

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

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SUMMARY

This document details the communication and progress collaborative tools that have been selected by the SOCIETIC consortium at the start of the project that will be used to manage and monitor the project.

This Deliverable D1.1 is under the responsibility of the WP1 leader and project coordinator UNIZAR-BIFI.

INTRODUCTION

This CSA (Coordination and Support Action) project does not have a large set of beneficiaries within the consortium but we have partners in Austria, Spain, Portugal and Brazil. Therefore the internal communication tools play an important role for the consortium, but we expect them to be crucial by fulfilling its role for the EC, external groups or citizens that will cooperate with us.

As an introduction, our communication and progress collaborative tools selected to manage and monitor the project include:

- collaborative framework for internal and external interactions
- repository of documents
- forum
- calendar for public and private events
- wiki
- source code version systems
- documents editors
- audio conference facilities and mailing lists.

Of course, the Research Participant Portal¹ provided by the European Commission will be used by all the partners of the consortium. It includes a set of services for interactions with the EC.

¹ <http://ec.europa.eu/research/participants/portal>

COLLABORATIVE FRAMEWORK

SOCIETIC Project Website

SOCIETIC Website runs on Drupal last version. Drupal is a CMS (Content Management System), free and open-source distributed under the GNU General Public License. Currently, it is one of the most widespread CMS counting with a big community working at its back.

Out of the box, Drupal² can be use as a mostly static site, blog or forum because of the basic features that comes with it. However, the addition and development of new modules is what allows Drupal to grow exponentially up to be a great tool for building web applications. Therefore, it is the appropriate use of the modules to be added what improves relevantly the performance of Drupal. Drupal runs on any computing platform that supports both a web server capable of running PHP and a database.

After an examination of the state-of-the-art on different CMS, Drupal was chosen against to the other two main alternatives: Joomla³ and Wordpress⁴. The main reason to choose Drupal was that it seems to be a powerful tool to build and manage sites. It is also easily customizable and, although the out of the box features are very limited, there are a big amount of modules already developed that are free, open source and available on the web. Since it is very widespread, great support can be found on user communities and forums across the internet. In what concerns to the other two alternatives, not satisfactory experiences of some the partners were decisive. Some Joomla security breaches and the blogging-oriented of Wordpress, leaned the decision towards Drupal.

Next picture is a screenshot of the home page of the website www.societic-project.eu powered by Drupal.

