Design4Green 2018 – November 21 to 23 2018

PREAMBULE

Ecodesign is a holistic approach that aims to reduce the environmental impacts of products or services over their entire life cycle (from manufacturing to the end of life through the stages of use).

Applied to digital services, it is based on several inseparable concepts:

- The definition of function and functional unit
- All stages of the life cycle of the service and associated equipment: manufacturing, installation, distribution, use, end of life;
- Several environmental indicators: depletion of resources, pollutant emissions, water consumption, waste production, emission of substances contributing to climate change, etc .;
- Three-thirds of the architecture: user terminals, communication networks and data centers;
- Establishment of a dialogue with stakeholders;
- Progressive and continuous environmental improvement without pollution transfer.

In order to ensure the improvement of the environmental performance of a digital service, it is essential to be able to measure or evaluate its impacts before and after the implementation of improvement actions.

In parallel, it is important to be able to assess the level of maturity of implementation of good practices in relation to a business repository

These two evaluations can be done "manually" or "automated" using information identification tools and calculation of impacts or detection of good practices.

And finally the qualitative analysis by an expert makes it possible to ensure the overall coherence of the project.

In summary, only the combination of these three complementary approaches makes it possible to ensure the relevance of the ecodesign approach and the improvement of the environmental performance:

- **evaluation of the environmental impacts before / after (quantitative according to several environmental indicators);**
- **assessment of maturity with reference to a (quantitative) benchmark;**
- **expert analysis (qualitative);**

AGIT (Alliance Green IT) has defined the concepts and explained the ecodesign approach for digital services in its white paper: http://alliancegreenit.org/wp-content/uploads/Doc%20AGIT/LB-ecoconception-numerique.pdf

This white paper serves as a reference on the ecodesign of digital services, and has received the support of 15 clusters and federations of players in the digital sector on a European scale.

SUBJECT By ALLIANCE GREEN IT

Eco-design numerically a complete functional unit of a web application (an online survey)

The Green IT alliance publishes every two years a survey to assess the maturity of companies in France in terms of setting up eco-design digital services. This survey is distributed by the AGIT and all its partners for 3 months, from January 1st to March 31st.

It consists of different questions that take up the 8 major themes of Green IT - IT infrastructure, data center, purchasing, workstations, end-of-life equipment, governance, printing and applications.

The responses of the questionnaire are then collected, weighted, compiled and analyzed, leading to the creation of a detailed report available HERE.

Subject : Without excluding the user experience, develop an online survey that can be scalable and adapted to a typology of respondent.

Functional Unit: Answering an Online Survey of 88 questions

Available data:

- Data set of 88 questions
- Survey map (In french but you have the numbers associated to link with the English data set)
- Report of the existing survey

Description of the survey online :

1. Presentation of the online survey
2. Identifying the respondent with two key questions (Using servers or workstations / Hosting the IT infrastructure)
3. Display a list of primary questions adapted to the respondent's profile
4. Display some secondary questions, generated or not based on the answers to the primary questions (jump of questions indicated by the green dashed arrows) – See data set Excel sheet
5. If the questionnaire is not completed, generate a share link to return to it later
6. Submission of completed questionnaire and posting a concluding sentence

- end –

Requested features:

Create an application that allows you to manage 88 questions

- The application must be visually appealing (simplified graphic chart, images, uniform fonts ... etc.), inspired by the aspect of the 2015 Report, to encourage answering the questionnaire
- The application must fit on a single web page
- The application must allow to introduce the survey with an explanatory text and finish it on a concluding sentence
- The application must make it possible to identify, thanks to a few key questions, the typology of a respondent based on various criteria and propose an adapted course.
- The questionnaire must be easily shared because it is distributed by several actors
- The questionnaire addresses different professions of the company, it must be able to be filled by different people
- The Survey must be able to be paused and resumed later, by the same or a different user, keeping the answers already filled in
- The application must allow a collection of aggregated results

Quantitative evaluation

The solutions of the different teams will be submitted to a first pre-selection stage thanks to the Ecoindex tool. This is a plugin running on the Mozilla Firefox browser, from version 57 - see description of the tool below.

We will select the solutions that will have obtained the 10 best scores AND that will have integrated the 9 prerequisites required:

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Projects with the 9 conditions above are fulfilled and who obtain one of the 10 best results will then be qualitatively evaluated by the Jury

Qualitative evaluation

After the evaluation of the teams' achievements, the top 10 scores will be selected and analyzed qualitatively by Green IT experts.

The jury will have 6 hours to qualitatively evaluate the projects with the top 10 marks following the final analysis via the ecoindex tool. 6 hours will be allocated to the Jury to qualitatively evaluate the process, according to several criterias :

- Response to the requested functional unit
- Simplicity and ergonomics of the service
- User Experience
- Aesthetic appearance

EVALUATION TOOLS - Plugin ECOINDEX (version 0.3.1)

This tool makes it possible to analyze the different projects in a technical way according to various criteria: environmental footprint (GHG emission, water consumption), page complexity, bandwidth and server load. After having analyzed these different criteria, Ecoindex then gives a score of 100 (higher is better).

The plugin can be downloaded here: https://addons.mozilla.org/en/firefox/addon/ecoindex/

Extension for firefox ONLY - This module requires Firefox V 57 minimum. This extension calculates an ecoindex according to the formula of the site http://ecoindex.fr

To use the module :

- Start the measurement by clicking on the Ei icon and then on the "start" button
- Go to the page to measure by tapping the link in the browser
- Once the page is loaded, click the Ei icon and then the "Stop" button
- Click on the View Result button

To have a correct measurement, you must first clear the browser cache or ctrl + reload the page concerned.

It should be noted that the use of an advertising blocker or other filter has an influence on the result.

Attention, this extension calculates an ecoindex according to the formula of the site http://ecoindex.fr. Applicants are advised not to visit this site to calculate the footprint of their solution but to use the Plugin provided exclusively.

Measurement history: You can access the measurement history via the history button

THE BUSINESS REFERENTIAL USED:

Eco-conception web: the 115 good practices / Publisher: Eyrolles