



SOCIETIC
**SOCIety as Infrastructure for E-Science via technology, innovation and
 creativity**

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EXECUTIVE SUMMARY

This document provides the basis of a successful dissemination of the Societic project, and contributes to a comprehensive awareness strategy.

Dissemination is an on-going activity that is carried out with the participation of all project partners, thus it is essential that it is organized around guidelines planned in advance.

In this plan we cover the following key points for dissemination and awareness activities:

- We select widespread models around which guidelines are organised.
- We identify and refine steps for a successful strategy that includes: a key message, target audience and tools/communicating channels.
- We present the existing partner networks to be used for the successful dissemination of the project.
- We set metrics for monitoring the dissemination activities against which we are going to improve our strategy.

It is essential for all communication to define a clear Societic vision and communicate the main message. For Societic the core vision is to link science and public into a partnership where both sides will have real benefits.

On the one hand Societic allows the general public to participate in science, where people who have never been involved in science projects can become active contributors. This is seen as a way to help people understand science processes, but also to provide them with the opportunity to team up with researchers and contribute to urgent research topics which are socially relevant and valuable for the general public. On the other hand Societic allows scientists to benefit from citizen-infrastructures for their research. The large involvement of volunteer citizens in science projects enables scientists to address research issues in ways they could not have thought of without a large number of volunteers who spend their time and effort in the collection and analysis of research data. Societic will offer researchers a technical infrastructure to meet and organise research with an existing and continuously growing number of volunteers.

The Societic project targets six distinct stakeholder groups: the general public, educational institutes, artists, policy makers, the science community, and e-Infrastructure providers. For each of this target groups the requirements, expected benefits, motivators for participation as well as a set of targeted dissemination instruments where elaborated.

All target groups will be addressed over the project website and social media tools. For the general public, dissemination instruments like press releases and cooperation with media, flyers and give-aways as well as the participation at public events will be used. Societic will also intend to involve artists in this communication process. Awareness for citizen science should be raised also via artistic presentations of scientific results. The idea is to take results out of the scientific institutes and laboratories and present it to people where they are – in museums, schools, during exhibitions, on the street etc. The research community will be addressed via more traditional instruments of science dissemination, like scientific conferences, workshops, concertations meetings and published research papers. A first compilation of relevant scientific and public events relevant for Societic is

part of the dissemination plan. In addition the project partners started to create a list of contacts, which contains relevant organizations, communities and projects which will be purposefully used for the acquisition of volunteer scientists, the collection of additional experiments and research ideas, as well as the involvement of further experiences and know-how from citizen science experts for the white book.

This dissemination plan will guide our activities and the planning of the dissemination and awareness strategy of the project has been an important step for the consortium. Based on the continuous monitoring of on-going dissemination activities this dissemination plan will be adapted taking the collected experiences and feedback into account. A summary of the conducted dissemination activities, as well as the results from the monitoring process and elaborated changes to the dissemination plan will be presented in the two upcoming deliverables of workpackage 2 (WP2), D 2.3.1 and D 2.3.2 Annual report of activities (due in month 12 and 24 of the project).

1. INTRODUCTION

Societic has a vision of promoting citizen science amongst the general public, helping people to better understand science by letting them participate in scientific research and experiments. The project will set-up a common forum for cooperation where infrastructure providers and researchers will recruit volunteers from the general public to perform science at home.

The project objectives are to foster interaction and coordination between citizen-science actors, including researchers, resources providers, system administrators, and volunteers from the society, creating common communication tools and workspaces for all of them. The recruitment, engagement and support processes of the project aim at involving not only advanced users but also newcomers in eScience activities exploiting the Societic infrastructure.

The dissemination of capabilities and results of the citizen-science experiments to the scientific community should show that it is possible to make top-level science with contributions from volunteer users and foster the generation of new experimental ideas and the involvement of further research projects.

Success criteria, best practices, feedback and requisites regarding topics like licenses, open-science, data sharing, property rights, certification, incentives, business and sustainability models etc. will be summarized and disseminated to policy makers on a national, European and worldwide level.

The dissemination and awareness activities ensure the involvement of the different stakeholder groups and the visibility needed to reach a large audience with a two-fold goal:

- to attract and motivate the general public to actively contribute to science experiments using the Societic infrastructure.
- to raise awareness of the project's objectives amongst e-Infrastructure providers and researchers so that the project partners could reach out to them, and thus raising the number of available citizen science experiments on the Societic platform.

To reach these aims an effective and efficient dissemination plan has to be implemented. The dissemination plan is implemented mainly in WP2, where dissemination activities will focus on:

- Raising the awareness for the project and attracting interest and sustainable involvement of researchers in citizen science.
- Encouraging communication, collaboration, and network building between researchers and the general public via selected communication channels.
- Establishing close links to other e-Infrastructure projects and science communication projects.
- Contacting with other open-participatory science initiatives.
- Helping to build and develop a community of users and its specific user's requirement catalogue.
- Establishing an effective framework for internal as well as external communication.

Following to the Communicating EU Research guide¹ the dissemination plan will define the following aspects:

- the message of the dissemination activities,
- the target audience,
- the appropriate tools to address the audience,
- the program of dissemination activities,
- the evaluation of the achieved dissemination goals.

2. DISSEMINATION PRINCIPLES

The dissemination activities aim to ensure the maximization of the reach, effectiveness, extensibility, and sustainability of the project outcomes. The activities aim to provide a high visibility of the project in Europe and Brazil, and also support the establishment of the Societic community.

The main issues considered by the dissemination objectives are:

- Reach: reaching the target groups in Europe and Brazil.
- Effectiveness: the dissemination infrastructure provides effective tools and methods for communication
- Extensibility: extent of dissemination continues to grow during and after the completion of the project in terms of both geographical area coverage and the size of the community involved
- Sustainability: making the dissemination infrastructure to function beyond the lifetime of the project

All the communication activities will follow the best practices provided in:

http://cordis.europa.eu/fp7/ict/participating/communication-best-practices_en.html

¹ http://ec.europa.eu/research/science-society/science-communication/index_en.htm

3. DISSEMINATION MODEL

Complex scientific issues are an essential part of modern societies and, if valuing and respecting the citizens' view, a basic understanding of these complex issues should be made possible for all individuals living in these societies. Therefore science communication and outreach activities are an important part of research, supposing that greater access to information will lead to more knowledge about ethical, legal, and social issues and therefore enable individuals and communities to deal properly with these issues when they encounter them and to have sufficient information on which to base their assessments of policy alternatives.

Initial science communication activities broadly followed the deficit model approach. It assumes the broader public as 'deficient' in scientific knowledge and that this deficit must be filled, also to increase the acceptance of science in society.

