COMPASS

COMPANION

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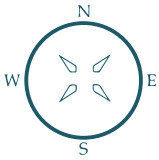
Create a navigation device that compliments the traditional methods of location identification to help encourage more people to take up outdoor activities and live healthier lifestyles during and post lock-down.



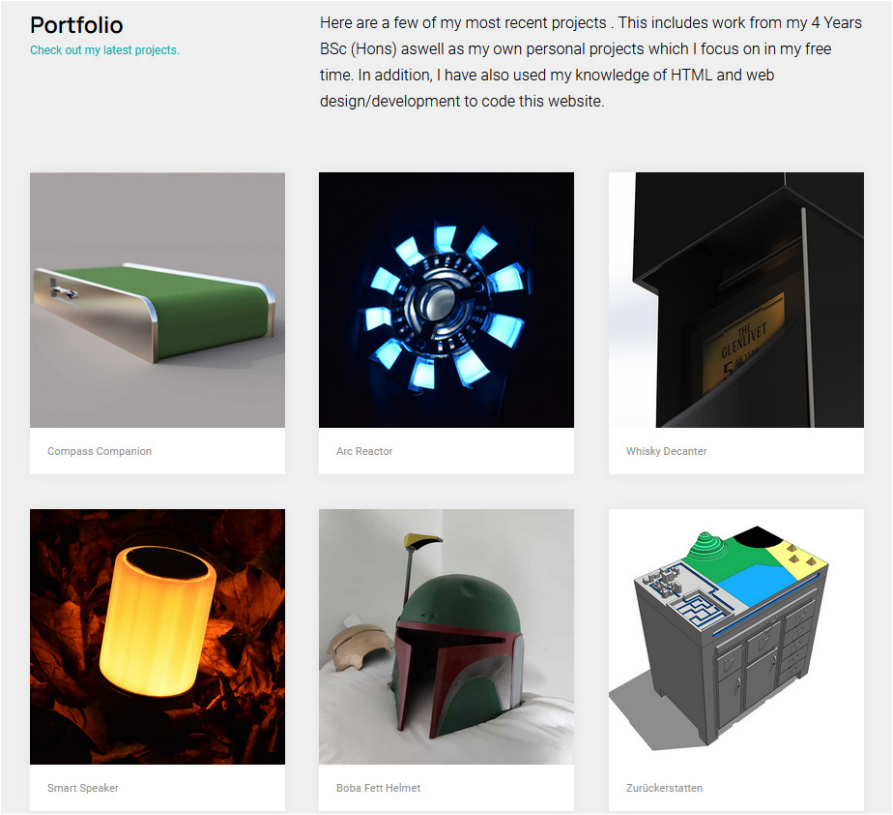
ABOUT ME

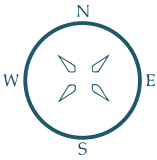
Hey! I am Alex, a 21 year old final year graduate of Product Design at the University of Dundee. I love thinking creatively to solve complex problems, often incorporating technology to offer a seemless and enjoyable user experience. My passion is fusing modern technology with creative design to generate a new way of looking at things and believe that learning new methods and techniques will continue to take my projects further!

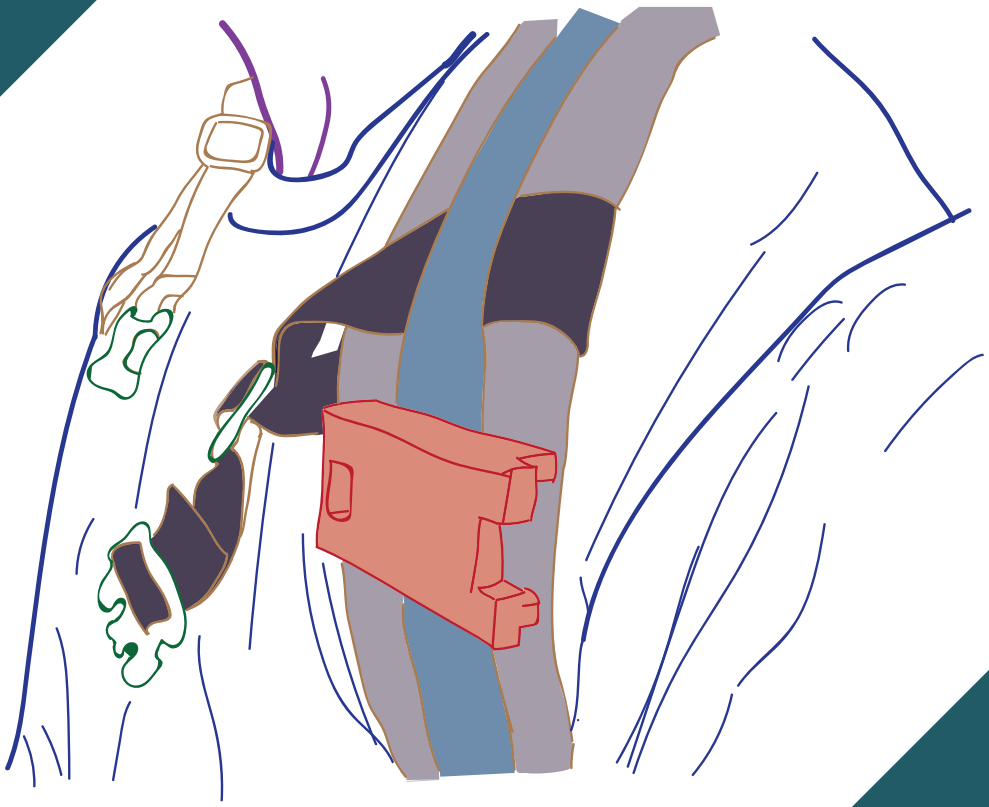
Out-with University I have been an active member of the Scouting Network and have been part of the organisation since I first started at the age of 6. The outdoors is an integral aspect of the Scouts and I have spent many expeditions outdoors including several in other countries. This has helped me identify possible market gaps and build many close connections to industry .

A LITTLE BIT MORE

This is a screen grab from my live website at www.alexbinyon.co.uk







ACKNOWLEDGEMENTS

I would like to thank the following people for all of their help and support in the development and completion of my honours year project!

ACADEMIC TUTORS

- Martin Skelly - Product Director, Product Design
- Andrew Cook - Programme Director, Interaction Design
- Polly Duplock - Lecturer, Social Digital

RESEARCH PARTICIPANTS

- Alan Mackay- Duke of Edinburgh assessor
- Aidan Shields - Keen hiker
- Callum Aird - Scout leader and Outdoor games instructor
- Niamh Anderson - Watersports instructor

USER TESTERS - *(Different levels of hiking experience)*

- Mathew Millroy
- Aidan Shields
- Alan Sunny
- Wiktoria Morawska

GURU'S

- Sara Nevay - Lecturer, Social Digital
- Neil Dawson - Interaction Designer

In addition to these, I would like to thank my family and friends for supporting me through the development and completion of Compass Companion.

