



DELIVERABLE

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D7.2 – Project Web Site

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Executive Summary

This document deals with the presentation of the architecture, the underlying technologies and the information structure of the Natural Europe project Web Site. The aim of the project Web Site is to provide constant online presentation and dissemination of the project progress and results including information about the project and its goals, the consortium members, the ways to participate as an affiliated partner and the current list of partners, the public deliverables of the project, the PowerPoint presentation of the project, etc. The actual deliverable is the Web Site itself which can be found at http://www.naturaleurope.eu/.



1 Introduction

1.1 Scope

This report presents the structure, technologies and functionalities of the Natural Europe Web Site. The actual deliverable is the Web Site itself (available online at http://www.natural-europe.eu). This document aims to give an overview of the Web Site and to present some technical information about its implementation techniques.

1.2 Audience

This report is addressed to the Natural Europe project partners and the European Commission, presenting how the Web Site has been structured, as well as its main functionalities. The general public may also consult this document to find out more about the functionalities offered the Natural Europe Web Site and the information contained.

1.3 Definitions, Acronyms and Abbreviations

ANSI - American National Standards Institute - A private non-profit organization that oversees the development of voluntary consensus standards for products, services, processes, systems, and personnel in the United States.

PHP - Personal Home Page, PHP: Hypertext Preprocessor (recursive acronym) - A general-purpose scripting language originally designed for Web development to produce dynamic Web pages.

DBMS - Database Management System - A software package, with computer programs, that control the creation, maintenance, and the use of a database.

RDBMS - Relational Database Management System - A database management system based on the relational model.

ORDBMS – Object Relational Database Management System - A database management system similar to a RDBMS, but with an object-oriented database model

SQL - Structured Query Language - A database computer language designed for managing data in relational database management systems originally based upon relational algebra and calculus

SQL-92 - The third revision of the SQL database query language.

MySQL - A Relational Database Management system that runs as a server providing multiuser access to a number of databases. It is named after the developer Michael Widenius' daughter, My. The SQL phrase stands for Structured Query Language.



Oracle - An object-relational database management system produced and marketed by Oracle Corporation.

Sybase - The first high-performance RDBMS for online applications

MS SQL - Microsoft SQL Server - A relational model database server produced by Microsoft

mSQL - Mini SQL - A historically important lightweight database management system

Postgress – A free and open source object-relational database management system.

ODBC - Open Database Connectivity - A standard software interface for accessing database management systems.

CMS - Content Management System - The collection of procedures, used to manage work flow in a collaborative environment.

Joomla! - A free and open source Content Management System for publishing content on the World Wide Web and intranets.

GIF - Graphics Interchange Format - A bitmap image format

JPEG - Joint Photographic Experts Group – A used method of lossy compression for images.

PNG - Portable Network Graphics - Aa bitmapped image format and video codec that employs lossless data compression, created to improve upon and replace GIF.

PDF - Portable Document Format - An open standard for document exchange.

Shockwave - A multimedia platform used to add animation and interactivity to Web pages.

HTTP - Hypertext Transfer Protocol - A networking protocol for distributed, collaborative, hypermedia information systems.

FTP - File Transfer Protocol - A standard network protocol used to copy a file from one host to another over TCP-based networks

LDAP - Lightweight Directory Access Protocol - An application protocol for reading and editing directories over an IP network

Z39.50 - A client–server protocol for searching and retrieving information from remote computer databases.

SMTP - Simple Mail Transfer Protocol - An internet standard for electronic mail transmission across IP networks.

XML - Extensible Markup Language - A set of rules for encoding documents in machine-readable form.



GPL - General Public License - The most widely used free software license, originally written by Richard Stallman

1.4 Structure

Chapter 1: Contains an overview of this document, providing its Scope, Audience, and Structure

Chapter 2: Provides an overview of the Natural Europe Web Site

Chapter 3: Describes the structure of the Web Site

Chapter 4: Presents the functionalities that the Web Site offers

Chapter 5: focuses and elaborates on the content management system

Chapter 6: Presents a reflection on the way the present deliverable affects Natural Europe Vision



2 Project Web Site Overview

A key element for the dissemination of the Natural Europe project is the construction and population of a Web Site, so that the latest project information can be shared with potential customers (users), peers and the research & practitioners communities. This document presents the information specifications for the implementation of the Natural Europe project Web Site. The Web Site uses up-to-date Web technologies, together with a user friendly graphical interface. The implementation of the Web Site allows detailed visits information to be tracked and statistical reports to be generated. These reports will also give valuable input concerning dissemination evaluation criteria.

