



Monitoring of the corporate communication and information performance

Framework Contract for the provision of Website Benchmarking Services

Final Report

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1 INTRODUCTION

The European Agency for Safety and Health at Work, set up in 1996, contributes to help meet the information needs in the field of occupational safety and health. As the Agency explains, its aim is to make Europe's workplaces safer, healthier and more productive, acting as a catalyst for developing, collecting, analysing and disseminating information that improves the state of occupational safety and health in the European Union.

For this purpose, the Agency has developed a communication and promotion strategy oriented to its key audiences (policy and decision makers; OSH policy 'shapers' including social partners; policy influencers; OSH professional community; Education, academic, service providers; end-users – workplaces; information providers and intermediaries). This strategy benefits from the existence of the Agency's information network, in which national focal points (FOP) play an important role, and its objective is to establish the Agency as Europe's first reference point, as well as its website as the principal portal for 'quality-assured' information on safety and health at work.

In this sense, giving the important role that the Agency's web site represents within this communication and promotion strategy (providing information about the Agency, its activities, network partners, etc), the monitoring of the Agency's web site performance is perceived as a very important aspect to consider. Thus, a benchmarking exercise has been carried out aiming at enhancing the knowledge of the Agency's current and potential information users, their needs and expectations regarding the Agency information and communication strategies and activities.

2 OBJECTIVES

The objective of this service is to establish a benchmark of Agency's main website against other websites of National, EU, and International organisations, public and private, specialised in providing social information to SMEs.

Furthermore, apart from the "pure" exercise of benchmarking, in which several webs have been analyzed according to various characteristics and a ranking of them has been established; three analysis of the OSHA website has been made in parallel with the aim of knowing the level of acceptance of web development professionals, daily users of the OSHA web and sporadic users.

The benchmarking exercise expects to enable the assessment of some key aspects of the Agency's website, such as:

- Usability – Is the site easy to use by SMEs?
- Accessibility - Can everyone access the site?
- Communication – Can users find what they need?
- Integration – Does the site support, and work in harmony with the Agencies' off-site and off-line communications?
- Referencing – Does the Agency put search engine optimisation into practice?
- Agency's offer of OSH products and services – Are they relevant to the Agency's main target audiences?

3 WORK PERFORMED

3.1 WEB SITE PANEL DEFINITION

3.1.1 Introduction

The web site panel definition has been divided into four categories considered as being the most appropriate for this benchmarking study, and which are considered to give the most interesting and relevant data for comparison with the Agency website. The appropriate benchmark indicators are:

1. **Website that have similar content to the Agency website**
2. **Websites that have a similar level of complexity to the Agency website (e.g. that present large volumes of data)**
3. **Websites that are focussed on diffusing information within the Member States of the EU/EEA**
4. **Web sites that use the similar technology (Plone)**

A selection websites was compiled by CARSA & Cbt as being the most suitable for analysis, based on the criteria defined on top. (See Annex 6.1)

3.1.2 List of selected web sites

Among all them, and with the support of the Agency, a total of 10 websites were selected for analysis:

1. Cedefop Training Village
 - a. <http://www.trainingvillage.gr>
2. European Environmental Agency
 - a. <http://www.eea.europa.eu/>
3. International Labour Organization
 - a. <http://www.ilo.org>
4. Health and Safety Executive
 - a. a. <http://www.hse.gov.uk/>
5. Canada's National Centre for Occupational and health and Safety information
 - a. <http://www.ccohs.ca>
6. World Health Organisation
 - a. <http://www.who.int/>
7. European public health alliance
 - a. <http://www.epha.org/>
8. Environment Agency (UK)
 - a. <http://www.netregs.gov.uk/>
9. Prevent Net (BE)
 - a. <http://fr.prevent.be/net/net01.nsf/p/mm00-03>
10. DG EMPL
 - a. http://ec.europa.eu/dgs/employment_social/index_en.htm

3.2 BENCHMARKING METHOD

3.2.1 Introduction

This section presents the method defined to carry out the benchmarking of Agency's main website against other websites of National, EU, and International organisations, public and private, specialised in providing social information to SMEs; and to provide the "experience" of different potential users and experts in developing websites.

3.2.2 Methodology

The objective of the benchmarking method is to define an exercise that takes into account different points of view provided by:

- o Quality assurance experts, with high expertise in checking and assuring the quality of web applications
- o Website developers
- o Regular users of the OSHA website
- o Sporadic users, subscribed to different services

These four complementary exercises will provide us with a very good overview of all the aspects of the benchmarking exercise.

3.2.2.1 Systematic assessment by EVALWEB

The **systematic assessment** by EVALWEB a tool especially created for these exercises. This tool permits the validation of web applications, assessing their quality in a systematic way and considering the characteristics of the web and its development process. This tool is based on a set of predefined (but customisable) requirements, existing models and web quality standards.

The following high level criteria of the websites will be analysed: Usability, Accessibility, Communication, Integration, & Referencing (keywords).

In this exercise, eleven websites (including the OSHA website) will be analyzed with the aim of comparing the results obtained for each website and to establish a ranking between them.

3.2.2.2 Analysis by expert developers

Three members of the team, with a high expertise in developing websites, will analyze the OSHA website in terms of accessibility, usability, design & architecture, security, performance and functionality. Three independent reports will be carried out and a final report, realized by consensus, will gather the results of the analysis and the recommendations.

3.2.2.3 Experience of regular users

The experience of regular users will be collected by means a questionnaire sent to 10 partners of the Agency. This information is considered very important because they can provide us with the opinion of daily users of OSHA information.

This questionnaire contains several questions regarding accessibility, usability, design & architecture, security, performance and functionality and a section for comments and overall impression for each of these aspects.

The questionnaire will be sent by the Agency to their contacts and the OSHA partners will have 10 days to send back it filled with their impressions.

3.2.2.4 Experience of OSH subscribers

The last exercise consists in collecting the experience from the **OSH subscribers**, as sporadic users that access to the OSHA website in specific moments or for punctual services. The **OSHA On-line Questionnaire**, carried out in parallel in the other **Specific Service contract** with CARSA, will be used as an input to the current study, as many of the questions that are used during that survey, are also applicable during the website benchmarking process.

3.3 ANALYSIS OF RESULTS

3.3.1 Evalweb analysis¹

3.3.1.1 Introduction

The systematic assessment by Evalweb has permitted the validation of the 11 web applications, assessing their quality in a systematic way and considering the characteristics of the web and their development process.

This analysis consists on checking the fulfilment of a range of requirements, which are classified in two different categories:

- o Aspects categorized by Evalweb method,
 - o General aspects
 - o Sections and contents
 - o Navigation capacity
 - o Specific characteristics
 - o Aspects linked to software infrastructure
 - o Features (functions)
 - o Login and authentication
 - o Security during validation and data entry operations
 - o Security during transactions and functionalities
 - o Aspects linked to the type of accessibility to the web site
 - o Aspects linked to elements present in the web site
 - o Aspects linked to the technologies that are incorporated in the web site
 - o Aspects linked to the execution environment
 - o Aspects linked to the type of web site
 - o Server configuration
 - o Capacity of the web site
 - o Availability
- o Web standards
 - o Usability
 - o Accessibility
 - o Security
 - o Functionality
 - o Architecture and Design

¹ The complete analysis of OSHA website is shown in the Annex 5.3.2. The rest of the analysis is in the EVALWEB ANALYSIS ANNEX.

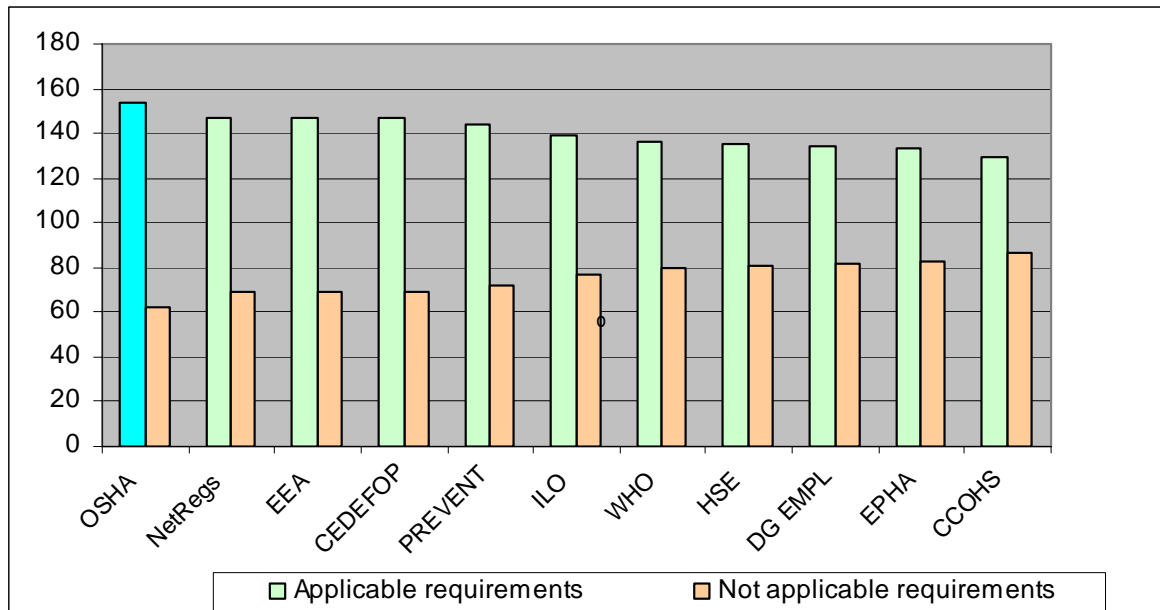
- HTML standards
- Other requirements
- Capacity
- Availability

3.3.1.2 Requirements and its applicability

The Evalweb method consists of 216 requirements (see annex 6.3.1) classified by:

- Usability
- Accessibility
- Security
- Functionality
- Architecture and Design
- HTML standards
- Other requirements
- Capacity
- Availability

The above mentioned requirements are or not analyzed depending on the functionalities of the web site. In this sense, the first activity has been to study each web site and decide which requirements were applicable and not. The following figure shows the applicable requirements for each website.

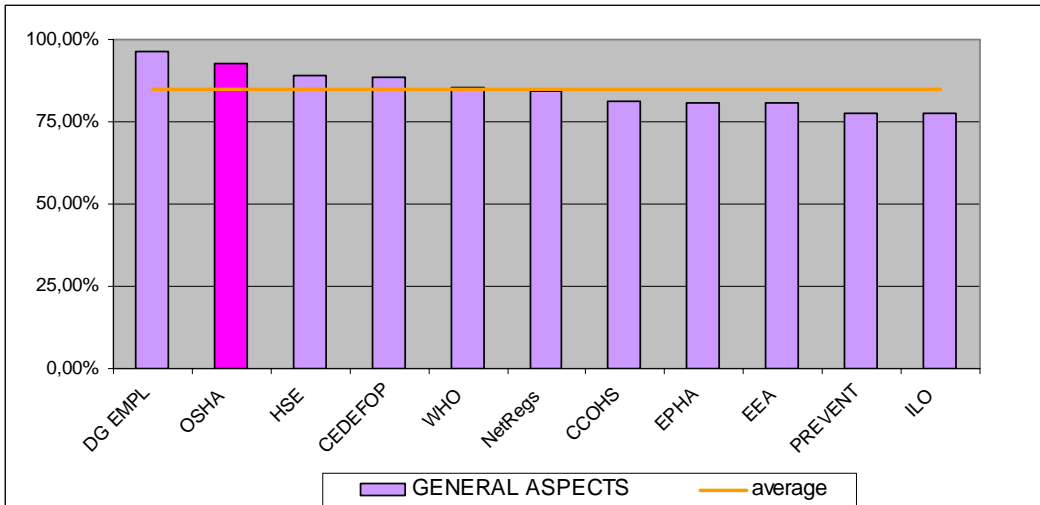


From this first analysis, the results shown that the OSHA web site is the web in which more requirements are applicable, which also means that is the web site with more functionality implemented.

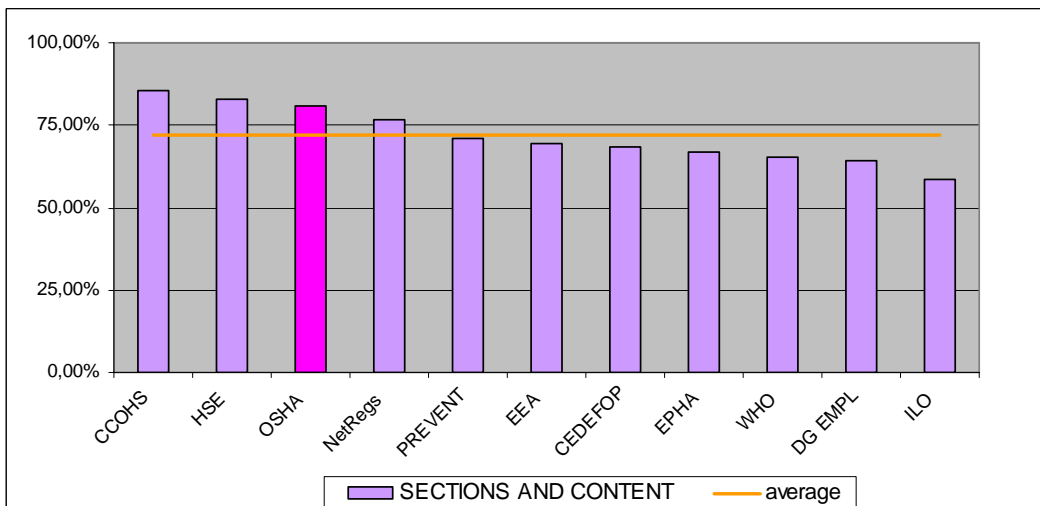
3.3.1.2.1 Results obtained according to the Aspects categorized by Evalweb method

The following figures shown the results obtained for each website according to Evalweb method and for the global analysis:

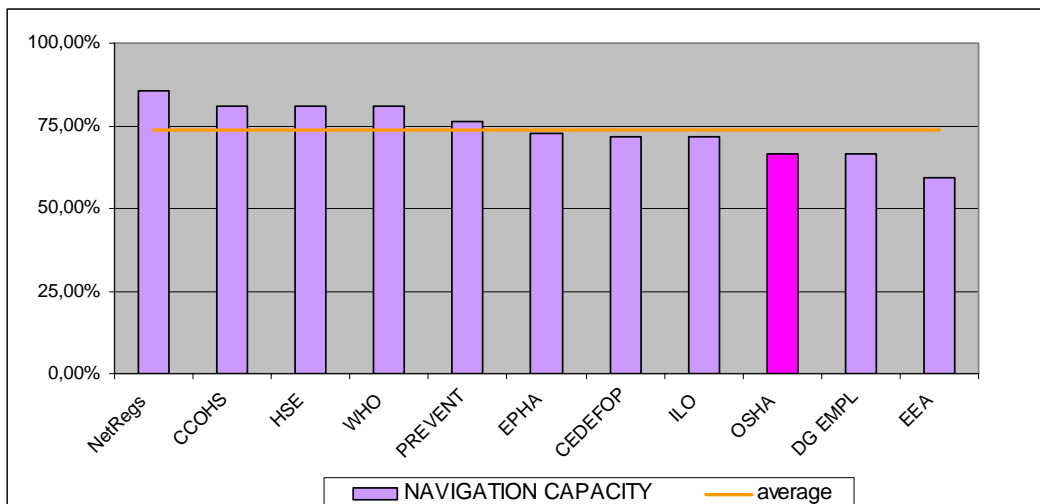
- General aspects**



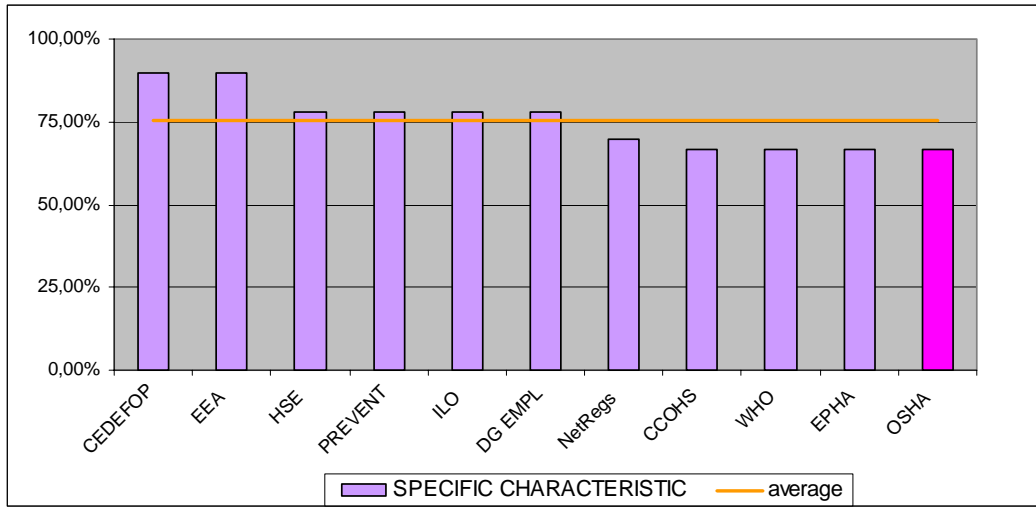
- Sections and contents**



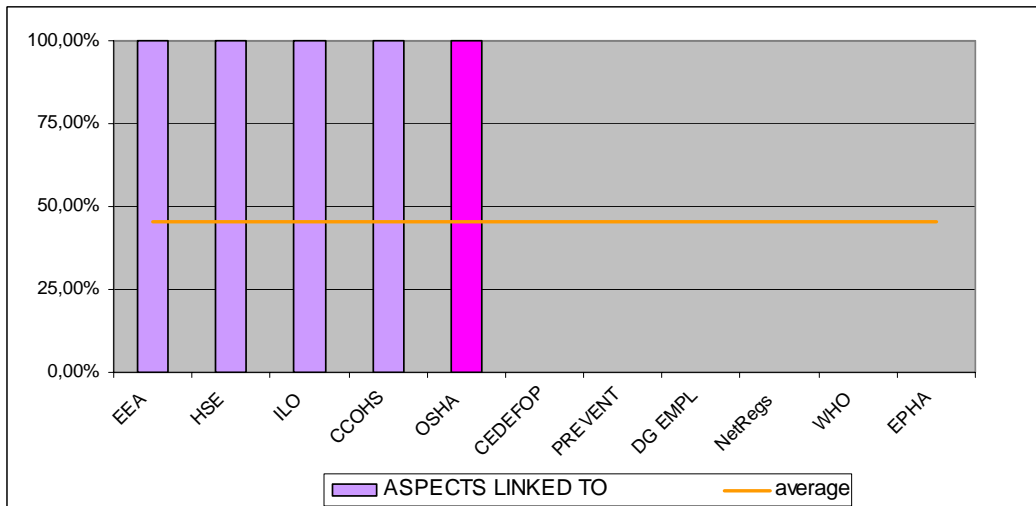
- Navigation capacity**



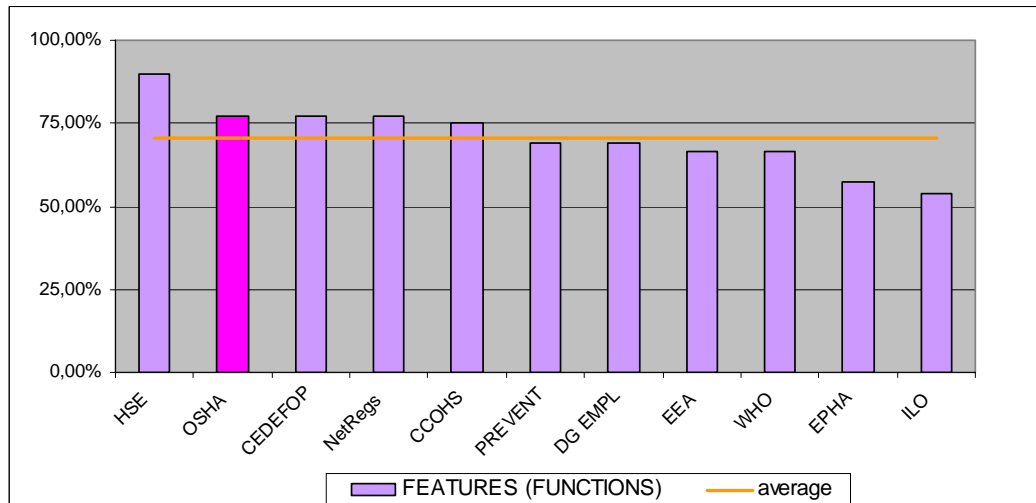
- Specific characteristics**



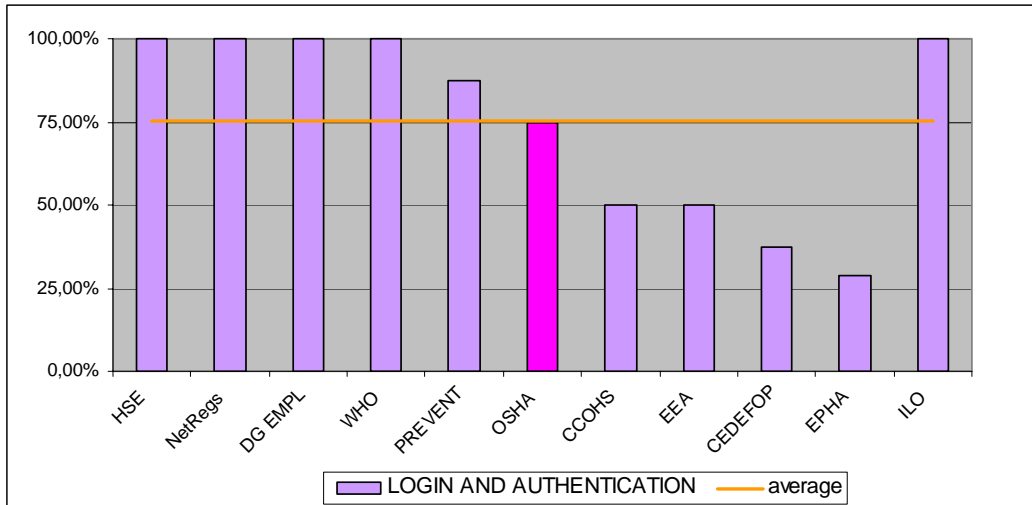
- Aspects linked to software infrastructure**



