Discover the Cosmos	01.10.13	Portugal	50	http://nuclio.org/blog/conhecer-o-universo-20122013/
Teacher Training Course "Hands-On Astronomy", Chaves, Portugal	Discover the Cosmos	01.-03.02.13	Portugal	22	http://nuclio.org/events/astronomia-hands-on-descobrir-o-cosmos-chaves/
Teacher Training Course "Hands-On Astronomy", Caldas da Rainha, Portugal	Discover the Cosmos	01.-03.07.13	Portugal	20	http://nuclio.org/events/astronomia-hands-on-descobrir-o-cosmos-caldas-da-rainha/
"Universe Quest 2013" - Workshop for Teachers and Students, Cascais, Portugal	Discover the Cosmos	02.02.13, 23.02.13, 16.03.13, 13.04.13	Portugal	10	http://nuclio.org/blog/universe-quest-2013/
Teacher Training Course "Hands-On Astronomy", Vila-Nova de Gaia, Portugal	Discover the Cosmos	02.03.13, 09.03.13, 16.03.13	Portugal	70	http://nuclio.org/events/astronomia-hands-on-descobrir-o-cosmos-gaia-2013-03-02/
Teacher Training Course "Hands-On Astronomy", Vila-Nova de Gaia, Portugal	Discover the Cosmos	03.03.13, 10.03.13, 17.03.13	Portugal	30	http://nuclio.org/events/astronomia-hands-on-descobrir-o-cosmos-gaia-2013-03-02/

Teacher Training Course "Invisible Universe", Aveiro, Portugal	Discover the Cosmos	04.05.13, 11.05.13, 25.05.13	Portugal	30	http://nuclio.org/blog/o-universo-invisivel/
Teacher Training Course "Hands-On Astronomy", Coimbra, Portugal	Discover the Cosmos	06.04.13, 25.05.13, 08.06.13	Portugal	25	http://nuclio.org/events/astronomia-hands-on-descobrir-o-cosmos-coimbra-2013-05-04/
Presentation for school teachers: Colégio da Bafureira, Cascais, Portugal	Discover the Cosmos	15.01.13, 19.02.13	Portugal	100	-
Teacher Training Course "Hands-On Astronomy", Quarteira, Portugal	Discover the Cosmos	24.-26.03.13	Portugal	25	http://nuclio.org/events/astronomia-hands-on-descobrir-o-cosmos-algarve/
Teacher Training Course "Hands-On Astronomy", Cascais, Portugal	Discover the Cosmos	27.10.12, 15.12.12, 19.01.13, 16.02.13, 13.04.13, 20.04.13, 18.05.13, 15.06.13	Portugal	15	http://nuclio.org/events/astronomia-hands-on-descobrir-o-cosmos-2012-10-20/
From teachers to teachers (Science on Stage - Portugal)	Discover the Cosmos	October 2013	Portugal	25	http://www.science-on-stage.de/page/display/en/2/10/0/lehrerfortbildung
Greek Teachers Programme "Bringing CERN to the School Classroom"	Discover the Cosmos	27.09.13	Switzerland	33	https://indico.cern.ch/conferenceDisplay.py?confid=274209
Norwegian Teachers Programme "European Education Projects"	Discover the Cosmos	04.10.13	Switzerland	24	https://indico.cern.ch/conferenceDisplay.py?confid=273837

**Annex B: Updated print materials (for leaflets and flyers see D9.1, M6)
Project Business Card (double-sided printed, 85x55 mm)**

 <p>GO-LAB GLOBAL ONLINE SCIENCE LABS INQUIRY LEARNING AT SCHOOL</p> <p>www.go-lab-project.eu</p>	<p>The Go-Lab Project opens up remote and virtual science laboratories to support inquiry learning at schools.</p> <p>As a lab owner you may provide web access to your laboratory in the online labs federation.</p> <p>As a teacher you may enrich your classroom activities with appealing demonstrations.</p> <p>As a student you may gain hands-on experience in science by conducting personalized experiments using modern laboratory equipment.</p> <p>European research project in the 7th Framework Programme </p>
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Project Roll-ups (each 85x200 cm)

 <p>GLOBAL ONLINE SCIENCE LABORATORIES FOR INQUIRY LEARNING AT SCHOOL European research project in the 7th Framework Programme</p>  <ul style="list-style-type: none"> Live demonstrations and personalized experiments with online laboratories Access to research data and archives, scientific instruments and tools Exchange of methodologies and best practices in a teacher community  <p>Find more information at our website www.go-lab-project.eu</p>	 <p>GLOBAL ONLINE SCIENCE LABORATORIES FOR INQUIRY LEARNING AT SCHOOL European research project in the 7th Framework Programme</p>  <ul style="list-style-type: none"> Live demonstrations and personalized experiments with online laboratories Access to research data and archives, scientific instruments and tools Exchange of methodologies and best practices in a teacher community  <p>Find more information at our website www.go-lab-project.eu</p>
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