ACCESSIBILITY MODE FOR WEBSITE BASED SCOTRAIL TRAVEL BOOKING

CREATED BY
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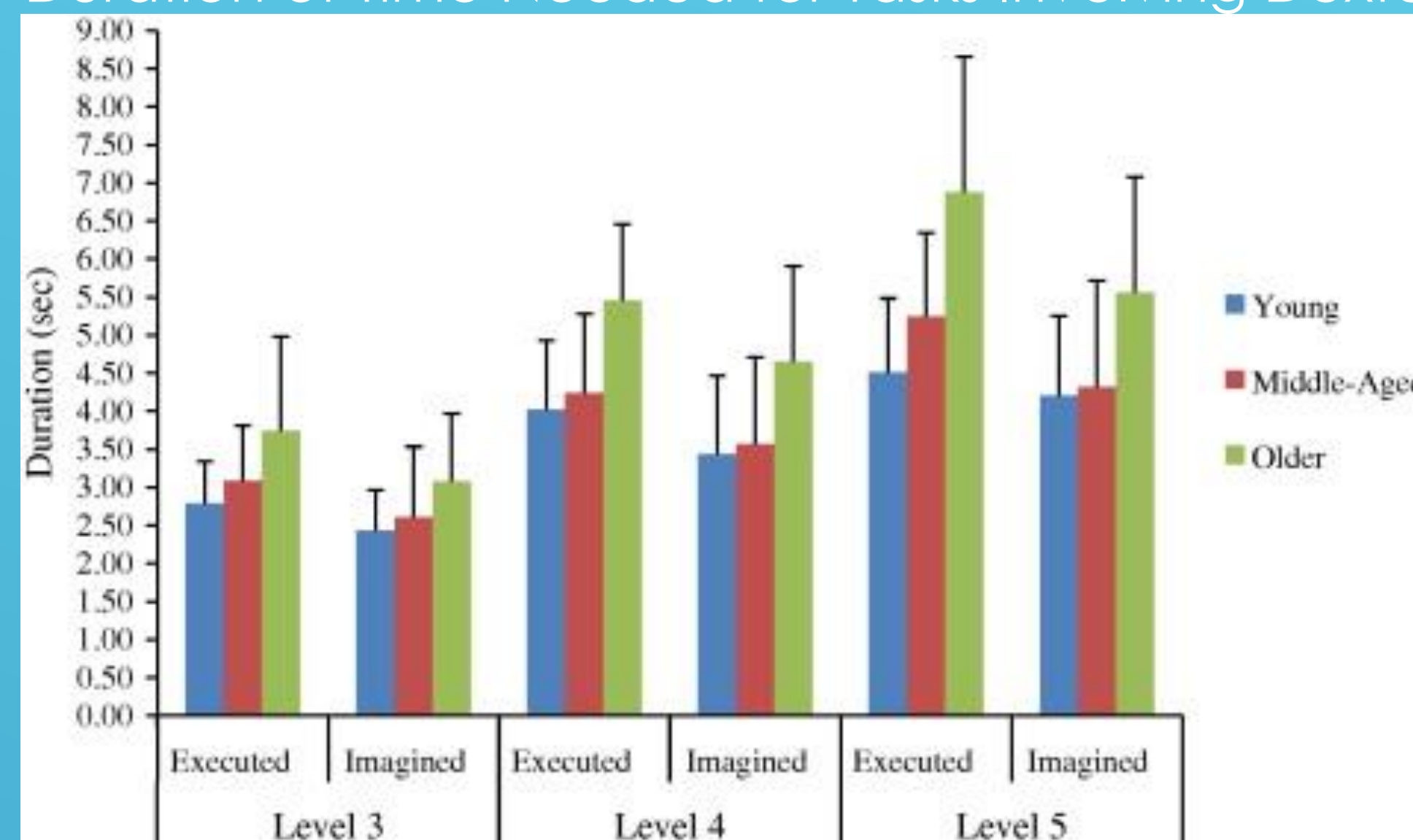UNIVERSITY OF ABERDEEN