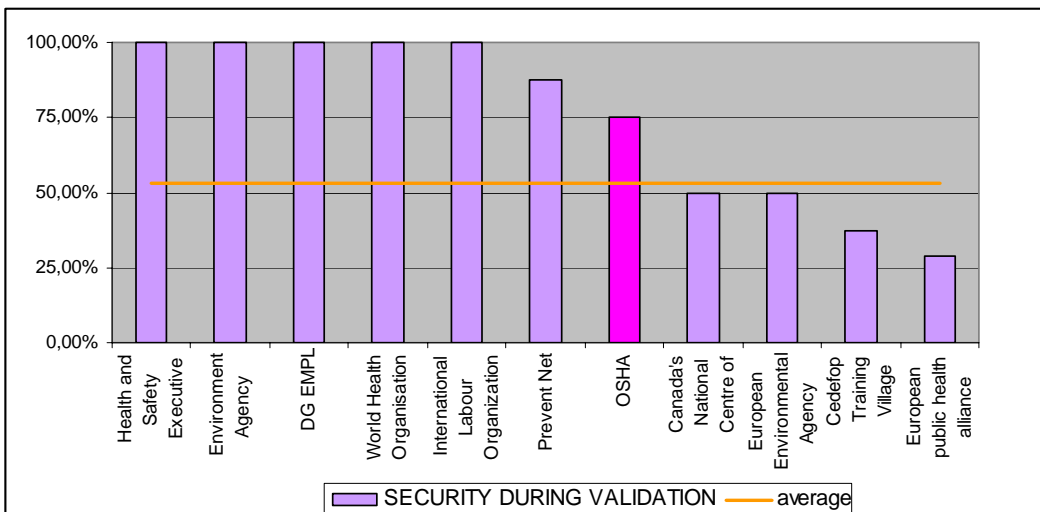
- Features (infrastructures)**



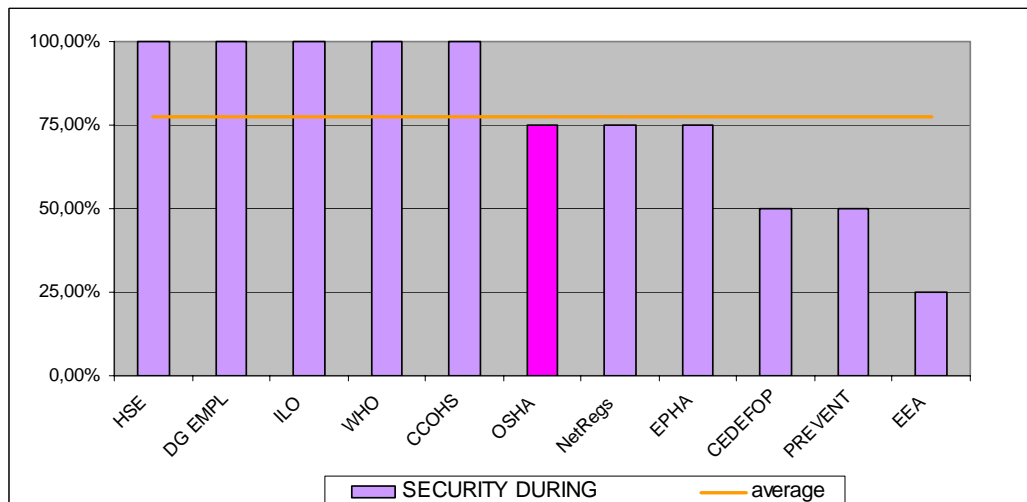
- [Login and authentication](#)



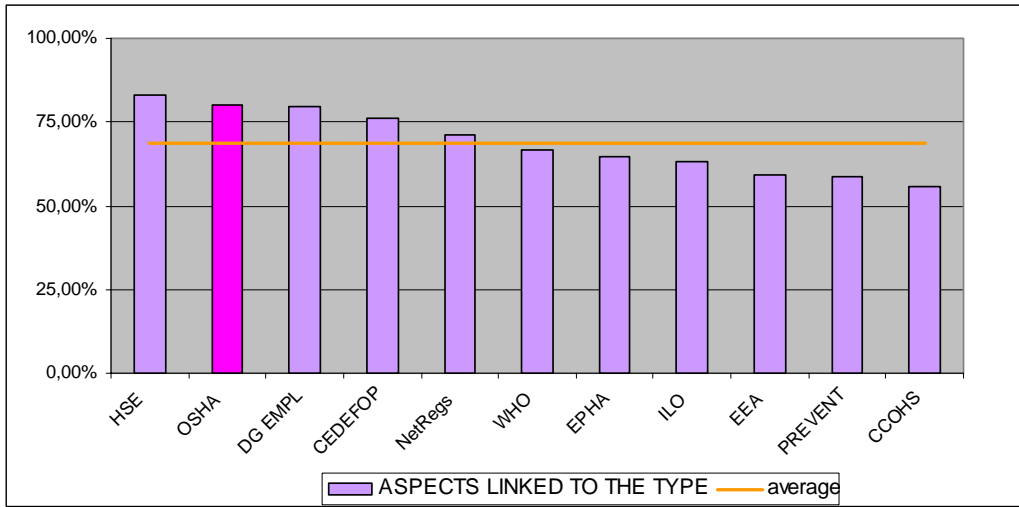
- [Security during validation and data entry operations](#)



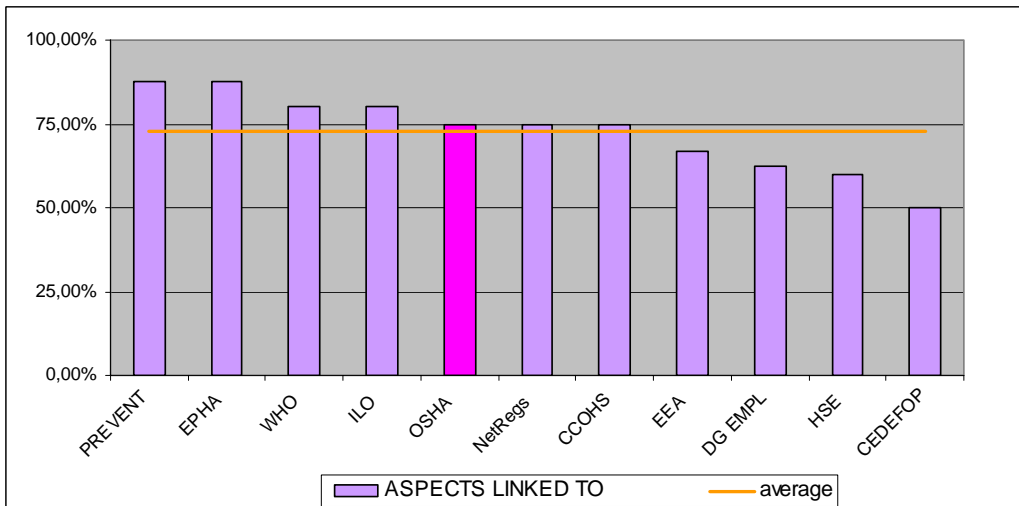
- [Security during transactions and functionalities](#)



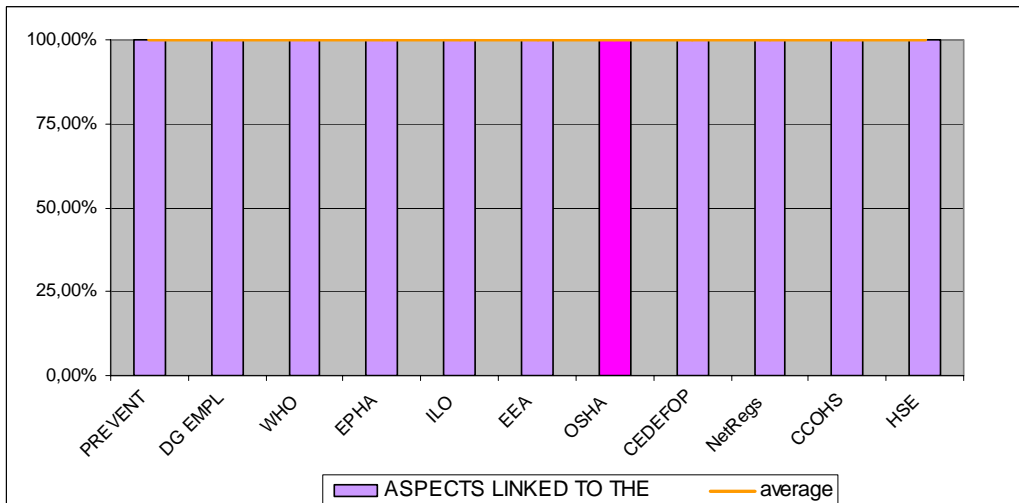
- [Aspects linked to the type of accessibility to the web site](#)



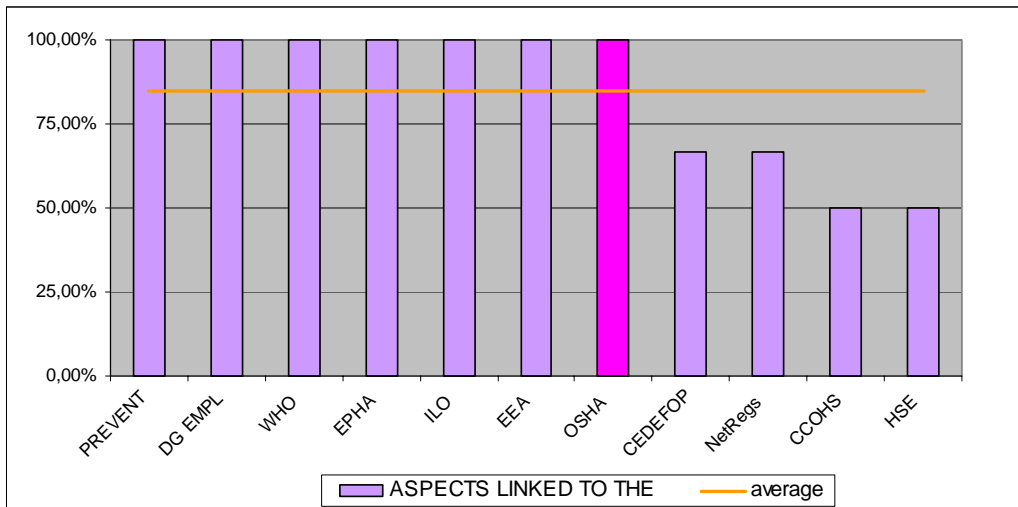
- [Aspects linked to elements present in the web site](#)



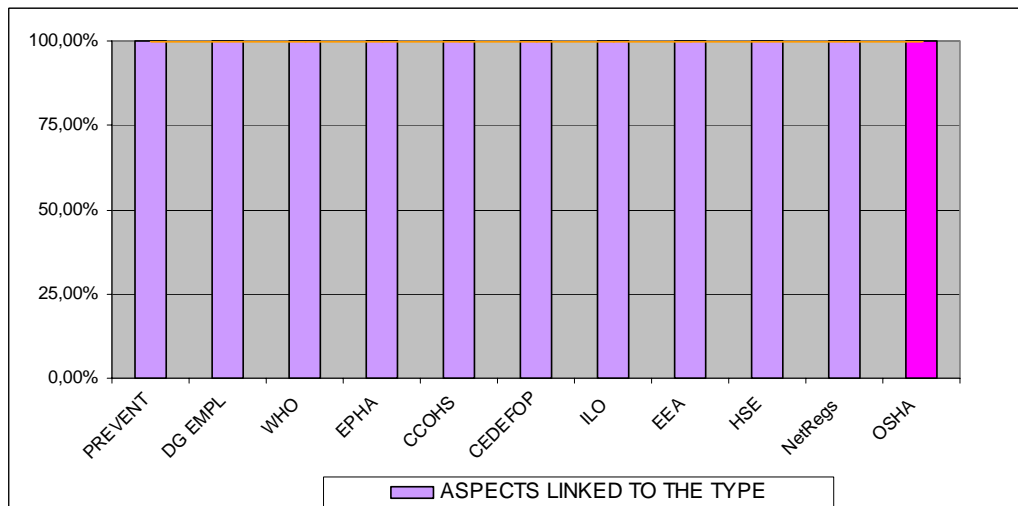
- [Aspects linked to the technologies that are incorporated in the web site](#)



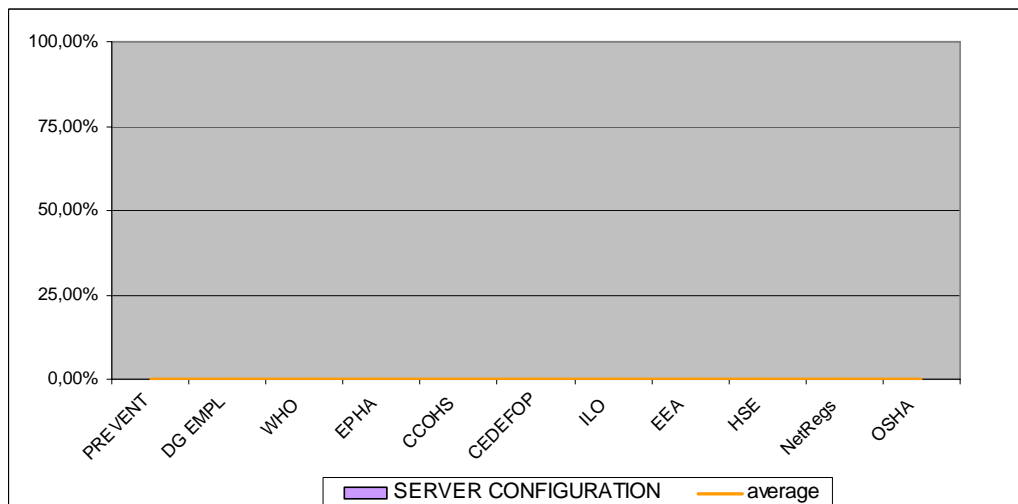
- [Aspects linked to the execution environment](#)



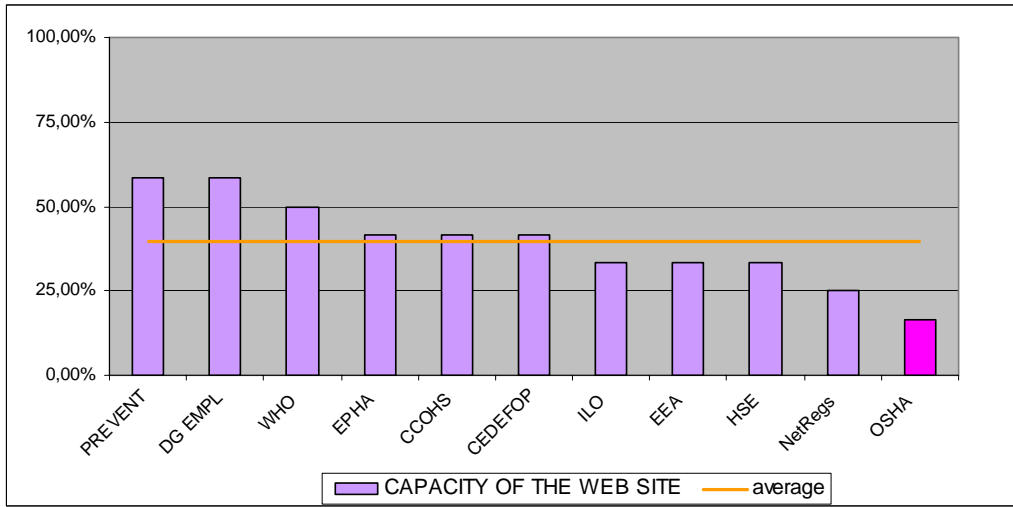
- [Aspects linked to the type of web site](#)



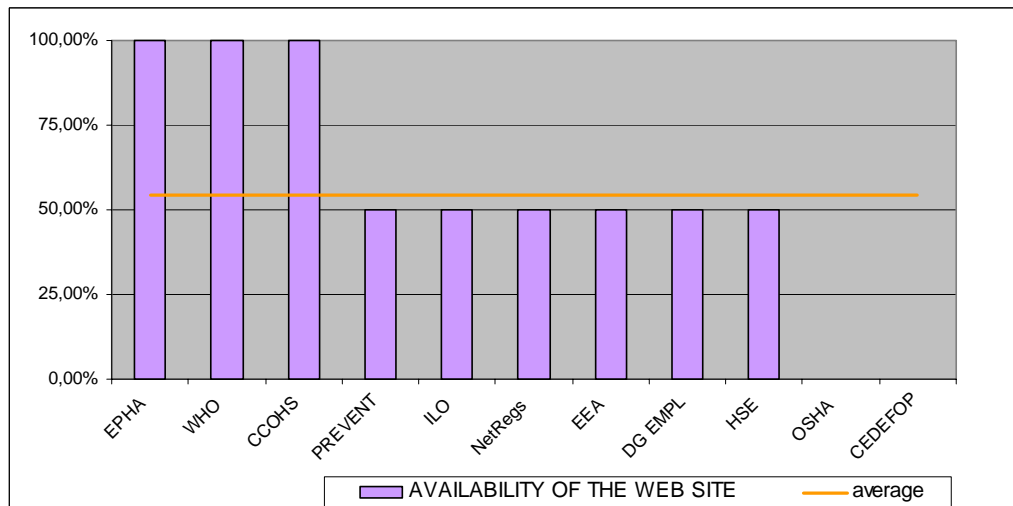
- [Server configuration](#)



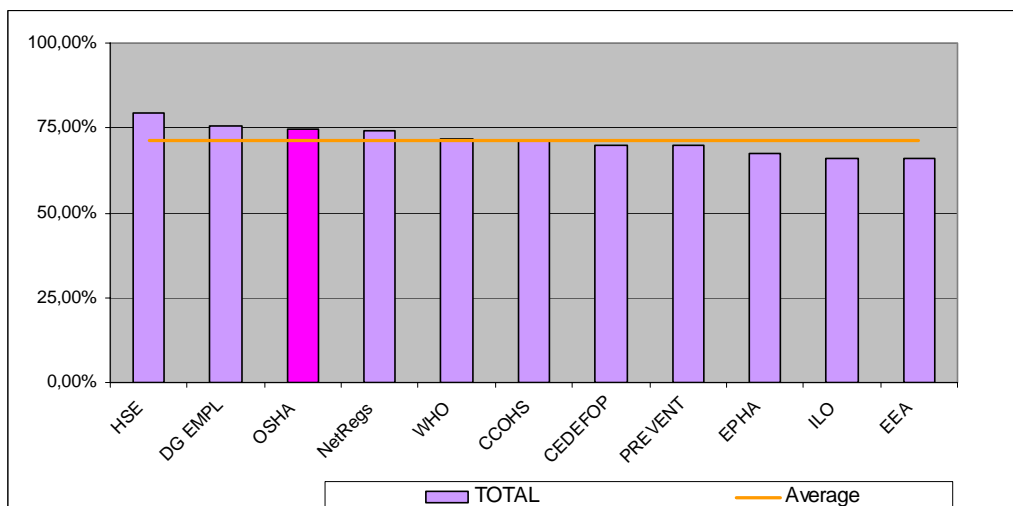
- Capacity of the web site



- Availability



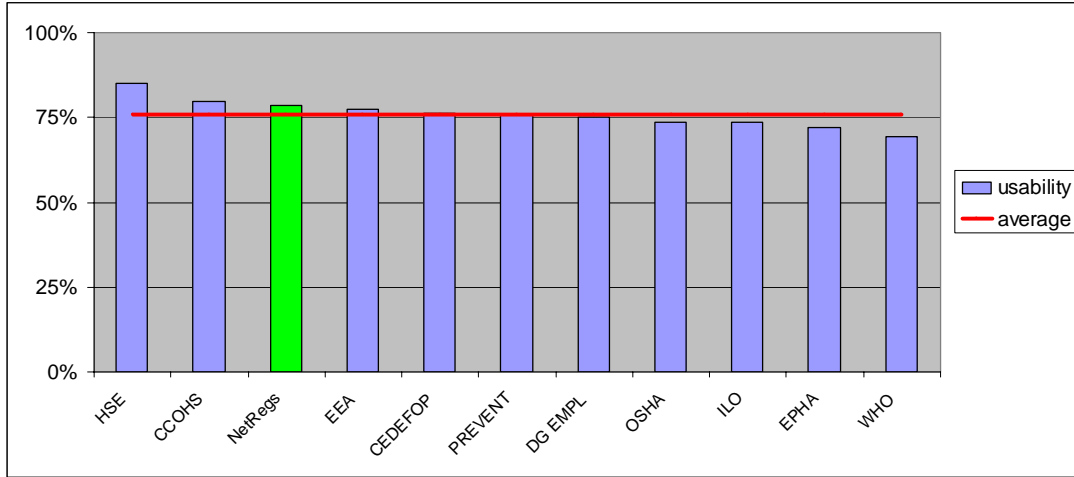
- **Total**



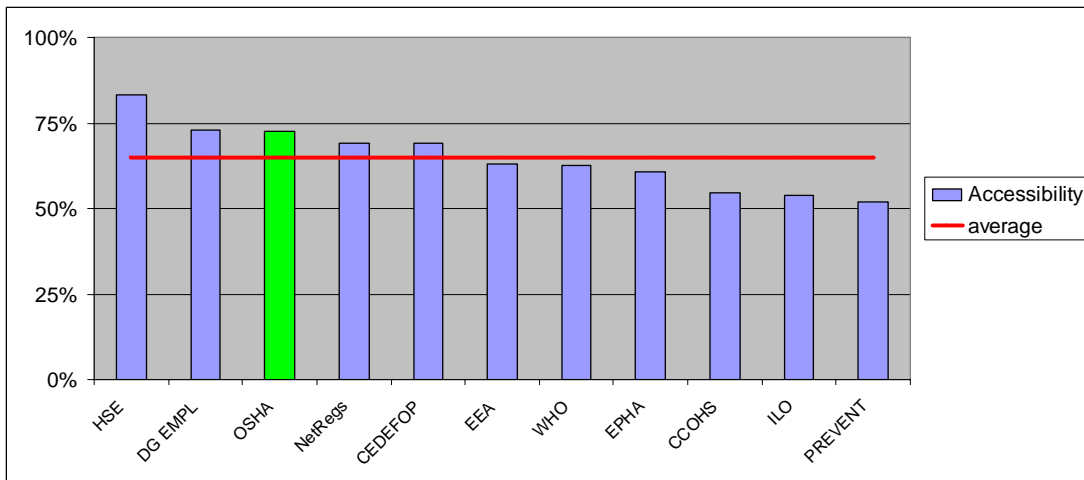
3.3.1.2.2 Results obtained according to web standards