This initial model was criticized for its too general, paternalistic top-down view on the science – public relationship. And after many years of active attempts to increase public science knowledge, the numbers of scientific literacy seemed to be remarkably stable (Brossard and Lewenstein 2012). Subsequently there is a 'new mood for dialogue' and in many countries, and at the European level, funding schemes and policy documents shifted their keywords from 'public awareness of science' to 'citizen engagement'; from 'communication' to 'dialogue'; from 'science and society' to 'science in society' (Bucchi 2008).

Amongst others, the increasing level of general education among citizens, and the extended access to science information through the internet, fostered more participatory approaches of science communication.

New concepts of public understanding of science have emerged, moving from a "deficit", to models stressing lay-knowledge, public engagement, and public participation in science policy making.

These new models shifted the priority from 'the education of a scientifically illiterate public' to the need and right of the public to participate in the discussion, on the assumption that "lay" people have knowledge and competencies which enhance and complete those of scientists and specialists (ibid 2008).

The science communication and outreach strategy of Societic will follow these participatory approaches of science communication, where the main objective and also message of the project is to form research teams of scientists and volunteers to address urgent research topics together, with valuable benefits for both sides.

4. SOCIETIC – THE MAIN MESSAGE

Societic links science and public

For all members of the consortium the mission of Societic is clear: it supports the link between research and society where both sides will have real benefits from this cooperation.

Message to the general public: Societic will allow you and me to participate in science

Citizen science has emerged recently as a new concept to involve the general public in scientific processes. With the help of the Internet, and powerful, functionally-rich, and affordable processing and communication devices, including mobile ones, people are able to participate in the collection and analysis of large sets of research data in various fields of research, including such diverse fields as earthquake detection, protein docking or classification of astronomical images. With citizen science, researchers and volunteers form scientific teams, which aim to collaboratively find solutions to urgent research topics.

Most citizen science projects also strive to help participants learn about the subjects they are observing and to experience the process by which scientific investigations are conducted. Thus letting people participate and involving them in scientific research is seen as a way to help people understand science. This trend is relatively new, but the number of volunteers involved is growing every day and first citizen science projects have been remarkably successful in advancing scientific knowledge.

With Societic people who were never involved in science projects can become active contributors. They can participate in science projects either as donors when connecting to the infrastructure their own computing resources, such as smart phones, desktop computers or other devices, or as actors when they actively participate in the scientific process, in different phases: from short and easy activities to the inception of new research lines, leading people-driven developments. Targeting the general public the Societic experiments aim to be socially valuable and relevant for citizens in Europe and worldwide. Experiments like the “cells image”-application which helps to fight cancer, or the “temperature maps”-application which helps to optimize energy saving strategies for whole neighbourhoods or cities are typical examples for this approach.

Providing the wider public with the possibility to contribute to science projects aims to retrieve science from its “ivory tower”, making science processes understandable and increasing the interest in science in general.

Our definition of broader public does not only imply citizen volunteers, we also aim at the involvement of private organisations in citizen science processes. Via the provision of infrastructures or the promotion of the citizen science ideas and specific experiments, citizen science can contribute to the social responsibility of involved organisations. Additional benefits for organisations and ways to participate in the Societic project will be analysed during the project.

Message to the scientific world: Benefit from citizen-infrastructures for your research

The large involvement of volunteer citizens in science projects adds valuable results to research and has been remarkably successful in advancing scientific knowledge. It allows scientists to address research issues more efficiently or in ways they could not have thought of without a large number of volunteers who spend their time and effort in the collection and analysis of research data.

Societic will provide researchers with a platform for citizen science projects: an infrastructure which can deal with large amounts of citizen science data. The Societic portal is partly based on existing volunteer computing networks which serve to run new projects and supports the communication between scientists and volunteers. In addition, Societic will establish a community of citizen scientists who will act as advocates for a growing number of experiments and which researchers can involve as volunteers. The experience that citizen scientist will undergo through the Societic portal can also be seen as an important channel to attract young talents to pursue scientific careers.

In Societic we will communicate the successful involvement of citizen-infrastructures in research projects to the wider scientific community. It is our aim to raise wider awareness on citizen science within the world of research and to trigger new ideas and experiments that will rely on this participatory concept.

In the following we will present the three citizen science applications that have already been selected for the Societic portal and the core message that is being communicated to the general public in order to attract volunteer scientists:

4.1. Cell images

Fight cancer together - Your contribution matters

The University of Zaragoza and the Societic team will ask the support of volunteer citizens to classify large sets of images of cancer and Alzheimer cells. In the search for new and effective drugs these cells were treated with a sample of substances and volunteers will help to describe how the cells react to the treatment. Via Internet and on mobile devices they will receive images of cell cultures being studied from a microscope and help to determine the actual state of each cell based on some simple questions. Compiling and adding the cell classifications, researchers will know what is happening in each cell culture and better understand how the samples of medicament applied to each cell culture are working.

Providing just a few minutes of time and some simple clicks on the Societic platform, citizens can support this research, helping to find new solutions to cure cancer and Alzheimer.

On the Societic platform they will join other volunteers and researchers who will provide them with regular information about the results obtained from their contributions. Volunteer participants will also better understand the scientific method behind this experiment and learn more about topics such as biotechnology, pharmacy or biophysics.

Together, researchers and volunteers will fight cancer and Alzheimer for the benefit of future generations. Each image classification that citizens are contributing will bring the whole team a step closer to potential breakthroughs.

Schools will be addressed specifically offering teachers to enrich science lessons with practical experiences and the direct link to researchers. Special training material will be prepared for teachers and their students, and explanations about the scientific process and research challenges addressed with this experiment. Involving teachers and their students in this experiment aims to make research processes better understandable and increase interest among the youth for science topics.

In addition we will address collective creativity of some of the groups' participants by opening a jury-based contest for best visual works based on the cells images received. The contest will be announced, organised and published on the Societic platform as well. This will allow us to address both young students and creative communities. Also, artists will be invited to work with the

scientific data collected by volunteers, demonstrating that art work can support the awareness-rising and interest amongst the public for science topics.

A detailed description of this experiment will be part of D4.2, delivered in month 10 of this project.

4.2. Temperature map

Become an energy saver - Contribute to the fight against climate change

Aspects like changing climate, global warming and decreasing raw materials are discussed in all media and everybody talks about it. But how can the individual contribute to fighting against it?

University of Zaragoza and Societic invite citizens to contribute in today's research on how to optimize heating units of European cities. Volunteer citizens are asked to spend a few minutes per day on the Societic platform and provide the researchers with regular temperature data from inside and outside of their houses. The volunteers' temperature data will allow researchers to create temperature maps of cities and neighbourhoods, helping to understand and analyse heating potentials and compare them with other cities in Europe. Participating citizens will join a community of volunteers who support researchers in collecting vast amounts of research data on diversified places.