ScotRail SCOTLAND'S RAILWAY

Globally, people over 60 are the fastest increasing demographic[5] however their engagement with technology remains below other age groups.[1] In using technology the elderly face special challenges such as decreasing manual dexterity, sight and hearing issues, and cognitive overload. Designing an 'Accessibility Mode' which can be activated on Scotrail's web can aid usability for both elderly and disabled users, increasing satisfaction and continued interaction with Scotrail.
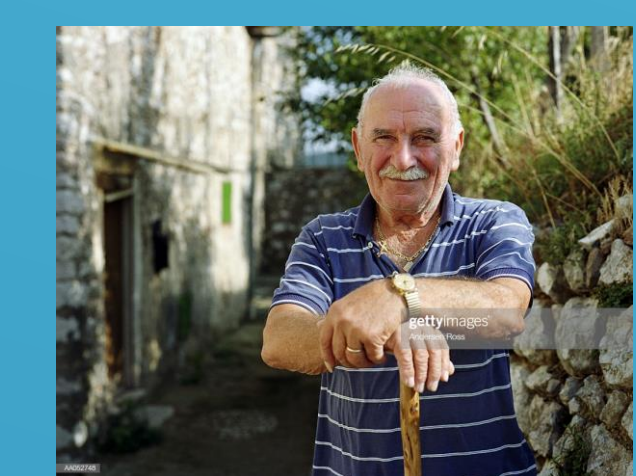
Ross, a persona created to assess areas of difficulty for elderly users, is a 77 year old man with hearing and chronic pain issues. This storyboard shows how he might find the Scotrail website at first glance.

Duration of Time Needed for Tasks Involving Dexterity [4]

Average Age of Technology Use [1]

Figure 1: Distribution of the sample according to the use of electrical device.

Sources:
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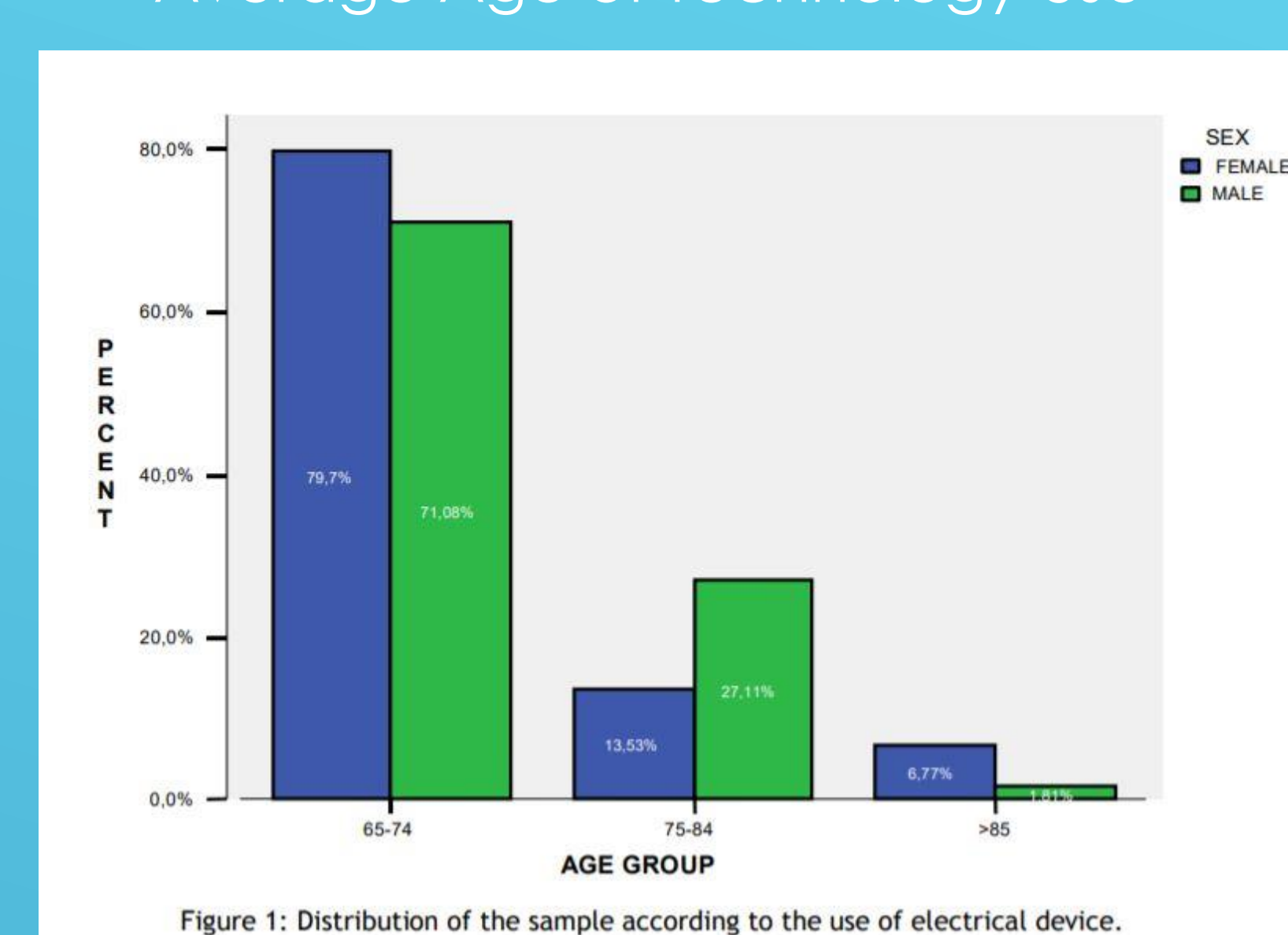11.Jason Allardyce, Passengers stuck as ScotRail skips stations, thetimes.co.uk