DISCOVER.

PERSONAL EXPERIENCE

The concept was heavily based on my own previous experiences whilst hiking, particularly during my Duke of Edinburgh awards where I suffered from unnecessary stress brought on by navigating for the group. The outcome could lead to hours of re-correction or possibly cause harm or damage. This then can have a massive impact on psyche of the hikers which will only amplify over the duration of the expedition, where the situations are already tense by being around each-other extensively for long periods of time.

On a separate expedition we were disorientated and walked past a checkpoint as the route plan that we had made had not taken to account the change in tide. We were looking for a shipwreck that had been marked on our map, but due to the high tide, we missed the landmark and we continued past the waypoint.

This is where the idea for Compass Companion was born, particularly to help new hikers have a safety net when out on multi-day expeditions.

EARLY RESEARCH

INTERVIEWS

At the early stages of the research process, I conducted video Interviews with regular hill walkers and a water-sports Instructor.

This helped me identify what works well in existing products as well as flaws and possible issues that could arise whilst developing this one. The Interviews stretched far into the end of the project as I feel that user feedback is a necessity for a device that is based on feelings. The Interviews also offered as a way for me asking what kind of features that they would be looking for in a device like this.

CONSTANT LIAISON

The video Interviews were incredibly helpful in gaining different perspectives covering different scenarios of usage.

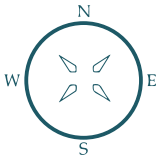
However consistent email correspondence with a Duke of Edinburgh assessor has also offered specific feedback offered more in depth scenarios that could potentially occur when on an expedition. Often relating to experiences that he has witnessed first hand.

An idea that the DofE assessor suggested was to was to focus on the communication between different groups of users. Specifically to communicate if there is an issue with the pre-planned route, or if they encountered any other issues.

PAPERS

The information mentioned in several papers was what brought the project into fruition and moulded the way in which Compass Companion would encourage its users to engage with the outdoors.

One of the most relevant books that I referred to throughout the project was the Natural Health Service which highlights how drastically nature can affect the mind.
It promotes small habits that we can introduce into our lives that alter the way in which we interact with the world

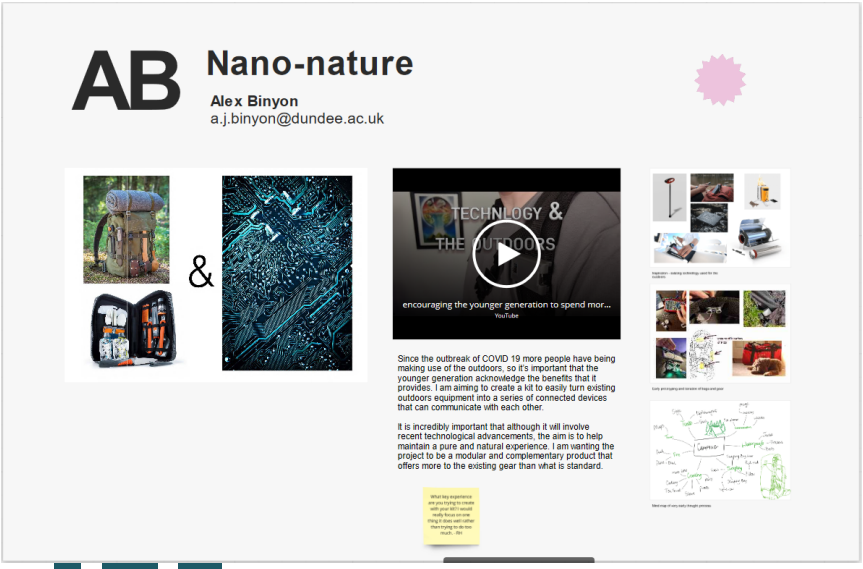


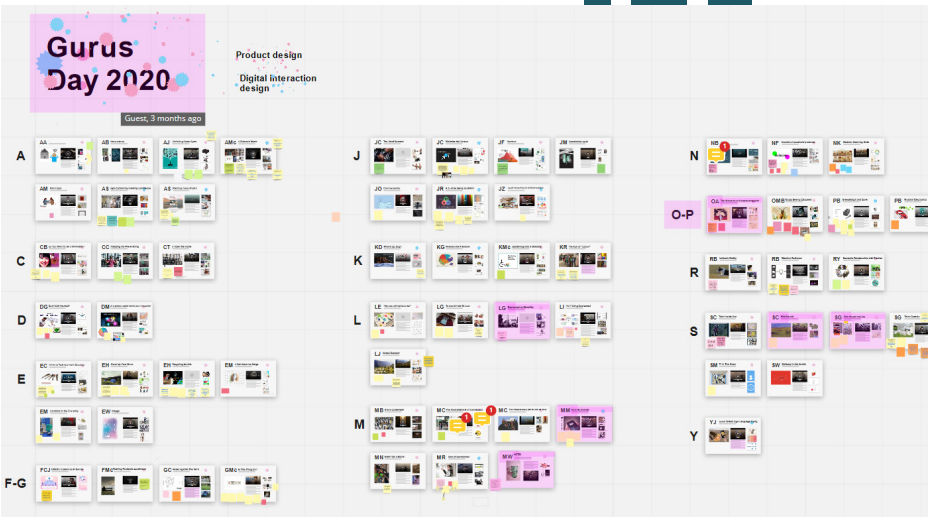
GURU'S DAY

WHAT IS IT ?

Guru's Day is an opportunity to showcase the work we have done to date, to gain constructive feedback and suggestions on possible directions to look at from industry professionals.

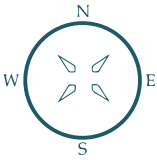
I spoke to two gurus that had different specialities, allowing me to get feedback from different areas of expertise. To home my creative direction and to finalize the goal for the project.





Due to COVID-19 the Guru's day was virtual, and consisted of three A3 Boards alongside a video and 100 words to describe our idea at that stage. The Guru's day typically involves the professionals to walk around the room and have an informal chat about the idea and possible routes forward. It was particularly difficult to replicate the style of communication, however with some interesting icebreakers, we were able to get a similar feeling- *I imagine.*

The feedback I received on this was positive and consisted of both a professional angle with additional more personal preferences.



GURU'S FEEDBACK

SARA NEVAY

Sara Nevay is a lecturer at DJCAD for Product Design with a background in textile design. Sara has a background in e-textiles, service and participatory design across both academic and commercial contexts.