For the volunteer scientists this participation will pay off. As motivator and driver for the active involvement they are provided with a personal report about the best way to heat their house and to save energy. Several interactive and real time maps will be used to allow the visualisation of the anonymised data of the volunteer network and allow them to compare their data with other households in the city and neighbourhood.

Again schools will be provided with specific training packages and the direct link to the researchers. Involving teachers and their students in the temperature map experiment not only helps to collect a wider set of research data. It will enrich science teaching with practical exercises and thus show the relevance of science and motivate the interest in science topics.

Artists will be invited to use the collected temperature data for media installations in cities, bringing science topics to real places and spaces in urban areas, showing the involvement of volunteer citizens and increasing the awareness for current research.

A detailed description of this experiment will be part of D4.3, delivered in month 15 of this project.

4.3. Semantic map

Have fun and socialize with your friends

In this application volunteer citizens will support the Societic project and researchers from the University of Zaragoza to trace the distance between thousands of word pairs. Players will select words which lead from one starting word to the goal word, creating a visual map of distance between words. The traces from the starting to the goal word will help to analyse if some words are very similar or have a big sense in common. Those related words could be considered as neighbours in a graph. This application will allow researchers to collect thousands of data and patterns. The results from this research experiment will provide important insights into semantic analysis which is a major challenge for science and innovation, as it is a very complex task, requiring advanced models and expert validations.

Citizens playing with this application do not need to have big knowledge, but they will be able to learn about the semantics and cognitive science, reading the complementary information related with the scientific issues.

To motivate the participation of volunteers, this scientific experiment is using the gaming approach and links it to a social platform like Facebook, where the game fosters the socialisation with friends. Gaming addresses those ones who want to challenge themselves, trying and exploring the idea of the game and how to compete best. On the other hand, it will allow interacting with friends, understanding differences in language usage, analysing different traces from one word to another (e.g. you used that trace, most of your friends used that trace).

For those players who want to further test their creativity, we will open a contest for micro stories using existing paths of words. Those micro stories must contain the set of words that link two concepts as well as the rest of elements of a narration: one or more characters acting in a more or less settled time and space, following introduction, climax and resolution.

A detailed description of this experiment will be part of D4.1, delivered in month 6 of this project.

5. IDENTIFICATION AND DESCRIPTION OF TARGET GROUPS

Having described the main messages of the Societic project and each of the first three experiments, we will describe the main target groups, their requirements, expected outcomes, as well as motivators and ways to address them in the following chapter.

Target group	Specification	Requirements	Expected benefits	Motivators	How to reach
General public ²	<p>... with interest in science</p> <p>... with interest in cancer and Alzheimer</p> <p>... with interest in climate and energy saving</p> <p>... with interest in social games</p>	<p>General information about citizen science</p> <p>User guide for the Societic experiments: objectives, research process, pre-conditions for participation, requested efforts</p> <p>Information about benefits and results for volunteers from their participation</p> <p>Alert on new experiments</p> <p>Alert on occasions to get to know citizen science and practical experiments at events</p> <p>-</p>	<p>Better understanding of science and scientific processes</p> <p>Awareness rising and interest in science topics</p> <p>Volunteer contributions to current research topics</p> <p>Broader information of public on scientific work results (e.g. in the field of Alzheimer and Cancer; in the field of climate change)</p>	<p>Help to fight cancer, to find solutions to energy problems ... your contribution counts</p> <p>See the output of contribution (e.g. nr. of cells evaluated)</p> <p>Get acknowledgement from scientists and volunteers (e.g. certificate, badges)</p> <p>Have visibility for your contributions</p> <p>Get a personalised report on how to optimize your heating strategies</p> <p>Unleash your creativity in one of the art contests (e.g. Stories with word traces)</p> <p>Socialise with your friends, explore the game</p> <p>Get material prizes for the most active volunteers</p>	<p>Via patient associations, 50+ networks</p> <p>Via local initiatives (e.g. Smart Cities)</p> <p>Media (e.g. newspaper)</p> <p>Website, Newsletter, Social Media</p> <p>(Artistic) events in urban places and museums</p> <p>Existing volunteer communities from related projects</p>

² Risk of exclusion groups, like unemployed, older people, homemakers etc. are seen as part of the general public, who – if interested in the topic – may have more time available to contribute and will profit more from motivators like acknowledgement, material prizes etc.

Target group	Specification	Requirements	Expected benefits	Motivators	How to reach
Educational institutes (educating pupils aged 14-18)	Higher / secondary education, teachers and headmasters	<p>Information on research processes and access to researchers</p> <p>Teachers' guides for experiments</p> <p>Information on pre-conditions for participation, requested efforts and expected outcomes.</p> <p>Future trends</p> <p>Alert on new experiments</p> <p>Alert on workshops, conferences</p> <p>Published papers</p>	<p>Provide insights into science processes, link researchers with school classes and thus make science better understandable for students.</p> <p>Make science lessons more exciting through practical experiments and increase students' interest in science</p> <p>Demonstrate theoretical concepts via hands-on exercises for students</p>	<p>Practical experiments and experiences will increase the motivation and interest of students</p> <p>Certificates and a competition like format will increase the visibility for students, teachers & schools</p> <p>Game-based approach is attractive to many students</p> <p>Material prizes will be given to the most active volunteers</p>	<p>Via European Schoolnet and local ministries for education</p> <p>Via links to existing science and e-Infrastructure projects in schools</p> <p>Website, Newsletter, Social Media</p> <p>Teacher conferences and workshops</p> <p>Journal papers</p>
Artists	Media artists	<p>Information on available data sets and conditions of use (rights, timeframe etc.)</p> <p>Information on planned dissemination activities and visibility of project (e.g. media partnerships, presence</p>	<p>Increased visibility for citizen science projects</p> <p>Increased awareness and discussion amongst citizens</p> <p>Usage of a large set of science data collected by</p>	<p>Demonstrate how art can increase the awareness and discussion amongst citizens</p> <p>Get visibility towards a large set of stakeholders through your participation in this project</p>	<p>Art festivals and festival organisers (e.g. Ars Electronica Centre, Media Architecture Biennale etc.)</p> <p>National funding</p>

Target group	Specification	Requirements	Expected benefits	Motivators	How to reach
		at conferences etc.) Information on available allowances or additional funding opportunities Information on potential partnerships, e.g. schools	volunteers for artwork Establishment of new science-art liaisons	Increase your contacts with new stakeholder groups	institutions Website, Newsletter, Social Media
Policy makers	Educational Science comm. Urban planning	Information on gaps Recommendations, white-book Information on state-of-the-art /future trends Experts Quality Criteria (evaluation indicators) Published Papers Results, Tools	High awareness for the Societic platform supporting citizen science in Europe and Brazil Awareness for the white-book on citizen science, approval and consideration of the white-books's recommendations Support of the dissemination of the project results	Participation in the white-book creation	Direct contact and information policy Existing contacts from the partner networks Website, Newsletter, Social Media Conferences, concertation meetings and public events Media
Citizen Science Community and projects	Scientific	Information on Societic work and results Meta-information on	Contribution of best practice and lessons learned in the white-book	Increase project dissemination and visibility though cooperations Get visibility in the Societic	Contacts of consortium partners from previous projects