2 <http://drupal.org>

3 <http://www.joomla.org>

4 <http://wordpress.com>

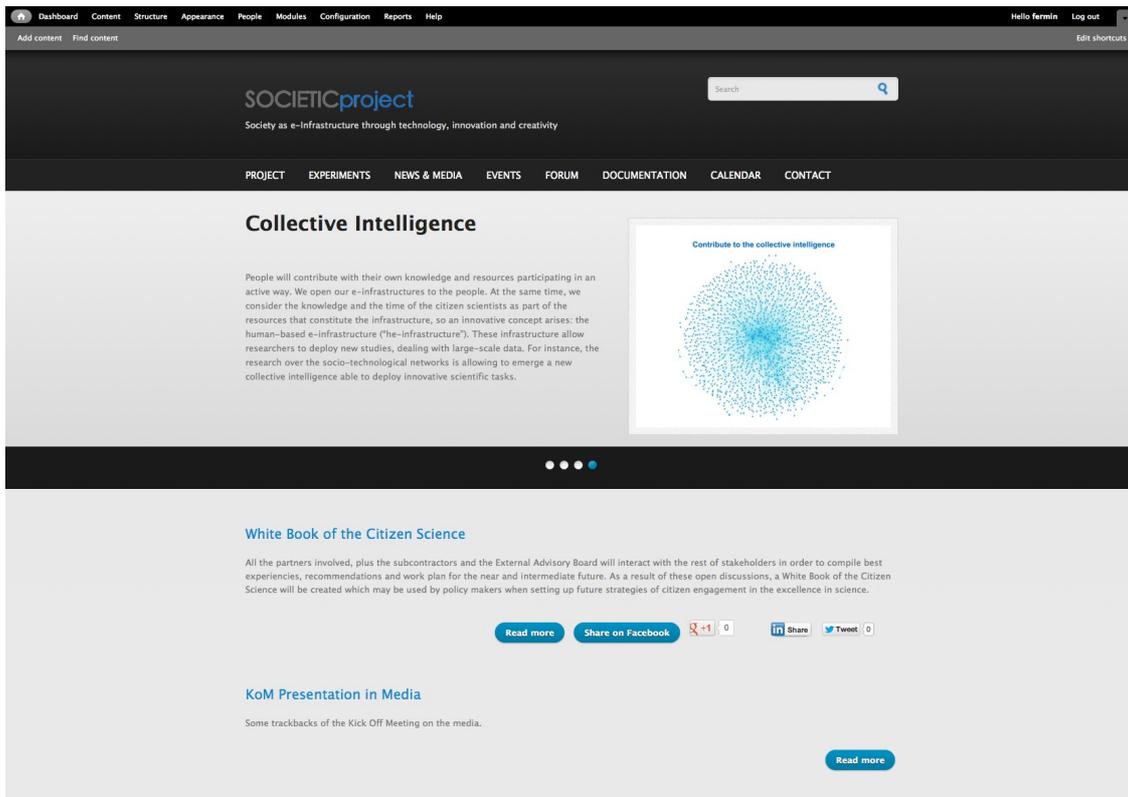


Figure 1: screenshot of the home page of the website www.societic-project.eu

It is deployed and managed by the UNIZAR-BIFI.

Installation And Deployment

In this section, the installation and deployment issues will be covered. The Drupal version installed is **7.16**. In the following a schema of the installation is presented since for length constraints is not possible to present the whole process. Further information about the installation and initial set up can be found at <http://drupal.org/documentation/install>.

- Make sure that Drupal requirements can be fulfilled: support for PHP, a database and a Web server.
- Prepare the server, Lampp in our case.
- Create an empty database for Drupal, MySQL⁵ in our case, and set up permissions and a

⁵ <http://www.mysql.com>

new user.

- Download Drupal and extracts it in the public directory.
- Run `install.php` from Drupal folder.
- Follow installation procedure. Inserts database information.
- Set up the first account.
- Now, start to add modules and set up content types and whatever is needed for the site.

Drupal core is modular, defining a system of hooks and callbacks, which are accessed internally via an API. That is why the core is isolated from the modules and themes. Those are the part which can be developed or modified by anyone. That modularity increases flexibility and security of the site. As a consequence the file system is organized in the way described below.

- **/drupal/** → Main folder which contains the most of installation, subfolders and Drupal management files.
- **/drupal/scripts/** → It includes scripts installed with the framework.
- **/drupal/modules/** → Folder to store the added modules. Information about how to install every module is specified in the documents of each module. Commonly the installation consists in copy the tar file to the *modules* folder and extract its content there. Once that is done, in the administration section of Drupal, go to *Modules* tab. There, look for the added module and enable all the options that may be necessary. Modules are grouped by its function. The modules can come with some plugins which might be enabled also depending on the particular feature needed.
- **/drupal/themes/** → It stores the added themes. The common installation is similar to the modules one. Extract the theme on the *themes* folder. In the administration section of Drupal, go to *Appearance* tab and set up the new theme as default. It is possible to configure some of its settings. Once the theme is installed, its CSS/JS, HTML, images, etc., can be edited.
- **/drupal/sites/default/** → Folder whose files configure the web server settings such as database, hostname, page caching, PHP settings, etc.