Key Insights

- Narrow down target market Current users / people encourage people
- How can it bring in more connection to the outdoors theme of outdoors (materials?)

NEIL DAWSON

Neil Dawson is an interaction designer working in London with lots of experience with applications and creating intuitive and meaningful user interactions.

Key Insights

- When designing for young people, incorporating challenge could be a very good way to engage them.
- Look at existing products that utilize have a reward system for children whilst maintaining anonymity.

INSIGHTS

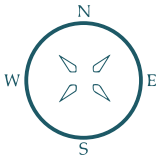
Guru's Day was an opportunity to receive feedback regarding my project direction, and the feedback I received from the Gurus were positive, however identified that more attention should be directed towards the target audience. With a particular focus on the specific ways in which they interact which sets their user group apart from other categories of users.

It was really helpful to get the feedback we did, from specialists which became possibly the most prominent turning point throughout the project.

At this point, the project was a shell on the idea of reducing phone time whilst out hiking, and the insights gathered allowed me to shape the project into what it has become.

It was unanimous that I needed to finalize why and how I wanted to communicate to the user, to focus on a niche and then best target that rather than trying to appeal to the mass market.

It also became apparent that the device would not have the same texture of feedback if the response or notification was a sound. The most natural response is touch, and that is what Compass Companion does best.

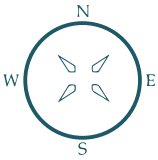


DEFINE.

INSPIRATION

There have been tonnes of different products stretching from many different markets that have had different levels of influence on Compass Companion.

However the following have had the most impact on how the project has evolved throughout the duration of the year, and are worthy of particular notice.



OPINEL

Opinel was my first main influence particularly with an outdoor object being viewed as a character. Opinel have a very unique and individual style utilizing materials and trying to create a tool that has a doesn't try to be anything else. Early in the process, some feedback was to ensure that I make a device that works really well at one task rather than focus on a multifunction device that does not have the same level of professionalism. The colour and material choice of opinel is instantly distinguishable from all other outdoor equipment, and does a very good job of subtly reminding the user that they can rely on their trusty knife. The use of a living material like wood, helps the knife adapt and react to its environment. It expands and shrinks depending on moisture levels in air. The brand acknowledges that the material has some flexibility in the shaft and is sourced from different trees, and celebrates each knife's uniqueness.

Although the brand use natural materials, they still manage to make sure that the device would stand out along side them .

(Right) source : https://www.opinel.com/en/tradition/carbon-steel/n8-carbon


OPINEL
CARBONE
Carbone
SAVOIE · FRANCE
OPINEL
N°


MSR
MSR
DANGER
EXTREMELY FLAMMABLE.
CONTENTS UNDER PRESSURE
EXTRÊMEMENT INFLAMMABLE.
CONTENU SOUS PRESSION
MSR
ISOPRO™
ALL-SEASON FUEL BLEND
MÉLANGE DE CARBURANT
TOUTES SAISONS

MSR - Pocket Rocket

MSR's product highlight the peak of efficiency with ease of use.
They clearly understand the market with the designing the device with a minuscule footprint whilst balancing safety and functionality. MSR understand that their product is a fundamental aspect of an expedition despite its only constraint being a stable device that has the capacity to hold a pan whilst controlling the release of the gas canister affecting the temperature of the flame.

(Left) source : https://www.amazon.co.uk/Msr-Pocket-Rocket-Portable-Stove/dp/B072K31B94

The "CEO"

The "CEO" is a luxury leather chair, designed by Penn Executive chairs for executives. Despite this being a completely different market, the Principles of good design still remain effective.

The aspect that most excites me, is the natural shapes tying the form with the natural curves to the hard wood used, hinting at it's source. The mixture of fabric and wood particularly stand out as an interesting material choice and one that offers a feeling of both comfortable but reliable.

(Right) source : https://www.wayfair.com/furniture/pdp/penn-executive-chairs-timko-genuine-leather-executive-chair-w004111646.html

UPRIGHT GO

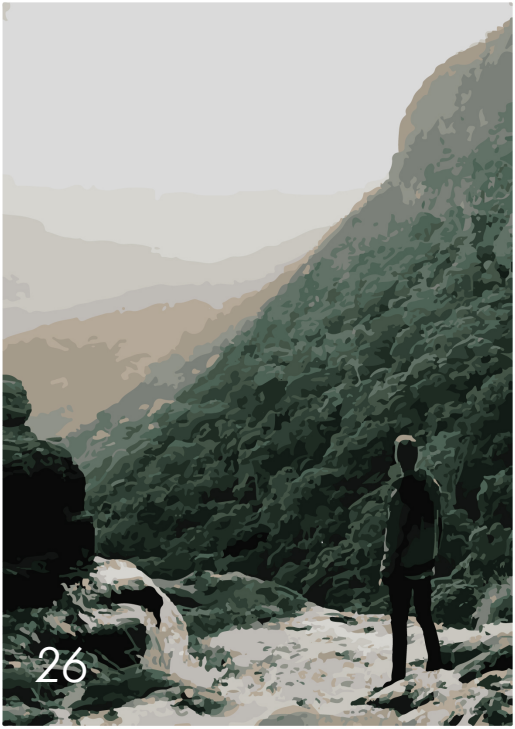
Upright Go is a digital posture corrector device that uses haptics as a method of instantly letting the wearer know if their back is outwith an acceptable tolerance. However what I found was that there were many complaints with the device going off throughout the day during regular life, like bending down to tie shoes etc... This is a great inspiration to always refer to what it is trying to do, and how it would affect the user during normal use rather than perfect conditions. This greatly inspired to take a more user experience driven device and look at unmoderated explorative user testing for a more true and unbiased reviews.

(Right) source : https://www.wareable.com/wearable-tech/the-best-wearables-for-improving-your-posture

THE BRIEF

Covid-19 has affected the way many of us interact with nature. The Compass Companion can provide psychological support by providing physical responses to actions done to the user.

As lockdown seemed to last several months, the Government started to advise people to perform atleast one form of exercise a day, highlighting the importance of maintaining social and physical well being. This led to extreme amounts of people taking up outdoor hobbies, often inexperienced and doing so as a means of socializing within the confines of the strict rules regarding meeting outdoors.



Getting People to Dis-engage From Using Their Phones to Socialize Outdoors

Camping and Hiking are great ways of getting people interested in the outdoors, allowing them to build strong social connections without the necessity of using a mobile device.

There are many healthy benefits to camping and hiking; reducing stress, anxiety and letting you take a step into recreation after the everyday ongoing rush of life, but most importantly, socialization.

There is a growing community of people doing these outdoor activities for the sole purpose of updating their social media profiles/post.

Generation Z typically spend over 29 hours a week on mobile devices with 55% of them using their phone five hours or more a day.