Target group	Specification	Requirements	Expected benefits	Motivators	How to reach
		<p>processes</p> <p>Information on potential cooperations and contacts</p> <p>Upcoming and joint Events</p> <p>Efficient handling of resources</p> <p>Conference Alert</p> <p>Published Papers</p>	<p>Bundling and strengthening of joint dissemination efforts</p> <p>Shared access to volunteer communities</p> <p>Efficient resource handling though synergies (e.g. joint events)</p>	<p>white-book</p> <p>Use the Societic infrastructure and community</p>	<p>Scientific conferences, concertation meetings, and workshops</p> <p>Published papers</p> <p>Website, Social Media, Newsletter</p>
e-Infrastr. providers, researchers	Scientific, technical	<p>Information on Societic work and results</p> <p>Information on how to use the Societic infrastructure, pre-conditions for participation, proposed benefits and expected efforts, contacts</p> <p>Efficient handling of resources</p> <p>Alert for call for proposals</p> <p>Conference Alert</p> <p>Published papers</p>	<p>Expansion and dissemination of citizen science projects</p> <p>Collection of experiences and lessons learned for the white-book</p> <p>Valuable contributions for research</p> <p>Efficient handling of scientific resources</p> <p>Exploitation of the Societic infrastructure and community</p>	<p>Benefit from the Societic infrastructure and community for your research</p> <p>Learn more about results from citizen science</p> <p>Get valuable contribution for your research</p> <p>Benefit from Societic dissemination activities to get visibility for your research</p>	<p>Contacts of consortium partners from previous projects</p> <p>Scientific conferences, concertation meetings, and workshops</p> <p>Published papers</p> <p>Website, Social Media, Newsletter</p>

www.societic-project.eu

6. COMMUNICATION ACTIVITIES TOWARDS TARGET GROUPS

6.1. *Dissemination instruments*

While researchers generally communicate and disseminate their work via publications, social media channels, specialised website and conferences, the general public obtains its knowledge through different channels like newspapers, popular magazines, radio, TV, the internet or specific organizations and associations which act as promoters towards citizens.

Addressing these different target groups we will need to find well balanced dissemination formats taking into account the necessity of adaptation of language (from scientifically high advanced to common understanding), format and mode.

Language is especially important when communicating with the general public. Thus the project takes the approach of first translating all dissemination material (website, leaflets, brochures) to the languages of the project partners (English, German, Portuguese, Spanish) and then, in a second step, extending the multi-language approach to a broader set of commonly used languages in Europe (e.g. French, Italian, Russian).

Design and usability of the dissemination instruments are another important aspect. Therefore the project works with a professional designer. Understanding the main objectives and target groups of the project the designer will hold responsible for the creation of the project design elements (logos, key visuals, colours etc.) and the dissemination instruments (project website, leaflets, presentations etc.).

We use an appropriate communication mix for each audience consisting of several dissemination tools. The most important tools are:

Project website:

The project website is the main information portal for both, researchers as well as citizen volunteers. The main aim of the Societic website is to inform the different target groups about the general achievements of the project and motivate participation and involvement.

First the website addresses the general public, the potential citizen volunteers, and provides a guide on citizen science, the Societic experiments and how to participate.

It is the place to login and access the different experiments, provide new tasks to volunteers and have feedback from the researchers on the volunteers' contributions. It provides the possibility to exchange with researchers and other citizen volunteers via discussion forums and blogs. Also competitive elements, artistic activities and the motivational need for visibility and acknowledgement of the volunteers will be covered on the website. The website will provide information on events organised by Societic, or conferences and science festivals where Societic will be present. It will provide continuous information about the project dissemination activities and results to the press, trying to foster the visibility of the project whenever citizen science and science communication are a topic.

Second it presents the concept of citizen-infrastructures to the researchers' world and communicates about experiences and results from the experiments, aiming to attract additional ideas and projects for citizen involvement. It will provide information to researchers on how to participate and how to use the Societic infrastructure for the promotion, acquisition and involvement of volunteers in

additional scientific experiments. Scientific conferences where Societic will be present will be listed and the contact between researchers fostered.

An appealing and user-friendly appearance is thus an important success factor for the dissemination of project activities. To reach this objective, a storyboard is elaborated to discuss and define the main navigation items, sections and content elements of the website.

This storyboard is on the one hand used by the technical development team, which is responsible for the back-office creation of the website via the Content Management System Drupal (www.drupal.org). On the other hand the storyboard serves to brief the professional designer who takes over the development of the corporate design (CD) of the Societic project and thus also the themes of the website.

