Choices are made by the **youth.**

An educational climate installation at the University Museum

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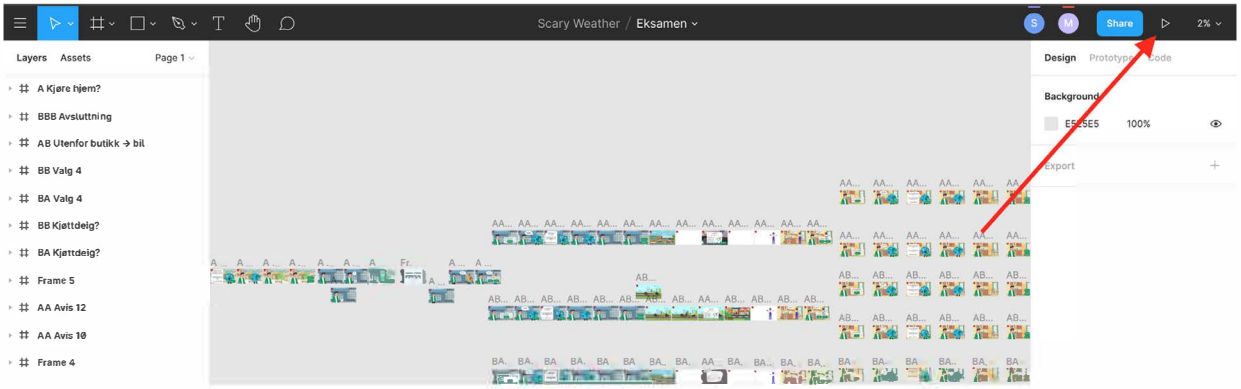
Scary Weather
FRA FAKTA TIL FORTELLING

Test the prototype

Link to the prototype:

https://www.figma.com/file/USGUxAIO9g6auKG75CO7Ja/Eksamen?node-id=0%3A1

To experience the prototype as a game, press the present button in the right corner:



You can also resize the prototype to the screen by pressing the "Z" on the keyboard until it looks right, or by selecting an appropriate size under options in the right corner.

This specification was written as an exam assignment at MIX202 Design for Media Use in the spring of 2020. The course is part of the Bachelor's program Media and Interaction Design at the Department of Information and Media Science at the University of Bergen. The course leader was Professor Lars Nyre. Subject teachers were Professor Andy Opel (Florida State University), senior engineer Zulfikar Fahmy, PhD fellow Fredrik Håland Jensen, PhD fellow Oda Elise Nordberg and master's student Jonathan Lindø Meling. The specification is translated into English by Kristin Eidsheim.

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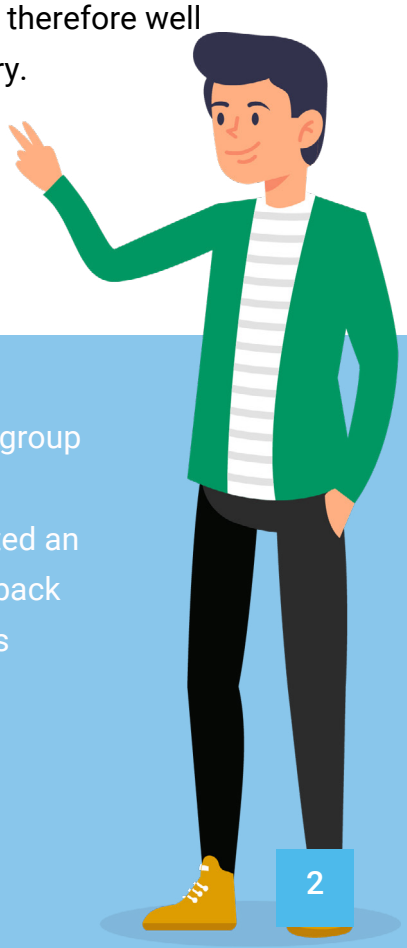
Introduction

It is more urgent than ever to take the necessary steps to reach the two-degree goal. In order to do so, emission cuts must be initiated and the young people's climate commitment is of great importance. Every little helps and it is therefore important to show that the choices you make in everyday life influence the climate. That's why we, five students from the bachelor's program in Media and Interaction Design at UiB, have partnered with Scary Weather to create an interactive experience. The purpose is to teach secondary school students more about climate and how the choices they make everyday make a difference. The experience takes the form of a game where the youngsters help the character Kim Klima make different choices that will have consequences for the globe.

