Overview

As part of my User Experience Design assessment, I have designed an interactive prototype of a website that aims to help the National Railway Museum with displaying vehicles that are too fragile to be moved. My prototype is focused on presenting the history and functionality of the Travelling Post Office train in an interactive way. So that my final product is going to meet the expectations of the visitors, I have evaluated the post visit survey National Railway Museum has made available for us. In terms of the designing tools, I have used Webflow. As part of my designing process, I had to also find my main inspiration that is going to influence the layout and experience of the prototype. My main inspiration is the interactive one-page graphic novel "The boat". The design concept of the website is a visual story of the history of the train.

Design Approach

In order to generate my design concept, I have reviewed the data gathered by the National Railway Museum. The data collected was in the form of answers from past visitors of the museum to a survey conducted by the museum. Following the visitors feedback I have found the main problems my prototype aims to solve. One visitor stated that the museums lacked information in regard to the trains that they were looking at, as well as the history of the railway, therefore the prototype I have designed includes not only the information needed in regards to the train, but also the history of its production. Another possible improvement the visitors evoked was in regards the lack of description of how the trains were used, as a result the prototype will have a step by step animation that will explain how the travelling post office train used to pick up and drop off mail, as well as a video demonstration of the procedure in action. As another answer stated, the museum is known to be static, however it could be improved if it would have screens that would display information. Therefore, the prototype is designed in order to be displayed on a laptop in front of the entrance of the Travelling Post Office Train. Some visitors consider that having sound on the train would be helpful in setting the right environment, however there are visitors with autism and intense sensitivity to sound is a common autism symptom (R. Morgan Griffin, 2009). Therefore, the prototype I have designed has sound for the video of the drop off and pick up demonstration, however the user has to enable, it won't be a default feature. I have also used the information from the museum curators to produce the text, the timeline and the animation.

In order to make sure the user is using the prototype the say it is intended to, I have conducted usability testing on one participant. The participant has been informed about the aim of the test, using the "Information sheet", they have also signed the "Informed consent form", their name is not visible in any of the form in order to retain their anonymity. I have also completed the Research Ethics Checklist. All the forms, as well as the checklist are attached in the appendix. I have used the method "think aloud" method in order to collect the data, therefore the participant has not been recorded in any way. I have observed their activity and as a result I have changed a few features. The vertical line that is shown in the next two pictures has its animation changed from "scroll into view" to "while scrolling in view".

Another change that has occurred as a result of the user testing, is the last image available on the website. The user informed me that for a better understanding of the train, I should make available a complete picture of it.

As a result of the research I have done, I have made a persona.

Chris

About

Age: 28

Location: York

Train Enthusiast: No

Tech proficiency: Medium

Wish

More access to inside of trains. More interactive things like projectors and screens for example. More sound in general but certainly not loud.

"I find the museum to be this peaceful place I want to be in. I wish there was more access to inside of trains."

Pain Point

The lack on information regarding how the train used to work.

The persona I have designed is the summary of some of the common wishes found in the answers of the survey.

Design Statement:

Museums are a place where curious people seek to discover history, art and most importantly, information. They are open to everyone; therefore, the range of visitors is broad, with diverse wishes. Given that the National Railway Museum is unable to allow visitors to enter each train, due the fragility of the vehicles, I have designed a prototype specifically made for the Travelling Post Office train that will allow each visitor to not only see the inside of the train, but also to explore the way it used to work. Although the museum allows visitors to enter the train, it is not accessible to everyone. There are still people that due to disabilities are not able to explore it, therefore the prototype seeks to solve this challenge and allow them as well to explore the interior of the train. In order for the prototype to be accessible to everyone is going to be displayed on a computer in front of the entrance of the train. Acknowledging that the museum is visited by many children, the website is user friendly, I have designed the content in a way that the user will understand the storyline without having to read the text necessarily because the text is also followed by a picture that summarises the text. As a result, kids do not necessarily need to be always assisted by an adult. Although it was challenging to design something that will entertain children as well, it was also an opportunity to create eye catching animations that could be appreciated not only by children, but also by adults, given the minimalist layout the website has.