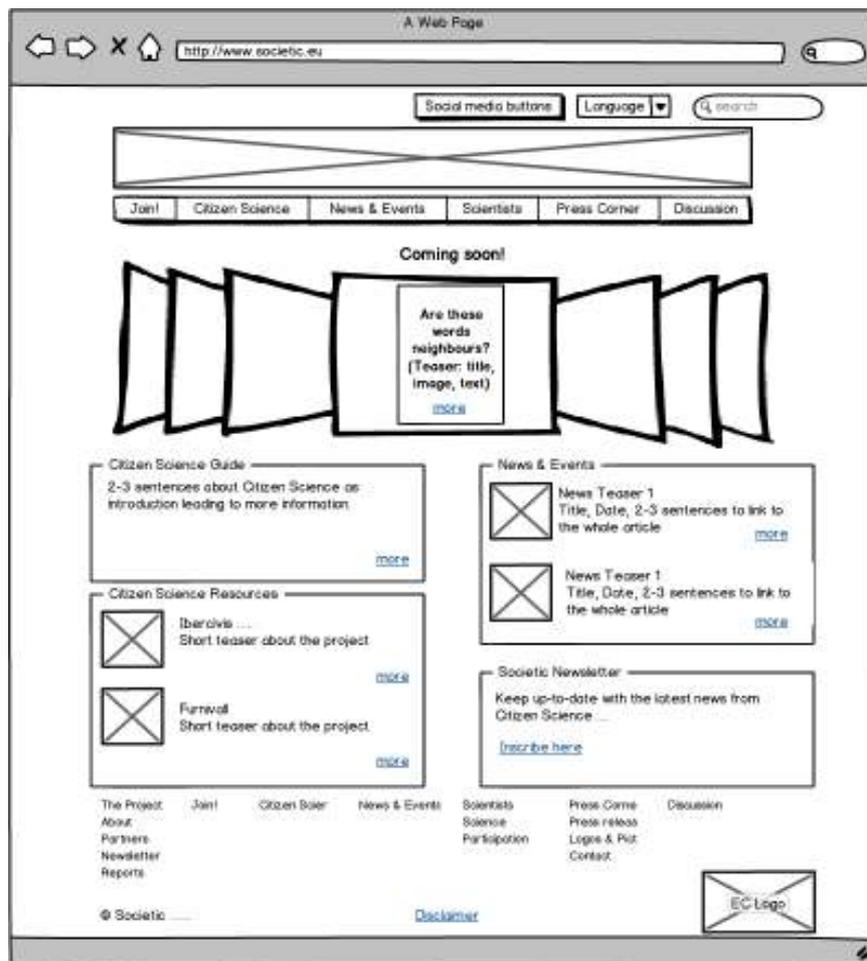


Figure 1: Storyboard of Societic Homepage

To access the website the URL <http://www.societic-project.eu> was reserved. Additionally Sub-URLs for each of the experiments will be installed.

For the successful dissemination of Societic activities a good Google ranking will be important, which will be challenging to achieve. Therefore cross-referencing is very important on the project website. References will lead to other citizen science projects and initiatives, and integration of links to the Societic website from related projects will be actively searched for and motivated.

Related projects are for instance:

<https://www.zooniverse.org/>

<http://www.citizen-science-alliance.org>

<http://fold.it/portal/>

<http://www.ibercivis.net/>

<http://boinc.berkeley.edu/>

<http://www.globalexursion-project.eu/>

<http://vishub.org>

Social media tools:

Like YouTube/Vimeo, Twitter or Facebook. Social media has become a very popular means of disseminating information fast across heterogeneous target groups. On the one hand, they have entered the scientific sphere and researchers are making use of social media for their scholarly practice. On the other hand social media, especially Facebook and Youtube, have spread across the whole society as prominent communication channels. These channels serve on-demand access to content anytime, anywhere, on any digital device. To extend the project target audience (especially to involve the younger generation who are raised on these new media tools) Societic is integrating these media tools strategically in the dissemination activities. Producing small explanation videos and putting them on a public video site (e.g. YouTube/Vimeo) serves several audiences and even offers a feedback channel for the project.

On Youtube there is already an interesting selection of small videos introducing the concept of citizen science and promoting specific citizen science experiments. Societic will use this communication channel and contribute with videos promoting the experiments, using the advantage of audio-visual media which allows to present complex content in an easy understandable and appealing way. If successful, even a citizen science YouTube Channel could be envisaged.



Figure 2: Videos about Citizen Science on Youtube

Twitter is one the most powerful social media tools, thus we created a twitter account for Societic (@SOCIETIC_EU) and are already populating it with news from the project and citizen science in general.

A Facebook account will be created to attract the younger generation and launch the Semantic Map experiment which will be designed as a Facebook game. We will use this channel to inform about

the planned and conducted project activities, launch invitations for events, motivate participation in the experiments. This communication channel will mainly target the broader public. For researchers we will use the more traditional instruments like the website and twitter for a continuous communication flow.

Press releases:

Most of the press releases will be targeted at the audience of public oriented media including newspapers and TV channels. We will actively follow up the releases to assure maximum coverage. Partnerships with selected newspapers in the partner countries will be aimed at assuring continuous information coverage in national newspapers and also to be more attractive for potential promoters of the project (e.g. associations of cancer sufferers, schools, artists)

A first press release was transmitted to the local press around Zaragoza on the occasion of the project's Kick-Of-Meeting. The press was not only provided with information about the project in written form, they were also invited for a press event at the University of Zaragoza where they could meet and interview the project participants. This first press-release showed high interest amongst local newspapers and the local television stations for the topic.

The Societic project was mentioned amongst others in <http://www.aragondigital.es>, <http://www.aragonuniversidad.es>, <http://www.aragoninvestiga.org>, <http://www.aragonidentidad.es> and the local television (<http://www.youtube.com/watch?v=6EiqhvgXZcc>)



Figure 3: Media coverage at the start of the Societic project

Leaflets.

In order to target the different types of audience the consortium partners are preparing different kinds of leaflets.

There will be a one-page leaflet for each of the experiments, which will contain the main objectives of the experiments explained in a way understood by non-scientists, the reason why citizen volunteers are invited to participate and what are the benefits of this participation in the experiment,

the conditions under which participants can participate, original statements and testimonials from researchers and first volunteers, a timetable of planned activities and contact details.

These one-pagers will be produced as electronic templates to be translated in all partner languages and at a later stage in broadly used languages in Europe. It will help us to contact and inform the different stakeholders of the experiments during the promotion and acquisition process. The one-pagers will exist in electronic form to be forwarded via e-mail and downloaded on the website and they will be printed out to take them to conferences and live events.

In addition to the one-pagers for each of the experiments the project partners will prepare a two-pager explaining the Societic project as a whole and the citizen science approach. This two-pager will be a shorter version of the project presentation again targeting the broader public with a language adapted to non-scientists and translated to several native languages.

When preparing the leaflets special attention will be given to an appealing and clear language and a friendly, serious, light design which represents the idea of the project via nice pictures and key visuals.

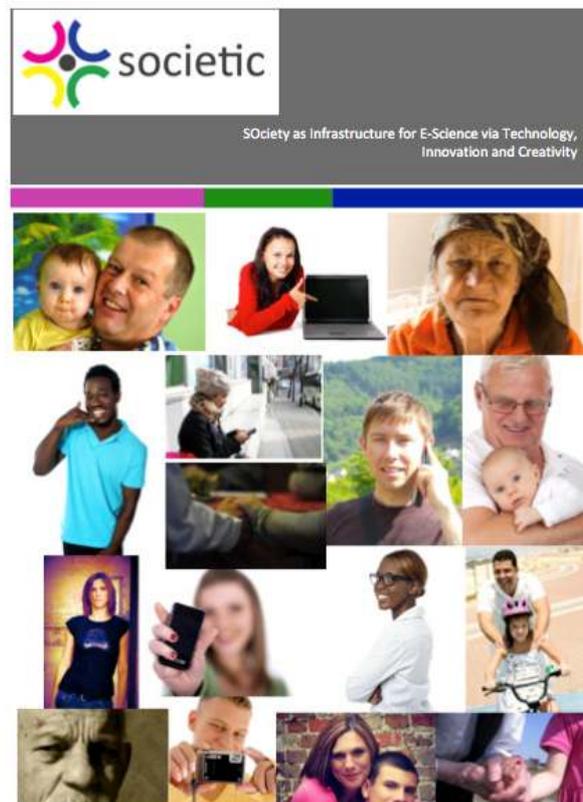


Figure 4: First project presentation

Give-aways. Experience has shown the broader public, including teachers and students, are especially fond of small gadgets. Therefore, in order to reach our target group we plan to have some give-aways. The idea is to relate the give-away to the metaphor of global collaboration and

participation and at the same time to link to a scientific phenomenon, to emphasise the association with the project.

