

MOOC ENVIRONMENTAL IMPACTS OF DIGITAL TECHNOLOGIES

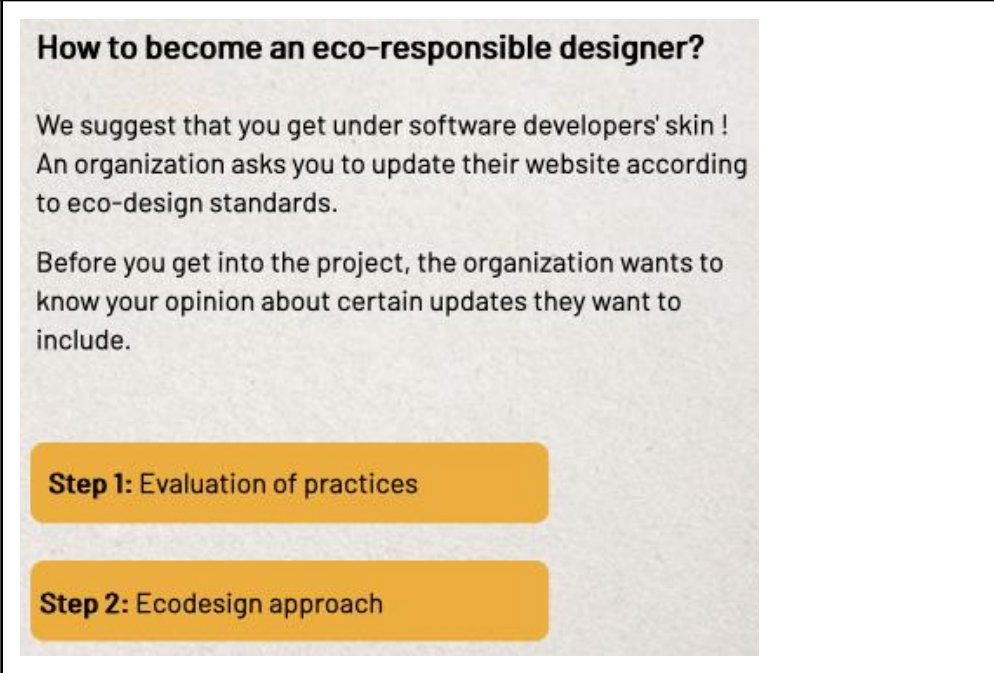
3.4.2 How to become an eco-responsible designer?

Auteurs :


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Activité 08.2 : How to become an eco-responsible designer?

As users we can have an impact on our digital consumption patterns. Broadcasters and solution providers also have a responsibility, and not just in terms of the technologies used.

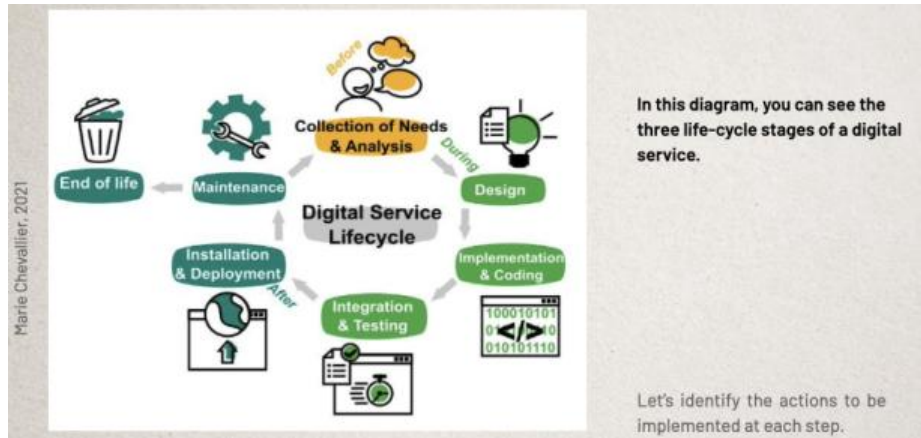
Capsule slide	Related text
 <p>How to become an eco-responsible designer?</p> <p>We suggest that you get under software developers' skin ! An organization asks you to update their website according to eco-design standards.</p> <p>Before you get into the project, the organization wants to know your opinion about certain updates they want to include.</p> <p>Step 1: Evaluation of practices</p> <p>Step 2: Ecodesign approach</p>	<p>How to become an eco-responsible designer?</p> <p>We suggest that you get under software developers' skin ! An organization asks you to update their website according to eco-design standards. Before you get into the project, the organization wants to know your opinion about certain updates they want to include.</p> <p>Step 1: Evaluation of practices</p> <p>Step 2: Ecodesign approach</p>