In this storyboard, Ross has used a Google search to find the Scotrail website. The home screen is crowded with columns of text and banners in an array of colours. Ross can't find an intuitive area to start at, so he scrolls down the page. Instead of getting simpler, there are yet more areas of info. He tries to find a phone number to call but the contact page has nothing obvious. Frustrated and suffering from information overload, Ross turns to the phone book, where buses are listed ahead of rail services.

Problems on the Current Website and Possible Solutions

Main Problems	Reasons	Solutions
Too cluttered and too much information on the same space	Older people have issues with cognitive overload, memory and concentration[5]	A more simplified design where the biggest space only contain the most important functions
Fonts and text buttons are too small	Older people often have eyesight problems[5]	Change font from 11px to 16 px, which is recommended for older people[5]
Unclear steps lead to difficult navigation	Older people take longer time to navigate complex websites[4]	A tutorial function and clear visualization of all steps

Visualising Accessibility Mode With Wireframes

Accessibility Mode
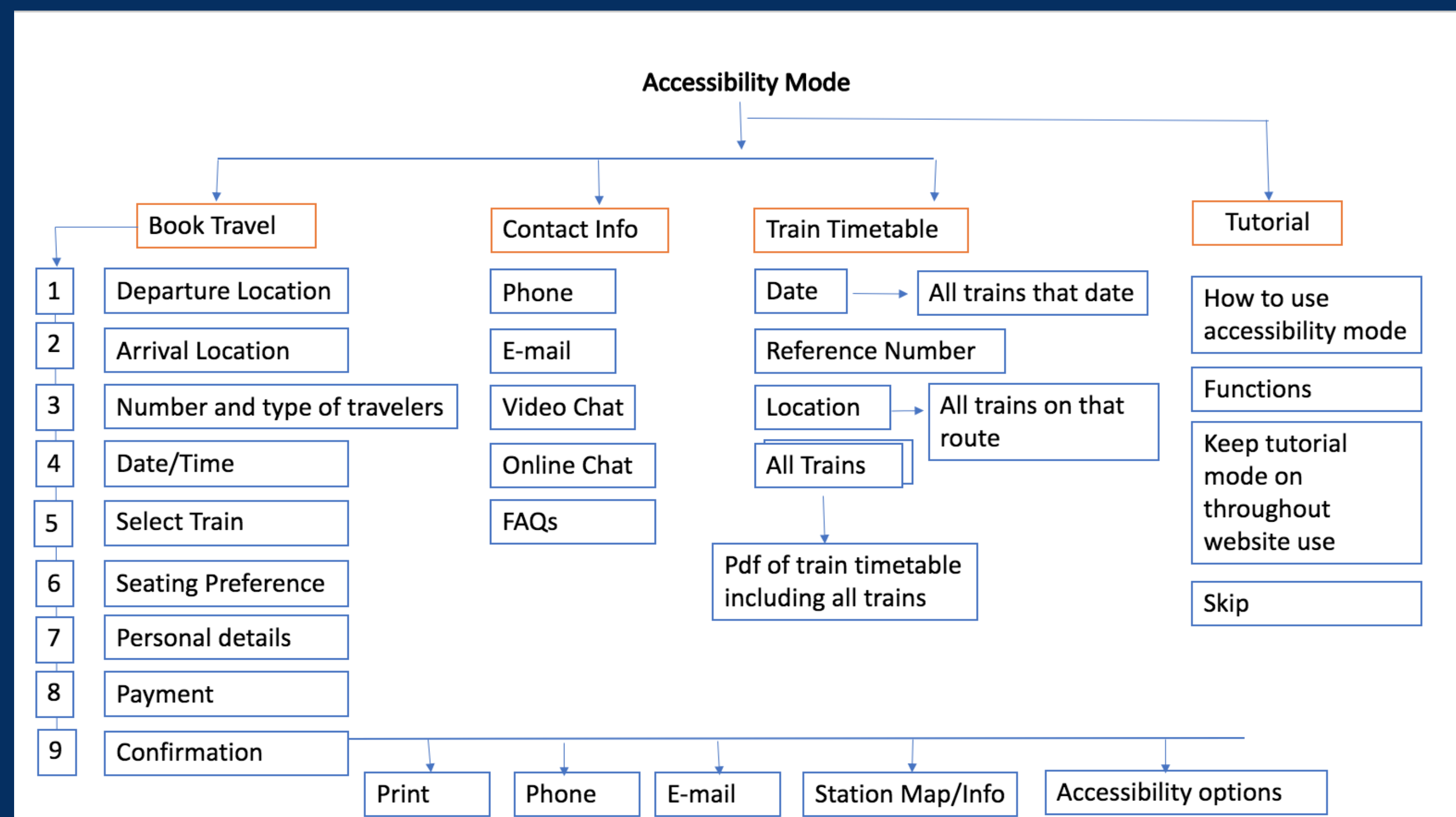
This Navigation Map shows how users will move through the website when the Accessibility Mode is switched on. When selecting Book Travel users can see all the steps involved in legible font at the top of the page as they go through them. They can access contact information, train timetables and even go through or skip a tutorial assisting users in how the website works, especially the Accessibility Mode.

This chart contains a brief description of the website and the principles which supported the decisions that were made.

Affordance	As our project is focusing on helping elderly people, we have designed our website in such a way that the user will instantly know what each feature does.
Perceivability	Users should be able to perceive every action when or if it should be taken. This could be hard for elderly people as they are typically not as familiar with the modern technology. With our accessibility mode design, this obstacle will not be present for them.
Feedback	Feedback is very important. Not giving proper feedback might cause the user to think that something went wrong. Accessibility mode will make sure that the user knows if the action they performed went through or not by giving text messages after each action taken.
Consistency	Each element and feature on our website are consistently placed where they were the first time the user entered the website so they can instantly find anything they need.
Usability	The new website will be easy to learn for elderly people, and despite having fewer option it still be very efficient and effective.
Navigation	Accessibility mode will provide easier navigation. There will be fewer levels/subsites so the user will get to their destination faster.

Prototype of Implemented Scotrail Accessibility Mode