The server is located in an OpenVZ⁶ virtual machine. The host containing that virtual machine has the following features:

- 16 Intel(R) Xeon(R) CPU E5520 @ 2.27GHz cores
- 24 GB RAM

⁶ <http://wiki.openvz.org>

- 1 TB Hard Disk

Modules

As explained above, it is necessary to add modules in order to extend and improve the functionality of Drupal, and so, the site. Though some of them are commonly used, the selection of the modules highly depends on the needs of the site. It exists dependencies among the modules usually. Thus, in order to be able to use some module another one must be installed or enabled. The administration part of Drupal provides a usable interface to see the dependencies differentiating between if the needed module is disabled or missed. From Drupal website it is possible to find most of the modules: <http://drupal.org/project/Modules>.

In the following a list of the initially used modules for the purpose of the project site is presented:

- **Calendar:** It allows to embed a calendar in a view displaying dates in it. It is used in the *Calendar* section to display the events of the project in a calendar.
- **Content access:** provides flexible content access control. It extends the permissions feature of Drupal. Thanks to this module it is possible to hide some contents. It provides either content type and node access control level.
- **Context:** provide modules with a cache that lasts for a single page request besides providing an interface for the site structure and some context layouts.
- **Ctools:** a set of APIs and tools for helping in the development. A significant amount of modules depend on it. Most important tools that it contains are:
 - Exportables: tools to make it easier for modules to have objects that live in database or live in code, such as 'default views'.
 - AJAX responder: tool to handle AJAX requests on the server side and tell the client what to do with them.
 - Form tools: help to forms to deal with AJAX.
 - Contexts: the notion of wrapping objects in a unified wrapper and to create and accept these contexts as input.
 - Dependent: a simple form widget to make form items appear and disappear based upon the selections in another item.
 - Content: pluggable content types used as panes in Panels and other modules like Dashboard.
 - Form wizard: API to make multi-step forms much easier.

- CSS tools: tools to cache and sanitize CSS easily to make user-input CSS safe.
- **Date**: makes date/time fields available to be used in *Calendar* module.
- **Entity**: enables modules to work with any entity type and to provide entities.
- **Insert view**: input filter which allows to embed views in other nodes. The views are the way to display a set of nodes in any other part of the site different to front page. Allowing to embed views in other nodes means to be able to display in any part of the site a set of nodes, e.g. A list of news in the *News* section.
- **Meta tags**: adds support and an API to implement meta tags. They are used in the context of search engine optimization. They may help improve the rankings and display of the site in search engine results.
- **Nice menus**: enables drop-down/right/left expandable menus. By means of its use it is possible to build drop-down menus to group pages of the same topic. In such a way, the main menu bar has been built grouping for instance *Last News*, *Clipping*, *Press Releases* and *Radio*, *TV* as submenus of *News & Media*.
- **OpenID**: allows user to log into your site using OpenID⁷.
- **Pathauto**: provides a mechanism for modules to automatically generate aliases for the content they manage. It avoids the user to provide an alias for every node, tag, term or user. In the context of the project site, it is particularly useful in the automatic generation of the real content like news, gallery images and alike.
- **Rules**: react on events and conditionally evaluate actions.
- **Service links**: module engine for add various service links about sharing networks to nodes. In other words, sharing a node in various of the most well-known social networks.
- **Token**: provides a user interface for the Token API and some missing core tokens.
- **Widget services**: it provides the Widgets: Digg Smart Button, Facebook Like, Facebook Share, Google Plus One, LinkedIn Share Button, Twitter. It is used in the site to give the option to share some type of node in some social networks.
- **Video filter**: filter to include streaming videos from most of the main sites like Youtube. It is used in the *Radio*, *TV* section to embed those kind of content within the proper node.
- **Views**: administrative interface to views. Without this module, you cannot create or edit your views.
- **Wysiwyg**: allows to edit content with client-side editors.

⁷ <http://openid.net>

Visual aspect of the site

The interface of the webpage is a free template downloaded from Drupal Website. It is being customized in order to achieve the wished look and feel. The theme chosen is **Corporate Clean Theme**⁸.

As aforementioned, the theme was customized. The changes affected the header, footer and the slideshow of the front page. Some images and menu design were also modified. The goal was to improve the look and feel of the theme and adapt it to the needs of the project.