The game is mainly intended to be an installation in The Globe Room at the University Museum in Bergen, where the youth interact via a touch screen. The experience takes about five minutes. We have chosen to make research data accessible to young people in an entertaining but educational way. This fits well with Scary Weather's motto, "from facts to story". Therefore, we also envision that Elevkanalen, one of Scary Weather's partners, will be able to include the game on its pages. The game can also be experienced in a web browser and is therefore well suited to relevant teaching at secondary schools across the country.



Youth

This game is made for 15 year old high school students. This is a target group who are likely to visit The Globe Room in a school setting, or learn about climate issues as part of their education. During this project, we conducted an informal test of the prototype with a 15-year-old and received good feedback on language and design. The game may seem simple to an adult, but it is precisely because it is adapted to the youth.

Earlier this semester, evaluations of the installations in The Globe Room were conducted, where the users were students from a high school. In this context, we have gained useful insight into how young people interact with the installation and how they experience the dissemination of weather and climate information. We feel that this insight can be largely generalized and therefore, together with established design principles, it is relevant to several of our design choices.

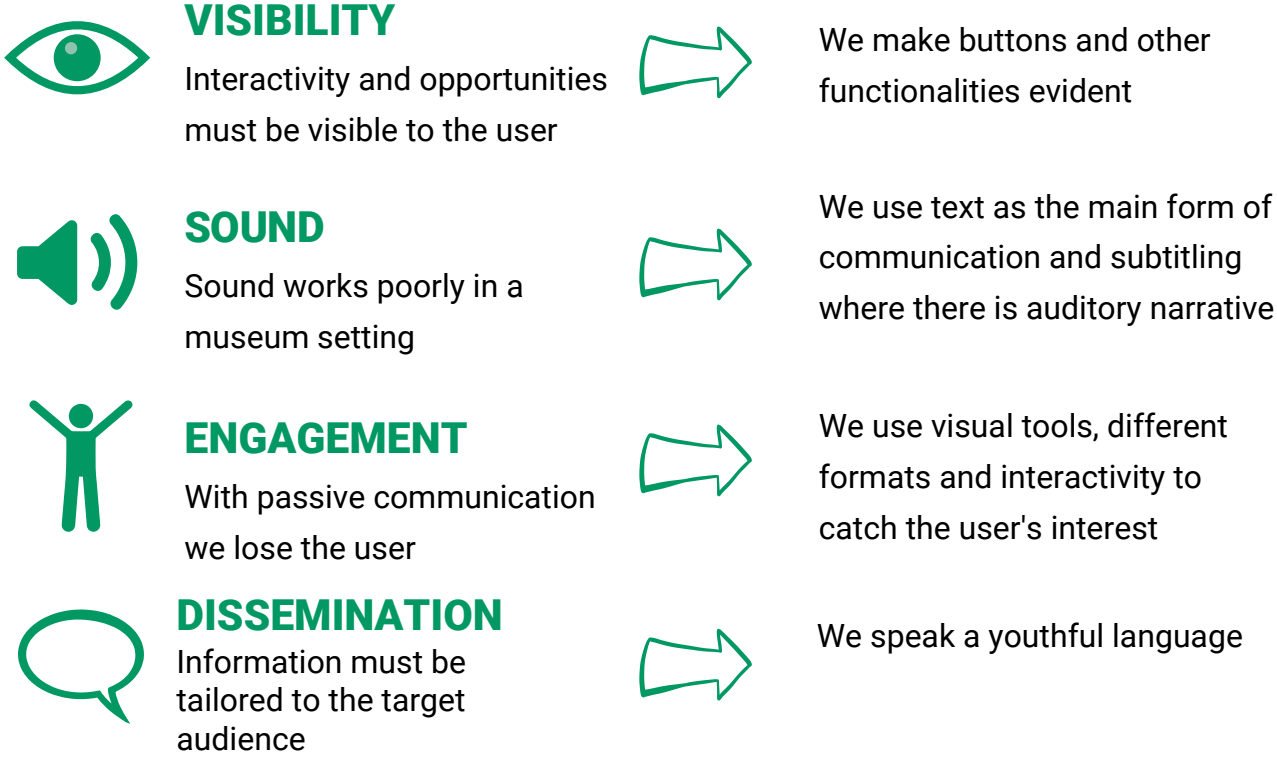


Figure 1: Overview of important findings from the evaluation and how we have chosen to solve key challenges associated with them. These are further elaborated on during the review of the prototype.

Summary

The game is based on following the character Kim Klima and his friend Max Miljø, through everyday situations young people can typically find themselves in, where it is necessary to make choices: to buy new clothes or buy used/use what you already have, be picked up by car or by bike, and eating meat or trying a plant-based alternative. The choices they make affect the climate - or in this situation the character Jan Jordklode. Jan provides fact-based feedback based on what has been selected. After each choice, other fact-based information is presented through three different formats; an article in an online newspaper, an article in a regular newspaper and a news report on TV. Finally, you meet Jan, who summarizes the choices and presents a result.

The structure of the game

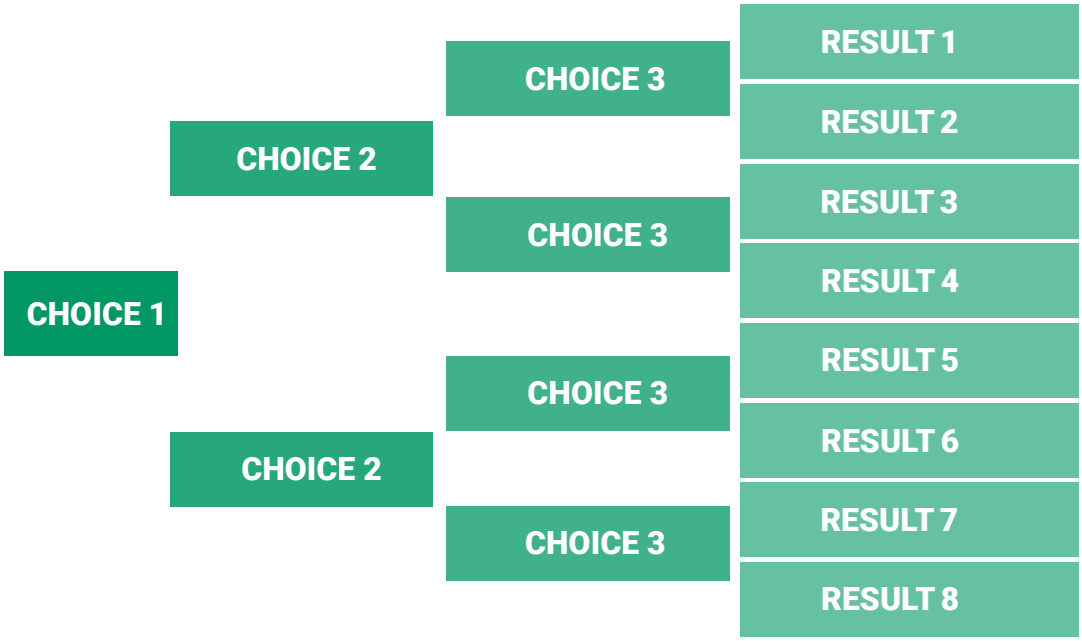


Figure 2: Overview of the game's structure. At each choice you continue on one of the branches. There are eight possible outcomes based on the choices made.