The following figures shown the results obtained for each website according to each web standard:

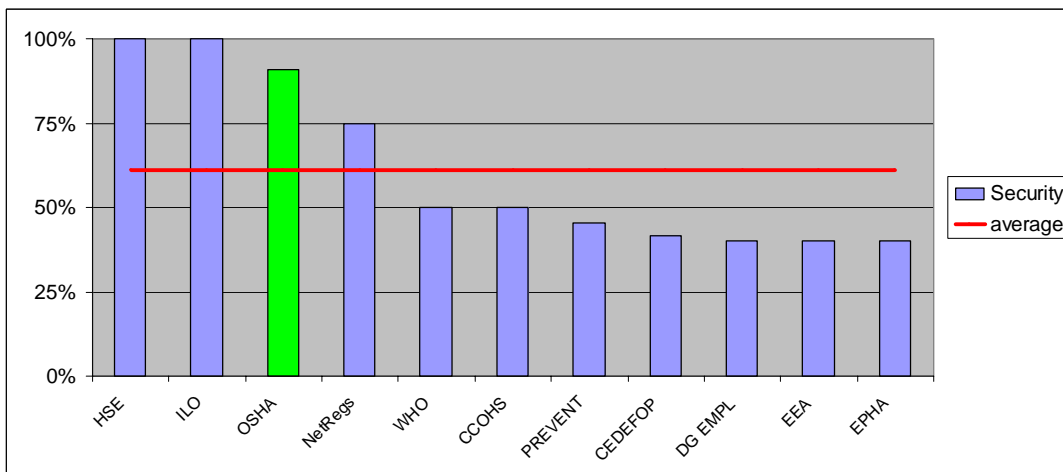
- Usability**



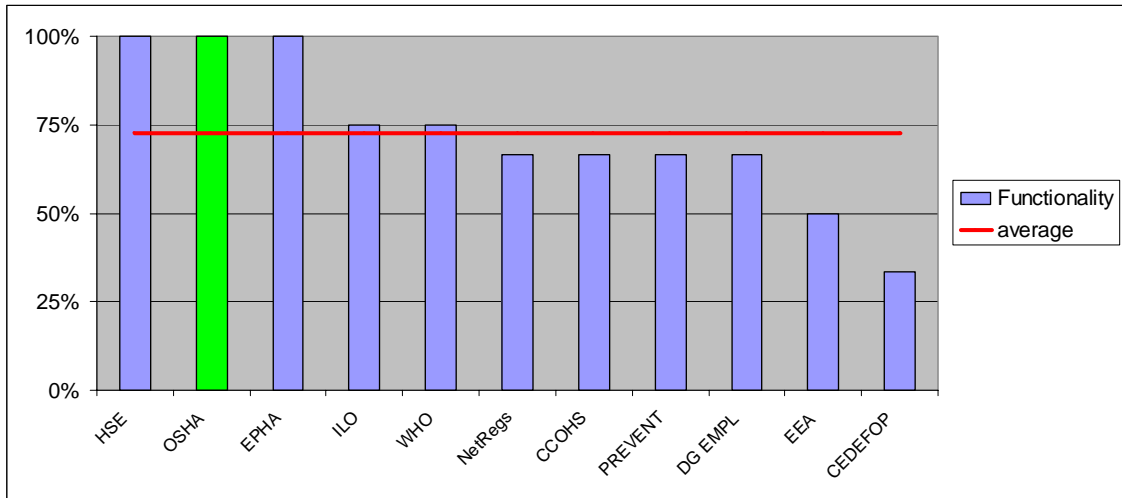
- Accessibility**



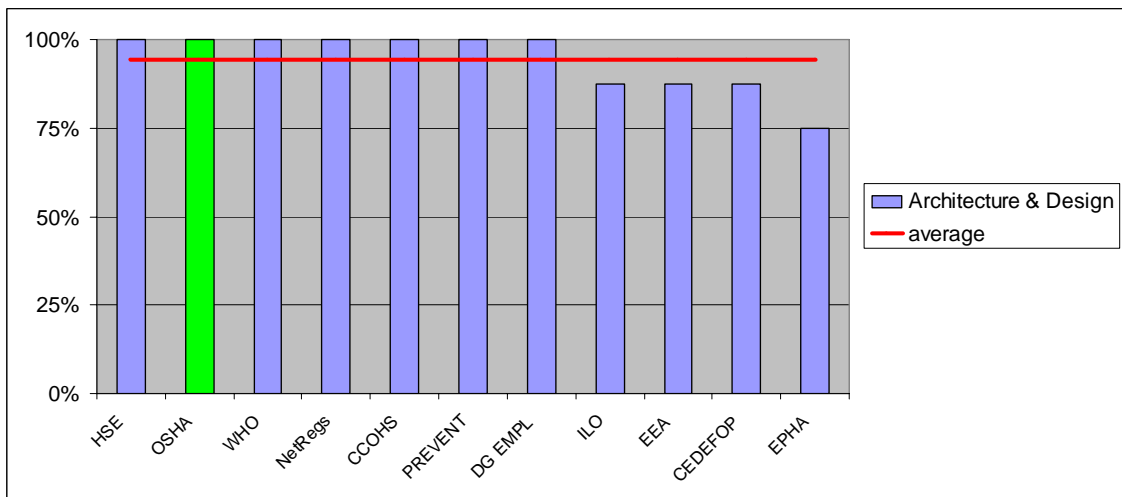
- Security**



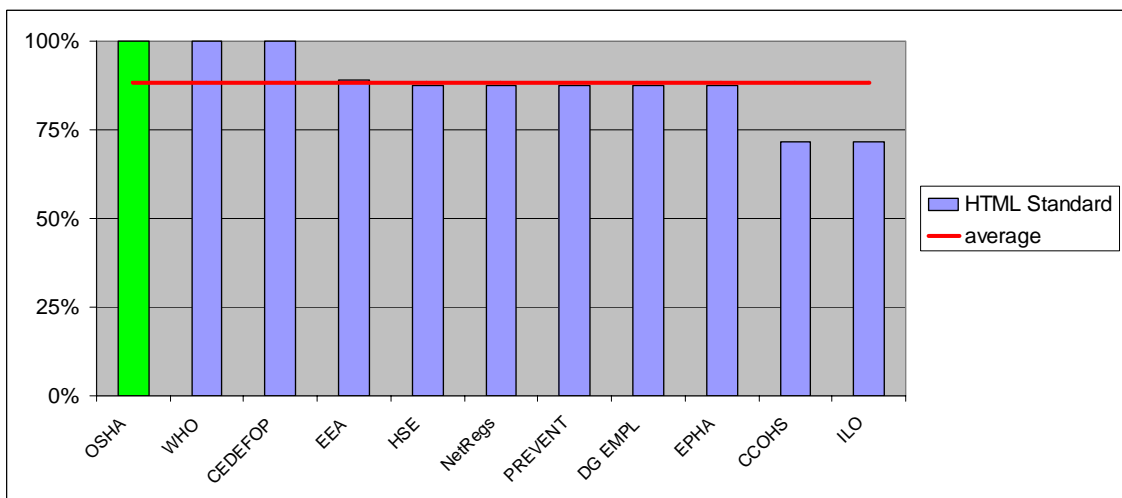
- **Functionality**



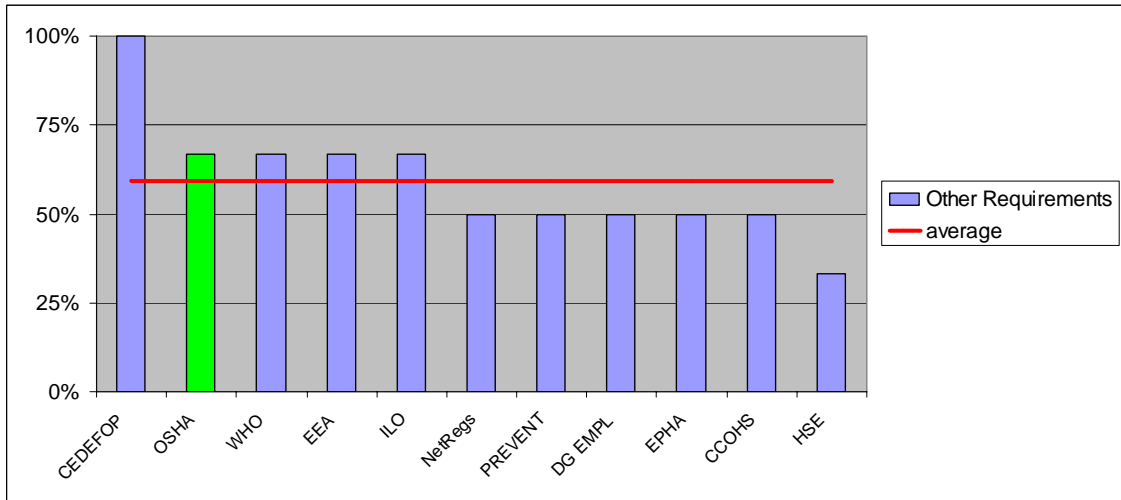
- **Architecture and Design**



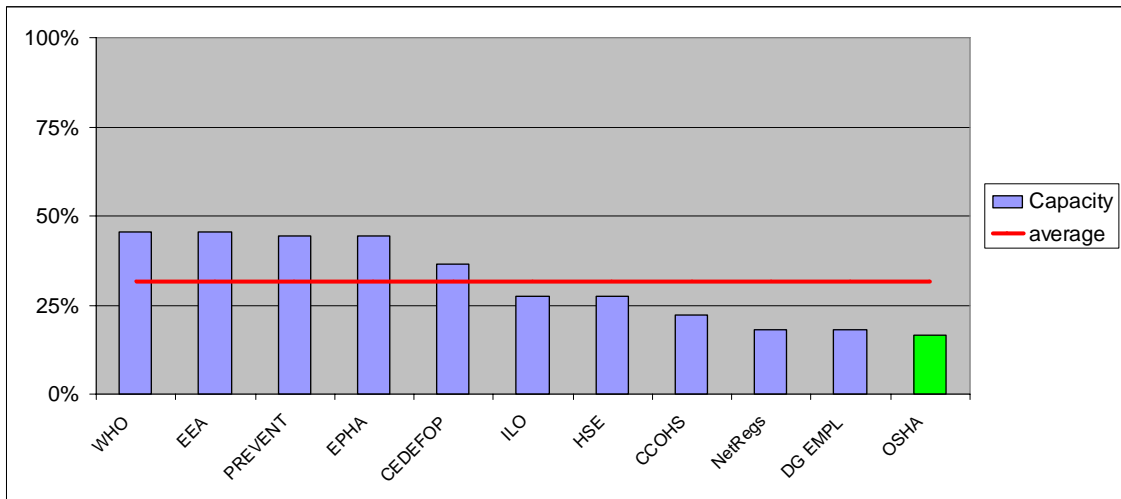
- **HTML standards**



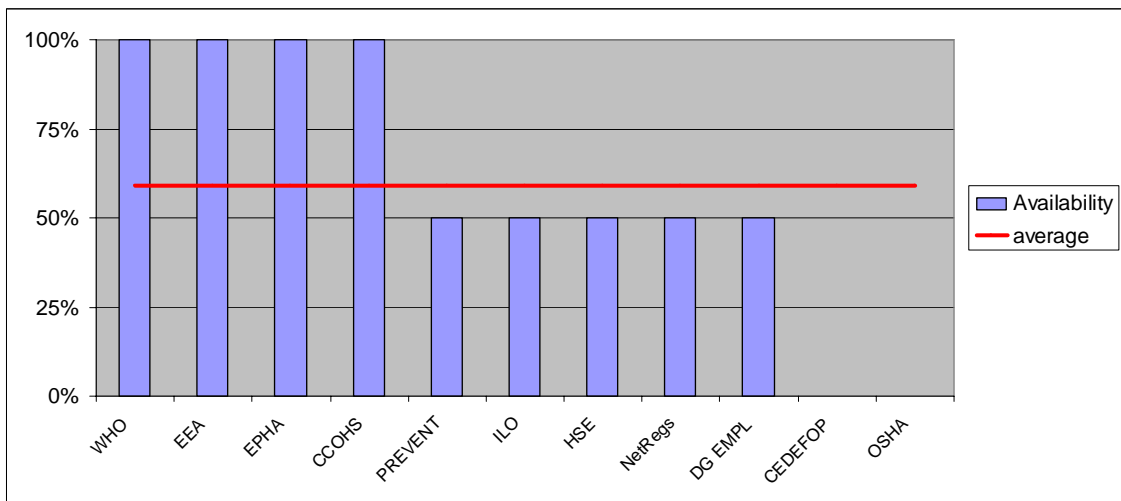
- Other requirements



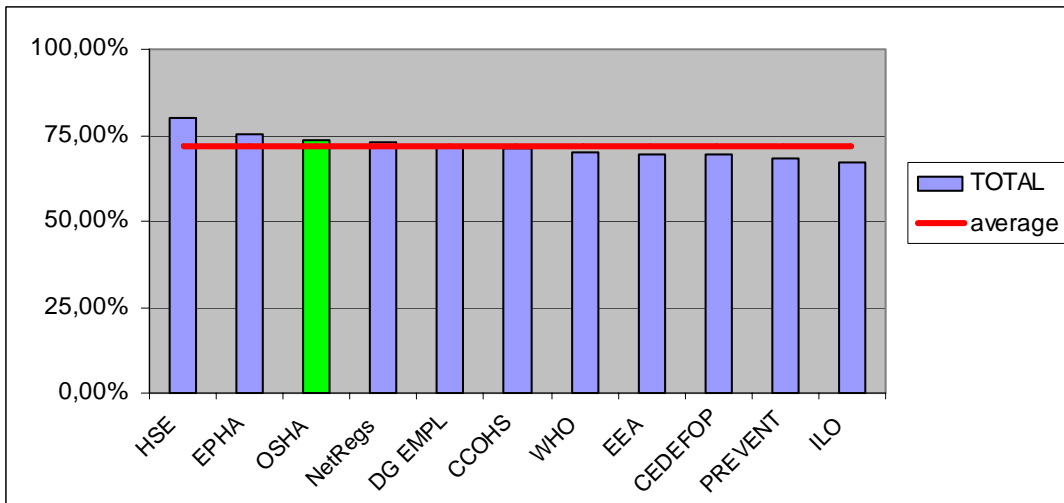
- Capacity



- Availability



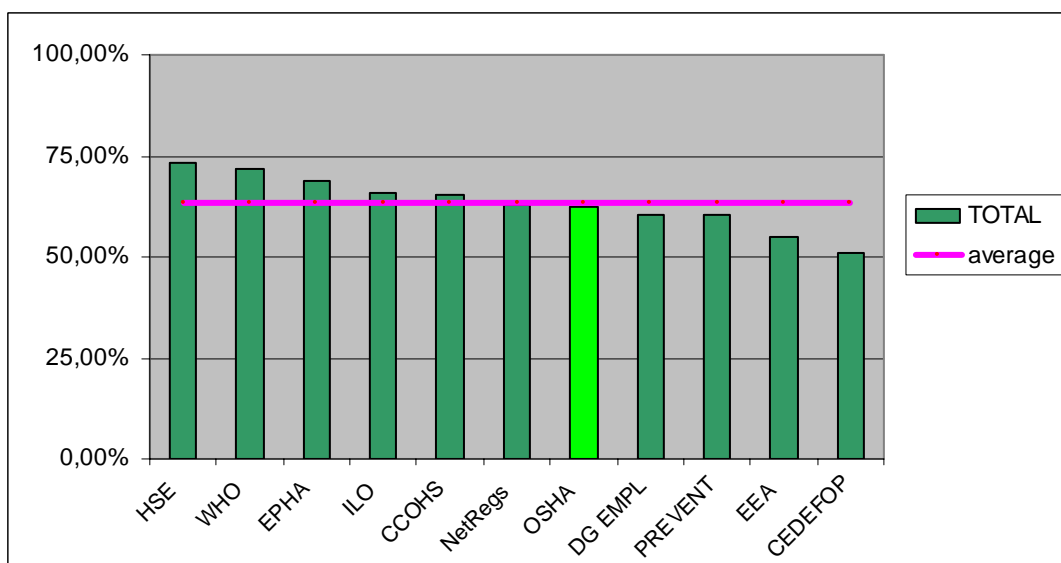
- **Total**



- **Total with “weighted” aspects**

Taking into account the different level of significance of each aspect and ranking them according to the next table, the figure below shows the results:

Usability	2
Accessibility	2
Security	3
Functionality	2
Architecture & Design	2
HTML Standard	1
Other Requirements	1
Capacity	3
Availability	3



3.3.2 Developers analysis

The team of expert developers, in charge of analyzing several aspects of the OSHA web site, has agreed this final report, with an analysis of each criteria and a final section with conclusions and recommendations.

Web Experts General Report

Usability

In general, the usability of the Agency's website has been considered as satisfactory by the experts, the structure of the site and how the information is organized is predictable by the user.

Nonetheless, some issues have been found and should be corrected. One of the most relevant is that despite in general the users are warned that the provided page won't be in their selected language, this warning is not applied to the whole navigation and menus, breadcrumbs² and options are not completely translated to every language.

In some cases, the menu items don't match the bread crumb item too, this can confuse the users as they have to know "where they are" at any moment.

Sometimes, navigation appears to be too limited, in some pages the option to link to another pages towards getting a forward navigation is missing.

The links change their appearance without a semantic need: same level links can appear underlined or not, with icons or without.

Mail addresses are images and in some case without a link. The users can't copy the address to their mail software or send and email directly.

Another aspect that has come up on the three reports is related with the contact form: how to get to it and how to use it. It is not easy to reach it and splits up into many segments, but don't give any indication of where users are in the process.

On the different ways that users interact with the site (alerts, registration form...) there are some aspects that make them more difficult to use. For example, in some of them the language is mixed.

Multiple choice availability using Ctrl + click might result difficult for certain groups of users.

In the Alerts subscription, it doesn't provide specific error messages just a general 404 error page and it redirects to the home site, the user can feel lost and bored if they have to start all the process again.

The 'search' button changes its placement in some pages or even disappears, and the searching results are not as accurate as expected.

Accessibility

The accessibility of the website is closely related to the system it is based on: Plone. The accessibility level that has been taken into account is WAI AA.

When the pages are tested with accessibility validation tools the result is that it is not compliant with web accessibility standards.

² Text displayed on the top left corner of the Agency's site that help the user follow the navigation for the current page

Most of the errors are related with the lack of alternate texts 'alt' for images. Other issues are related with using W3C non-recommended tags or using "px" instead of "%" or "em" in the coding.

A poor contrast between background/foreground colours makes some information non-readable for some users.

The first analysis performed with the [W3C Validator](#) shows that there are some compliance errors (155 errors found). Most of the errors are related with using HTML coding in a XHTML tagged document.

Design & Architecture

The design of the site gives the user a relaxed experience due to the colours and layout that has been used.

Anyway, the header is not very attractive: the logo image is quite poor quality and the spaces between elements are narrow so the user can't appreciate all the elements.

Performance

The overall performance for browsing the website is acceptable. Nonetheless, when it comes to performing searches with a large amount of results the performance gets worse. Some figures have been provided to this point.

The performance tests should be repeated with a selection of the most used keywords to have a better idea of the "real" performance.

Functionality

The experts were pleased to see that the website includes some web2.0 functionalities such as RSS, links to DIGG and other content sharing platforms. Anyway, some recommendations have been provided to improve the user experience.

A deeper analysis could give more ideas on how to improve the way users contribute with the content of the site and feel more connected with the Agency.

Security

Overall the security in the web site is good: As a test, the experts tried to introduce a SQL Injection in order to create a valid login for non-registered users and it failed.

Conclusions and recommendations

At least the complete navigation menu should be translated to all languages to help the user to find the content.

An improvement to this could be that this message is displayed beside the link or as a tooltip previously to access the page. The user would know that the page he is going to visit is going to be in English.

If the content is not translated to the chosen language previous information has to appear always.

The user should be informed that the link will be opened on a new window and that this won't be on their own language.

In the coding the link should be identified with the **hreflang** tag.

<http://riskobservatory.osha.europa.eu/>

The way of retrieving the information should be predictable, for example links should have certain behaviour such as changing the colour when hover, be underlined or have small icons that tell user what kind of link is.

“mailto:” not always works in all operating systems or mail software so if the intention is to avoid spam, the only solution acceptable is to define the mail addresses with this structure:

name[at]domain[dot]generic_domain

In general, it is a good idea to give a full explanation on what the user will find if they click on that link, using a sentence where just a part is marked as linkable.

The search form should be found in every web page of the site in the same position. The searching results have to be more accurate.

Multimedia elements should be helpful and catch the user’s attention, not distract him from watching the information. Some of the campaigns don’t take advantage on the space and don’t seem to be relevant; this is related to the size but also the space between elements which also gives more importance to the multimedia element.

The Contact form has to be easy to reach, easy to use and friendly to the users, it is the way most users will contact the agency for any kind of questions.

The complete website should be compliant with WAI Level AA. Accessibility Training should be provided to the authors of content.

Provide a text equivalent for every non-text element (e.g., via "alt", "longdesc", or in element content). This includes: images, graphical representations of text (including symbols), image map regions, animations (e.g., animated GIFs), applets and programmatic objects, ascii art, frames, scripts, images used as list bullets, spacers, graphical buttons, sounds (played with or without user interaction), stand-alone audio files, audio tracks of video, and video. Missing equivalent text for image.

Use relative rather than absolute units in markup language attribute values and style sheet property values.