The Web Site has been deployed at the reserved domain name http://www.natural-europe.eu. The Natural Europe Web Site will be used to communicate with both technical and non-technical audiences; therefore it has been designed for ease of use and interaction. Public deliverables will be made available via the Web Site, as will general presentation material. Copies of other Natural Europe papers and presentations will also be made available, subject to permission of the copyright holder in the case of journal and conference publications.

As will be described in detail in the following, the Natural Europe Web Site employs state-of-the-art Web technologies like the PHP programming language and MySQL database management system, to allow dynamic content presentation, advanced search functionalities and other communication tools.

2.1 Implementation

The Natural Europe Web Site is developed on the Joomla! 1.5 platform. CMS (Content Management System) is a software that keeps track of every piece of content on the Web Site, much like a local public library keeps track of books and stores them. Content can be simple text, photos, video, documents, or just about anything one can think of. A major advantage of using a CMS is that it requires almost no technical skill or knowledge to manage.

Joomla! is based on PHP and MySQL.

- PHP (<u>http://www.php.net/</u>) was chosen as the server side scripting language, while
- MySQL (http://www.mysql.com/) was selected as the proper RDBMS to support the storage requirements.

PHP is an HTML-embedded scripting language similar in its concept to Microsoft's ASP and Allaire's Cold-Fusion. When a client requests a Web Page, the Web Server passes this request to PHP, which in turn generates dynamically (possibly based on information drawn from a database after processing user input parameters) the Web page to be sent back to



the client. PHP can interface with Apache both as a module and as a CGI. Much of its syntax is borrowed from C, Java and Perl with a couple of unique PHP-specific features. PHP's functionality is extended through the use of external libraries. There are functions that can be used to connect to various database systems (Oracle, MS SQL, Sybase, MySQL, mSQL, Postgress, ODBC etc.), to generate on the fly GIF, JPEG, PNG, PDF and Shockwave files, to access HTTP, FTP, LDAP, Z39.50 and SMTP servers, to parse XML files and many more.

MySQL is an open source project now owned by Oracle and is distributed under the GPL license. If MySQL is used in conjunction with a Web Server on Unix, there is no need for a license fee even for commercial use. On Win32 though, a license is required. MySQL is a fast, ANSI SQL92 compliant, RDBMS system, which is unrivalled in its ease of use.

The core Joomla! framework enables developers to quickly and easily build:

- Inventory control systems
- Data reporting tools
- Application bridges
- Custom product catalogs
- Integrated e-commerce systems
- Complex business directories
- Reservation systems
- Communication tools

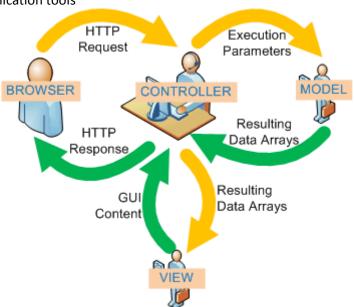


Figure 2-1: The Joomla model view controller



3 Structure

3.1 Content

The Natural Europe Web Site includes various types of navigation and content:

- **Home Page**: It contains links to various information and news items regarding the project, also giving access to the menus and other sections of the Web Site.
- **The Project**: This page, subcategorized in three sections, elaborates on:
 - the project description: general description of the project
 - the project objectives: the goals and achievements the projects aims at
 - the project vision: the envisioning of the project
- Outcomes: The section hosting the outcomes of the project categorized in:
 - Conferences: all the conferences were either the project results were presented or represent interesting and relevant events for the project.
 - Publications: all publications of the project, i.e papers, articles, etc. coming out
 of the project activities, along with either a draft or a full version of the paper
 (whenever possible; not copyrighted).
 - Deliverables: all the public deliverables of the project that anyone interested in them can download. Private and restricted deliverables will be made available through the project workspace, which is hosted separately from the project Web Site.
- The Consortium: This page lists the consortium partners, providing some basic
 information for each one of them, namely: a short description of each partner, its
 logo and key people involved in the project, along with their photos. Additionally, a
 Google map will provide an overview of all the consortium members, showing their
 distribution in Europe.
- Affiliations: The section hosting the affiliations of the project, subcategorized in:
 - Affiliated Partners: This page includes a growing list of affiliated partners of the project, also providing some information about them (short description, logo and key people with their photos).