Due to the COVID-19 Pandemic, Social media usage has skyrocketed 40% with a 33% increase to Facebooks daily logins.

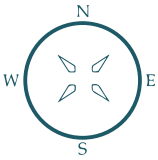
I need to investigate deeper into what encourages people to venturing out. Having a way to get people off their phones is a step forward into realising how important camping and hiking can be.
I will need to look more into what discourages people form doing those outdoor activities to make them feel more active and connected with their friends and outer world.

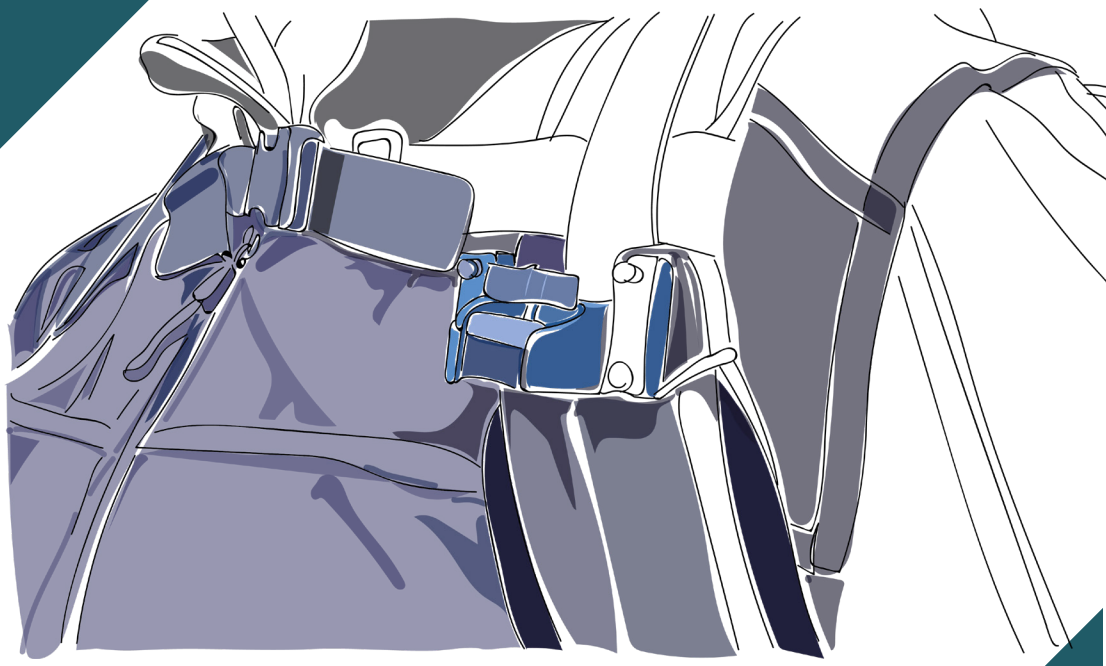
This was my first copy of the brief which was primarly focused on getting younger people to make concious decisions to be healthier and to utilize the outdoors. This changed over the course of the project and the aim became more specific, to use haptics as a method of communicating that you have left the trail.

(Below) source : https://www.wareable.com/wearable-tech/the-best-wearables-for-improving-your-posture

The brief also went through many different user groups. Initially Compass Companion was tailored to the younger generation (similar to Duke of Edinburugh), however it became apparent that the more suitable users would be those specifically in a hurry who would suffer from stopping to reach in their rucksack for a map to double chack their positions. For users completing challenges like Duke of Edinburugh award also could offer an unfair advantage to those using the device which defeats part of the challenge which is to navigate effectively through the wilderness.

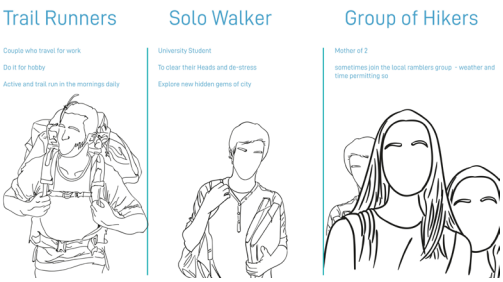
THE DUKE OF EDINBURGH'S AWARD





CHARACTER

Personas

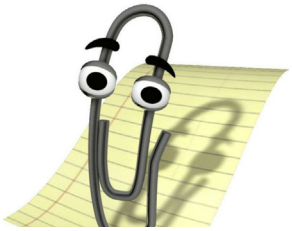


A great length of time was spent looking at devices that embrace a character rather than to perfectly merge into its surroundings. Compass Companion celebrates its uniqueness in function and replicates it in its form and material choice.

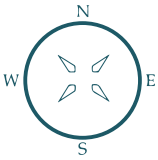
As previously addressed, the psychology behind the "training wheels" for hiking allows many novice / amateurs to feel more confident whilst partaking in outdoor activities, which causes them to become more likely to continue or engage in outdoor activities.

It is for this reason that the device is best suited to stand out and act as an assistant as opposed to a device or tool.

This included both well liked characters and those that did not receive the same amount of public acceptance.



(Right) source : https://www.mentalfloss.com/article/504767/tragic-life-clippy-worlds-most-hated-virtual-assistant



UNDERSTANDING THE PROBLEM

How can Compass Companion help new hikers stay engaged in a new outdoor hobby and to put away their mobile devices and to promote healthier lifestyles ?

The issue when starting new hobbies, is finding it too much of a challenge, getting discouraged and giving up.
This is an aspect that I have returned to regularly to ensure that it does not go unanswered.

That is one of the driving factors as to why the target market are those who are new to the space. In addition to that, this is the importance of viewing the device as an assistant rather than a tool or device.

DEVELOP.