I have chosen to create a prototype about the Travelling Post Office train because this train revolutionised mail transportation, it delivered mail at a speed that has not been encountered before. As a result, it enabled a faster communication between people. In addition, although the train is opened for everyone to enter and explore, that does not mean it is accessible to everyone, given that people with locomotor disabilities. These are the two main reasons why I chose this specific train.

Design Context

The main idea that influenced my design is the website "The Boat" (SBS, 2015). "The Boat" (SBS, 2015) is an interactive graphic novel based on the story written by Nam Le. This website gave me the idea to structure the information inside the website in such a way that it feels like a story. At the same time, it also inspired me to create animations for the text, instead of having a simpler design. As a result, I have designed a one page website that tells the story of how Railway Post Office was invented and how it operated, in order to create context I have also added information in regards to the history of mail transportation.
For the landing section.

Railway Post Office

The conveyance of mail by rail was at the vanguard of a communications revolution that would continue with the introduction of the telegraph and reflected the desire to both streamline the movement of knowledge and information throughout the country.

I have been inspired by The British Museum website. The landing page has a styling attribute that makes the image feel like its viewed through a window. I have used this styling method in designing the "Railway Post Office", therefore instead of the font having a colour, it has a picture. While the user is scrolling, they can see more details of the picture.

Considering that the main topic of the website is the history of the Railway Post Office, I have decided to design some infographic that can not only illustrate the passing of years, but also create an easier visualisation of how long each method of transport lasted. The idea came while I was searching for digital creations made in order to illustrate historical events for children. I found this picture (Durham, 2022).
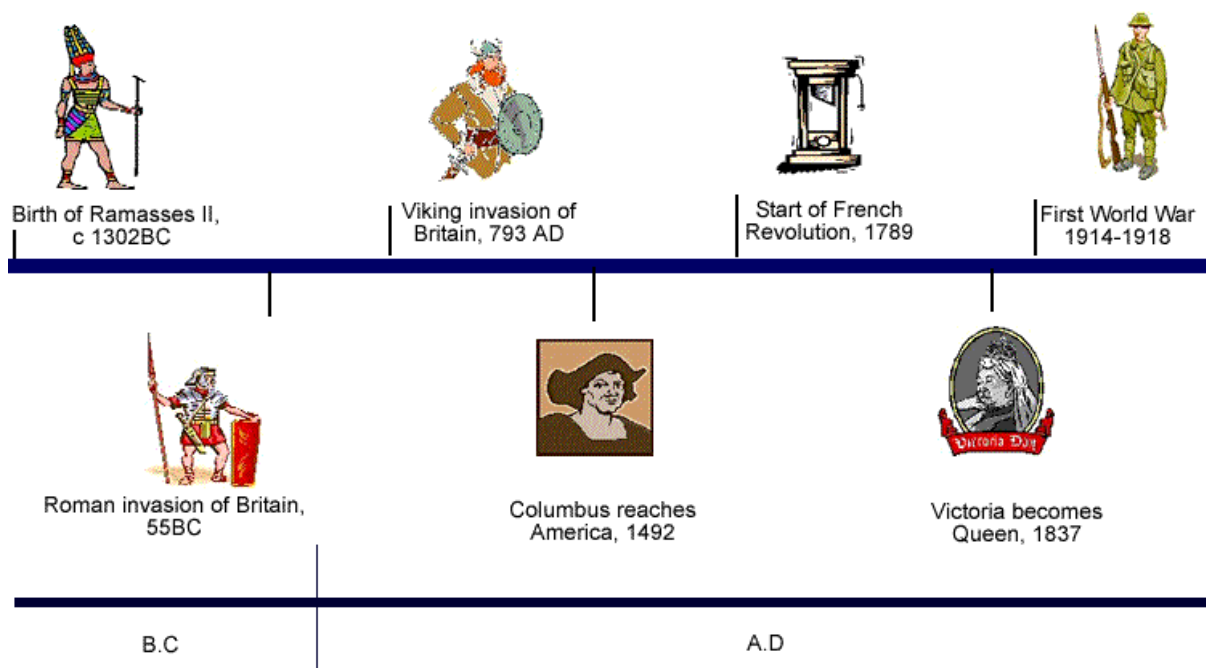