Video

We have created a video showing a quick walkthrough of the game. This presents how the news video (figure 14) is integrated. You will find here: https://www.youtube.com/watch?v=hhvQ2kx5dF8

The climate choice

- a walkthrough

Introduction

Figure 3: The game's homepage.

The first thing the young people encounter when they start the experience is a homepage with the game's logo and a start button. In the background there is a classroom - a recognizable scene for youth.

Figure 4: Jan Jordklode is the first character to be introduced. He acts as a narrator throughout the game.

Here they meet the game's narrator and companion, Jan Jordklode. We have used anthropomorphism by giving him human characteristics. By giving an object human characteristics, such as names and facial expressions, it becomes more fun and motivating to interact with the game (Preece et al., P. 153). At the same time, it can help to create more empathy when the players see how their choices affect Jan.

Figure 5: A class about climate is over. A conversation between Kim Klima and Max Miljø sets the stage for the game's climate theme. Connecting the experience to real people will help to create empathy and thus the communication of climate topics works better (Corner, Webster & Teriete, 2015, p.5).

Early in the game we get to follow a dialogue about climate between the characters Kim Klima and Max Miljø. Through youthful dialogue and jargon (e.g. figure 5) we speak to the youth in their own language (Duggirala, 2016). Our view is that many young people find it difficult to know what to do when it comes to climate and climate choices, so we also let the game's characters experience this. In this way, the youth should be able to identify with the characters early on and become more involved in the experience.

Choice 1: To buy, or not to buy clothes?

Figure 6: First choice. The topic is the textile industry. Selection buttons provide feedback to the user to contribute to progress and visibility (Preece et al., p. 26-27).

After school, Kim and Max go to the mall. Here Kim finds a bunch of clothes he likes, which introduces the theme of the first choice - namely the textile industry. The textile industry is a very polluting industry, something young people often do not think about when buying new clothes. Such a choice will thus help young people to reflect on this.

We have chosen to give buttons an essential role in guiding the youth through the game. The buttons are visible and of relatively large size. All buttons are provided with explanatory text, and buttons which are used for navigating in the game are additionally equipped with an arrow. The buttons are designed consistently in such a way that the size, color and location are the same for buttons with equal function (Preece et al., P. 29). All buttons that allow the user to explore back and forth in the game are green. This is the color of nature and the complementary color to red. Red color is applied to buttons that restart and end the game. Red is a typical "stop" color, so the "re-start" button captures the attention of those who come to an unfinished game. After pressing this, we also give the youth the opportunity to confirm or undo the action, by asking if they are sure (Nielsen, 1994).

Figure 7: Jan Jordklode presents information on the textile industry to the user and encourages them to think differently the next time a similar choice comes.

When the first choice is made, Jan Jordklode appears on the screen. Jan tells the youth why the choice that was made is either good or bad for him. Here the text is short, supplemented with emojis and important words in bold. To allow the youth to explore the game as they wish, we also give them the opportunity to make the choice again shortly afterwards. This applies to all choices.

Figure 8: A section of the online newsarticle on Kim Klima's mobile phone. Scrolling gives you the rest of the newspaper. This is done by dragging your finger along the screen at the museum.

Kim hears a sound from his pocket. It's a news alert, and he's picking up the phone to read the article about emissions from the clothing industry. The content of the newsstory is about the clothing industry in the same way as the feedback from Jan Jordklode, but it presents more information about the industry itself and what you can do to reduce emissions. This way you get both slightly more personal comments from Jan and neutral facts in the online newspaper.

A touch screen is a well-known format for young people, and we therefore expect features like scroll to be quite understandable (Preece et al., P. 29), but we still include a clear text that says "scroll down". The youth is now well acquainted with the functionality of the game, and easily clicks on when finished reading and encounters the "go ahead" button at the bottom of the article.

Choice 2: Car or bicycle?