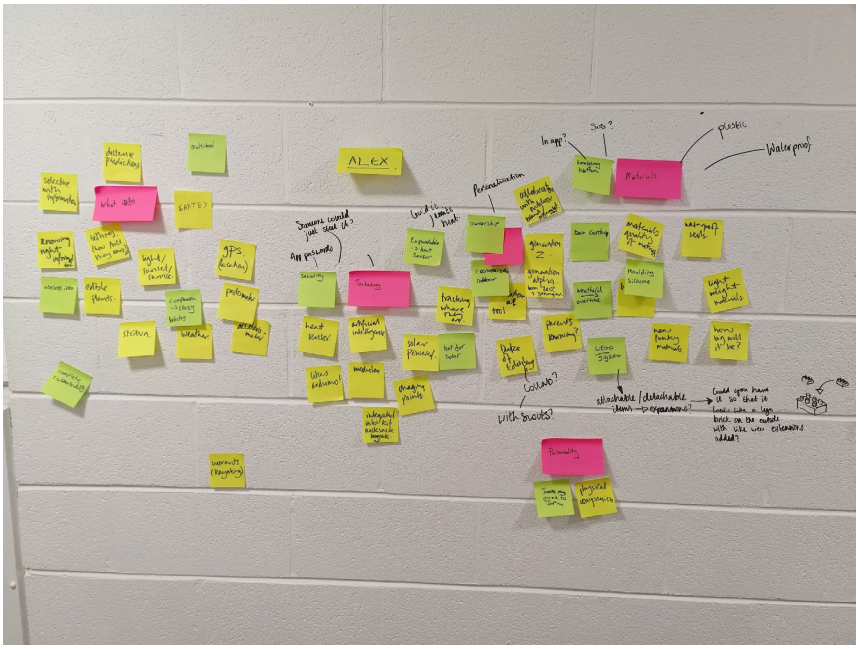
PROBING IDEAS

MINDMAPS

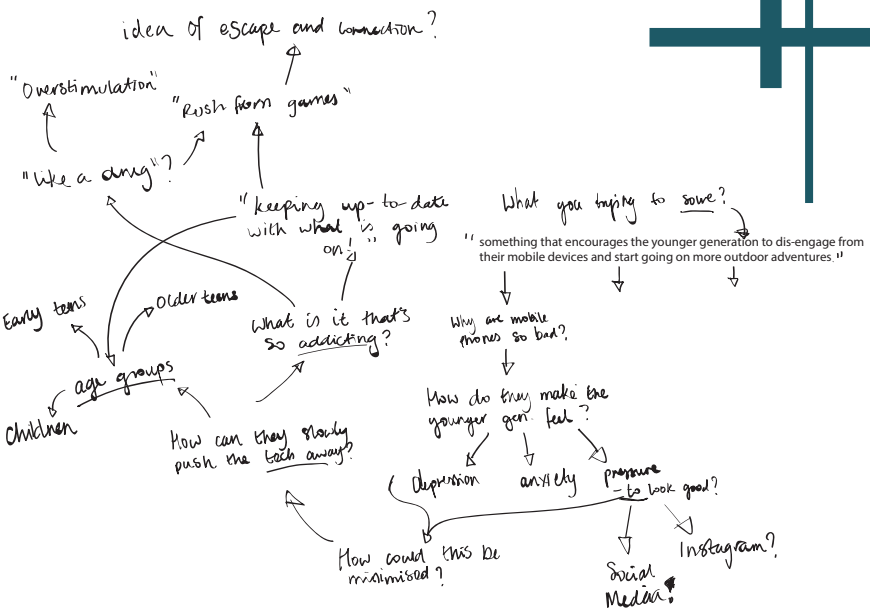
Following the regular chats with my lecturer, it was suggested that I should map my train of thought to help visualize and solidify my thinking, this also helped with expanding each idea more thoroughly.

This helped me identify what works well in existing products both within the market and external to the outdoors niche.

One of the groups of sticky notes were talking about collaborations, and because of the exploration of similar brands, that I was able to reach out for interviews and statements from.



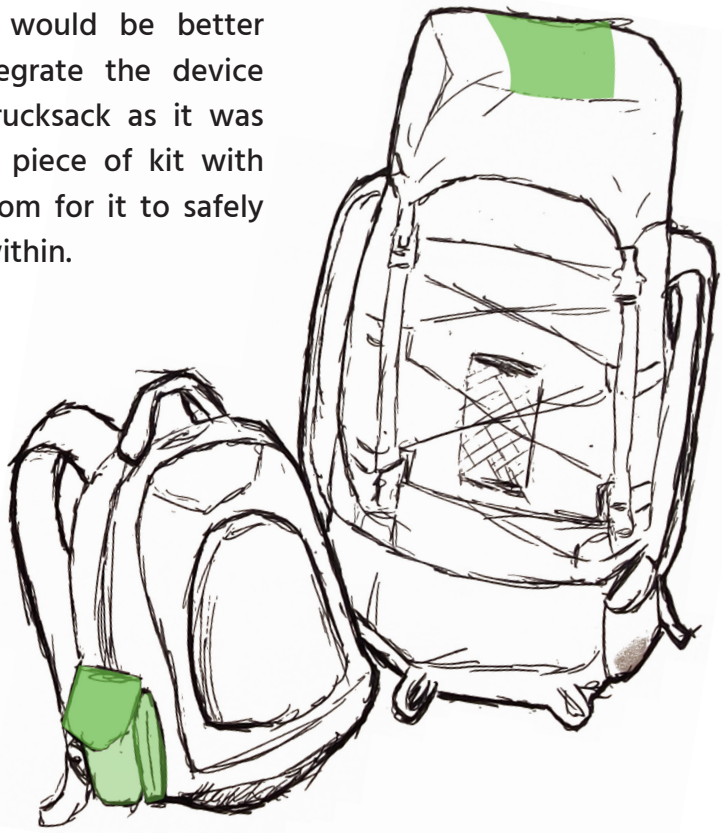
Teens who suffer from addiction to technology feel extreme anxiety when separated from their digital devices, video games, and social networking sites. Hence, their emotional symptoms mirror those seen in substance abuse and drug withdrawal.



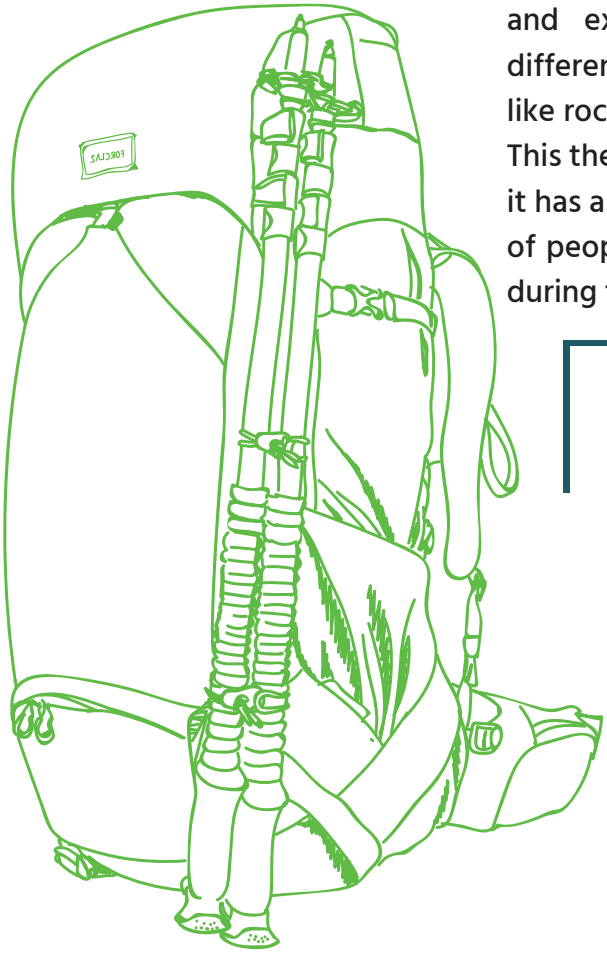
INITIAL SKETCHING

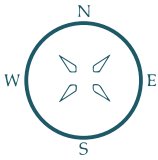
With the insights gathered from my interviews, I started to sketch out ideas as to what could accommodate all the ideas suggested, mainly taking inspiration from multi tool sheaths and other existing outdoor equipment. I quickly assumed it would be better to fully integrate the device within the rucksack as it was an essential piece of kit with plenty of room for it to safely be housed within.