However, I decided to make my layout vertical, not horizontal as shown in the picture.
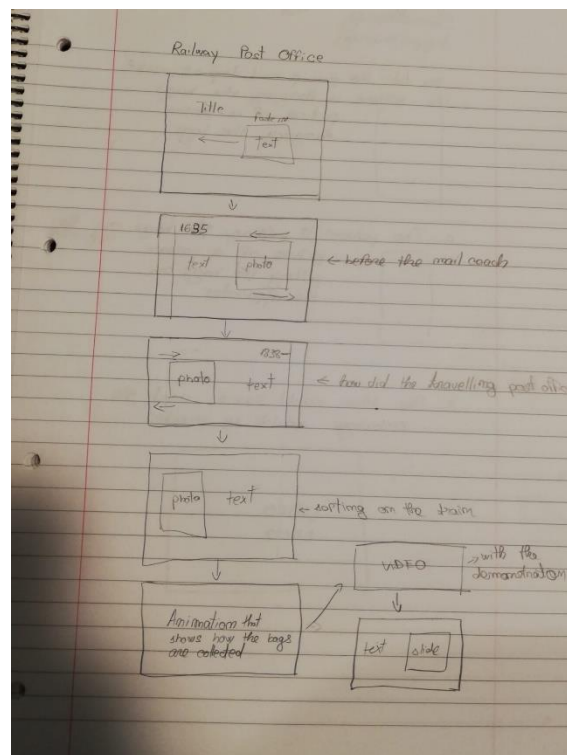
Development Process

In order to have a better overview of how I intend the prototype to look like I started analysing the answers from the survey conducted by the National Railway Museum. That's

how I discovered that the final prototype has to be user friendly in order to be accessible for a broad range of people. It also needs to be placed in a location where everyone can access it. Given that the museum is visited by many children, it needed to have many pictures so the children can understand the history of that vehicle without having to read the text. Another important detail is that not every person that visits the museum has knowledge about the functionality of the train.

Considering all the requirements the final product had to meet, I have decided to create a prototype of a website that is going to be located at the entrance of the train. In terms of the layout, it will be formed on only one page, so it is user friendly, given that the user only has to scroll to discover the story. I have started designing the layout on paper.
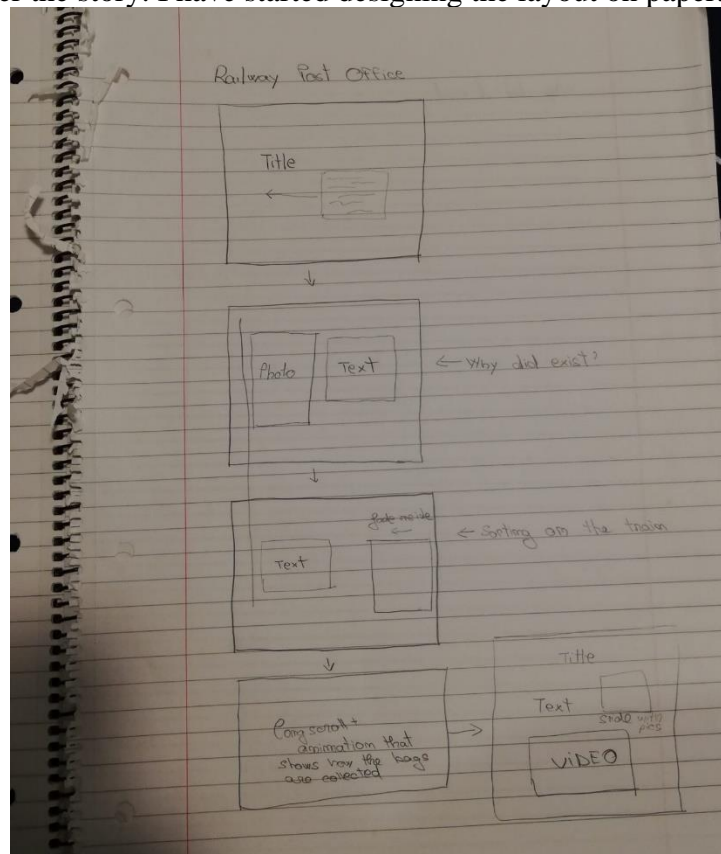
This was the first paper prototype I have made for the website, all though it includes some of the features the final product has it lacked information regarding the history of how mail used to be transported.