Colours should be selected taking into account users with colour deficits.

The code should be compliant with current standards to improve accessibility. Basic Validations also include XHTML and CSS compliance.

Organize documents so they may be read without style sheets. For example, when an HTML document is rendered without associated style sheets, it must still be possible to read the document.

The header is one most important elements of a website, mainly for first time visitors, so it should be attractive and friendly.

A redesign of this issue could bring out a more fresh and bright appearance to the header, taking care of the logo image quality, the spaces between elements, and a bigger title.

The overall performance is good or acceptable. Anyway, using AJAX technologies to load content such as used in the search results page could make loading times smaller.

With the so called "Web 2.0" trends the way people use the internet is changing. Users not only access information but they contribute with their own. This way of interacting with the information should be taken into account to include in some way the possibility to contribute with the content such as comments to the

articles to give a non-static impression. This would raise the issue of controlling this information and can be only analysed by the Agency.

The way users can contribute to the content of the website should be analysed.

To help users to share and interact with the information, services such as 'Print' 'Send by e-mail' or information management services as 'Delicious' or 'Digg' should appear beside the article, because that is the item which will be recommended or bookmarked.

The bottom menu of the Agency's website includes a link to RSS news. This is a very useful functionality. The RSS section has a list of shortcuts to different news sections and for each one a list of RSS oriented services. The most popular are:

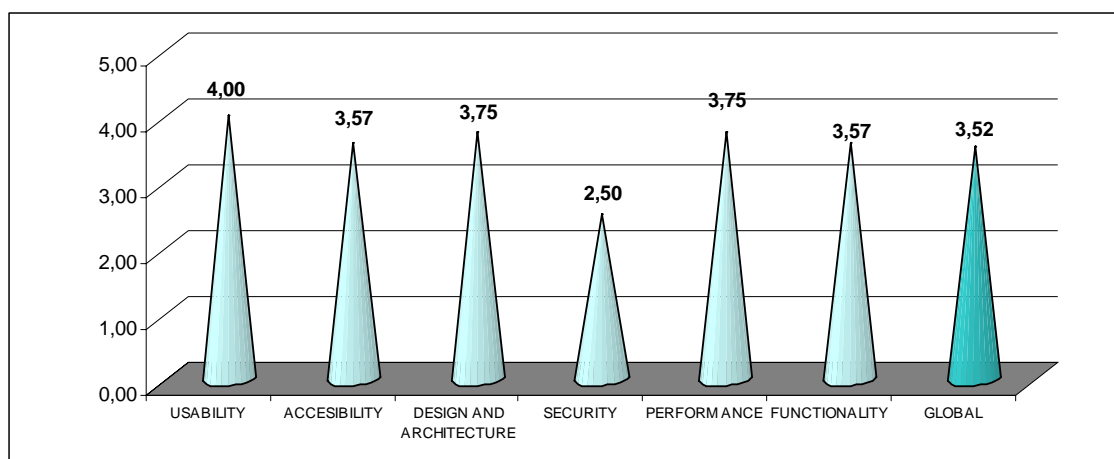
- <http://www.bloglines.com/>
- <http://www.google.com/>
- <http://www.yahoo.com/>
- <http://www.live.com>
- <http://www.netvibes.com/>
- <http://www.addtoany.com/>

It would be also useful to add RSS links in the section where the RSS belongs to, like for example, in the Events and News box, next to "More.." link.

The user shouldn't be allowed to input characters such as ", % ... on the forms as this results in the potential manipulation of the statements performed on the database by the end user of the application.

3.3.3 OSHA partners' analysis

The following figure shows that for daily users, OSHA partners, the global perception about the services and performance of OSHA web site is considered as "enough satisfactory" getting a 3,52 out 5. According to each analyzed aspect, the users appreciate as the best characteristics the usability and performance of the site, being the security the aspect worst valued.



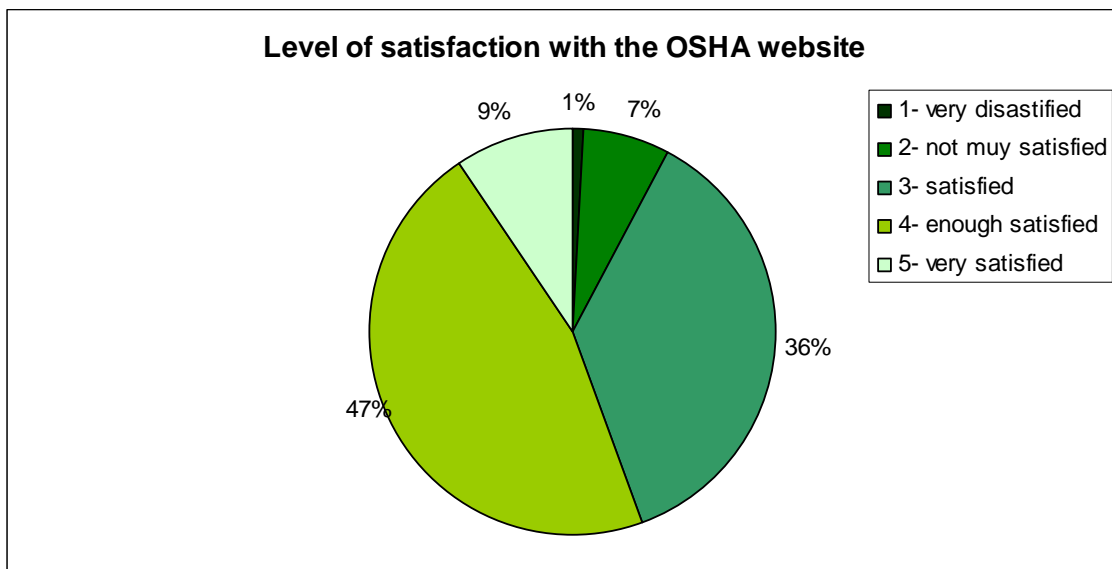
Although the homogeneity of the OSHA partners allows to extrapolate the results of the sample (only 10 surveys), the final objective of this exercise is to know the opinion of these users about different services and functionalities of the OSHA site.

For each of the analyzed aspects, the results obtained have been:

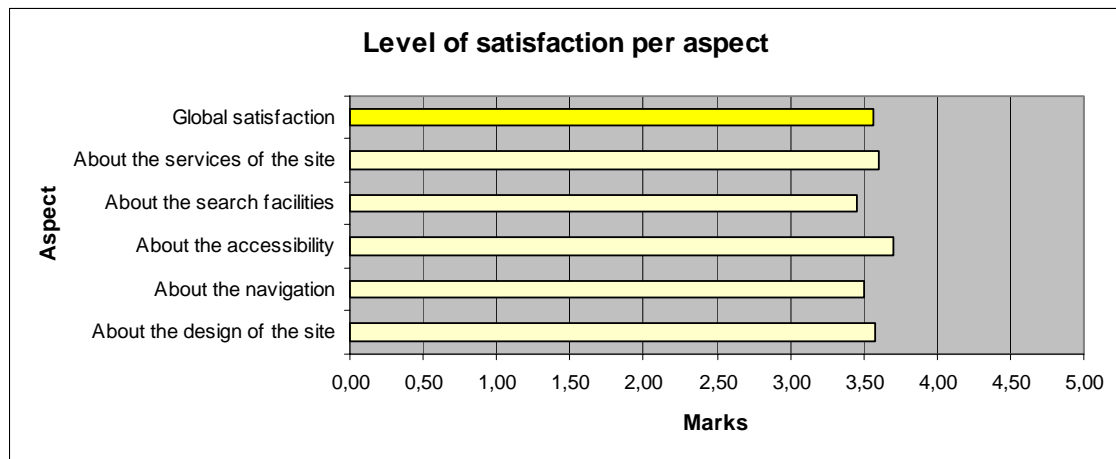
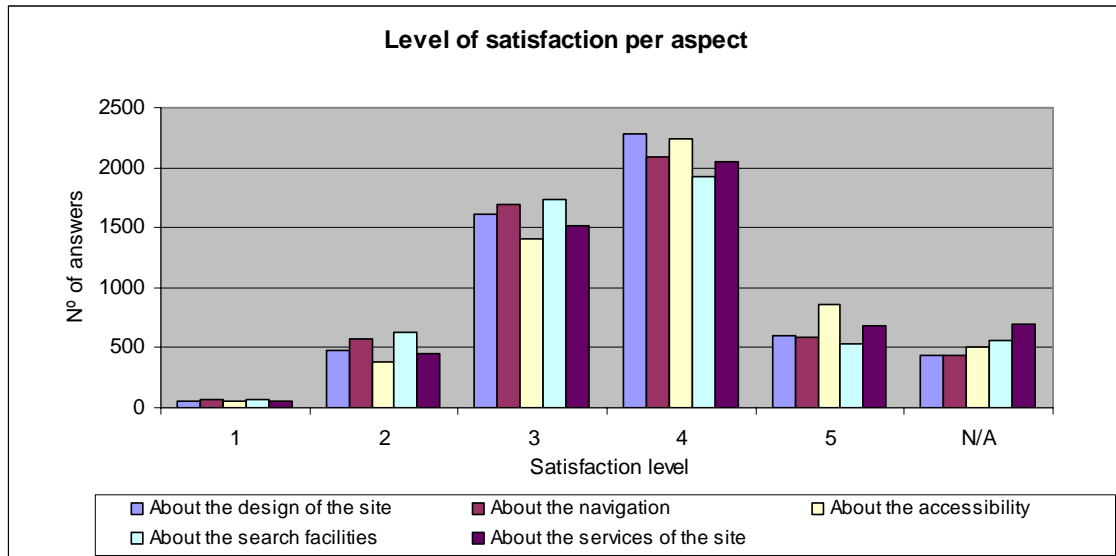
- Usability: the users consider this aspect as good, with the information organized in a predictable way.
- Accessibility: as normal users, they consider the accessibility of the site satisfactory.
- Design and architecture: the most of them consider that the site is easy to read and that the use of colours and images is adequate.
- Security: this is the worst aspect, because some of them consider that the private part of the site is not clearly identified.
- Performance: the users consider that in general the OSHA website is slower than others and that the
- Functionality: They realize that not all the information is translated and consider important that the people would be advice in these cases.

3.3.4 OSH subscribers analysis

From the results of the OSH subscribers on line survey (question9a), the first conclusions indicate that the OSHA web site visitors are enough satisfied with the OSHA web site. The following figure shows the results related to the global satisfaction of the user from a global point of view. The opinion of **5453** users has been taken into account.



Seizing the opportunity provided by the OSH subscribers on line survey, a second question about the satisfaction of the OSHA web site was done. In this question (question 9b), a more in depth analysis was required, asking about the level of satisfaction of different aspects (design of the site, navigation, accessibility, search facilities and services provided by the site. Like in the previous conclusion, the results show that the most of the users value as “enough satisfactory” all the aspects analyzed. The following figures show these results through the number of answers received for each aspect and the average obtained.



Obtaining a 3,57 out 5 for the global satisfaction of the OSHA web site, the figure shows as the accessibility of the web site is the most appreciated aspect with a mark of 3,71 out 5, whereas the search facilities is the worst one with a 3,46.

4 CONCLUSIONS AND RECOMMENDATIONS

The conclusions obtained are presented below:

1. There are different levels of development of each analysed website. This point is observed when considering the number of functionalities that has been applied to each website during the Evalweb analysis. In this sense, Agency's web site obtains a good result in the systematic evaluation of the functionalities it has implemented. This aspect is very relevant, since it is the website with the maximum number of functionalities implemented.
2. The OSHA website achieves a third position in the benchmarking study according to the two Evalweb analyses, obtaining always the best position the Health and Safety Executive web site.
3. Although the fulfilment of the 73,38% of the requirements is considered as a good result, there are two important aspects in which the obtained score is very poor and has to be increased: availability and capacity. The users can only appreciate the services provided by the OSHA web site if they can access properly to it, and the analysis shows that it is not possible in a 20,21% of the times and that the maximum time response is longer than 10 seconds several times.
4. The development web site's experts consider the OSHA web site as a site with a high number of functionalities implemented and a good performance in general. As global remarks, their analysis show that the usability is adequate to the characteristics of the site and the information is organized in a predictable way although the selected language doesn't appear in all the pages; according to the accessibility, the analysis state that the OSHA web site is not compliant with web accessibility standards, although the most of the errors are related with the lack of alternate texts 'alt' for images and are easy to solve; regarding the design and architecture, the developers think that the site gives the user a relaxed experience due to the colours and layout used; with respect to the performance, the overall performance for browsing the website is acceptable and the main problem is related to performing search with a large amount of results; regarding the functionality, the experts appreciate the use of web 2.0; and in relation with the security, no risks has been detected.
5. For the OSHA partners, the global perception about the services and performance of OSHA web site is considered as "enough satisfactory" getting a 3,51 out 5.
6. The same results are provided by the OSH subscribers, that give a 3,57 out 5 for the global satisfaction of the OSHA web site.

The main recommendations are:

1. The availability and capacity of the OSHA website have to be improved.
2. Regarding language and translations:
 - a. The complete navigation menu should be translated to all languages to help the user to find the content
 - b. If the content is not translated to the chosen language, previous information has to appear informing about this.
3. To facilitate the navigation linking the logo to the main page

4. To improve the accessibility of the site including alternative text in the images.
5. To improve the search system.

5 ANNEXES

5.1 Web site panel definition

The following websites were chosen as a potential starting point for the analysis. A selection of 10 websites was analysed from this list and from the suggestions of the Agency.

Possible EU web pages:

Directorate General Enterprise and Industry http://ec.europa.eu/enterprise/index_en.htm

Directorate General Health and Consumer Protection http://ec.europa.eu/health-eu/index_en.htm

DG Employment and Social Affairs: Social protection systems in the Member States and the European Economic Area (MISSOC) http://ec.europa.eu/employment_social/social_protection/missoc_en.htm

Related European Agencies:

European Agency for the Management of Operational Cooperation at the External Borders (FRONTEX) <http://www.frontex.europa.eu/>

European Aviation Safety Agency (EASA) <http://www.cfca.europa.eu>

European Centre for Disease Prevention and Control (ECDC) <http://www.ecdc.europa.eu>

European Environmental Agency <http://www.eea.europa.eu/>

Community Fisheries Control Agency (CFCA) <http://www.cfca.europa.eu>

European Centre for the Development of Vocational Training (Cedefop) www.trainingvillage.gr

European Food Safety Authority (EFSA) <http://www.efsa.europa.eu>

European Foundation for the Improvement of Living and Working Conditions (EUROFOUND) <http://www.eurofound.europa.eu>

European Fundamental Rights Agency (FRA) - previously EUMC <http://www.fra.europa.eu>

European Maritime Safety Agency (EMSA) <http://www.emsa.europa.eu>

European Medicines Agency (EMA) <http://www.emea.europa.eu>

European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) <http://www.emcdda.europa.eu>

European Training Foundation (ETF) <http://www.etf.europa.eu>

Other related International sites:

International Labour Organisation <http://www.ilo.org/global/lang--en/index.htm>

International Occupational Hygiene Association <http://www.ioha.net>

U.S. Occupational Safety & Health Administration <http://www.osha.gov>

The Occupational health section of the World Health Organisation http://www.who.int/occupational_health/en/

Centre for Disease Control and Prevention: National Institute for Occupational Safety and Health <http://www.cdc.gov/niosh/>

Canadian Centre for Occupational Health and Safety <http://www.ccohs.ca/>

U.S. Occupational Safety & Health Administration <http://www.osha.gov/>

Australian Government Health and Safety Commission http://www.australia.gov.au/Health_&_Safety

Japan International Center for Occupational Safety and Health <http://www.jicosh.gr.jp/english/index.html>

The Occupational health section of the World Health Organisation http://www.who.int/occupational_health/en/

Korea Occupational Safety and Health Agency <http://www.kosha.or.kr/eng/english.htm>

Private sites:

Amnesty International <http://www.amnesty.org/>

IPR Helpdesk <http://www.ipr-helpdesk.org>

5.2 Benchmarking method

This section collects the guidelines and templates to be used in each exercise of analysis.

5.2.1 Aspects analyzed by EVALWEB

High level Criteria	Aspect code	Indicator description
• General aspects	Aspect [F001]	High position in search engines
	Aspect [F007]	Legibility
	Aspect [F018]	Web portability
	Aspect [F019]	Web maintenance by specialised personnel
	Aspect [F037]	Web site
	Aspect [F043]	Use of style sheets
	Aspect [FH100]	Web with text and images
	Aspect [Fo101]	Web with Plug-ins
•Sections and Content	Aspect [F005]	Web with images
	Aspect [F006]	Web with multimedia elements
	Aspect [F008]	Web with sections

	Aspect [F009]	Web with content stored on a server
	Aspect [F013]	Web with tables
	Aspect [F014]	Web with lists
	Aspect [F015]	Web with effects
	Aspect [F030]	Existence of a Help Section
	Aspect [F035]	Privacy standards
	Aspect [F039]	The Web site contains publicity
	Aspect [F051]	Web organized by sections
• Navigation capacity	Aspect [F003]	Web navigable
	Aspect [F032]	Use of menus
	Aspect [F034]	Web with crumb trail
	Aspect [F064]	Use of rollovers
• Specific characteristics	Aspect [F004]	Web with company image
	Aspect [F047]	Web printable
	Aspect [F048]	Offering very large listings
	Aspect [F049]	Web with pages that take a long time to load
	Aspect [F052]	Dealing with a large Web site
	Aspect [F067]	The Web site uses date and time
• Aspects linked to software infrastructure	Aspect [F010]	Client needs a tools or plug-in installed
• Features (Functions)	Aspect [F031]	Web with file downloads
	Aspect [F041]	Uses site map
	Aspect [F042]	Includes a search option
	Aspect [F046]	Use of different languages
	Aspect [F066]	Compatibility with text navigators
• Login and authentication	Aspect [F020]	Existence of public and private parts within the Web

	Aspect [F021]	Identification using user/password
	Aspect [F023]	Distinction between roles or types of users in private part (independently of the existence of users - administrators)
	Aspect [F024]	Existence of Administration of the application via Web
•Security during validation operations and data entry operations	Aspect [F076]	Existence of validation rules in areas in data entry fields
	Aspect [F078]	Error messages specifically created for the application and with a unified design
	Aspect [F079]	Anti-robot methods for avoiding automatic operations for registering / consultation
	Aspect [F080]	Detailed design for search options to avoid queries which, although correct, could overload the system (*.*)
	Aspect [F081]	Field validation for forms (searches, registration,...) to avoid techniques of SQL-Injection.
	Aspect [F082]	The existence of complex registration operations (various related fields, large quantity of fields)
•Security during transactions and in functionalities	Aspect [F083]	Methods for confirming data and operations which involve e-mail
	Aspect [F087]	A means of treating old or out-of-date data: the necessity for delete operations and their impact on the complexity of the application.
	Aspect [F088]	The use of novel characteristics, exclusive or little tried in navigators, dependent on concrete versions or without guarantee of the same functionality in older versions of the same navigator or other different navigators.
	Aspect [F090]	The use of application server, web server or DB server technologies

•Aspects linked to the type of accessibility of the Web site	Aspect [F025]	Web with general accessibility
	Aspect [F026]	Web accessible for disabled people
•Aspects linked to elements present in the Web site	Aspect [F027]	Existence de forms
	Aspect [F036]	A logotype is included
	Aspect [F065]	The presence of start-up animation
•Aspects linked to the technologies that are incorporated in the Web site	Aspect [F038]	Use of style sheets
•Aspects linked to the execution environment	Aspect [F045]	International Web site
•Aspects linked to the type of Web site	Aspect [F057]	A Web site with news service
•Server Configuration	Aspect [F068]	The sessions expire on time
•Capacity of the website	Aspect [Fc000]	Speed of the page
•Availability of the website	Aspect [Fav000]	Availability and response time of the page

5.2.2 Questionnaire for developers



OSHA Website Benchmarking Exercise

This questionnaire is designed to evaluate certain aspects of the Agency website (<http://osha.europa.eu/>). In particular its usability, accessibility, design and architecture, security, performance and functionality.

Usability

- Aspects to be taken into account:
 - Users should find the information in its own language
 - Users should be able to know when this is not possible
 - The way of retrieving the information should be predictable
 - Multimedia elements should be helpful and catch the user's attention, not distract him from watching the information.
 - Users should know "where they are" at any moment

Accessibility

The complete web site should be compliant with WAI- AA level.

Design & Architecture

- Aspects to be taken into account:
 - The design should help to organize the information
 - The use of colours should be correct
 - The structure of the website (menus, hierarchies) should help the user to find the information

Security

- Check possible security issues in forms and search sections

Performance

- Check whether the overall performance and in specific sections such as search forms is acceptable.

Functionality

- Does the website include all the functionality that current techniques allow?
- Should the website include further functionalities to the users?

5.2.3 Questionnaire for regular users (OSHA partners)



OSHA Website Benchmarking Exercise

To improve our knowledge of our website users' satisfaction and expectations, the European Agency for Safety & Health at Work is currently carrying out a benchmarking exercise of its website.

As you are a regular user of the Agency website, we would like to hear your views and invite you to complete the following questionnaire.

This questionnaire is designed to evaluate certain aspects of the Agency website (<http://osha.europa.eu>). In particular its usability, accessibility, design and architecture, security, performance and functionality. We would like you to answer (YES/NO) to questions regarding each aspect and to rate them at the end of each section with a different score, depending on your level of satisfaction using the Agency website. Furthermore, you can include any comments that you have below each aspect.

Thanks in advance for your time and cooperation. Your evaluation and suggestions will help us to improve the online service we offer.

Usability

- The entire site's information is presented in the user's chosen language?
 YES NO DON'T KNOW
- The navigation menus are presented in the correct language?
 YES NO DON'T KNOW
- The quantity of information presented in the correct language is acceptable?