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<p>Evaluation of good practices</p> <p>The organization wants to list the best eco practices to use for their website. They need your advice.</p> <p>Decide for each practice whether the practice is good or not.</p>	<p>Step 1: Evaluation of good practices</p> <p>The organization wants to list the best eco practices to use for their website. They need your advice.</p> <p>Decide for each practice whether the practice is good or not.</p>
<p>1 / 7 Good practice?</p> <p>Measure the environmental performance of the current website and then, compare it with an update version</p> <p>You are right !</p> <p>To begin with, you can use ecoindex notes to track the environmental performance of your application. Service Ecoindex.fr [accessed 16/12/2021]</p>	<p>1 / 7 Good practice?</p> <p>Measure the environmental performance of the current website and then, compare it with an update version => good practice</p> <p>Feedback</p> <p>To begin with, you can use ecoindex notes to track the environmental performance of your application. Service Ecoindex.fr [accessed 16/12/2021]</p>
<p>2 / 7 Good practice?</p> <p>Highlight the efforts we can make about an ecodesign approach of websites</p> <p>No, actually it's a good practice!</p> <p>Highlighting the efforts you make, can inspire others.</p> <p>P.S. also useful not to fall into the greenwashing greenwashing.</p>	<p>2 / 7 Good practice?</p> <p>Highlight an ecodesign approach of your website => good practice</p> <p>Feedback</p> <p>Highlighting the efforts you make can inspire others. P.S. also useful not to fall into the greenwashing.</p>

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<p>3 / 7 Good practice?</p> <p>Choose a colorful background for your website</p> <p>No, actually it's a good practice!</p> <p>It is not because your site is on a green background that it is eco! Computer screens use energy to display colors. Pay attention to contrasts to encourage accessibility of the site. Pay attention to contrasts to encourage <u>accessibility of the site</u> Furthermore, if your users want to print anything, it will have a high consumption of inks!</p> <p>If you still want to keep a colorful background, don't forget to suggest another stylesheet made for printing to avoid ink waste. </p>	<p>3 / 7 Good practice?</p> <p>Choose a colorful background for your website => bad practice</p> <p>Feedback</p> <p>It is not because your site is on a green background that it is eco! Computer screens use energy to display colors.</p> <p>Pay attention to contrasts to encourage <u>accessibility</u> of the site. Furthermore, if your users want to print anything, it will have a high consumption of inks!</p> <p>If you still want to keep a colorful background, don't forget to suggest another stylesheet made for printing to avoid ink waste.</p>
<p>4 / 7 Good practice?</p> <p>Choose a service provider with an environmental policy for the development or hosting of the site</p> <p>You are right !</p> <p>Service providers can be involved at several levels:</p> <ul style="list-style-type: none"> • training of participants in ecodesign (need analysis, code, architecture, etc.), • choice of reconditioned materials, • choice of more virtuous energy suppliers, certified hosts (e.g. <u>CoC des datacentres</u> ...). 	<p>4 / 7 Good practice?</p> <p>Choose a service provider with an environmental policy for the development or hosting of the site => good practice</p> <p>Feedback</p> <p>Service providers can be involved at several levels:</p> <ul style="list-style-type: none"> • training of participants in ecodesign (need analysis, code, architecture, etc.), • choice of reconditioned materials, • choice of more virtuous energy suppliers, certified hosts (ex: <u>CoC des datacentres</u>...).

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<p>5 / 7 Good practice?</p> <p>Limit the number of videos on the site</p> <p>No, actually it's a good practice!</p> <p>Videos are among the heaviest elements that cause the highest bandwidth consumption, energy and place on servers.If you can do without it, it's better!</p> <p>Otherwise, don't forget to reduce the weight (Comment réduire en 5 minutes le poids d'une vidéo tout en gardant une bonne qualité ? The Shift Project, 2018)</p> <p>[accessed 16/12/2021]</p>	<p>5 / 7 Good practice?</p> <p>Limit the number of videos on the site</p> <p>=> good practice</p> <p>Feedback</p> <p>Videos are among the heaviest elements that cause the highest bandwidth consumption, energy and place on servers. If you can do without it, it's better!</p> <p>Otherwise, don't forget to reduce the weight (Comment réduire en 5 minutes le poids d'une vidéo tout en gardant une bonne qualité ? The Shift Project, 2018) [accessed on: 16/12/2021]</p>
<p>6 / 7 Good practice?</p> <p>Provide the IT security of your website</p> <p>You are right !</p> <p>Good security practices prevent misuse of the site that could have an impact on the environment (cryptocurrency mining without the knowledge of the site owner, access left open for mass attacks, etc.).</p> <p>Conversely, ecodesign reduces the attack surface (because of less functionalities) and limits risks.</p>	<p>6 / 7 Good practice?</p> <p>Provide the IT security of your website</p> <p>=> good practice</p> <p>Feedback</p> <p>Good security practices prevent misuse of the site that could have an impact on the environment (cryptocurrency mining without the knowledge of the site owner, access left open for mass attacks, etc.).</p> <p>Conversely, ecodesign reduces the attack surface (because of less functionalities) and limits risks.</p> <p>Inversement, l'écoconception permet de réduire la surface d'attaque (moins de fonctionnalités) donc de réduire les risques.</p>