Railway Post Office

Title
fade in
Text
↓

1835
text | photo ← before the mail coach
↓

1832
photo | text ← how did the travelling post office
↓

photo | text ← sorting on the train
↓

VIDEO ⟶ with the demonstration
↓

Animation that shows how the bags are collected
text | slide

The second paper prototype had the history, as well as the explanation behind how the train used to operate. However, it still needed an improvement, therefore I have replaced the last for slides with a section dedicated to the process.

Something to show now beginning

How did the pick up and drop out work?
1. The person is hanging the bags
   picture of a person hanging the bags

2. The person is putting the bags on the apparatus
   picture of a person putting the bags on the apparatus

3. The train would come and the exchange would be made

VIDEO DEMO
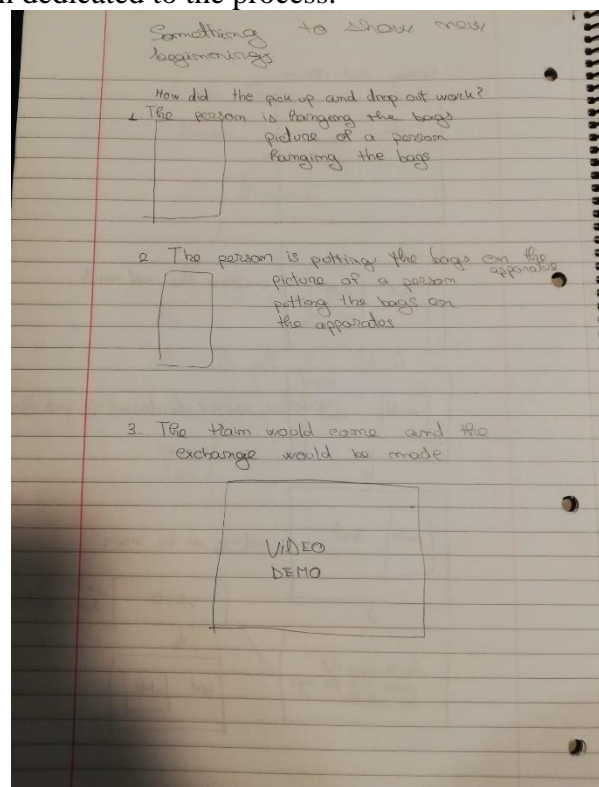
The next step was to find the platform that would give me the flexibility to create engaging animations. I have chosen Webflow, because it is easy to use and time efficient given that I did not have to code any of the features. Once I understood what I can do in Webflow, I started implementing new features that are not visible in the paper prototype, such as the animations. However, the first design decision I have made was in regard to the colour scheme the prototype will have, as well as the fonts that will be used. In terms of the colours of the sections, I decided to alternate the colour of the backgrounds, as shown in the drawing below.

In terms of the colours used for the text, that was dependent on the background the section had. Therefore, the text that is on the white background has the colour "#333", while the text on the black background has the colour "#d6d6d6". However, the text on the landing section has the colour "#333". The fonts I have used are only two: "wollkorn" and "lato". The font "wollkorn" has been used for headings and the text on the black backgrounds that is animated. While the font "lato" was used for the paragraphs. The repetition of the colours and of the fonts creates a consistent design.

For the design to be engaging and eye-catching I have created animations. The first animation for the text on the landing section is triggered when the page loads. The variable for x is set to 498 px and the opacity is set to 0, therefore it is not visible, while the page loads the opacity is increased and the x value is decreased to 0 so it goes back to the original position. The animation of the vertical line on the sections shown below are triggered while scrolling into view.