Partner websites and newsletters: we will also utilise the dissemination activities that the partners already have in place. A link to the Societic website will be available from each partner organisation in the consortium. In addition, most partners have regular newsletter and their own weblogs, etc., which will be used to disseminate regularly and frequently via these channels.

White-book for citizen science: The white-book will compile best cases experiences and policy recommendations for citizen infrastructure providers, the scientific community, private companies and the society in general. It is therefore seen as an important dissemination instrument at the end and after the project.

It will integrate the results, evaluation and recommendations from the Societic project and the Societic collaboration partners, like the EAB members, subcontractors and related projects, for the future of citizen science. To ensure that this white-book will be the basis for the future deployment of any technical work in this area the elaboration of the white-book will be announced during all dissemination activities of the project, and when finished, it will be actively disseminated to the Societic communities via channels like the website, the newsletter, personal contacts, scientific conferences, concertation meetings etc.

6.2. Outreach activities

Conferences, meetings and face-to-face events are an important part of the planned dissemination activities as they will help to increase the visibility of Societic and foster the dialog between the stakeholders.

Scientific conferences and meetings

At the one hand, the Societic project will participate in scientific conferences related to science communication and citizen science, as well as concertation meetings and workshops to search the collaboration and experiences with related projects, other scientists and specific target groups like teachers. The project will organise two scientific workshops per year, which might be organised around important conferences or meetings of the science community. At congresses, scientists and developers will get together to analyse the results obtained in the development of the open data e-Infrastructure.

A deepened collaboration will be strived for with related projects like, Zooniverse, Fold-it, Ibercivis etc. with the aim to integrate the experiences and outcomes from these projects in the white-book. In addition collaborations with other project will help to find synergies, bundle resources, get involved in dissemination activities together etc.

Events for the general public

At the other hand, the project will participate in events oriented towards the broader public. During these events the concept of citizen science will be presented to the public and the participation in the Societic experiments promoted. An important aspect for this range of events is the advanced and artistic visualization of that complex data corpus the project is collecting through the citizen infrastructures.

The artistic visualization of results aims to reach the general public and raise awareness amongst citizens in a way that makes them not only interested in the current artistic item, but also in the research which is displayed and in citizen science in general. The aim is to make scientific results better understandable and more attractive to the broader public through the inclusion of artistic and innovation oriented features.

In our project art and science will run parallel pathways in the sense that both of them are involved in a trend composed by a) amateurs are performing great artistic compositions (home-made songs or short films, for instance); and b) museums and laboratories are opening windows and doors so that people come in and also taking the art and the science out to the street getting a wider audience.

We know that participating in events, which are oriented towards the broader public (e.g. Ars Electronica Festival, Media Architecture Biennale) can be a challenge for the Societic project. First these events have long preparatory activities, a high interest of projects to participate, strong selection criteria and in addition the preparation of public booths, installations etc. might be limited by budget restraints. Nevertheless we have collected a number of public events, which we can use for the artistic presentation of the Societic results in the course of this 2 years project and which can be found in Figure 5.

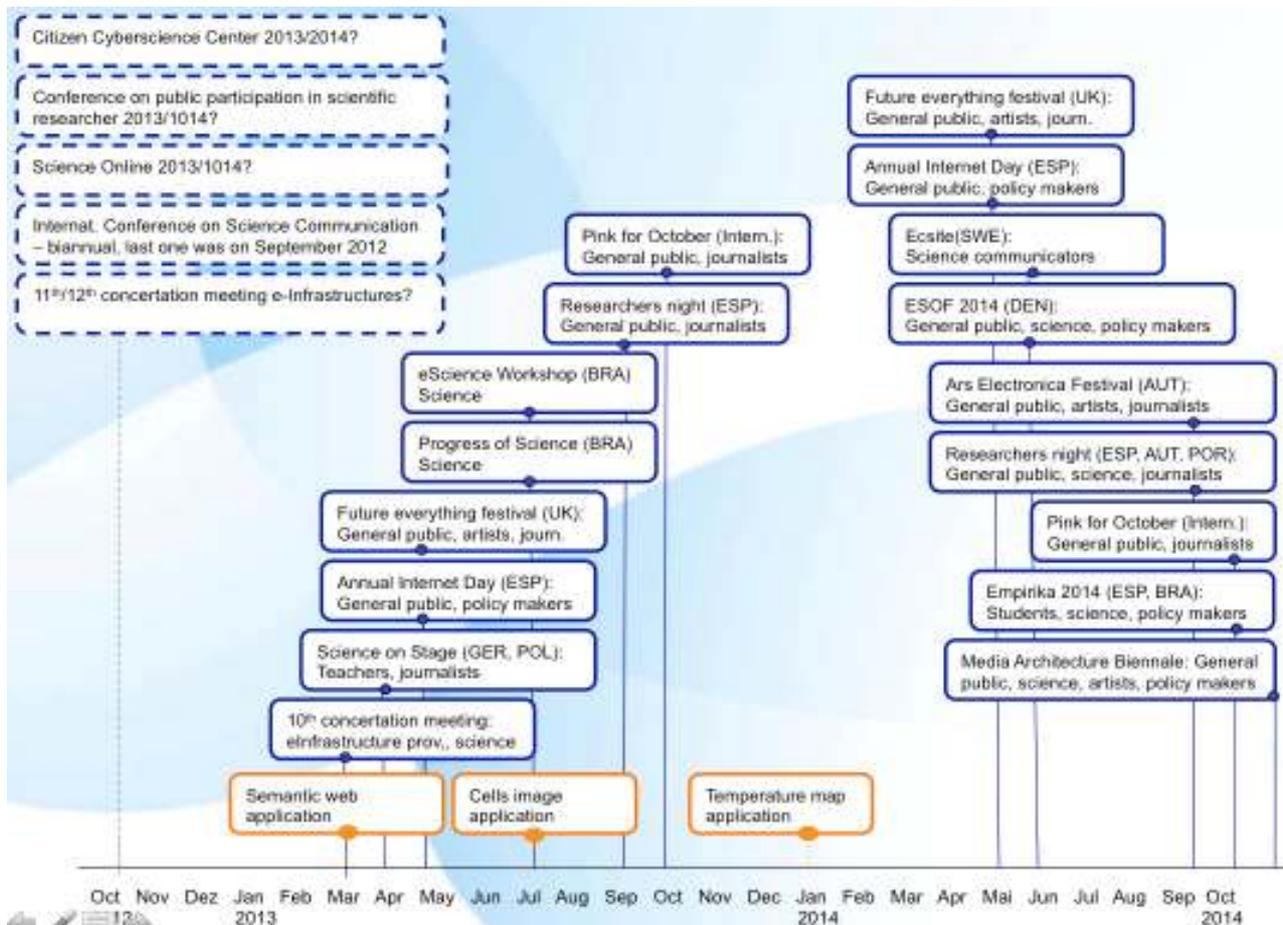


Figure 5: Relevant events for the Societic dissemination (for dotted lined events the dates are not fixed yet)

Finally, to bring all stakeholders together the project will organise two conferences, one after the first year, and the second at the end of the project. These project conferences will unit the consortium partners, researchers, teachers, citizens, companies and other communities to share experiences and views on the themes covered by the project and to discuss the content of the white-book.