YES NO DON'T KNOW

- Is sufficient help provided about how to correctly use the website?
 YES NO DON'T KNOW
- Does the use of multimedia elements help to find the desired information or does it make the page difficult to read?
 YES NO DON'T KNOW

What is your overall appreciation of the usability of the website? Please score from 1 to 5 (being 1 bad and 5 very good)

1 2 3 4 5

And give your comments

Accessibility

- Can you correctly access all the content of the website from your computer?
 YES NO DON'T KNOW
- If you are/were a disabled user: Does the web page incorporate adequate mechanisms to visualise the page correctly?
 YES NO DON'T KNOW

What is your overall appreciation of the accessibility of the website? Please score from 1 to 5 (being 1 bad and 5 very good)

1 2 3 4 5

And give your comments

Design & Architecture

- Does the general design of the web site match the following criteria?:
 - Is the use of colours adequate?
 YES NO DON'T KNOW
 - Is it easy to read?
 YES NO DON'T KNOW
 - Localisation of menus & information on the page?
 YES NO DON'T KNOW
- The organisation of the menus enables the information on the website to be easily localised?
 YES NO DON'T KNOW
- The use of too many multimedia elements in the page distracts the user?

YES NO DON'T KNOW

What is your overall appreciation of the design and architecture of the website? Please score from 1 to 5 (being 1 bad and 5 very good)

1 2 3 4 5

And give your comments

Security

o The zone or means of Entry and Exit from the private part of the website is clearly identified in each case?

YES NO DON'T KNOW

o When you enter or leave the private part of the website. Are you provided with information that makes you fully aware of your connection state?

YES NO DON'T KNOW

o If your password is lost or forgotten, do you consider the mechanism of recuperation is correct?

YES NO DON'T KNOW

What is your overall appreciation of the security of the website? Please score from 1 to 5 (being 1 bad and 5 very good)

1 2 3 4 5

And give your comments

Performance

o The load time for a web page with information is acceptable?

YES NO DON'T KNOW

▪ Approx time:

o The images (if any) contained in each page make the load time slower?

YES NO DON'T KNOW

o Are searches carried out in an acceptable amount of time?

YES NO DON'T KNOW

▪ Approx time:

For carrying out a correct evaluation of this question, could you indicate us what type of connection are you using to access to the website?

- Modem
- Broadband
- LAN

What is your overall appreciation of the performance of the website? Please score from 1 to 5 (being 1 bad and 5 very good)

- 1 2 3 4 5

And give your comments

Functionality

- o Does the web site present the correct facilities to personalise the web site for each user (language, information, services....)?
 YES NO DON'T KNOW

- o Is sufficient help available about the functionality that is presented within each page?
 YES NO DON'T KNOW

What is your overall appreciation of the functionality of the web site? Please score from 1 to 5 (being 1 bad and 5 very good) and give your comments

- 1 2 3 4 5

And give your comments

5.2.4 Questions for the OSH subscribers



Online Survey for Agency Web Visitors

⊗ 9. Overall, how satisfied are you with the EU-OSHA website?

Scale: 1 (very dissatisfied) ... 5 (very satisfied)

1 2 3 4 5

And more precisely

	1	2	3	4	5	N/A
About the design of the site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
About the navigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
About the accessibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
About the search facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
About the services of the site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

5.3 Analysis phase

5.3.1 List of requirements

- o Usability

- RU000 Presenting the images in the suitable format
- RU001 Presenting the images in the suitable size
- RU002 Using the gif progressive load
- RU004 The icon or link to the help section must be in the upper right corner
- RU005 Help availability in all the pages where it is necessary
- RU006 The files must contain the related information
- RU007 Suitable information is provided in order the form to be properly filled in
- RU008 The images labels include the height and width attributes
- RU009 Entering data in the fields is made easy
- RU011 Form elements are properly used
- RU012 Fields validating is made top to bottom and left to right
- RU013 Menu options are properly arranged
- RU014 Once an option from the menu has been chosen there must be a link to return the previous categories
- RU015 Using wide menus (many options in the same menu) rather than deep ones (many levels)
- RU019 Tabs must be perfectly drawn
- RU021 The horizontal scroll should not be seen
- RU022 Links are properly used
- RU023 Titles of the pages are right
- RU024 There will be links to the main page in all the pages except the main one
- RU025 Not opening new windows during the navigation

- RU026 The user must be always aware of where he is
- RU027 Not underlining text
- RU028 Not using intermediate welcome pages
- RU029 Implementing error pages in order to prevent "404 error" from appearing
- RU030 Allow deep links
- RU031 Most usual navigation elements will be in the places where they are usually
- RU032 There should not be "drain pages" (those ones without any link)
- RU033 Users should get to useful information by no more than 4 clicks
- RU034 The necessary information about the company will be provided
- RU035 Company information is added in the "About us" link
- RU036 The link to the page which contains the privacy rules must be called "Privacy Rules"
- RU037 Logo size may range from 50x50 to 100x100
- RU038 Logo has to appear in the upper left corner
- RU039 Clicking on the logo will lead to the main page
- RU040 URL must be used as properly as possible
- RU041 Linked style sheets instead of embedded style sheets must be used
- RU043 Some style rules will be followed when choosing the format that will be applied to the style sheets
- RU044 There will not be more than 3 advertisement each page
- RU045 Advertisements must be quickly loaded
- RU046 Contents of the advertisements will not be awkward for users
- RU047 The site map must not be a graph
- RU048 The interface which is presented to the user for his searches will be suitable
- RU049 The search field is showed in all the pages
- RU050 The search results are properly shown
- RU051 Data entering in the text field is permissive
- RU052 If it is a multilingual website and there are searching options multilingual searches will be provided
- RU053 Searches are properly made
- RU054 Key words are properly used
- RU057 Presenting images of the offered products
- RU063 Not using offensive icons or symbols
- RU065 Information about date and time is right
- RU066 The domain hosting the website is suitable
- RU067 Suitable language selection
- RU068 Sparing a 30% of free space in the dialogue boxes
- RU070 Translations have to be updated
- RU071 There will not be links to the main page in the main page itself
- RU072 There will not be text boxes in the main page
- RU076 None of the table cells will be empty
- RU077 The table have to be properly visualized if the font size is enlarged
- RU078 There will not be spelling mistakes
- RU079 Fonts will be properly used
- RU080 Colours will be properly used
- RU081 Writing will be good
- RU082 Text and paragraph format is proper
- RU083 The place where the plug-in is going to be needed have to be specified and some information regarding where and how it can be got has to be added
- RU084 The website must detect if the necessary plug-ins are already installed and, if they are not, it should let the user know
- RU085 The necessary information in touch with the users register will be provided
- RU086 It should not be mandatory for users to log on as registered users when not necessary
- RU087 If users were asked to give any kind of personal information when registering it would be necessary to put a link leading to the Privacy Rules
- RU088 Suitable information for the multimedia files is provided
- RU089 The users should be provided with reproduction controls
- RU090 Videos will have to be downloaded instead of presenting them in streaming format

- RU091 Long videos which were presented in streaming format should be fragmented in several pieces
- RU092 Animations should not be played in an endless curl
- RU093 3D images will only use horizontal texts as otherwise their reading becomes difficult
- RU100 A different document version must be provided for printing
- RU101 Pdf's and Ps should be compatible with the most common formats for international pages: A4 and 8,5x11
- RU102 Pages or printable versions have to include an URL which identifies the place where they are located
- RU103 The page or printable version background has to be white
- RU104 The lists will be shown in a proper way
- RU105 There should be a comparative table for the elements
- RU106 Feedback information will be provided while slow pages are being downloaded
- RU107 Links leading to slow pages should warn users about it
- RU111 Some space must be spared for the rollovers visualization
- RU112 Sections must be properly shown and described
- RU113 Sections will not have an only element
- RU114 There will be a way to jump over the initial animation
- RU115 The website has to include a search engine
- RU116 The website has to include a site map
- RU117 When the page is reloaded the contents into the form fields should not be reset
- RU119 Frames in "Text mode" version will not be used
- RU120 The link leading to the website in "Text Mode" should be in the top or the bottom of the page
- RU127 The server clock will be used instead of the client's one
- RU128 Navigator configuration will not be changed
- RU129 There should not appear warnings about page sections under repair
- RU130 Slang will not be used
- RU131 The session expiring period will not be too short
- RU132 The remaining time for the expiring of the session will be shown
- RU133 There will not be lost images

o **Accessibility**

- RA000 Providing users with equivalent text for the images
- RA001 Providing users with redundant text links for each active area in an image map
- RA002 Synchronizing subtitles or sound descriptions of the visual track with the multimedia presentations
- RA003 Ensuring that all the information communicated by using the colour will be also available without it
- RA004 Ensuring that all background and close-up colour combinations spare enough contrast
- RA005 Creating validated documents according to the formal grammar rules which has been published
- RA006 Using style sheets to monitor the presentation

- RA007 Using relative instead of absolute units for the attributes of the marking language and the values of style sheets properties
- RA008 Using heading elements to communicate the document structure, according to the specification
- RA010 Clearly identifying changes in the original language of the text in the document
- RA011 Identifying the main document language
- RA012 Creating tables with the proper markers for its transformation
- RA013 Not using tables for the page layout unless tables make sense when being aligned
- RA014 Provide summaries of tables
- RA015 Organize the document in order it may be read without style sheets
- RA016 Ensuring that frame equivalents are refreshed when the dynamic contents change
- RA017 Ensuring that script equivalents are refreshed when the dynamic contents change

- RA018 Ensuring that pages can keep on being used when scripts, applets or other programming elements are disconnected or cannot be supported
- RA019 Preventing flickering and flashing of the elements which are shown on the screen
- RA020 Preventing moving contents in the pages
- RA021 Not creating self-refreshed pages

- RA022 Not using markers to automatically redirect pages
- RA023 Making programming elements such as scripts or applets directly accessible or compatible with technical support
- RA024 Providing the client with image maps instead of server maps, when possible
- RA025 Designing pages where the access is independent of the device
- RA026 Putting title to each frame so as to make their identification and the navigation among them easier
- RA027 Specifically link labels to their controls
- RA028 Clearly identifying each link objective
- RA029 Using the proper language in order the site contents to be clearer and more simple
- RA030 Providing applets and objects with alternative text
- RA031 Providing page with frames with alternative text
- RA032 Providing scripts with alternative text
- RA033 Image and text must not be used at the same time
- RA034 Application must observe HTML standard

o Security

- Rs000 Existence of realistic technical and human resources in order to comply with the availability degree foreseen for the site
- Rs001 The unregistered user cannot access the private part
- Rs002 The area devoted to enter or exit from the private part is clearly identified in each case

- Rs003 The registered user, when entering or leaving the private part, is provided with information in order to let him know the state of his navigation
- Rs004 Password hiding with asterisks when logging in
- Rs005 Robustness of the formula which will be used as password reminder, for instance involving user e-mail address
- Rs006 Disabling self-completing and other similar tools, or at least recommending users to disable them in public-use PC's
- Rs010 Existence of management of the roles assignment by the site administrator
- Rs011 Maximum and minimum number of administrators, and their
- Rs012 Separation of the administrative part of the application in another IP/port
- Rs013 Complex Administration
- Rs029 Using the same validation libraries in all the application
- Rs031 Sorting out all kinds of messages
- Rs033 Different presentation of the error messages according to the user profile
- Rs034 Controlling that there are enough changes of images
- Rs035 Human operator validation. Checking the procedure does not involve a bottleneck for the rest of the system tools
- Rs036 Existence and/or parameterization of limits for data recovery
- Rs037 Using integrity restrictions and fields definition
- Rs038 Automatic Commit or Commit/rollbacks controlled according to exceptions management
- Rs039 Active account validation before accepting an email account
- Rs040 Yes/No option to accept free/spam mail servers
- Rs041 Security in the process off confirming mail operations
- Rs050 Existence of a clear mechanism to distinguish cases of deletion or marking
- Rs051 Existence of automatic deletions, and their setup

- Rs055 Identifying and informing the user about HTML and Javascript elements which are specific of certain brand or navigator version
- Rs056 Using commercial software from suitable servers to support the real load to which the system is going to be subjected

o Functionality

- Rf001 The functional requirements have been already defined
- Rf002 Review of the functional requirements
- Rf003 Assessment and acceptance of the functional requirements
- Rf004 Access profiles
- Rf007 Including user controls for the multimedia contents (play/stop/rewind/volume)

- Rf008 Estimation on the number of visits which are expected every month (or day)
- Rf009 Providing guidance in order to help users to understand pages or elements
- Rf010 Using "Style guides"
- Rf011 Easiness of use
- Rf012 Having alternative ways (apart from the form itself) to send the information (e-mail, fax...)

o **Architecture and Design**

- RAD001 Internal and external references
- RAD002 Information storage
- RAD003 Website image
- RAD004 Balanced design
- RAD005 Standardization and variety
- RAD006 Hierarchy
- RAD007 Utility and clarity
- RAD008 Contact information
- RAD009 Server contents prepared
- RAD010 Depth in the server
- RAD011 Contents name
- RAD012 Title

o **HTML Standards**

- RH000 Adding titles and paragraphs
- RH001 Emphasizing the text
- RH004 Using line breaks properly
- RH005 Introducing spaces without breaks
- RH006 Using entities for special characters
- RH007 Using pre-formatted text
- RH008 Put text surrounding the images
- RH009 Using out of order lists
- RH010 Using lists in order
- RH011 Using lists with definitions
- RH012 Using effects
- RH013 Using logos as advertisements
- RH100 The application must start with a title
- RH111 Access to other page clicking on an image

o **Other Requirements**

- ROP000 Popularity of the website
- ROC102 Pages with alternative elements for navigators without plug-ins
- ROPM000 To guarantee the maintainability of the website
- ROPM003 Easiness to install the webpage
- ROPM004 Adaptability of the website
- ROPM006 Validation of the changes in the website

o **Capacity**

- RC000 The maximum number of HTML files per page is 2.

RC001	the maximum number of objects per page is 8
RC002	the maximum number of images per page is 10
RC003	the maximum number of style sheet is 1
RC004	the maximum number of multimedia files per page is 1
RC005	the size of the page has to be less than 30K.
RC006	the maximum number of scripts is 2
RC007	the total size of the HTML page has to be less than 20K.
RC008	the total size of the images has to be less than 30K.
RC009	the total size of external scripts has to be less than 8K.
RC010	the total size of the style sheets less than 8K.
RC011	the total size of the external multimedia files has to be less than 20K.

o Availability

RAv000	The webpage has to have a minimum availability of 90%.
RAv001	the replay time of the webpage could not be greater than 10 seconds

5.3.2 Results of the Evalweb analysis

5.3.2.1 OSHA web site analysis

5.3.2.1.1 TESTED PAGES

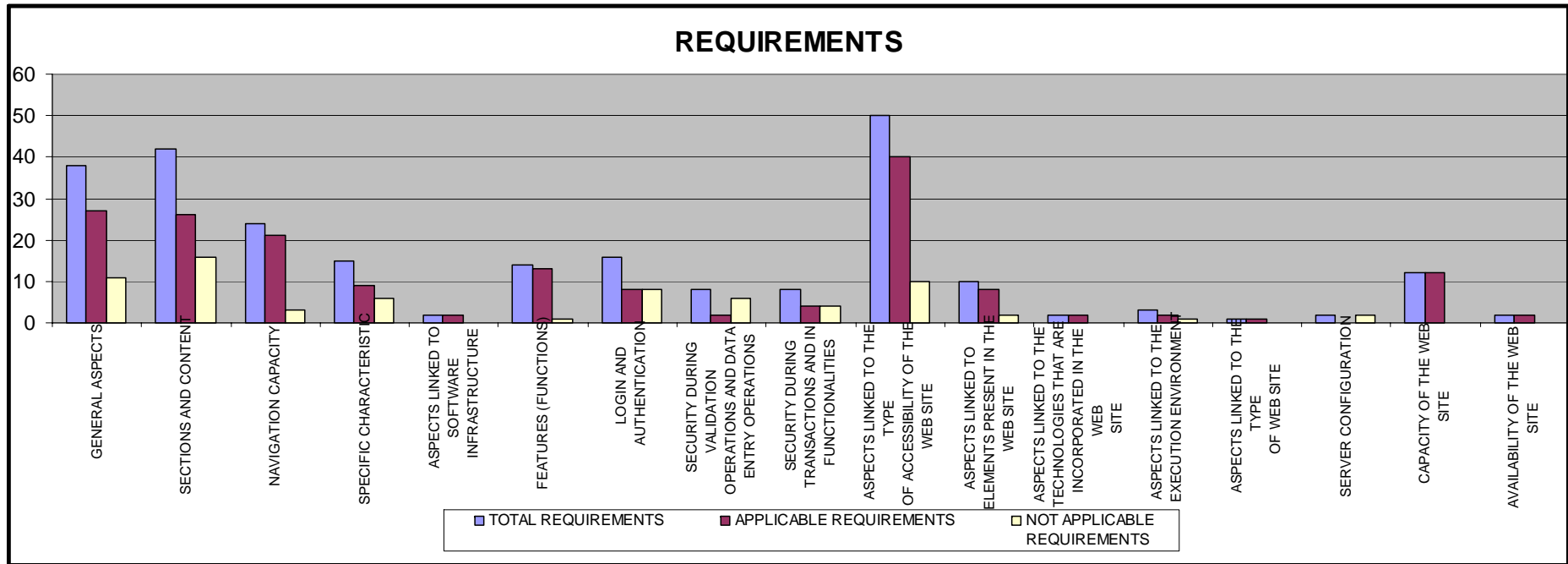
- <http://osha.europa.eu/>
- <http://osha.europa.eu/about>
- http://osha.europa.eu/good_practice
- <http://riskobservatory.osha.europa.eu/>
- <http://osha.europa.eu/topics>
- <http://osha.europa.eu/sector>
- http://osha.europa.eu/priority_groups
- <http://osha.europa.eu/campaigns>
- <http://osha.europa.eu/help>
- http://osha.europa.eu/navigation_view
- http://osha.europa.eu/login_form
- http://osha.europa.eu/about/contact_us

5.3.2.1.2 ANALYSIS ACCORDING TO ASPECTS DEFINED BY EVALWEB METHOD

5.3.2.1.2.1 APPLICABLE REQUIREMENTS

SECTION	TOTAL REQUIREMENTS	APPLICABLE REQUIREMENTS	NOT APPLICABLE REQUIREMENTS	APPLICABILITY PERCENTAGE
GENERAL ASPECTS	38	27	11	71,05%
SECTIONS AND CONTENT	42	26	16	61,90%
NAVIGATION CAPACITY	24	21	3	87,50%
SPECIFIC CHARACTERISTIC	15	9	6	60,00%
ASPECTS LINKED TO SOFTWARE INFRASTRUCTURE	2	2	0	100,00%
FEATURES (FUNCTIONS)	14	13	1	92,86%
LOGIN AND AUTHENTICATION	16	8	8	50,00%
SECURITY DURING VALIDATION OPERATIONS AND DATA ENTRY OPERATIONS	8	2	6	25,00%
SECURITY DURING TRANSACTIONS AND IN FUNCTIONALITIES	8	4	4	50,00%
ASPECTS LINKED TO THE TYPE OF ACCESSIBILITY OF THE WEB SITE	50	40	10	80,00%
ASPECTS LINKED TO ELEMENTS PRESENT IN THE WEB SITE	10	8	2	80,00%
ASPECTS LINKED TO THE TECHNOLOGIES THAT ARE INCORPORATED IN THE WEB SITE	2	2	0	100,00%
ASPECTS LINKED TO THE EXECUTION ENVIRONMENT	3	2	1	66,67%
ASPECTS LINKED TO THE TYPE OF WEB SITE	1	1	0	100,00%
SERVER CONFIGURATION	2	0	2	0,00%
CAPACITY OF THE WEB SITE	12	12	0	100,00%
AVAILABILITY OF THE WEB SITE	2	2	0	100,00%

The graphic bellow shows the total number of requirements as established in the methodology EVALWEB (in blue) and the number of "Applicable" (in red) and "Not applicable" (in yellow) requirements for OSHA.



5.3.2.1.2.2 RESULTS

The following table shows the results obtained for each aspect through the analysis of the applicable requirements.

ASPECT CODE	INDICATOR DESCRIPTION	REQUIREMENTS OK	REQUIREMENTS NOT OK	NOT CONSIDERED	FULFILMENT (OK-NOT OK)	TOTAL FULFILMENT	COMMENTS
General aspects					92,59%	65,79%	
Aspect [F001]	High position in search engines	RAD001 / ROP000			100%	100%	
Aspect [F007]	Legibility	Ru027/Ru079/ Ru080/Ru081/ Ru082/RH000/ RH004/RH005/ RH006/RH008/ RAD004/RAD007/ RAD008	Ru078	RH001/RH007	93%	81%	There is not preformatted or stressed text. And there are spelling mistakes.
Aspect [F018]	Web portability			ROP003/ ROP004/ ROP006	100%	0%	Not access to modify the web.
Aspect [F019]	Web maintenance by specialised personnel	ROP000			100%	100%	
Aspect [F037]	Web site	Ru021/Ru040/ Ru072/Ru128/ Rf009/Rf011/ Rf012		Rf001/Rf002/ Rf003/Rf008/ Rf010	100%	58%	There is not access to the documentation.
Aspect [F043]	Use of style sheets	Ru054			100%	100%	
Aspect [FH100]	Web with text and images	RH100		RH111	100%	50%	No image with areas to click.
Aspect [Fo101]	Web with Plug-ins		ROC102		0%	0%	When users have not plugins the web site does not show any alternative.

Sections and Content					80,77%	50,00%	
Aspect [F005]	Web with images	Ru000/Ru001/ Ru008/Ru133/ Rh008/Ra033	Ru002/Ra000	Ra001/Ra024	75%	60%	There are not image-maps. Also, all the images must have an alternative text. The big images must have a continuous load.
Aspect [F006]	Web with multimedia elements		Ru092	Ru088/Ru089 / Ru090/Ru091 / Ru093/Rf007/ Ra002	0%	0%	There is not any multimedia file or 3D image. And the animations are in an infinite loop.
Aspect [F008]	Web with sections	RAD005/RAD006			100%	100%	
Aspect [F009]	Web with content stored on a server			RAD009/RAD 010 /RAD011	100%	0%	There is not access to the server.
Aspect [F013]	Web with tables	Ru076/Ru077/ RA012/RA013/ RA014			100%	100%	
Aspect [F014]	Web with lists	RH009		RH010/RH01 1	100%	33%	There is not any sorted list or any list with definitions.
Aspect [F015]	Web with effects			RH012/RH01 3	100%	0%	There are not effects and there are not sponsors on the web.
Aspect [F030]	Existence of a Help Section	Ru004/Ru005			100%	100%	
Aspect [F035]	Privacy standards		Ru036		0%	0%	It is not found any section whose name is "Privacy Policy".
Aspect [F039]	The Web site contains publicity	Ru044/Ru045	Ru046		67%	67%	The ads are in the middle. These elements keep the attention of the users, not allowing them to concentrate in the content of the web.