- Related projects: This page reports on related ongoing/completed projects, to maximize synergies between Natural Europe and relevant initiatives. Each related project is briefly presented through a short summary and a logo.
- Contact us: This page contains contact information for the coordinator of the project, as well as a contact form through which, the project coordinator can also be reached.
- Press Room: This page contains all the dissemination/publicity material of the project, including the Natural Europe logo, brochures, leaflets, presentations, press releases, etc. for the public to download.
- News Archive: This page contains all the news items ever published on the Natural Europe project Web Site. The most recent ones also show on the home page and related feeds, but all of them are accessible through the news archive. This page also hosts the newsletter archive of the project, containing all the newsletters produced and promoted through the Natural Europe mailing list.
- Interesting Web Links: This page contains reference material and interesting links related to the project but also to similar initiatives promoting museum education, not only for Natural History Museums, but for other types as well.

3.2 Social Features

The Natural Europe Web Site, apart from the standard presentation and menus, will also adopt a set of Web2.0 widgets, enhancing the "social" aspect of the Web Site, aiming to attract additional activity throughout the Web Site. More specifically, a set of widgets will be deployed, such as:

- **RSS feeds** that will summarize the latest project news to where the users can subscribe and get all the latest information.
- **Facebook fan box** that will allow the users to connect to the project through Facebook, following the project group that is set up online.
- Flickr widget that will display pictures from the Flickr account of the project, tagged
 with the word "naturaleurope", showing pictures from project meetings and events
 organized by the project.
- Twitter feed that will display all the twitter feeds that are either published by the
 project or are generated by other users of Twitter, related to Natural History and
 Museums.
- Social Bookmarking that will allow users to share and send project news and events that are uploaded to the project Web Site.



• **Comments** in articles that will allow the users to contribute to all the project news and events by providing comments on them.

3.3 Site Map

The following list presents the information structure of the Natural Europe Web Site:

Main Menu

- Home
- The Project
 - o Description
 - o Objectives
 - o Vision
- Outcomes
 - o Conferences
 - o Publications
 - o Deliverables
- The Consortium
- Affiliations
 - o Affiliated Partners
 - o Related Projects
- Contact us
- Press Room
- News & Events
 - o News
 - o Events
 - Newsletters
- Links

In the following figures the Natural Europe home page and main section pages are presented.





Figure 3-1: The home page of the Natural Europe Web Site

In Figure 3-1, the main area of the Web Site can be seen. This area will dynamically change, showing each time the content of the menu item that is selected using the navigation menus depicted in Figure 3-2. In Figure 3-3 the consortium map of Natural Europe can be seen.



Figure 3-2: Left and right hand side navigation menus in Natural Europe Web Site



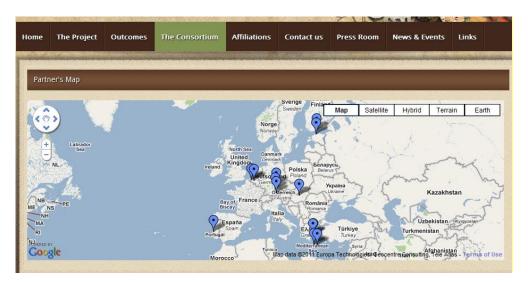


Figure 3-3: The consortium map of Natural Europe Project Web Site



4 Functionalities

4.1 The Calendar

The calendar stores all upcoming events for easy reference. A monthly and a year view can be presented.

On the main page of Natural Europe Web Site, users can have access to the calendar tool. The calendar tool allows users to keep track of events. On the specific date that there is an event, users can see "a small cube" on this date.



Figure 4-1: Project calendar

By clicking on this date users can see more details about this event and also the user can register to attend this event. On this screen user can have access to useful information about the event such as brief description of the event, location, dates, target group.



Figure 4-2: Project calendar



4.2 Polls

The Natural Europe Web Site is expected to host polls on interesting topics related to the museum education around Europe, to invoke participation of the Web Site visitors. As an example, the figure on the right shows the initial poll that was used when the Web Site was launched, asking visitors to express their opinion for the Web Site itself.