All of these activities will be done in either English or a local language (or both), whatever is most appropriate for the activity in context.

6.3. Partner networks

For a successful dissemination the project can benefit from the project partners' existing network of organizations and communities. In the following table an initial overview of project relevant network partners will be given. It should be stated that this list is a "living instrument" so to speak, which will be expanded and updated by the project partners in parallel to the advancement of the project. One of the activities within the dissemination workpackage will be to analyse the partner networks according to the defined target groups and prioritize them accordingly.

Community, Network, Organization	Target group	Type of involvement
Intercultura Consult	General public, Artists	dissemination to other countries such as Bulgaria; connection to creative industries and arts
Realitylab	General public, Artists	Collaboration in a media architecture projects
Asalto Festival	General public, Artists	participatory street experiment
Future Everything	General public, Artists	participatory street experiment EAB
Ars Electronica	General public, Artists	participatory street experiment
Arts Santa Monica	General public, Artists	space and festival art and technology probably used for participatory experiments
Museo Thyssen-Bornemisza	General public, Artists	Participatory experiments, arts and science. 30K+ users
WWTF	General public, Artists	liaison with specific dissemination activities; identify projects with overlapping aims
etopia_	General public	new building for art and technology probably used for participatory experiments, or showroom
MAST - Museu de Astronomia e Ciências Afins	General public, scientists	Scientific dissemination for the general public
Ministerio de Industria	Policy makers, organisations	Subdirección General de Crecimiento Empresarial
Secretaria de Estado para las Tecnologías de la Información	Policy makers, organisations	Promotes and rules IT activities as Normalisation

Servicio de Información y Noticias Científicas (SINC), FECYT	Science communication	Journalist, science communication
Wissenschaftsladen - Science Shop	Science communication	Promotion of the project across science shops; advice on ethical aspects
University of Vienna	Science communication	Researcher focusing on the topic of science communication; candidate for advisory board
Asociación Española Comunicación Científica	Science communication	
Fundación Zaragoza Ciudad del Conocimneto	Science communication	Focusing on the liaison between science, citizens, artists etc.
Internet Society	Scientists, Policy makers	Contributions and dissemination
FuturICT	Scientists	FET Flagship Proposal: Participatory Science (ICT+social+complexity) 70+ partners!
CIMA Foundation http://www.drihm.eu	Scientists	Citizen Science tools and scenarios
CECAM	Scientists	Fundamental (biophysics) research community
ITER	Scientists	Fusion research community
Linking Open Data	Scientists	Open data contributions
Arduino	Scientists	Open Hardware developments, collective scenarios
UFPB - Universidade Federal da Paraíba	Scientists	They work on accessibility for hear impaired people that could benefit from crowd-sourcing applications
UFRGS - Universidade Federal do Rio Grande do Sul	Scientists	Researcher focusing on cognitive models of language processing, and potential user of citizen science applications
Universidad de la Republica, Uruguay	Scientists	Potential users of citizen science applications in the area of transcription of environmental data
Universidad San Jorge	Scientists	Private University of Zaragoza
Ciencia Viva (PT)	Scientists, General public, teachers	Science Museums, schools
Science on Stage	Scientists, teachers	Science Teachers. Festival
Ibercivis Foundation	Scientists, Volunteers	*support: loudspeaker, communication, preparation event *32K volunteers *10+ scientific groups (ES, PT, IT, MX, AR)
Parque Natural Doñana	Scientists, Volunteers	Participatory experiments, natural sciences, existing volunteer communities
Teachers of the GlobalExcursion project	Teachers	Participation in experiments with their classes
Teachers of the European Schoolnet	Teachers	Participation in experiments with their classes
Teachers of Zaragoza Region (Aragon)	Teachers	Participation in experiments with their classes

Austrian Federal Ministry for Education, the Arts and Culture	Teachers, Policy makers	Promotion of the project in the ministry, discussion of potential dissemination activities (e.g. events, newsletter)
Influenzanet.eu	Volunteers	50K volunteers tracing influenza
FOLD.IT	Volunteers	Citizen Science tools and scenarios
Aficca (Asociación para el Fomento de la Investigación Científica en Casa)	Volunteers, Scientists	Spanish-speaking volunteer computing community
citizen cyberscience centre	Volunteers, Scientists	Citizen Science tools and scenarios
Zooniverse, GalaxyZoo, Citizen Science Alliance	Volunteers, Scientists	Citizen Science tools and scenarios
BOINC	Volunteers, Scientists	Volunteer computing 400M+ users
International Desktop Grid Federation	Volunteers, Scientists	Volunteer computing
World Community Grid (IBM)	Volunteers, Scientists	Volunteer computing
Hewlett-Packard (Iberia)	Organisation	Sponsoring, technology providers
IBM (Iberia)	Organisation	Sponsoring, technology providers
Sony Research	Organisation	technology
Microsoft Research Europe	Organisation	Sponsoring, technology providers
k-tuin	Organisation	Sponsoring, technology providers
Ibercaja	Organisation	Sponsoring, dissemination
IPEA - Instituto de Pesquisas Econômicas e Aplicadas	Organisation	Users of the Table Transcriber application
Sociedad Estatal Red.es	Organisation	
CANIETI	Organisation	Mexican SME-PIN national association
Cluster TIC Midi Pyrenees France	Organisation	Regional IT Cluster South France

Table 1: Partner networks of Societic

7. MONITORING SUCCESS

The dissemination activities will be monitored according to a set of quantitative and qualitative success indicators, which were identified and further elaborated based on the Societic DoW (Description of Work).

The evaluation of dissemination activities will determine the degree to which the dissemination objectives have been reached, and the relationship between the outcomes and the efforts made to reach the goals. This analysis will help the project to better understand facilitators and barriers of a successful dissemination and will serve to refine the dissemination activities accordingly. In the upcoming dissemination reports the project will update its indicator set and identify gaps where more effort has to be spent to reach the planned dissemination activities.