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<p>7 / 7 Good practice?</p> <p>Multiplying content in different social networks</p> <hr/> <p>You are right !</p> <p>It is important to centralize content in one place and not duplicate it in different social networks. This prevents the same content from being stored several times. It's preferable to use links to give access to a file or video.</p>	<p>7 / 7 Good practice?</p> <p>Multiplying content in different social networks => bad practice</p> <p>Feedback</p> <p>It is important to centralize content in one place and not duplicate it in different social networks. This prevents the same content from being stored several times. It's preferable to use links to give access to a file or video.</p>
<p>Ecodesign approach</p> <p>Ecodesign involves integrating the environment from the design of a product or service, and at all stages of its life cycle.</p> <p>In order to carry out the environmental analysis of a digital service, it is essential to have a life-cycle approach to eco-design and to reduce the impact of digital services efficiently.</p> <p>Thus it is necessary to approach the ecodesign at each of the 3 stages of the digital project.</p> <p>In the diagram below, you can see the three life-cycle stages of a digital service.</p>	<p>Step 2: Ecodesign approach</p> <p>Ecodesign involves integrating the environment from the design of a product or service, and at all stages of its life cycle.</p> <p>In order to carry out the environmental analysis of a digital service, it is essential to have a life-cycle approach to eco-design and to reduce the impact of digital services efficiently.</p> <p>Thus it is necessary to approach the ecodesign at each of the 3 stages of the digital project. In the diagram below, you can see the three life-cycle stages of a digital service.</p>



In this diagram, you can see the three life-cycle stages of a digital service.

Ecodesign approach

Before :

- Need & Analysis

During:

- Design
- Implementation / codage
- Intégration / tests

After:

- Maintenance
- End of life

Step 2

What is the main function of this digital service ?

Drag and drop each action to be set up in the corresponding column. (green fund if ok)

Before: Need & Analysis

- **Define the need** => What is the main function of this digital service?
- **Sort in features** => Are they really essentials?
- **Search for an alternative** => Maybe an SMS or podcast would fulfill the same need?
- **Analyse of existing solutions** => Is there already a similar site or application? Usefulness of development.

During: design/implimantation

- **Choose a sober interface** => Choose a simple interface: avoid heavy media for example
- **Define data management** => Limit and manage the volume of published content and collected data
- **Contribute to commons** => Put your code in OpenSource or under CC-BY license so that they can be reused
- **Ensure compatibility** => Do not force the use of the latest technologies (network, equipment)
- **Choose the right tools** => Choose tools and languages appropriate to the right need and whose perennity is assured

Capsule slide	Related text
<ul style="list-style-type: none"> ● Test and find the documentation => To improve quality and facilitate site maintenance. <p>After: Maintenance, end of life</p> <ul style="list-style-type: none"> ● Communicate on the approach => To value ecodesign work and inspire other actors ● Stop the previous service => and delete obsolete data to free up storage space on servers. ● Choose the host service well => Choose an eco-responsible host. Beware of data stored in non-GDPR countries? ● Cleaning up => Delete or update obsolete content 	
<p>Now you are ready to be a responsible designer!</p> <p>As you can see, it is possible to make changes at each stage of the project.</p> <p>Codesign already includes several actions, and the list of those proposed in this activity is not exhaustive. .</p>	<p>Now you are ready to be a responsible designer!</p> <p>As you can see, it is possible to make changes at each stage of the project.</p> <p>Codesign already includes several actions, and the list of those proposed in this activity is not exhaustive..</p>

If you wish to go deeper into certain concepts

[Ecodesign - One of the pillars of the circular economy](#) shows you that eco-design is an approach that aims to reduce the environmental impact of a product or service over its entire life cycle with a multi-criteria perspective from the design phase, while maintaining its functionality and performance.

[The good practices of digital service ecodesign](#) describes the main good practices to be implemented to eco-design an online digital service.

[What is an accessible digital service?](#) allows you to understand why it is essential to take into account the exclusions generated by digital services that are not accessible to people with disabilities, what the regulations are and how to improve digital accessibility.

Conclusion :

That's it! You now know the best practices to put in place and you have your personalised action plan. Don't hesitate to share these actions with your friends and family! This can also count as a good practice :)

Crédits :

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<p>Graphismes :</p> <ul style="list-style-type: none">● Illustrations : Mikaël Cixous, 4 minutes 34● Photographies de Guillaume Clémencin : Nicolas Ledu	
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