Because of this the sketching mainly consisted of wondering for optimum placement of the haptics to have maximum surface area coverage for intensity of the haptic response.



Before the idea was narrowed down to hikers, I spent some time exploring different outdoor uses for navigation devices like compass companion, this allowed me to investigate solo and extreme sports to find different categories of users like rock climbers and kayakers. This then moved on to hikers as it has a much larger percentage of people taking up the hobby during this time.



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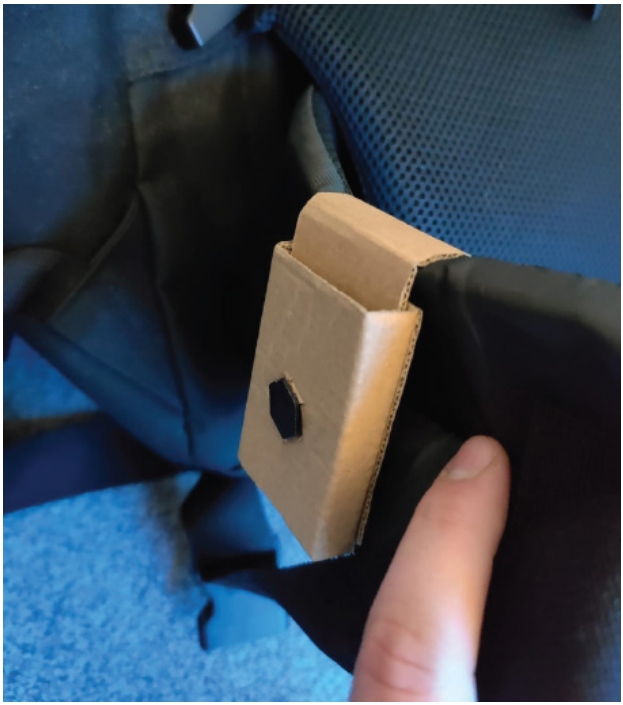
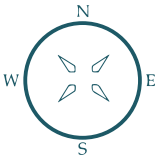
SKETCH PROTOTYPES

CARD MODELLING

Sketch prototypes play a vital role in visualizing the form of the design. Particularly with COVID-19, it is quite difficult to make low fidelity cad files. Sketch prototypes are the perfect combination of speed of production with the insights that you can only gather with physically handling the device. It was important for me to explore form whilst at home.



The first experience prototype consisted of a rumble motor salvaged from a broken games controller.



CAD PROTOTYPING

To consolidate the form and to help visualize the Idea, I then made quick sketch renders to explore shape, materials and texture. In order to get these different effects, I used a range of softwares to achieve different sections of the design for specific tasks; Solidworks, Blender, Fusion360.

HOW IT WILL WORK

ATTACHING

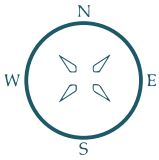
To begin with, I looked at how a device like this would be attached to the rucksack. Initially I assumed that the device would be internal and would then have haptics or buzzers that would help the user identify that they have left their preplanned route.

However It became apparent that in order to fully integrate a device like this into a rucksack, it would require the user to disassemble and to permanently alter their own gear.

The general shape of the device is also inspired by multi-tool belt sheath that also attaches onto the straps available on the rucksacks.

The placement of the device varied further and was ultimately re-located to the hip straps for more of a solid connection to the body for the haptics. In addition to this, the user testing group highlighted that it would be less likely to be accidentally knocked whilst still being accessible enough if the user were to interact with the device to acknowledge and understand that they are wanting to leave their route.

Then the possible points for the haptics to be embedded or attach to would have to be located in one of the green colours to the left.



THE CONCEPT

VISUALIZING THE PROBLEM

In preparation for my mark I prototypes, I created two small storyboards to illustrate the scenarios that this product could be used in. This allowed me to explain specific circumstances that would take place before during and after interacting with the product.

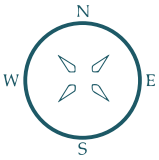
It was at this stage where I realized niche subject clearly to individuals who were perhaps not as familiar with the industry. These are two separate storyboards that detail different types of use.

The top storyboard is aimed to communicate the idea of mental health awareness whilst map reading. To be used as an additional method of location identification as a backup for the traditional methods of navigation - map,compass. The device builds up trust within each member of the group and teaches them to become more confident in their orienteering skills.

The second storyboard is a visualization of communication between groups of hill walkers. To be used as a way to locate different groups who may have of drifted from their pre-planned route.

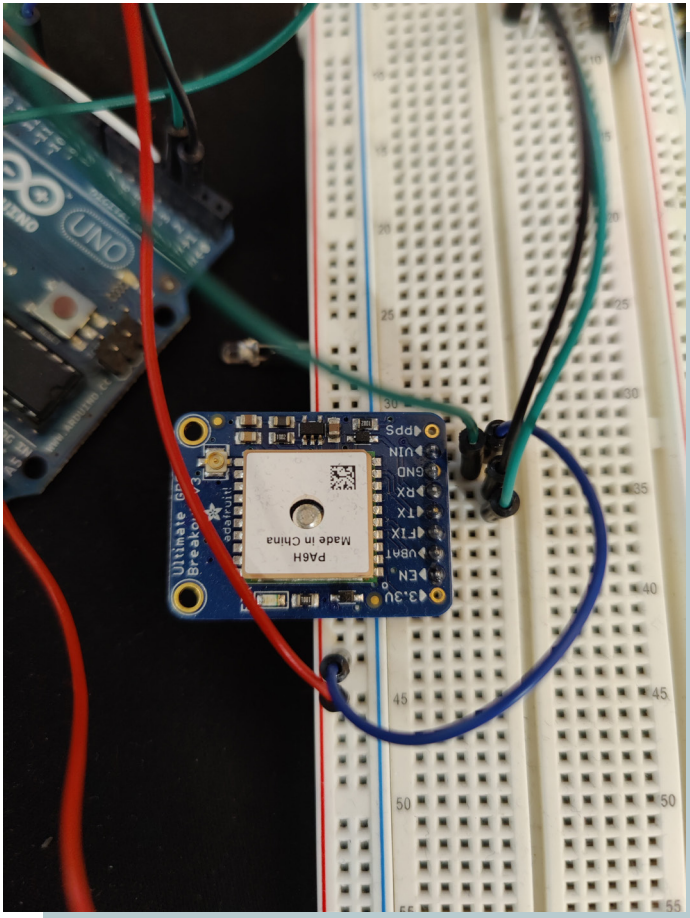
Similar to the second storyboard, I entered the mark I prototype with two different possible directions to go down. To focus on the communication aspect between groups of hikers, or for assessors to know their groups are continuing alongside their pre-planned route.