Aspect [F051]	Web organized by sections	Ru112/Ru113/ Ru129			100%	100%	
Navigation capacity					66,67%	58,33%	
Aspect [F003]	Web navigable	Ru023/Ru028/ Ru029/Ru030/ Ru032/Ru033/ Ru071/RAD004/ RAD007/RAD008/ RAD012	Ru022/Ru024/ Ru025/Ru026/ Ru031	RAD002	69%	65%	It is not possible to know if the information is correctly saved. And the logo of the main page does not have to be a link to the main page. There are broken links. Also, there is not a bottom link to go back to the previous pages. Finally, some sections change the structure of the web.
Aspect [F032]	Use of menus	Ru014/Ru015	Ru013		67%	67%	There are too many options in the menus.
Aspect [F034]	Web with crumb trail	Ru014	Ru013	Ru019	67%	33%	The crumb trails are not translated in all the languages and in some cases the translations are mixed. Also, there are too many options in the menus.
Aspect [F064]	Use of rollovers			Ru111	100%	0%	No rollovers in the web.
Specific characteristics					66,67%	40,00%	
Aspect [F004]	Web with company image	RAD003/Ru034/ Ru035			100%	100%	
Aspect [F047]	Web printable	Ru103	Ru100/Ru101/ Ru102		33%	33%	Not possible to print the pages correctly, the margins are too small and there is not any URL address in the printed pages.

Aspect [F048]	Offering very large listings			Ru057/Ru104 / Ru105	100%	0%	There are not lists or comparative tables, and this web does not sell anything, so there are not images to show about products.
Aspect [F049]	Web with pages that take a long time to load			Ru106/Ru107	100%	0%	The load of the web is at a normal pace.
Aspect [F052]	Dealing with a large Web site	Ru115/Ru116			100%	100%	
Aspect [F067]	The Web site uses date and time			Ru127	100%	0%	There is not any way to know if the server clock is used or not. The web has not time or date references.
Aspects linked to software infrastructure					100%	100%	
Aspect [F010]	Client needs a tools or plug-in installed	RU083/RU084			100%	100%	
Features (Functions)					76,92%	71,43%	
Aspect [F031]	Web with file downloads			Ru006	0%	0%	The files that can be downloaded must have information about size,...
Aspect [F041]	Uses site map	Ru047			100%	100%	
Aspect [F042]	Includes a search option	Ru049/Ru050/ Ru051/Ru052	Ru048/Ru053		67%	67%	It is necessary to use a filter, not to show so many results. Also, it is necessary to show where the users are looking for.
Aspect [F046]	Use of different languages	Ru052/Ru067/ Ru068/Ru070			100%	100%	
Aspect [F066]	Compatibility with text navigators	Ru119		Ru120	100%	50%	There is not an alternative version.

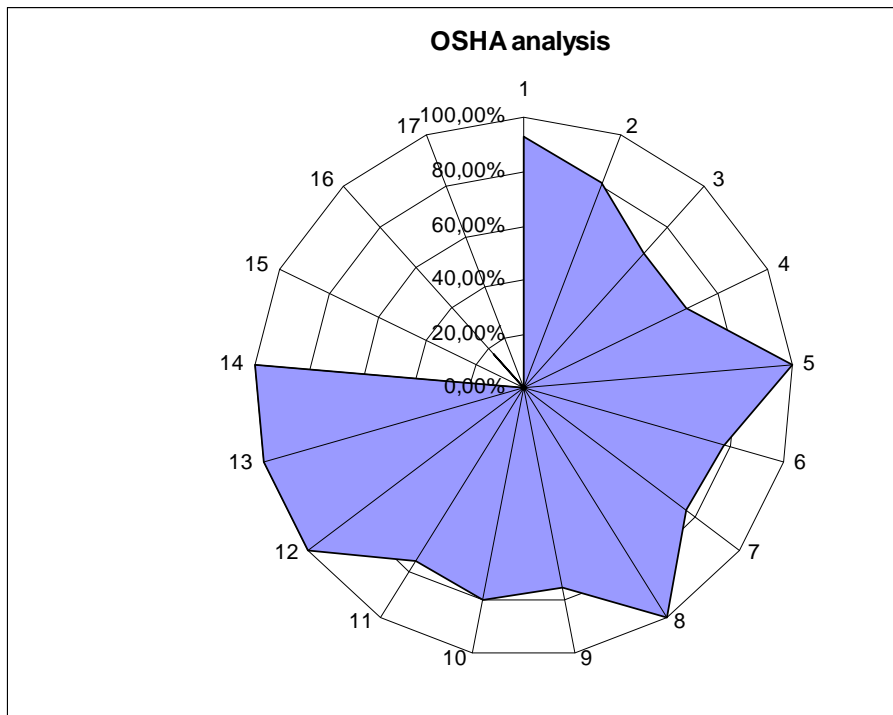
Login and authentication					75,00%	37,50%	
Aspect [F020]	Existence of public and private parts within the Web	Rs001/Rs002/ Rs003			100%	100%	
Aspect [F021]	Identification using user/password	Rs004/Rs005		Rs006	100%	67%	To disable options of the Internet depends on the user's computer.
Aspect [F023]	Distinction between roles or types of users in private part (independently of the existence of users - administrators	Ru086	Ru085/Ru087	Rf004/Rs010/ Ru131/Ru132	33%	17%	There is an area to login but there is not any information about privacy or advantages of login. Also, there are not different users or sessions.
Aspect [F024]	Existence of Administration of the application via Web			Rs011/Rs012 / Rs013	100%	0%	There are not system administrators.
Security during validation operations and data entry operations					100%	25,00%	
Aspect [F076]	Existence of validation rules in areas in data entry fields			Rs029	100%	0%	It is not possible to access to the libraries.
Aspect [F078]	Error messages specifically created for the application and with a unified design	Rs031		Rs033	100%	50%	There is not any difference among users.
Aspect [F079]	Anti-robot methods for avoiding automatic operations for registering / consultation	Rs034		Rs035	100%	50%	It is not possible to verify the number of people which validates the email addresses.
Aspect [F080]	Detailed design for search options to avoid queries which, although correct, could overload the system (*.*)			Rs036	100%	0%	There is not access to the database.
Aspect [F081]	Field validation for forms (searches, registration,...) to avoid techniques of SQL-Injection			Rs037	100%	0%	There is not access to the database.
Aspect [F082]	The existence of complex registration operations (various related fields, large quantity of fields)			Rs038	100%	0%	There is not access to the database.

Security during transactions and in functionalities					75,00%	37,50%	
Aspect [F083]	Methods for confirming data and operations which involve e-mail	Rs039/Rs041	Rs040		67%	67%	The web accepts any type of server, including servers that do not exist.
Aspect [F087]	A means of treating old or out-of date data: the necessity for delete operations and their impact on the complexity of the application			Rs050/Rs051	100%	0%	There is not access to the internal information.
Aspect [F088]	The use of novel characteristics, exclusive or little tried in navigators, dependent on concrete versions or without guarantee of the same functionality in older versions of the same navigator or other different navigators	Rs055			100%	100%	
Aspect [F090]	The use of application server, web server or DB server technologies			Rs000/Rs056	100%	0%	It is not possible to verify the number of people that work in the site and the type of the software.
Aspects linked to the type of accessibility of the Web site					80,00%	64,00%	
Aspect [F025]	Web with general accessibility	Ra003/Ra004/ Ra005/Ra006/ Ra007/Ra012/ Ra015/Ra021/ Ra022/Ra029/ Ra033	Ra000/Ra028/ Ra035	Ra001/Ra024 / Ra034	79%	65%	All the images must have an alternative text. Some links have not a correct name. Also, there are not image-maps, incorrect use of the XHTML standard.

Aspect [F026]	Web accessible for disabled people	Ra003/Ra004/ Ra005/Ra006/ Ra008/Ra010/ Ra011/Ra012/ Ra013/Ra014 Ra015/Ra017/ Ra018/Ra019/ Ra020/Ra021/ Ra022/Ra023/ Ra029/Ra032/ Ra033	Ra025/Ra027/ Ra028/Ra030/ Ra035	Ra001/Ra002 / Ra016/Ra024 / Ra026/Ra031 / Ra034	81%	64%	Some links have not a correct name. Also, there is not image-map, incorrect use of the XHTML standard. There are not frames. The events are not independent from the devices,...
Aspects linked to elements present in the Web site					75,00%	60,00%	
Aspect [F027]	Existence de forms	Ru009/Ru011/ Ru017/Rf011	Ru007	Ru012	80%	67%	There is not any information about how to fill a form and there is not access to the validation procedure.
Aspect [F036]	A logotype is included	Ru038/Ru039	Ru037		67%	67%	The logo of the Web does not have a correct size. It is very big, it is recommendable to decrease its size and also, it is a link to the main page.
Aspect [F065]	The presence of start-up animation			Ru114	100%	0%	There is not main animation.
Aspects linked to the technologies that are incorporated in the Web site					100%	100%	
Aspect [F038]	International Web site	Ru041/Ru043			100%	100%	
Aspects linked to the execution environment					100%	67%	
Aspect [F045]	International Web site	Ru063/Ru066		Ru065	100%	67%	The web has not time or date references.

Aspects linked to the type of Web site					100%	100%	
Aspect [F057]	A Web site with news service	Ru130			100%	100%	
Server Configuration					100%	0%	
Aspect [F068]	The sessions expire on time			Ru131/Ru132	100%	0%	There is not time for the end of the session.
Capacity of the Web site					17%	17%	
Aspect [Fc000]	Speed of the page.	RC000/RC007	RC001/RC002/ RC003/RC004/ RC005/RC006/ RC008/RC009/ RC010/RC011		17%	17%	It is possible to increase the page speed if the number of images, objects,... is decreased.
Availability of the Web site					0%	0%	
Aspect [FAv000]	Availability and response time of the page.		RAv000/RAv001		0%	0%	The availability and response time of the web are low.

The figure below collects all this information in an only graphic



- 1 GENERAL ASPECTS
- 2 SECTIONS AND CONTENT
- 3 NAVIGATION CAPACITY
- 4 SPECIFIC CHARACTERISTIC
- 5 ASPECTS LINKED TO SOFTWARE INFRASTRUCTURE
- 6 FEATURES (FUNCTIONS)
- 7 LOGIN AND AUTHENTICATION
- 8 SECURITY DURING VALIDATION OPERATIONS AND DATA ENTRY OPERATIONS
- 9 SECURITY DURING TRANSACTIONS AND IN FUNCTIONALITIES
- 10 ASPECTS LINKED TO THE TYPE OF ACCESSIBILITY OF THE WEB SITE
- 11 ASPECTS LINKED TO ELEMENTS PRESENT IN THE WEB SITE
- 12 ASPECTS LINKED TO THE TECHNOLOGIES THAT ARE INCORPORATED IN THE WEB SITE
- 13 ASPECTS LINKED TO THE EXECUTION ENVIRONMENT
- 14 ASPECTS LINKED TO THE TYPE OF WEB SITE
- 15 SERVER CONFIGURATION
- 16 CAPACITY OF THE WEB SITE
- 17 AVAILABILITY OF THE WEB SITE

5.3.2.1.3 ANALYSIS ACCORDING TO ASPECTS DEFINED BY WEB STANDARDS

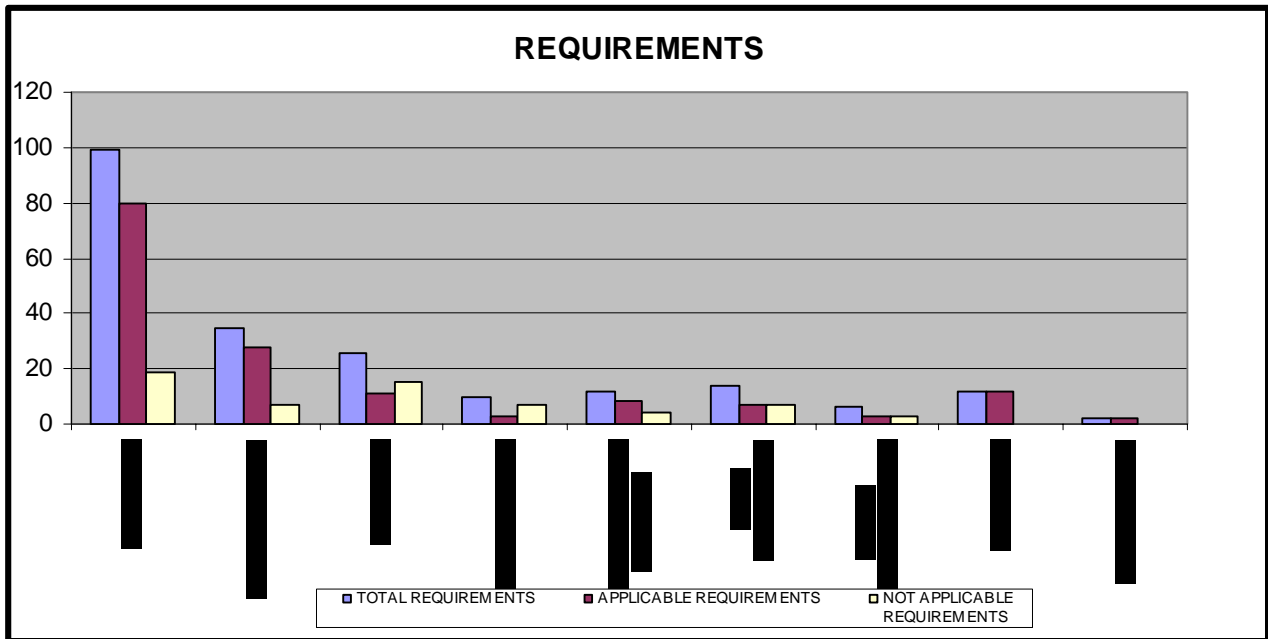
5.3.2.1.3.1 APPLICABLE REQUIREMENTS

SECTION	NOT APPLICABLE REQUIREMENTS			
	LACK OF INFORMATION*		FEATURE NOT IMPLEMENTED**	
	Number of requirements	Requirements	Number of requirements	Requirements
USABILITY	5	RU012/RU106/RU107/RU131/RU132	14	RU019/RU057/RU065/RU088/RU089/RU090/RU091/RU093/RU104/RU105/RU111/RU114/RU120/RU127
ACCESSIBILITY	0	-	7	RA001/RA002/RA016/RA024/RA026/RA031/RA034
SECURITY	14	Rs000/Rs006/Rs010/Rs011/Rs012/Rs013/Rs029/Rs033/Rs036/Rs037/Rs038/Rs050/Rs051/Rs056	1	Rs035/
FUNCTIONALITY	6	Rf001/Rf002/Rf003/Rf004/Rf008/Rf010	1	Rf007
ARCHITECTURE & DESIGN	4	RAD002/RAD009/RAD010/RAD011	0	-
HTML STANDARD	0	-	7	RH001/RH007/RH010/RH011/RH012/RH013/RH111
OTHER REQUIREMENTS	3	ROPM003/ROPM004/ROPM006	0	-
CAPACITY	0	-	0	-
AVAILABILITY	0	-	0	-

*The needed information to verify the requirements is not accessible, due to website confidentiality and privacy issues.

**The functionality related to these requirements is not implemented in the web site.

This graphic shows the total number of requirements as established in the methodology (in blue) and the number of "Applicable" (in red) and "Not applicable" (in yellow) requirements for OSHA.



5.3.2.1.3.2 RESULTS

- Usability

REQUIREMENTS	ASPECTS	ASSIGNMENT	PRIORITY	ASSESSMENT	COMMENTS
RU000	F005	Complete	High	PASSED	
RU001	F005	Complete	High	PASSED	
RU002	F005	Complete	Low	FAILED	The logo of the web is a big image, and it has not a continuous load. It is recommendable to have a continuous load in the big images (images that are bigger than 100x100).
RU004	F030	Complete	Medium	PASSED	
RU005	F030	Complete	High	PASSED	
RU006	F031	Complete	High	FAILED	The files that can be downloaded should have information about size,...
RU007	F027	Complete	High	FAILED	There is not any information about how to introduce data in the forms.
RU008	F005	Complete	High	PASSED	
RU009	F027	Complete	Medium	PASSED	
RU011	F027	Complete	High	PASSED	
RU012	F027	Complete	Low	Not applicable	There is not access to the validation procedure.
RU013	F032 & F034	Share	High	FAILED	There are too many options in the menus. And there is a menu in the bottom of the page that has too many icons and options.
RU014	F032 & F034	Share	High	PASSED	
RU015	F032	Complete	Medium	PASSED	
RU019	F034	Complete	High	Not applicable	The web uses colours as section dividers.
RU021	F037	Complete	High	PASSED	

RU022	F003	Complete	High	FAILED	There are some broken links: http://osha.europa.eu/index_html/www.cdc.gov/niosh/usnetwork/systems.html , http://osha.europa.eu/publications/reports/7606488 , http://osha.europa.eu/new_eustrategy ,...
RU023	F003	Complete	High	PASSED	
RU024	F003	Complete	High	FAILED	The logo of the main page is a link to the main page. If users are in an internal page the logo can be a link to the main page, but it cannot work as a link if they are in the main page.
RU025	F003	Complete	High	FAILED	There is a section, which name is: European Risk Observatory, which opens a new page. When this happens, users cannot go back, they have to close the new window to go back and they can be lost in the new menu of the page.
RU026	F003	Complete	Medium	FAILED	There is a section, which name is: European Risk Observatory, which opens a new page. When this happens, users cannot go back, they have to close the new window to go back and they can be lost in the new menu of the page.
RU027	F007	Complete	High	PASSED	
RU028	F003	Complete	Medium	PASSED	
RU029	F003	Complete	Low	PASSED	
RU030	F003	Complete	Medium	PASSED	
RU031	F003	Complete	Medium	FAILED	There is not a bottom link of the main page. Users normally click on this link to go back to the main page, when they are at the bottom of the pages.
RU032	F003	Complete	High	PASSED	
RU033	F003	Complete	High	PASSED	
RU034	F004	Complete	High	PASSED	There is information about the enterprise.
RU035	F004	Complete	Medium	PASSED	There is information about the enterprise.
RU036	F035	Complete	High	FAILED	It is not found any section named "Privacy Policy".

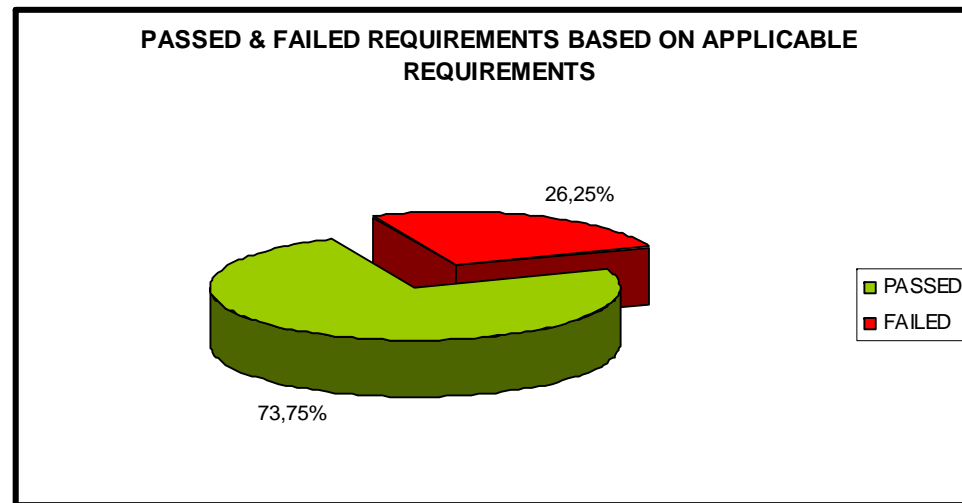
RU037	F036	Complete	Medium	FAILED	The logo of the Web do not has a correct size. It is very big, it is recommendable to decrease its size.
RU038	F036	Complete	High	PASSED	
RU039	F036	Complete	Medium	PASSED	
RU040	F037	Complete	High	PASSED	
RU041	F038	Complete	High	PASSED	
RU043	F038	Complete	Medium	PASSED	
RU044	F039	Complete	Medium	PASSED	
RU045	F039	Complete	Medium	PASSED	
RU046	F039	Complete	High	FAILED	Advertisements are placed in the middle of the page, and they are animations. These elements keep the attention of the users, not allowing them to concentrate in the content of the web.
RU047	F041	Complete	High	PASSED	
RU048	F042	Complete	High	FAILED	Users do not know what is the search engine unless they do the first search. It is recommendable to give information about the search engines used: Google, the Web,...
RU049	F042	Complete	High	PASSED	
RU050	F042	Complete	High	PASSED	
RU051	F042	Complete	Low	PASSED	
RU052	F042 && F046	Share	Medium	PASSED	
RU053	F042	Complete	High	FAILED	The search engine shows too many results when users introduce only one character. It is recommendable to create a filter. But, when users introduce a character, the web says that there is not anything that matches the text. This is not possible.
RU054	F043	Complete	High	PASSED	There are some key words in the web. It is recommendable to introduce more of them to make it easier to have the web found by the Internet search engines.