In the header, the site name and slogan were updated. That can be done from the administration section. First on the *Appearance* tab the theme can be customized in what concerns to colours and some content to be appeared like the logo, slogan, etc. by means of check boxes. In contrast, in the *Configuration* tab, *System* section, *Site information* it is possible to update some information like site name and slogan. In the header, a search item was also added.

Concerning to the footer some logos, texts, contact mail and links were added. The slideshow that appears in the front page were updated to display information, either pictures and a summary, about the experiments to be carried out in the project. In order to do that, Php documents must be modified. A wiki about how to modify the theme can be checked at this link⁹

Finally, the favicon was also updated with the logo of the project.



Figure 2: logo of the project used as initial favicon of the website

Site structure

The site structure differs according to the role of the user accessing to it. *Partners* and *Administrators* (*Administrators* have whole access to the site, thus they will omitted in the remaining) have access to content, not accessible for neither authenticated nor anonymous users.

⁸ <http://drupal.org/project/corporateclean>

⁹ http://wiki.morethanthemes.com/index.php?title=Corporate_Clean:Demonstration_Content_for_Drupal_7.x

However the whole content is accesible for *Partners*. Consequently, the section that are public are presented first and the privates one later.

Public Sections

Sections with access granted to any user.

- **Project:** specifications and main features of the project. That page contains a summary of the project, but the most of the information is grouped in several submenus. All of them are static pages with information about the project.
 - **Summary:** a detailed explanation of the project, contribution, some features.
 - **Objectives:** a detailed list of the objectives of the project.
 - **Work Packages:** action plan divided in the work packages which make up the project. It details the tasks for every package.
 - **Partners:** list of the partners from the consortium that make up the project.
 - **White Book of science:** description of the book and the aspects it covers.
- **Experiments:** how the capabilities of the c-infrastructures will be demonstrated by means of the deploying of some applications. It includes several submenus for a more thoroughly explanation of three of the main applications to be developed during the project. Those applications will be deployed in order to get their results as experiments of the project. It is also static information.
 - **Semantic Maps:** description of the semantic maps application.
 - **Cells Images:** description of the cells images application.
 - **Temperature Maps:** description of the temperature maps application.
- **News & Media:** it contains all the media related information. This section concentrates the last news, clipping, press releases and radio and TV appearances in the corresponding submenus. The content of such parts is dynamic in the sense that they are updating as new nodes related to those fields are added. For instance, the appearance of a new press release means a new node addition on either the News & Media and the *Press Release* sections. *News & Media* page contains a filter which displays the teasers of the whole nodes within their submenus.
 - **Last News:** list of the last news.
 - **Clipping:** image gallery of the images related to the project.
 - **Press Releases:** list of the press releases.
 - **Radio, TV:** nodes with radio and TV appearances.

- **Events:** contains the events related to the project. In the *Events* page either upcoming and past are listed as links. However, it has two submenus to check them separately. As *News & Media* section, this menu is in constant update.
 - **Upcoming Events:** the upcoming events.
 - **Past Events:** the past events.
- **Forum:** site to general discussion about topics related to the project. Requires login.
- **Documentation:** contains documentation related to the project. It is expected to be updated as the project goes on.
 - **Public Documentation:** documentation available for everybody.
 - **Administrative:** list containing the administrative documents.
 - **Deliverables:** list containing the deliverables.
 - **Milestone:** list containing the milestones.
- **Contact:** contact information page.

Private Sections

- **Calendar:** contains the events of the project displayed in a calendar.
- It is expected to provide a private documentation section.

TECHNICAL DEVELOPMENTS MANAGEMENT

In the following list, we present the tools initially selected for the technical development management:

- Subversion¹⁰: Is a software versioning and revision control system distributed under an open source license. Developers use Subversion to maintain current and historical versions of files such as source code, web pages, and documentation. We'll use the Ibercivis¹¹ subversion server hosted in the Unizar-BIFI Data Center to have the development of the different applications under control.