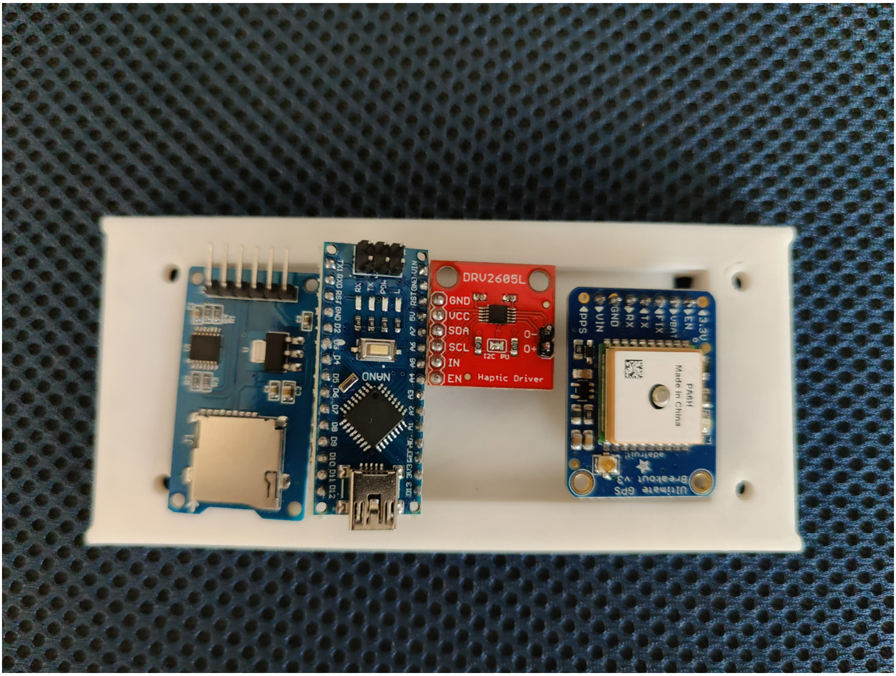
Or the other option which is to help raise awareness that the self inflicted pre-conceptual ideas about an inability to map-read causing unnecessary stress in perhaps those who are new to the industry.



ELECTRONICS

Here are some of the components,
The device works by comparing pre-inserted coordinates that are stored on a micro SD card, to the location data gathered by the Ultimate GPS sensor (on left) , this then runs through different if statements that will play the appropriate haptic response.




DRV2605L
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VCC
SDA
SCL
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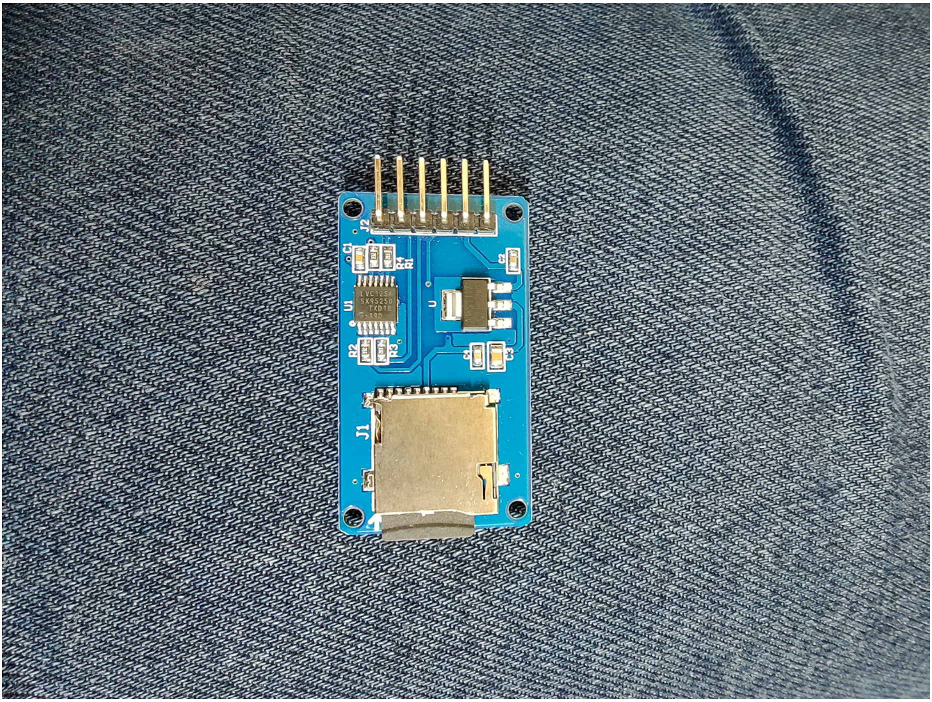
EN
Haptic Driver
NANO
PA6H
Made in China


J2
J1

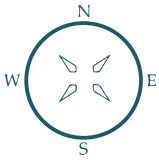
MATERIALS

The materials that I considered for this project have varied in almost all aspects. I looked at waterproofing, shock absorption and many other materials that would make sense in the environment it would be used in.

(Above) source: https://www.makersfabric.com/products/british-millerain-waxed-cotton-cypress?variant=26714160693348

However the materials that felt most suited for this product are carbon steel sides and shell with a waxed cotton to add more of a natural and user-friendly intractable surface

Overall the product and it's materials cohere with its core values and reflects the natural shape of its surroundings.