Figure 9: The second choice in the game deals with the transportation industry. This is presented through dialogue between Kim and Max.

Kim and Max are outside the mall and will be traveling home, which introduces problems related to the transportation sector and thus the game's second choice. Although youngsters do not own or drive their own cars, they contribute to emissions by being driven by parents or others. By choosing more environmentally friendly alternatives, they can help reduce hazardous emissions.

Figure 10: Jan Jordklode presents facts about the transportation sector, and encourages to think differently next time.

As with the first choice, Jan Jordklode appears to tell you why the choice you made is either good or bad for him.

Figure 11: The newspaper Kim Klima finds on the way home.

In the car or on the bike ride on the way home, Kim picks up a newspaper he finds. The newspaper presents visual facts about pollution from the transportation sector.

Choice 3: Meat or beans?

Figure 12: The third and final choice in the game deals with the meat industry.

This choice is about choosing meat or plant based just this one time. This is to show that one does not have to become vegan to cut emissions associated with one's own diet, but that it helps to reduce one's meat consumption.

Figure 13: Jan Jordklode presents facts about the meat industry and encourages to think differently next time a similar choice emerges.

As with the first and second choices, Jan Jordklode appears to tell you why the choice made is good or bad for him.

Figure 14: Screenshot from the video shown on the TV in the Kim Klima living room.

The video lasts for 1 min and can be viewed here: https://youtu.be/Pz3fnygUG4E

At Kim's home, there is a sudden noise from the TV. A news report on the meat industry's pollution and strain on the earth is presented on the screen. By showing how meat production contaminates the transportation sector, it helps to create a context for the youth, and it does not become too close or too distant (Corner, Webster & Teriete, 2015, p.5). Since the game will be at a museum where interference is likely, we have chosen not to focus on sound. That is, where there is auditory narration - in the video - there will also be subtitles.

We introduce the youth to facts and research data through three everyday formats - online newspaper, newspaper and video. The various formats are rich in illustrations and have content that we believe is interesting and relevant for the young people. This, in addition to allowing the youth to interact, we believe to both increase learning outcomes and strengthen engagement during the execution of the game. We also look to include a progress bar in the game to engage the youngsters to complete (Zhang, w.y).

The ending of the game

Figure 15: Jan Jordklode summarizes the choices that have been made. Here we also give the user visual feedback that they have done things right and that they have progressed throughout the game (Preece and others, p. 26-27).

At the end, the youngsters get to see the choices they have made. Here, various emojis emphasize which choices have been positive or which have been negative.

Figure 16: The last page of the game. A red button is clicked to exit game. We are looking to include a link to a website where anyone who wants to try again at home - this one is not working today.

They have now reached the end of the game. Throughout the game, youth have learned about climate, regardless of whether the choices made have been positive or negative for the globe. We want the youth to finish the game with a good feeling, thus we round off the experience with some encouraging words. The text box emphasizes the game's message briefly: "Remember that a little effort is better than nothing".

Technical specifications

and limitations

The prototype is developed in Figma, which is an online tool. Here we have mostly used self-produced graphics created in Adobe Illustrator in combination with freely available resources. The news report is made out of royalty-free stock photos and audio, freely available vector illustrations, and self-recorded voice audio. To create this, we have used Adobe Premiere Pro in combination with Adobe Character Animator and Adobe After Effects.

The prototype works well, but has some limitations. Since the file is relatively large, chopping can be experienced in some places, and the animations are not as seamless and detailed as we would like. In addition, Figma does not support integration with either audio or video.

Further development

Implement different languages so that international guests can make use of the game.

Finalize a working game with background sounds and other sound effects, as well as implementing the news report on the meat industry.

Include a progress bar to provide an overview of progression and motivate young people to complete the game.

Implement a feature that allows the game to return to play after a certain amount of inactivity, should it be left unfinished.

Add a framework that allows the game to be adapted to new situations, audiences and themes by switching or expanding content.

Literature

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