Figure 4-3: Poll

The poll results will be publicly available to each Web Site Visitor

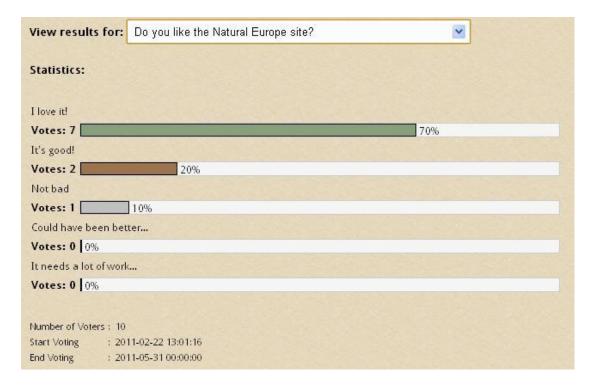


Figure 4-4: Poll Results



4.3 Google Analytics

In order to track the visibility of the project and the popularity of the Web Site, a Google Analytics account has been set up, to also support the dissemination strategy of the project, aiming especially on regions/countries with less visitors.



Figure 4-5: Poll Results

The image above shows a portion of the Google Analytics Dashboard, namely the visits through a time period, the Web Site usage, the visitors overview and the map overview. For each of the above overviews, more detailed reports can be produced.

4.4 Search

Each visitor will be able to search within the content of the entire Web Site using search terms with a simple text-based search



Figure 4-6: Search



4.5 Multiple Languages

The Web Site will be supported in multiple languages, allowing visitors from all over the world to access its content and learn about the project description, aims and outcomes.



Figure 4-7: Web Site Languages

4.6 Surveys

Surveys on important topics that may arise during the project lifetime are also expected to come up during the project lifecycle. These will also be supported by the platform upon which the Web Site will be built.



5 Content Management

The Natural Europe Web Site should be updated regularly meaning that it couldn't be developed as static HTML pages. Therefore there was a need to use content management functions that can be easily adapted to the needs of the project. In this respect, the Joomla! CMS has been used, that offers the ability to store, retrieve, edit, update control, and finally output information in a variety of ways. The figure below presents the Natural Europe Joomla! Web Site Control Panel



Figure 5-1: The Joomla! Administrator Panel of Natural Europe Project Web Site

5.1 User Management

The figure below presents the User Administration Panel. The Web Site administrator can change the details of a user, activate / deactivate an account, assign privileges e.t.c.

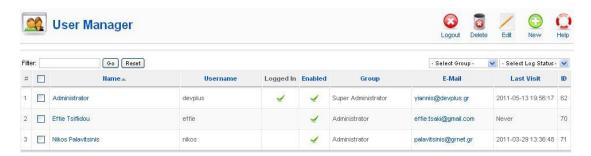


Figure 5-2: The Joomla! User Administration Panel



5.2 Article Management

The figure below presents the Article Manager Panel of the Natural Europe Web Site. The administrator of the Web Site can control the visibility of the articles hosted at the Web Site i.e. publish / unpublish, control the access level of each article (public / restricted / privileged). Most importantly, the administrator can have a general overview of the complete list of the articles hosted at the Web Site.



Figure 5-3: The Joomla! Article Manager Panel

By clicking at a particular article item, the Web Site administrator is presented with the article details, as shown in the figure below, in order to edit the details of the particular article item.



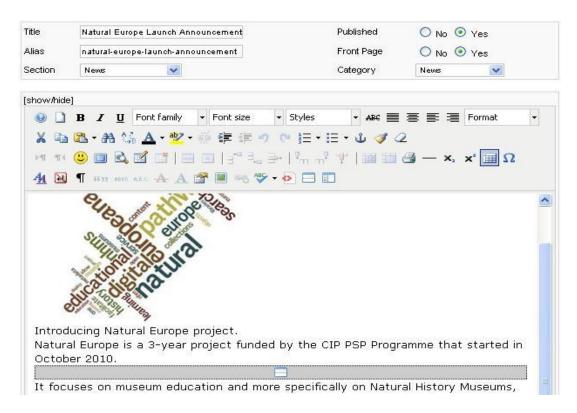


Figure 5-4: An article of the Web Site in Edit Mode

5.3 Module Manager

The Module Manager, as shown in the figure below, gives the Web Site administrator a general overview of the modules installed / used at the Web Site. Through the Module Manager Panel, the administrator can control all the available modules.