There are indicators, which monitor the successful deployment of a set of dissemination instruments to different stakeholders. These indicators comprise:

Planning of dissemination activities	
Dissemination plan	Plan created and communicated
Number of identified target groups and specific dissemination tools (at least 1-2 events per target group)	10
Online communication instruments	
Public Web site creation	Website created and communicated
Web 2.0 applications and tools	Social media accounts deployed
Number of contacts in social media accounts	1000
Collaborative web portal created	portal deployed
Number of visitors (unique IPs)	12000
Number of registered users (users forum)	150
Dissemination events	
Number of public events organized	6
Number of project conferences	2
Number of target group specific events	6
Number of co-organized events with other linked projects or initiatives	4
Number of stakeholders representatives contacted and meetings	10
Print, newspaper, journals activities	
Number of press releases	12
Number of publications in general media	6
Number of publications in science or technology related journals or scientific conferences proceedings referring to volunteers participation	4
Number of publications of end-users referring to the SOCIETIC environment	5
Other dissemination activities	4
Dissemination activities in which volunteers will learn about topics such as linguistics, cognitive research, biotechnology, pharmacy or climatology as well as to see what their efforts have been dedicated to and the results obtained from them	15
Number of contests about creativity arisen from volunteers	4
Number of MoUs	4

Table 2: Measurement indicators

There are success indicators, which measure the increasing involvement of different stakeholders in Societic, understood as a result of successful dissemination activities:

- number of people participating in citizen science experiments

- increased number of new partners to collaborate with SOCIETIC
- increased number of companies that give or get data from the e-infrastructure
- increased number of educational institutes that access to e-infrastructure
- establishment of new contacts of interested parties
- increased number of web accesses
- increased number of direct contacts to the coordinators or contact persons

The qualitative aspects of the monitoring process will investigate the encountered barriers and motivators of the different dissemination instruments for the different target groups and collect feedback on the outcomes of the dissemination activities for the involved stakeholders.

8. CONCLUSIONS

The Societic project targets various audiences with different backgrounds. The aim of this plan is not only to attract and motivate an increasing number of citizen scientists to participate as volunteers in the project, but also to reach out to an increasing number of scientists who use citizen-infrastructures for their research.

Successful dissemination and awareness strategy requires careful planning. It needs to be based on a sound strategy that covers the key messages, identifies and establishes target audiences, selects the appropriate tools and channels of communication. We defined this strategy in the document along these guidelines. Key dissemination instruments include, but are not limited to, the Societic portal and real live events and conferences. Our aim is to produce reusable dissemination material (template) whenever possible, but certain events require specifically tailored materials.

To provide successful dissemination and awareness activities, their effectiveness needs to be monitored and assessed along quantitative and qualitative indicators. Therefore we have defined indicators that we will use to monitor the project's progress against. Taking into account feedback from the external target groups as well as from internal critical reflections, we will continuously adopt and fine-tune the strategy throughout the project. A continuous monitoring and self-reflective process will help to identify strengths and weaknesses, point out areas of improvement as well as best practice.

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ANNEX

Press-Release for the start of the Societic project (Spanish language)

La Unión Europea quiere involucrar a los parados y a los jóvenes en proyectos de ciencia ciudadana.

La Universidad de Zaragoza (BIFI) lidera la creación de un Libro Blanco que mejorará la estrategia de la Comisión Europea de inclusión ciudadana en la excelencia científica de cara al Horizonte 2020.

El instituto universitario BIFI desarrollará, con el apoyo de la Fundación Ibercivis durante dos años esta iniciativa, dotada con 710.000 €.

(Zaragoza, miércoles, 24 de octubre de 2012). La Unión Europea quiere involucrar a los parados y a los jóvenes en proyectos de ciencia ciudadana, así como al resto de la población, para aprovechar, en procesos de investigación, el potencial de cálculo que representa la infraestructura cada vez mayor de ordenadores y dispositivos móviles, continuamente interconectados entre sí, las propias personas son parte de esta red de investigación, donde en vez de ordenadores se tienen en cuenta sus cerebros.

La Unión Europea quiere que quede constancia de esta colaboración con la ciencia en el currículum del ciudadano, especialmente, de los desempleados. Esta cuestión es una de las peticiones que se incluyen en el proyecto europeo Societic, que va a ser coordinado por el Instituto de Investigación de Física y Sistemas Complejos (BIFI) de la Universidad de Zaragoza durante los dos próximos años y en el que van a participar seis centros de investigación, innovación y empresas de Austria, Brasil, Portugal y España.

El objetivo es sentar las bases de este nuevo paradigma de investigación, como es la e-ciencia, en un libro blanco con recomendaciones para la Unión Europea sobre cómo involucrar a la sociedad en la investigación a través de las nuevas tecnologías.

El BIFI ha sido designado como centro coordinador gracias a su amplia experiencia en el desarrollo de la ciencia ciudadana gracias a Ibercivis, una plataforma de computación voluntaria que se puso en marcha en el año 2008, con investigaciones sobre fármacos contra el cáncer o fusión nuclear con más de 30.000 personas conectadas. Recientemente constituida como Fundación Ibercivis, fundación privada sin ánimo de lucro, creada actualmente al objeto de dinamizar la labor de colaboración con la investigación ciudadana y realizar actividades de divulgación y formación.

Por un lado, al tener miles de ordenadores y móviles de personas voluntarias se tiene una capacidad de captación y procesado de datos de gran valor para la ciencia. Sin embargo, más importante es encauzar "el saber hacer y la materia gris de todos los individuos y grupos sociales interconectados a escala global, que constituyen un gran cerebro virtual con un nuevo conocimiento colectivo", tal como apunta Fermín Serrano, director de la Fundación Ibercivis.

El proyecto europeo SOCIETIC, que comenzó el pasado 1 de octubre, cuenta con una financiación del VII Programa Marco, de 710.000 euros, de los que 300.000 euros han recaído en dos centros de investigación aragoneses: el BIFI, como coordinador, y el Cluster de Empresas TIC, Electrónica y Telecomunicaciones de Aragón, TECNARA, que es otro de los seis

socios europeos. Este presupuesto concedido a las dos entidades aragonesas para los dos próximos años servirá para impulsar la innovación tecnológica y social en la región.

La novedad es que la UE ha creado una nueva unidad para la integración del ciudadano en los procesos de ciencia y de innovación en el nuevo Horizonte 2020 donde el libro blanco del proyecto Societic servirá para fijar las características de futuros proyectos de este ámbito. Por ejemplo, una de las cuestiones que también va a recopilar este libro blanco es como involucrar la participación de los parados en investigación científica.

Más información:

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