RU057	F048	Complete	High	Not applicable	This is not a commercial web site, so it does not show any image about its products.
RU063	F045	Complete	High	PASSED	
RU065	F045	Complete	Medium	Not applicable	The web has not time or date references.
RU066	F045	Complete	Medium	PASSED	
RU067	F046	Complete	Medium	PASSED	
RU068	F046	Complete	Medium	PASSED	
RU070	F046	Complete	High	PASSED	
RU071	F003	Complete	Low	PASSED	There are not links to the main page, if we do not consider the logo of the main page. See Ru024.
RU072	F037	Complete	Medium	PASSED	
RU076	F013	Complete	Medium	PASSED	
RU077	F013	Complete	Medium	PASSED	
RU078	F007	Complete	High	FAILED	This web has been checked in 'English', 'Español', 'Deutsch' and 'Français'. And has found an error. The English word menu has an accent in Spanish. The correct way to write this word is: menú.
RU079	F007	Complete	Medium	PASSED	
RU080	F007	Complete	High	PASSED	
RU081	F007	Complete	Medium	PASSED	
RU082	F007	Complete	Medium	PASSED	
RU083	F010	Complete	Medium	PASSED	
RU084	F010	Complete	Low	PASSED	
RU085	F023	Complete	High	FAILED	There is not any information about the advantages of login.
RU086	F023	Complete	Medium	PASSED	
RU087	F023	Complete	High	FAILED	There is a section to login, and in this section, there is not any information about the privacy of the data.
RU088	F006	Complete	High	Not applicable	No video is found in the web.
RU089	F006	Complete	High	Not applicable	No video is found in the web.
RU090	F006	Complete	Medium	Not applicable	No video is found in the web.
RU091	F006	Complete	Medium	Not applicable	No video is found in the web.

RU092	F006	Complete	Low	FAILED	The animation are in an infinite loop. It is recommendable to place the animations in the left or in the right of the page not in the middle.
RU093	F006	Complete	Medium	Not applicable	There are not 3D images.
RU100	F047	Complete	Medium	FAILED	It is not possible to print the pages correctly. The content of the page appears moved,...
RU101	F047	Complete	Medium	FAILED	The margins of the printed pages are not correct. They are too small.
RU102	F047	Complete	Medium	FAILED	There is not any URL address in the printable pages of the web.
RU103	F047	Complete	High	PASSED	
RU104	F048	Complete	High	Not applicable	There are not lists that can be sorted in this web.
RU105	F048	Complete	Medium	Not applicable	There is not a comparative table of the elements.
RU106	F049	Complete	High	Not applicable	The load of the web is at a normal pace and depends on the connection of the users.
RU107	F049	Complete	Low	Not applicable	The load of the web is at a normal pace and depends on the connection of the users.
RU111	F064	Complete	Medium	Not applicable	There are not rollovers in this web.
RU112	F051	Complete	High	PASSED	
RU113	F051	Complete	High	PASSED	
RU114	F065	Complete	High	Not applicable	There is not main animation.
RU115	F052	Complete	Medium	PASSED	
RU116	F052	Complete	Medium	PASSED	
RU117	F027	Complete	High	PASSED	
RU119	F066	Complete	High	PASSED	
RU120	F066	Complete	High	Not applicable	There is not any link to the alternative version. Currently, this version is not used commonly, so not having it is not considered wrong.
RU127	F067	Complete	High	Not applicable	There is not any way to know if there is a timestamp mechanism. The web has not time or date references.
RU128	F037	Complete	Medium	PASSED	
RU129	F051	Complete	Medium	PASSED	

RU130	F057	Complete	High	PASSED	
RU131	F068 & F023	Share	High	Not applicable	There is not limited time for the sessions. There are not different sessions on this web.
RU132	F068 & F023	Share	Low	Not applicable	There is not limited time for the sessions. There are not different sessions on this web.
RU133	F005	Complete	Medium	PASSED	

Total not applicable requirements :		19/99
Total applicable requirements :		80/99
Total FAILED applicable requirements:		21/80
Total PASSED applicable requirements:		59/80
Fulfilment (Satisfactory requirements / Total applicable requirements):		73,75%



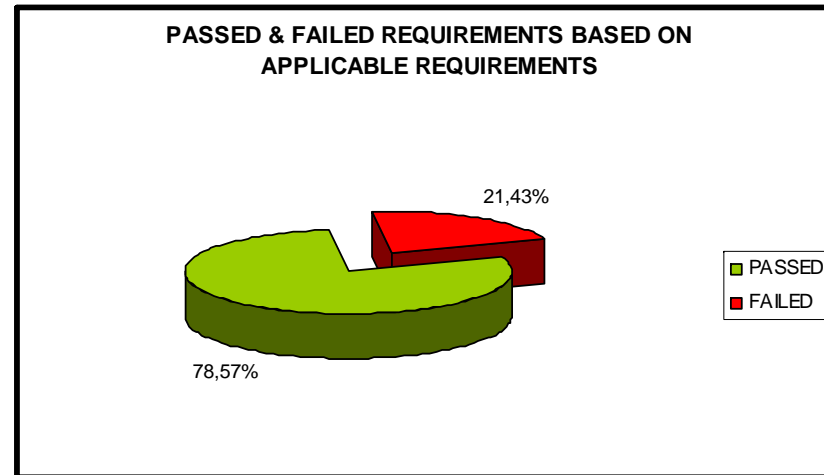
- Accessibility

REQUIREMENTS	ASPECTS	ASSIGNMENT	PRIORITY	ASSESSMENT	COMMENTS
RA000	F025 && F005	Share	High	FAILED	There are too many images without alternative text, all the images, which are not decorative, should have alternative text, defined by the attribute <i>ALT</i> .
RA001	F025 && F005	Share	High	Not applicable	There is not any image map.
	F026 && F005	Share	High	Not applicable	There is not any image map.
RA002	F026 && F006	Share	High	Not applicable	There is not any video or sound file in the web.
RA003	F025 && F026	Share	High	PASSED	
RA004	F025 && F026	Share	Medium	PASSED	
RA005	F025 && F026	Share	High	PASSED	There are not grammar or spelling mistakes in the CSS.
RA006	F025 && F026	Share	Medium	PASSED	
RA007	F025	Complete	Medium	PASSED	
RA008	F026	Complete	Medium	PASSED	
RA010	F026	Complete	High	PASSED	
RA011	F026	Complete	Low	PASSED	
RA012	F025 && F013	Share	Medium	PASSED	
	F026 && F013	Share	High	PASSED	
RA013	F026 && F013	Share	Medium	PASSED	The web does not use tables to lay out.
RA014	F026 && F013	Share	Low	PASSED	
RA015	F025 &&	Share	High	PASSED	There are not grammar or spelling mistakes in the CSS.

	F026				
RA016	F026	Complete	High	Not applicable	There are not frames.
RA017	F026	Complete	High	PASSED	
RA018	F026	Complete	High	PASSED	
RA019	F026	Complete	High	PASSED	There is not any blink.
RA020	F026	Complete	Medium	PASSED	
RA021	F025 && F026	Share	Low	PASSED	
RA022	F025 && F026	Share	Low	PASSED	
RA023	F026	Complete	High	PASSED	There are not applets or objects.
RA024	F025 && F005	Share	Medium	Not applicable	It is not found any image map.
	F026 && F005	Share	High	Not applicable	It is not found any image map.
RA025	F026	Complete	High	FAILED	Handled events have to be independent of the device and there are not redundant events.
RA026	F026	Complete	High	Not applicable	There are not frames.
RA027	F026	Complete	Medium	FAILED	There are some control without tag.
RA028	F025 && F026	Share	Medium	FAILED	Example: NAME: Comments LINK: http://osha.europa.eu/contact_us The name of the link should be 'Contact us'.
RA029	F025 && F026	Share	Medium	PASSED	
RA030	F026	Complete	High	FAILED	There is not any alternative text in the tested objects.
RA031	F026	Complete	High	Not applicable	There are not frames.
RA032	F026	Complete	High	PASSED	
RA033	F025 && F005	Share	Low	PASSED	
	F026	Complete	Low	PASSED	
RA034	F025 && F026	Complete	High	Not applicable	The application does not use HTML standard.

RA035	F025 && F026	Complete	Medium	FAILED	The application uses XHTML standard. Examples: <html>. Missing xmlns attribute for element html. The value should be: http://www.w3.org/1999/xhtml , ...m.button.GoEuNetwork" type="submit" value="Go">. An element is not closed, or r perhaps you meant to "self-close" an element, that is, ending it with "/>" instead of ">".

Total not applicable requirements :	7/35
Total applicable requirements :	28/35
Total FAILED applicable requirements:	7/28
Total PASSED applicable requirements:	22/28
Fulfilment (Satisfactory requirements / Total applicable requirements):	78,57%



- Security

REQUIREMENTS	ASPECTS	ASSIGNMENT	PRIORITY	ASSESSMENT	COMMENTS
Rs000	F090	Complete	Medium	Not applicable	It is not possible to verify the number of people which works in the site daily.
Rs001	F020	Complete	High	PASSED	
Rs002	F020	Complete	Medium	PASSED	
Rs003	F020	Complete	Medium	PASSED	
Rs004	F021	Complete	High	PASSED	
Rs005	F021	Complete	High	PASSED	Users can access to the private area using email or user ID.
Rs006	F021	Complete	Low	Not applicable	This requirement depends on the user's computer.
Rs010	F023	Complete	Low	Not applicable	There is not any difference among users.
Rs011	F024	Complete	Medium	Not applicable	There is not any system administrator.
Rs012	F024	Complete	Medium	Not applicable	There is not any system administrator.
Rs013	F024	Complete	High	Not applicable	There is not any system administrator.
Rs029	F076	Complete	Medium	Not applicable	There is not any way to access to the libraries.
Rs031	F078	Complete	Medium	PASSED	
Rs033	F078	Complete	Low	Not applicable	There is not any difference among users.
Rs034	F079	Complete	Medium	PASSED	
Rs035	F079	Complete	High	Not applicable	It is not possible to verify the number of people which validates the email addresses.
Rs036	F080	Complete	Medium	Not applicable	There is not access to the database.
Rs037	F081	Complete	High	Not applicable	There is not access to the database.
Rs038	F082	Complete	High	Not applicable	There is not access to the database.
Rs039	F083	Complete	Low	PASSED	
Rs040	F083	Complete	Low	FAILED	The web accepts any type of server, including servers that do not exist.
Rs041	F083	Complete	Medium	PASSED	
Rs050	F087	Complete	High	Not applicable	There is not access to the internal information.
Rs051	F087	Complete	Medium	Not applicable	There is not access to the internal information.

Rs055	F088	Complete	High	PASSED	
Rs056	F090	Complete	Medium	Not applicable	It is not possible to check if the software used is commercial or not,...

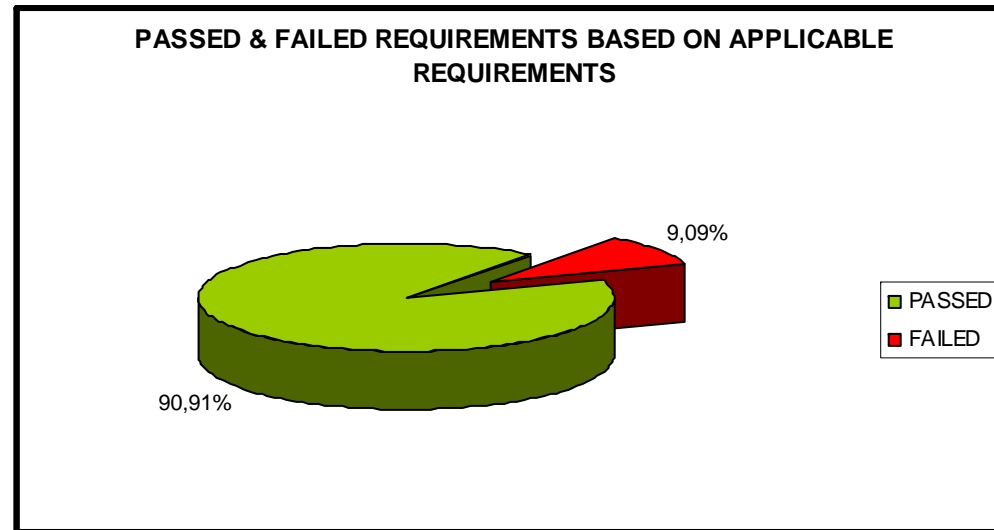
Total not applicable requirements : 15/26

Total applicable requirements : 11/26

Total FAILED applicable requirements: 1/11

Total PASSED applicable requirements: 10/11

Fulfilment (Satisfactory requirements / Total applicable requirements): 90,91%



- **Functionality**

REQUIREMENTS	ASPECTS	ASSIGNMENT	PRIORITY	ASSESSMENT	COMMENTS
Rf001	F037	Complete	High	Not applicable	There is not access to any document about the functional requirements.
Rf002	F037	Complete	Medium	Not applicable	There is not information about any review of functional requirements with the client.
Rf003	F037	Complete	High	Not applicable	There is not any evidence about any process to validate functional requirements.
Rf004	F023	Complete	Medium	Not applicable	There is not any difference among users.
Rf007	F006	Complete	High	Not applicable	There is not any video in the web.
Rf008	F037	Complete	Low	Not applicable	It is not possible to know, daily, if the owner of the web estimates the number of visits the site could have.
Rf009	F037	Complete	Medium	PASSED	
Rf010	F037	Complete	Medium	Not applicable	It is not possible to know if the style guides are used.
Rf011	F037	Complete	Low	PASSED	
Rf012	F027	Complete	Low	PASSED	

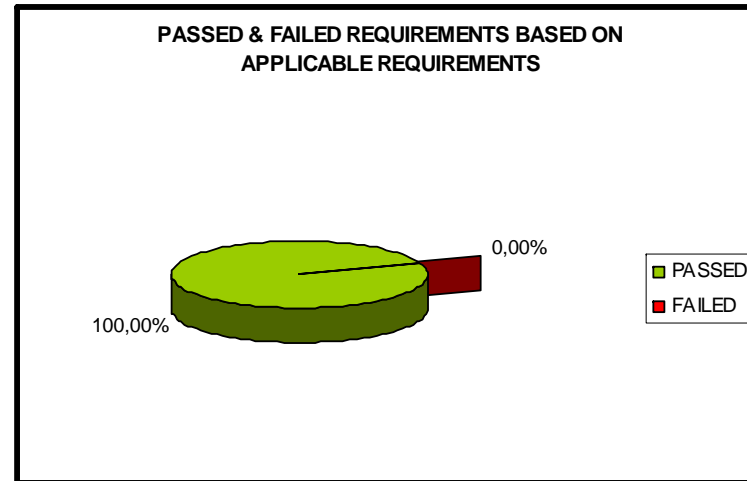
Total not applicable requirements : 7/10

Total applicable requirements : 3/10

Total FAILED applicable requirements: 0/3

Total PASSED applicable requirements: 3/3

Fulfilment (Satisfactory requirements / Total applicable requirements): 100,00%

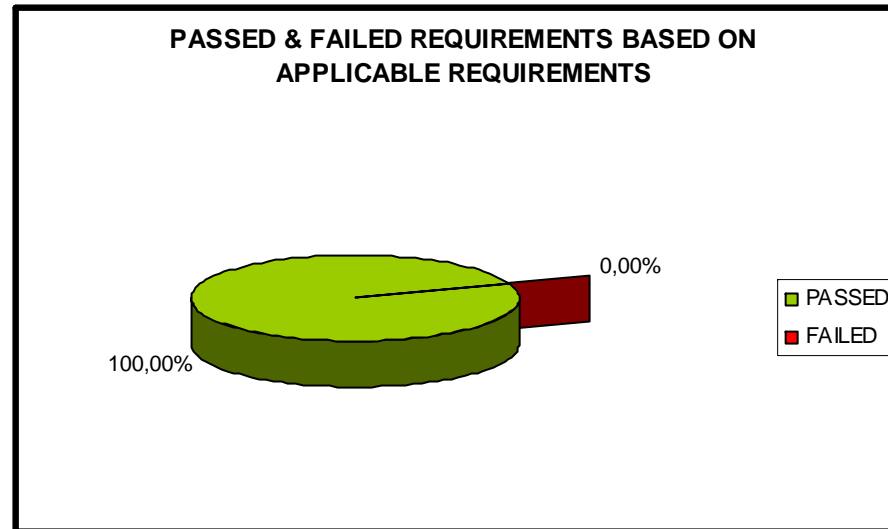


- Architecture and Design

REQUIREMENTS	ASPECTS	ASSIGNMENT	PRIORITY	ASSESSMENT	COMMENTS
RAD001	F001	Complete	High	PASSED	This page has been classified satisfactory, taking as reference the high level of links to this page by the web search engines.
RAD002	F003	Complete	High	Not applicable	It is not possible to know if the information is saved correctly.
RAD003	F004	Complete	High	PASSED	
RAD004	F003 & F007	Share	Medium	PASSED	
RAD005	F008	Complete	Medium	PASSED	
RAD006	F008	Complete	High	PASSED	
RAD007	F003 & F007	Share	Medium	PASSED	
RAD008	F003	Complete	High	PASSED	
RAD009	F009	Complete	High	Not applicable	There is not access to the server.
RAD010	F009	Complete	High	Not applicable	There is not access to the server.

RAD011	F009	Complete	High	Not applicable	There is not access to the server.
RAD012	F003	Complete	High	PASSED	

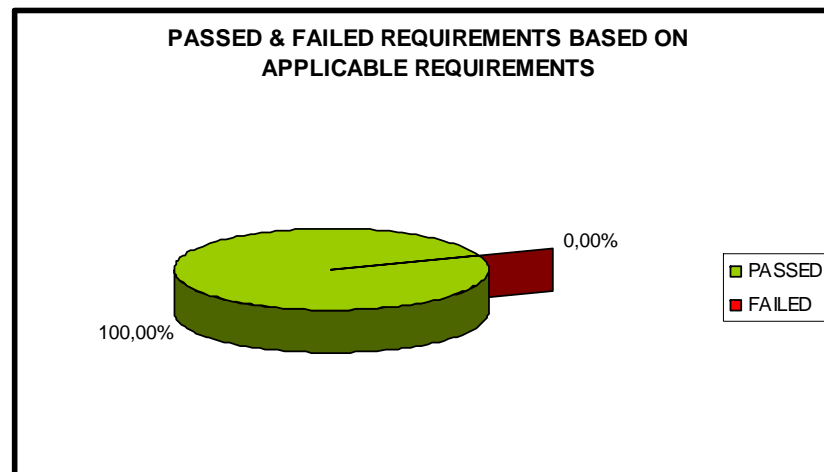
Total not applicable requirements :		4/12
Total applicable requirements :		8/12
Total FAILED applicable requirements:		0/8
Total PASSED applicable requirements:		8/8
Fulfilment (Satisfactory requirements / Total applicable requirements):		100,00%



- HTML standards

REQUIREMENTS	ASPECTS	ASSIGNMENT	PRIORITY	ASSESSMENT	COMMENTS
RH000	F007	Complete	High	PASSED	Title tags organize the structure of the web site.
RH001	F007	Complete	High	Not applicable	Stressed text is not found .
RH004	F007	Complete	Low	PASSED	
RH005	F007	Complete	Medium	PASSED	
RH006	F007	Complete	Medium	PASSED	
RH007	F007	Complete	Medium	Not applicable	Preformatted text is not found .
RH008	F005&F007	Share	Medium	PASSED	The pages are aligned using the tag <i>align</i> , not the style sheets.
RH009	F014	Complete	Medium	PASSED	
RH010	F014	Complete	Medium	Not applicable	There are not sorted list.
RH011	F014	Complete	Medium	Not applicable	There is not any list with definitions of its elements, and there is not any <dt> or <dl> tag.
RH012	F015	Complete	Medium	Not applicable	No effect is found.
RH013	F015	Complete	Medium	Not applicable	There are not sponsors on the web site.
RH100	FH100	Complete	High	PASSED	
RH111	FH100	Complete	Medium	Not applicable	It is not found any image with different areas to click.

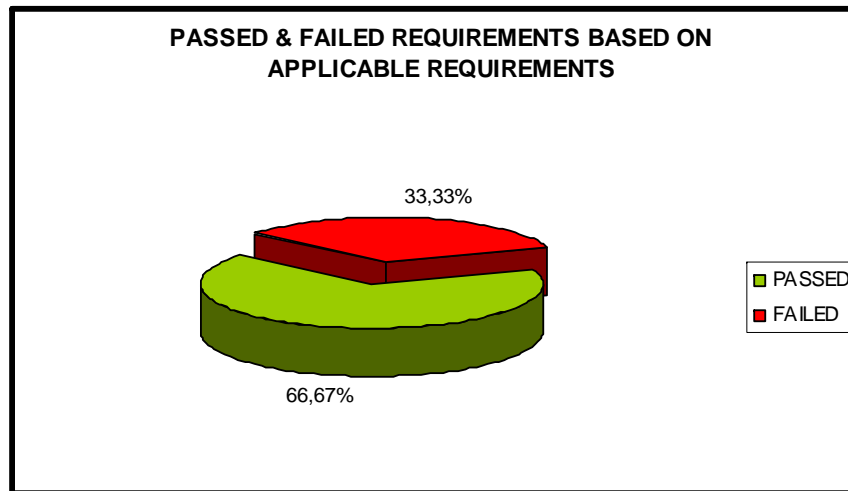
Total not applicable requirements :		7/14
Total applicable requirements :		7/14
Total FAILED applicable requirements:		0/7
Total PASSED applicable requirements:		7/7
Fulfilment (Satisfactory requirements / Total applicable requirements):		100,00%



- Other requirements

REQUIREMENTS	ASPECTS	ASSIGNMENT	PRIORITY	ASSESSMENT	COMMENTS
ROP000	F001	Complete	High	PASSED	This page has been classified satisfactory, taking as reference the high level of links to this page by the web search engines. For this reason it is possible to give a 7 to this web as a note.
ROC102	Fo101	Complete	Medium	FAILED	When users have not pluggings the web site does not show any other alternative. It should show an image as a summary of the multimedia file and a link below it to download the plugin and watch the file.
ROPM000	F019	Complete	High	PASSED	There are not grammar or spelling mistakes in the CSS.
ROPM003	F018	Complete	High	Not applicable	It is not possible to set up this page.
ROPM004	F018	Complete	High	Not applicable	It is not possible to verify if the page fits to a different environment.
ROPM006	F018	Complete	High	Not applicable	It is not possible to test if the web runs ok with other software.