¹⁰ <http://subversion.apache.org>

¹¹ <http://www.ibercivis.es>

- GIT¹²: Git is a distributed revision control and source code management (SCM) system with an emphasis on speed.[3] Git was initially designed and developed by Linus Torvalds for Linux kernel development; it has since been adopted by many other projects. We'll use the GitHub server to do a fork of the PyBossa and develop new features. Furnivall middleware source code is also hosted in GitHub.
- Google Docs¹³: Google Docs is a free, Web-based office suite and data storage service offered by Google within its Google Drive service. It allows users to create and edit documents online while collaborating in real-time with other users. Google Docs combines the features of Writely and Spreadsheets with a presentation program incorporating technology designed by Tonic Systems. It will be used by the partners for documents such as application description or system requirements.

MAILING LISTS

Mailman¹⁴ is free software for managing electronic mail discussion and e-newsletter lists. Mailman is integrated with the web, making it easy for users to manage their accounts and for list owners to administer their lists. Mailman supports built-in archiving, automatic bounce processing, content filtering, digest delivery, spam filters, and more.

The mail list `societic@ibercivis.es` is the major interaction tool for the partners. Most of the people working in Societic is already subscribed in this mail list. No topics are restricted so issues from all the work packages are transmitted to the rest of the consortium. Recipients in this list are: `bantoli@unizar.es`, `candidasilva@qui.uc.pt`, `carlos.val@bifi.es`, `eduardol@bifi.es`, `fabian@zsi.at`, `Fermin@bifi.es`, `frasan@unizar.es`, `fserrano@unizar.es`, `fubica@dsc.ufcg.edu.br`, `holocher@zsi.at`, `kieslinger@zsi.at`, `mcibanez@bifi.es`, `mperez@clusterticaragon.es`, `mperez@tecnara.es`, `nazareno@dsc.ufcg.edu.br`, `oswaldo@unizar.es`, `pgmota@antrop.uc.pt`, `rbrito@ci.uc.pt`, `tarancon@unizar.es`.

Another mail list `societic-systems@ibercivis.es` has been created in order to be a meeting point for all the developers, as well as to keep a backup of all the emails that are exchanged during the development process. Recipients in this list are: `candidasilva@qui.uc.pt`, `carlos.val@bifi.es`, `eduardol@bifi.es`, `Fermin@bifi.es`, `frasan@unizar.es`, `fubica@dsc.ufcg.edu.b`, `jalfjalf@gmail.com`, `jeymissoncz@gmail.com`, `nazareno@dsc.ufcg.edu.br`, `nigini@gmail.com`, `pgmota@antrop.uc.pt`,

¹² <http://git-scm.com>

¹³ <https://docs.google.com>

¹⁴ <http://www.gnu.org/s/mailman>

rbrito@ci.uc.pt.

If needed, we will create new mailing lists in the future.

AUDIO CONFERENCE FACILITIES

Audio conferences with low cost and great quality of audio/video are a critical issue for this kind of international project. It is always hard to find the best solutions, as alternatives evolve and many of these technologies require pay per use when mature.

SOCIETIC partners will start using Google Hangout¹⁵. Hangouts are places used to facilitate group video chat (with a maximum of 10 people participating in a single Hangout at any point in time). Only Google+ users can join the "Hangout" if they happen to possess the unique URL of the Hangout. We'll use it for our internal WP regular meetings as well for communication within the consortium and with the External Advisory Members.

CONCLUSION

After one single month of activity of the project, we have set up operational all required collaborative tools ready to be used by the SOCIETIC participants.

The current document covers the current state of the website. However, note that the website will continue being updated and improved providing new functionalities for both, either end-users and project partners.

In the next weeks and months, the rest of the tools will be progressively adjusted to the needs of the consortium and the interaction with the citizens will be ensured.

The SOCIETIC partners do not consider this set of tools as being exhaustive and definitive, as new ways of communicating internally and externally may appear in the next two years.

¹⁵ <https://tools.google.com/dlpage/hangoutplugin>