The animation of the sections shown below was more difficult because although it was triggered while scrolling into view, I had to take into account at what percentage of the scrolled page should the animation appear.

The video that demonstrates how the train operated is set to auto play, without any sound. The reason behind that decision is because the video starts when the page is being loaded and it might distract some people from reading through the page and encourage them to find the source of the noise. On top of that it might be uncomfortable for users that are sensitive to loud sounds. As a result, I have decided to mute the video and allow the user to turn the audio on if they want to.

In order to make sure the prototype will be used as intended I have conducted user testing using the method "think aloud". Following the participant's feedback and interaction with the website, I have decided to change a few settings. The animation of the vertical line was changed from "scroll into view" to "while scrolling in view". The text that is visible at the end of the page about "Carriage design and operation" has been added following the participant's feedback.

Critical Reflection

Although the website looks and feels as it was intended, I wish I could have added an animation of the drop off and pick up of the mails what would have been triggered by the user while they are scrolling the page. The animation would have started with the bags up on

the standard and while the user would be scrolling the page the train would appear and collect the bags. I was not able to make this animation because I needed more pictures from different angles. If I would be able to redo the design, I would add a feature that allows the user to select their age, so if the user is a child, the design would be more appropriate to their age in terms of the colour pallet that is used.

Word count: 2228

Reference List

Durham University, 2020. *What is history?* [online] Available at: < https://community.dur.ac.uk/4schools.resources/History/Timeline.htm > [Accessed 10 April 2022]

SBS, 2015. *THE BOAT* [online] Available at: < https://www.sbs.com.au/theboat/ > [Accessed 10 April 2022]

The British Museum. *Welcome to the British Museum* [online] Available at: < https://www.britishmuseum.org/ > [Accessed 10 April 2022]

Italo Melo. *Portrait Photo of Smiling Man with His Arms Crossed Standing In Front of White Wall* [online] Available at: < https://www.pexels.com/photo/portrait-photo-of-smiling-man-with-his-arms-crossed-standing-in-front-of-white-wall-2379004/ > [Accessed 14 April 2022]

R. Morgan Griffin, 2009. *What It's Like to Have Autism* [online] Available at: < https://www.webmd.com/brain/autism/features/understanding-autism-symptoms#:~:text=Intense%20sensitivity%20to%20sound%20is,to%20block%20out%20the%20noise. > [Accessed 15 April 2022]

Description of Asset	Source	Location on your prototype	License/Permission
	https://www.postalmuseum.org/blog/travelling-post-offices/	The background image of the text "Railway Post Office" Section with the description of the Procedure	Used under Illustration for Instruction
	https://www.postalmuseum.org/collections/mail-coaches/	Inside the section about before mail carriage	Used under Illustration for Instruction
	https://didcotrailwaycentre.org.uk/article.php/134/no-814-travelling-post-office	Inside the section about travelling post office	Used under Illustration for Instruction

	https://www.postalmuseum.org/blog/bags-tracks-tragedy/	Section with the description of the Procedure	Used under Illustration for Instruction
	https://www.postalmuseum.org/blog/travelling-post-offices/	Section with the description of the Procedure	Used under Illustration for Instruction
	Picture on the google drive about Travelling Post Office	Section "Carriage design and operation"	Used under Illustration for Instruction
	https://youtu.be/0EGQWAZghaM	Section with the description of the Procedure	Used under Illustration for Instruction
Text on the landing section	Text on the google drive about Travelling Post Office	Landing section	Used under Illustration for Instruction
Text about "Before the mail coach"	https://www.postalmuseum.org/collections/mail-coaches/	Section "before the mail coach"	Used under Illustration for Instruction
Text about the problems with how the mail was transported before the mail coach	https://www.postalmuseum.org/collections/mail-coaches/	Animated sections with the problems	Used under Illustration for Instruction
Text in the rest of the page	Text on the google drive about Travelling Post Office	Text in the rest of the page	Used under Illustration for Instruction