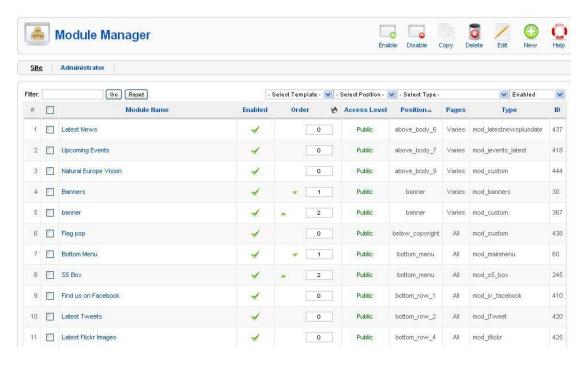


Figure 5-5: The Joomla! Module Manager Panel

5.4 Poll Management

For a created poll, the Administrator is given the option to control all the poll details as shown in the figure below.

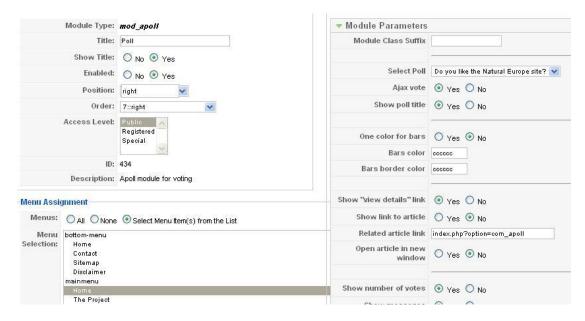


Figure 5-6: The Poll Manager



5.5 Language Management

The Web Site Administrator may control all the available options of the language menu, as shown in the figure below.

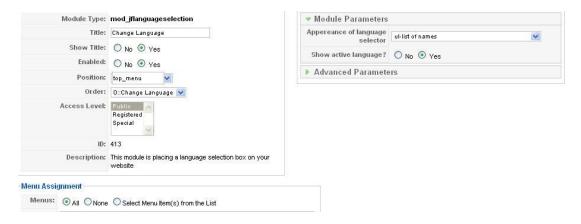


Figure 5-7: The Language Manager

5.6 Facebook Management

The Facebook widget, found at the bottom of the Web Site, can be controlled by the corresponding Facebook module as shown in the image below.

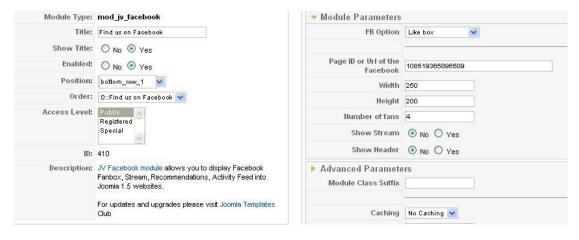


Figure 5-8: The Facebook Module Manager



5.7 Twitter Management

The 'Latest Tweets' widget also found at the bottom of the Web Site is controlled from the corresponding Twitter module, as shown below.

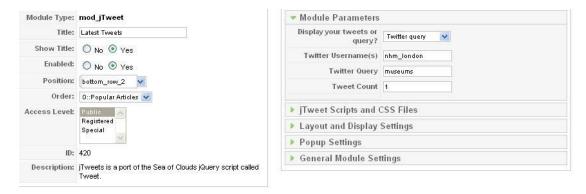


Figure 5-9: The Twitter Module Manager

5.8 Flickr Management

The 'Flickr images', drown in an ad hock fashion from the Flickr Web Site and presented at the bottom of the Natural Europe Web Site, is controlled from the Flickr module.

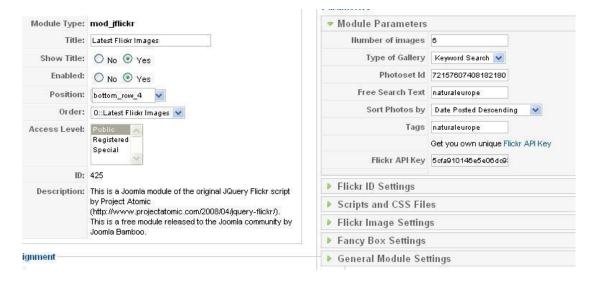


Figure 5-10: The Flickr Module Manager



6 Impact on Natural Europe Vision

This chapter focuses on the impact that the specific deliverable has on the Natural Europe as this is defined in D2.1 White Paper on Natural Europe Vision. In the end of this chapter, specific points will be made, related to the revisions that will come from this deliverable, affecting D2.1 and being reflected in its next version. Ideas and guidance on how this part should report the impact on Natural Europe Vision, can be found in chapter 5 of "D2.1 White paper on Natural Europe Vision".