Total not applicable requirements :		3/6
Total applicable requirements :		3/6
Total FAILED applicable requirements:		1/3
Total PASSED applicable requirements:		2/3
Fulfilment (Satisfactory requirements / Total applicable requirements):		66,67%



- Capacity

REQUIREMENTS	ASPECTS	ASSIGNMENT	PRIORITY	ASSESSMENT	COMMENTS
RC000	Fc000	Complete	High	PASSED	The total number of HTML files on this page (including the main HTML file) is 1 which most browsers can multithread.

RC001	Fc000	Complete	High	FAILED	The total number of objects on this page is 58 - consider reducing this to a more reasonable number.
RC002	Fc000	Complete	High	FAILED	The total number of images on this page is 45 , consider reducing this to a more reasonable number.
RC003	Fc000	Complete	High	FAILED	The total number of external CSS files on this page is 4, consider reducing this to a more reasonable number.
RC004	Fc000	Complete	High	FAILED	The total number of external multimedia files on this page is 3, consider reducing this to a more reasonable number or eliminate them altogether.
RC005	Fc000	Complete	High	FAILED	The total size of this page is 321732 bytes, which will load in 75.72 seconds on a 56Kbps modem.
RC006	Fc000	Complete	High	FAILED	The total number of external script files on this page is 5 , consider reducing this to one or two.
RC007	Fc000	Complete	High	PASSED	The total size of this HTML file is 11328 bytes, which less than 20K.
RC008	Fc000	Complete	High	FAILED	The total size of your images is 66122 bytes, which is over 30K.
RC009	Fc000	Complete	High	FAILED	The total size of external your scripts is 122872 bytes, which is over 8K.
RC010	Fc000	Complete	High	FAILED	The total size of your external CSS is 58010 bytes, which is over 8K.
RC011	Fc000	Complete	High	FAILED	The total size of your external multimedia is 63400 bytes, which is over 20K.

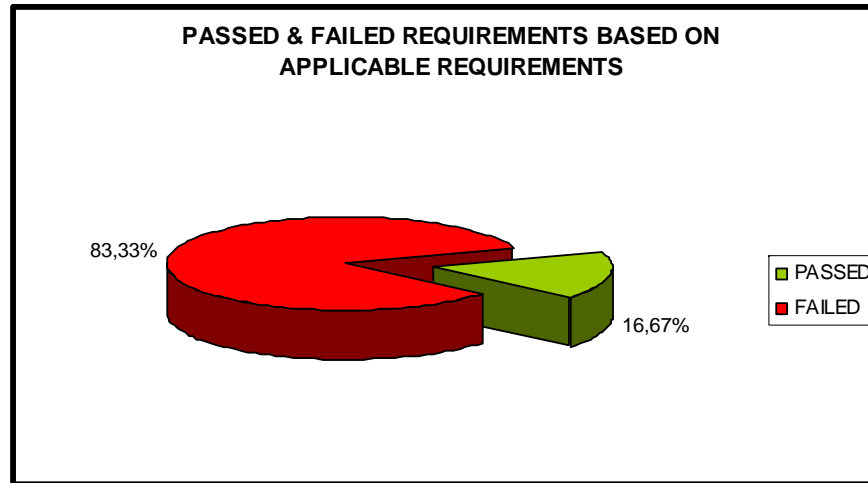
Total not applicable requirements : 0/12

Total applicable requirements : 12/12

Total FAILED applicable requirements: 10/12

Total PASSED applicable requirements: 2/12

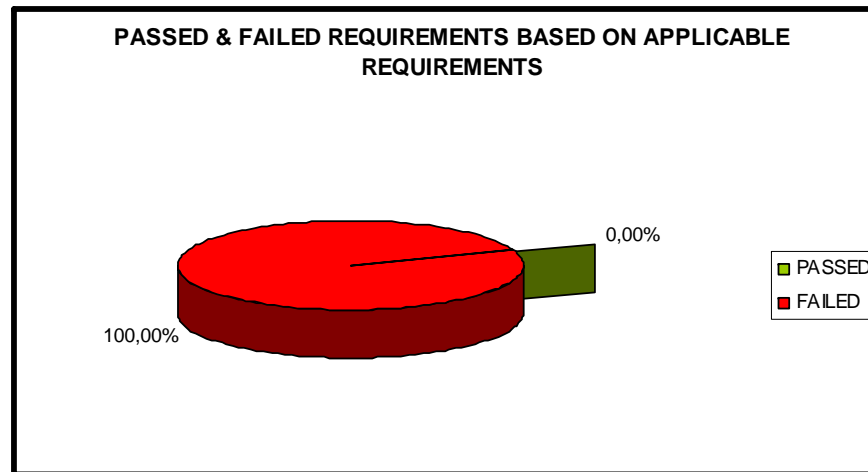
Fulfilment (Satisfactory requirements / Total applicable requirements): 16,67%



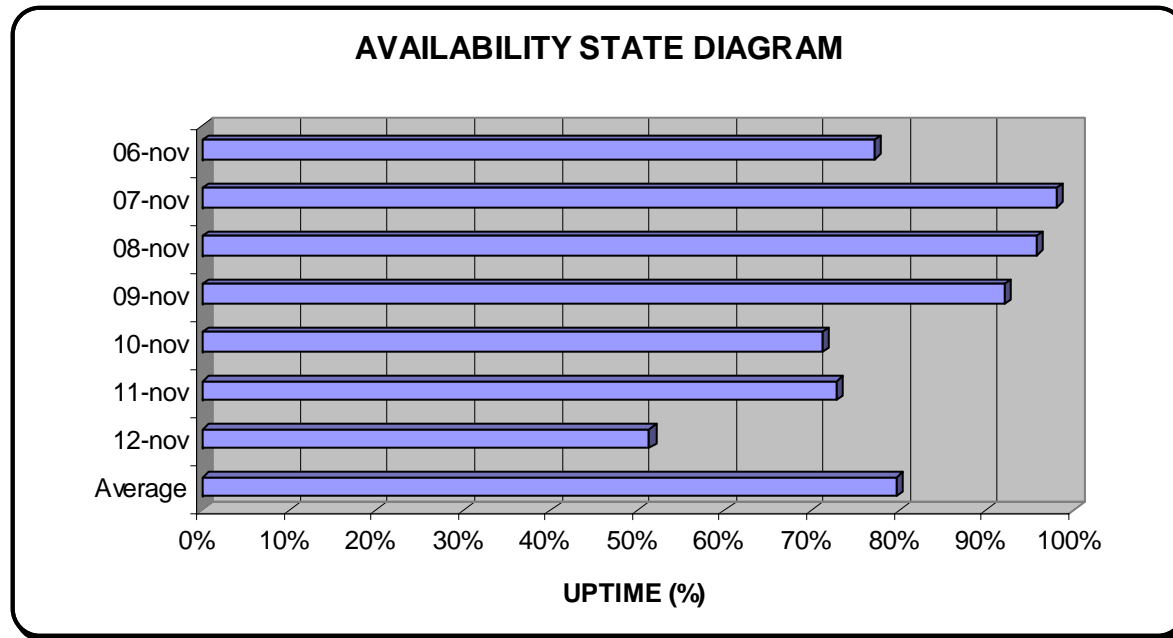
- Availability

REQUIREMENTS	ASPECTS	ASSIGNMENT	PRIORITY	ASSESSMENT	COMMENTS
RAv000	FAv000	Complete	High	FAILED	The maximum availability level is 98,13% and the minimum level is 71,17%. So, the average is 79,79%. The facto agreement on the internet considers that the minimum availability level for these types of webs is 99%.
RAv001	FAv000	Complete	High	FAILED	In this case, it is possible to see that the web has passed the level of 10 seconds a lot of times.

Total not applicable requirements :	0/2
Total applicable requirements :	2/2
Total FAILED applicable requirements:	2/2
Total PASSED applicable requirements:	0/2
Fulfilment (Satisfactory requirements / Total applicable requirements):	0,00%



The maximum availability level is 98,13% and the minimum level is 71,17%. So, the average is 79,79%. The facto agreement on the internet considers that the minimum availability level for these types of webs is 99%.

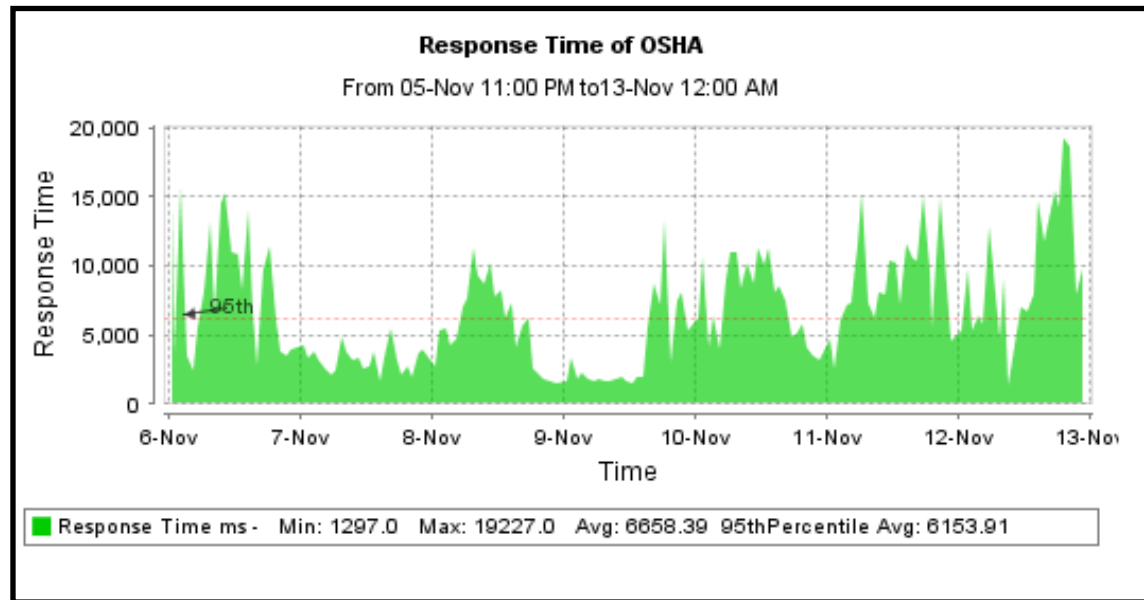


Ideal Response Times:

The standard guidelines for response times are (Nielsen 1999, page 42)³:

- 0.1 second (one tenth of a second). Ideal response time. The user doesn't sense any interruption.
- 1 second. Highest acceptable response time. Download times above 1 second interrupt the user experience.
- 10 seconds. Unacceptable response time. The user experience is interrupted at an alarming high rate and the user is likely to leave the site or system.

³ This information has been obtained from this URL: http://www.bohmann.dk/articles/response_time_still_matters.html. Here it is made reference to this standard: Nielsen, Jakob (1999). Designing Web Usability. New Riders.



5.3.3 Results of developers analysis

5.3.3.1 Analysis by a Design Project Leader



OSHA Website Benchmarking Exercise

Usability

The European European Agency for Safety and Health at Work web site is a multilingual site, users expect to find the information in their own language, and if this can't be possible they have to be informed.

In general the site carries out this rule but not always.

Examples: <http://osha.europa.eu/about/calls>

<http://osha.europa.eu/legislation/directives>

Translations also involve smaller details such as menu items or Bread Crumb items which in some cases appear to be in two different languages.

Examples:

[Inicio](#) | [About](#) | How we work with our partners

<http://osha.europa.eu/about/partners>

[Inicio](#) | [Buenas Prácticas](#) | [Temas](#) | Dangerous Substances

http://osha.europa.eu/good_practice/topics/dangerous_substances/

On the main navigation menu the links open different sections but the link to [European Risk Observatory](#) opens a new site, which appears to be in English.

In some cases the menu items don't match the bread crumb item too, this can confuse the users as they have to know "where they are" at any moment.

[Inicio](#) | [Buenas Prácticas](#) | [Priority Groups](#) | gender

http://osha.europa.eu/good_practice/priority_groups/gender

In other cases the menu item is not highlighted or the highlighted item does not match the page the user is visiting.

Example: <http://osha.europa.eu/about/organisation/lists/staff>

Navigation has to help user to move forward. The global navigation allows reaching major sections, no matter what part of the website we are on.

In case of related topics such as 'Topics', ' Sectors' or 'Priority Gropus' which also have more related content in the 'Good Practice' section the links between both are not very clearly displayed

The way of presenting the 'link to' action changes its appearance along the site. Sometimes it's underlined, sometimes it's not and sometimes it helps with icons that change too.

Mail addresses for direct contact such as the ones in 'contact us' section or press section are images and in general without a mailto: link. The user can't copy the address and expect a direct link to an email service.

Some of the multimedia campaigns don't take advantage of the space and don't seem to be relevant, they hardly catch the user's attention.

At the website map, the menu item structure has been replaced by the tooltip descriptions; this confuses the user although it completes the information.

Forms are the way the users interact with the web site and eventually with the Agency.

CONTACT FORM

http://osha.europa.eu/contact_us_form?referer=http://osha.europa.eu/about/contact_us

Force users to input data according to how the system wants it, this can be too aggressive for certain users.

Provides useful error messages that tell users to correct their mistakes, and remarks what they did wrong.

Split forms up into many segments, but don't give any indication of where users are in the process.

CREATE AN ALERT

http://osha.europa.eu/subscribe_form

The language is mixed.

Multiple choice using Ctrl + click might result difficult for certain groups of users

Doesn't provide specific error messages just a general 404 error page and it redirects to the home site, the user can feel lost and bored if they have to start all the process again.

REGISTRATION

Verifying user's registration with an image helps to prevent automated registrations but also to people with view disabilities.

Accessibility

The complete web site should be compliant with WAI- AA level.

The page is coded using XHTML 1.0 Transitional but there are some errors on the coding that don't validate the site.

XHTML 1.0 Transitional Validation on 3 random pages using W3C Markup Validation Service:

<http://osha.europa.eu/about>

NOT VALID (79 errors)

<http://validator.w3.org/check?verbose=1&uri=http%3A%2F%2Fosha.europa.eu%2Fabout>

http://osha.europa.eu/good_practice/sector/education/

NOT VALID (104 errors)

http://validator.w3.org/check?verbose=1&uri=http%3A%2F%2Fosha.europa.eu%2Fgood_practice%2Fsector%2Feducation%2F

<http://osha.europa.eu/legislation/proposals>

NOT VALID (111 errors)

<http://validator.w3.org/check?verbose=1&uri=http%3A%2F%2Fosha.europa.eu%2Flegislation%2Fproposals>

It is not possible to validate de CSS coding

The web site is not compliant with WAI-AA level. The web has been analysed with TAW (Web Accessibility Test) tool.

There are some examples:

Priority 1 accessibility issues.

On the OSHA website there are some images without “alt”.

Priority 2 accessibility issues.

The units used in markup language attribute values and style sheet property values are absolute.

Foreground and background colour combinations for images don’t provide sufficient contrast when viewed by someone having colour deficits or when viewed on a black and white screen.

The site uses tables to layout.

Design & Architecture

The ‘Search’ button is a very important item especially in extensive web sites. But here it changes its position and sometimes even disappears.

The searching results have to be more accurate. For example, on a general search of the word ‘Noise’ the results found are different articles where the word appears instead of links to the pages related to Noise issues.

At the header of the agency’s web page the logo is too displaced to the left, so loses its importance and the image quality could be improved, the text appears to be too blurry. This text ‘**European Agency for Safety and Health at Work**’ is repeated just beside the logo in a small plain text way. A redesign of this issue could bring out a more fresh and bright appearance to the header.

The login link is also quite displaced and could be hard to find to some users.

Performance

The web site performance is in general good. The loading time is fast and fulfils user expectations.

Functionality

When user clicks on the RSS icon expects to find the subscription to a feed not news sharing services such as 'Delicious' or 'Digg'.

Security

The result of the security tests performed on the login and forms was satisfactory.

5.3.3.2 Analysis by an IT Analyst and Programmer



OSHA Website Benchmarking Exercise

Usability

The European Agency for Safety and Health at Work web site is a multilingual site, the web auto detects the user country and displays the web in their own language. However some contents are only in one language, in this cases users are informed.

The web structure is quite common, that makes the way of retrieving the information predictable.

Mail addresses have to be text format, so the user can copy the address to their mail software, not an image as it is on the site.

Multimedia elements, like banners should be placed correctly, to avoid removing importance to other parts of the page. If one of the multimedia elements is very important in a period of time, this element should be placed with a correct size and position on the web.

Accessibility

The complete web site should be compliant with WAI- AA level but if tested it fails.

The W3 validator shows that the web is not a valid XHTML 1.0 Transitional.

<http://osha.europa.eu> [148 Errors]

<http://validator.w3.org/check?verbose=1&uri=http%3A%2F%2Fosha.europa.eu>

Design & Architecture

Header is not very attractive, the name of the website is not be enough big to take attention of the user. Header navigation elements need to take user's attention.

Login form is placed on the header, in a place which is not very clear for the user.

Some images compression is too big, that makes poor quality images and a bad user experience.

Performance

The overall performance is good or acceptable. Anyway, using AJAX technologies to load content such as used in the search results page could make loading times smaller.

Functionality

The RSS section has different shortcuts that are not RSS oriented services, like “digg” or “meneame”. Shortcuts like digg, or del.icio.us are more oriented to articles.

Security

Overall the security in the web site is good: As a test the experts tried to introduce a SQL Injection in order to create a valid login for non-registered users and it failed.

This form of SQL injection occurs when user input is not filtered for escape characters and is then passed into a SQL statement. These results performed in the potential manipulation of the statements on the database by the end user of the application.

5.3.3.3 Analysis by an IT Project Leader



OSHA Website Benchmarking Exercise

Usability

Non-idiomatic aspects

The usability is closely related with presenting the information in a predictable way for the user. The whole site can be browsed using the menu on the left side. Having this menu on this position anytime helps the user to find the information easily. The menu is clear and well structured.

The Search Form is a very used functionality. In the agency's web site, the search form can be found in the home page and several others, but not in everyone ([About us](#), [Statistics](#)). It's also not displayed every time in the same position.

The address, telephone and email address for contacting the agency are provided. The web site also includes a contact form that is very difficult to find and not very usable (two steps are needed to send the form).

Browsing the rest of the European Network, these sites have the same design and layout. This helps the user to find the information in the website of its own country.

Idiomatic aspects

One of the main aspects related with the usability of the Agency's site has to do with the language the information and the navigation is displayed.

After browsing in different languages the first issue that can be discovered is that some of the menu items and the "bread crumbs"⁴ are not translated to the browsing language. This can be found in the [Publications](#) menu; the sub-items are in English. In other cases, the menu is correctly translated but the text in the bread crumb is not as can be seen in the [Campaigns section](#).

On the home page, the "Most visited" section lists the names of the pages in English.

⁴ Text displayed on the top left corner of the Agency's site that help the user follow the navigation for the current page

Browsing the site one can have an idea of the amount of information translated to each language. Every time this is not possible, a warning message appears informing that the content is shown in English.

Multimedia

Banners and campaigns ads are presented in the home page. Their design is not too aggressive, they are not very obtrusive.

Accessibility

The Agency's website includes many of the functionalities that should be expected of this kind of websites. It includes quick access keys and a sitemap, although this section seems a little confusing due to the use of different titles in the sitemap and in the menu.

From the coding point of view, some techniques should be implemented to allow users with disabilities access the information correctly. I assume some of these techniques, such as table-less layout are possible with some versions of Plone. For the latest one some extra developments is needed.

Accessibility validation

The accessibility of website is related with how it has been programmed. The agency's website is based on Plone and, therefore it depends in some way on how accessible is this system.

The level of accessibility that the agency's website should be compliant with should be WAI-AA. The analysis with the [TAW tool](#) shows that there are some errors for Level A and AA. Most of the errors are related with the lack of alternate texts for images. Other issues are related with using W3C non-recommended tags or using "px" instead of "%" or "em" in the coding.

Colours compliance

Checking the colours used in this website with and [independent tool](#) has shown that there are some parts of the website that can be non-readable for some users. For example, in the top menu (Site Update | Site Map | Comments | FAQ | Help | Translation Help | Accessibility) the contrast of the text and the background colours is too small. The same issue can be found in when the current menu item is selected.

Browsers compliance

Viewing the website with Internet Explorer 6, Internet Explorer 7, Firefox 2 and Opera 9 gives the users the same output as expected on a website based on Plone.

Coding compliance

The first analysis performed with the [W3C Validator](#) shows that there are some compliance errors (155 errors found; correcting some of the errors would reduce this number dramatically). Most of the errors are related with using HTML coding in a XHTML tagged document.

The analysis of the CSS with the [W3C validator](#) shows 9 warnings related with the colours but no errors

Design & Architecture

The website is based on a very light design where blue is the dominant colour. It is also based on the commonly used three column layout.

Another option can be to give more "air" to the menus on the top and bottom. This way they can be found more easily. This issue is also related with the choice of colours in the top menu.

Performance

Measuring the performance of the website from a user point of view can be very variable depending on the load of the server (a parameter we don't control/measure). In order to have objective figures, I have used an [independent tool](#) and these are the results (the worst result was chosen):

Displaying the home site: up to 6 seconds

Performing a search with keyword "trabajo":up to 20seconds

Performing a search with keyword "work": sometimes no response was given.

Though these keywords are an example, the most used keywords should be used to have measure this performance.

Functionality

The website includes the possibility for RSS syndication that gives the user the opportunity of being updated with the latest information. The user can also add a section to a Del.icio.us account or to Digg among other. This options should be placed on each article and allow the user to bookmark or "digg" it.

Security

No risks involving security have been detected.

5.3.4 Results of OSH subscribers questionnaire

Results up to 30/11/07.

GI3.9a % distribution overall satisfaction scale (Q9a).

Q9a	No. Answers	Percentage/Question
1	36	0,89%
2	297	7,38%
3	1463	36,33%
4	1856	46,09%
5	375	9,31%

Average 3,56

GI3.9b % distribution satisfaction per benchmarking aspect (Q9b).

Q9b	No. Answers						Average
	1	2	3	4	5	N/A	
About the design of the site	32	378	1196	1676	428	317	3,56
About the navigation	48	449	1265	1527	414	324	3,49
About the accessibility	32	300	1053	1642	627	373	3,69
About the search facilities	49	463	1319	1392	390	414	3,45
About the services of the site	38	326	1149	1498	499	517	3,60