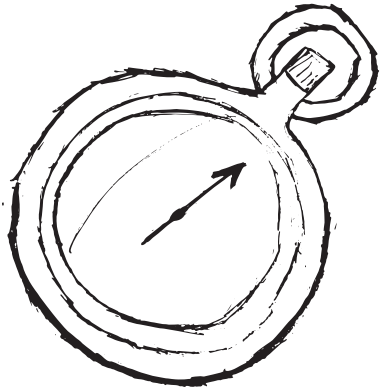


BRANDING

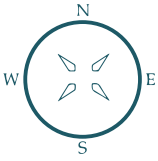
The branding of Compass Companion has developed a unique identity, its logo having a striped back and simplistic style of compass nicley links to its abillity to do its task well without being abnoxious and in the way.
The colour combination adheres to the “compass companion” brand identity, following a series of varied iterations which demonstrate developments in typography, colour and pictogram

LOGO

- NATURE
- TRADITIONAL
- NAVIGATION
- OUTSIDE
- STRAP
- NATURAL SHAPES
- GPS
- BUZZ
- DING
- BAG
- CURVES
- WALKING
- HICKING
- LOCATION IDENTIFICATION
- RUCKSACK HELPER
- HAPTIC HELPER
- BACKPACK BUDDI
- BUZZY BOY
- NANO NATURE
- COMPASS COMPANION
- LEAVES
- TREES
- WOOD
- COMPASS CONNECTIONS



COMPASS COMPANION



MARK I

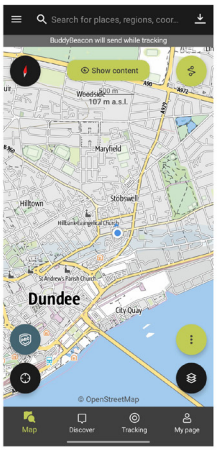
The mark one prototype was a great way to describe the idea and direction that I was most interested in exploring. I Explained the project brief and how I wanted to make a device that helps the user navigate without requiring a mobile device. The most important aspect of this was to allow for official feedback regarding the state of the project.

It was abundantly clear that I needed to look more into the reasoning as to why the project isn't just another app.
So to properly find out what the device would do differently,

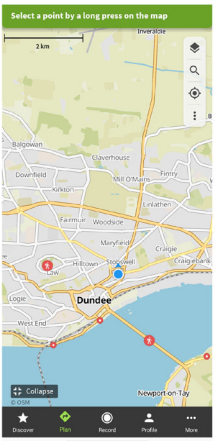
I measured and ranked some of the most popular apps in the outdoor trekking market in order of most pleasant and intuitive experience.

EXISTING APP USER EXPERIENCE

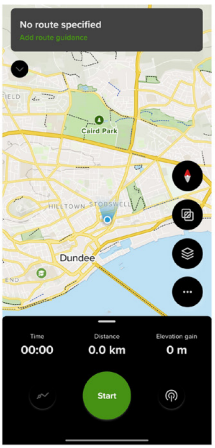
OUTDOORACTIVE



KOMOOT



ALLTRAILS

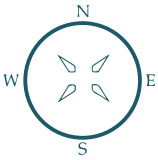


MARK II

The mark two prototype is where I focused more on the form design after refining the underlying task to what it is now, so after deciding that haptics would be the best and most natural way to notify the wearer, then the issue was finding the best position on the rucksack to house the components.

The mark two prototype was also used to showcase the electronic components working individually, as-well as a map for what each response will feel like.

Along side the electronics, was videos of different integrated models exploring different aspects of the device, such as the haptics, and the micro SD card reader.

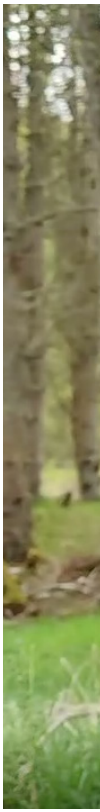


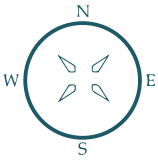
FINAL PROTOTYPE

This is the final prototype showing how it would be used.

It is designed to be as compact as possible without intruding whilst on a walk or hike. The device itself is very discrete despite still looking and combines itself with the neutral colours of nature.

The final prototype is packaged in a eco-friendly and sustainable outer packaging, reflecting when the device would be used and the nature of the environmentally conscious market that it would be sold to.




N
W
E
S

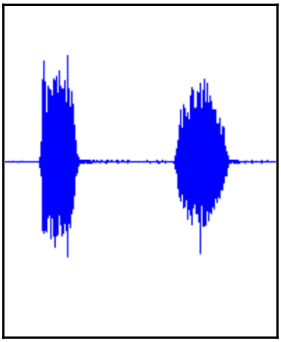
USER EXPERIENCE

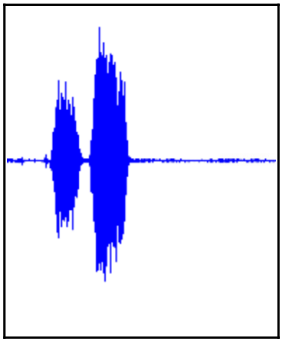
The experience is by far the most important aspect of Compass Companion, and has had to consider many factors to be appropriate for general use without any unnecessary complications. Because of this, I used an iterative approach to experimenting with feedback to the haptics, to gather what works well, and what does not feel as naturally distinctive for each action.

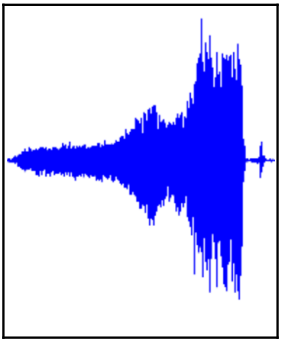
On the right, there was the first map that summarized the feelings attributed to each action that the user would trigger.

However after feedback with different levels of intuition testing, the haptics required some tuning to be more universally identifiable.

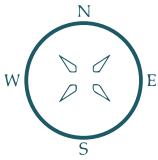
Some of the participants identified that the number of pulses were sometimes difficult to identify due to irregular terrain and were adapted accordingly.







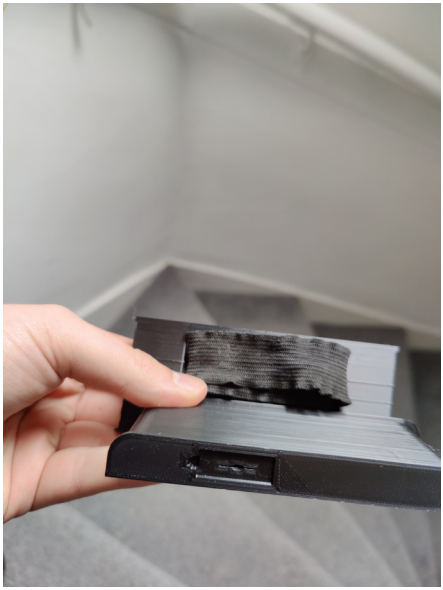
Boot-Up.	Constant buzz - 4 Seconds.
Is micro SD insterted with a readable file?	3 short light buzzez.
Leave of track?	Constant steady pulse/vibration.
Stationary for 30 minutes or more (break).	Small heavy clicks (constant).
Continues track as initiated (every 20 mins)	2 slow long buzzez (pat on back).
Approaching destination (10 mins to go)	Slowly increases invibration intensity.

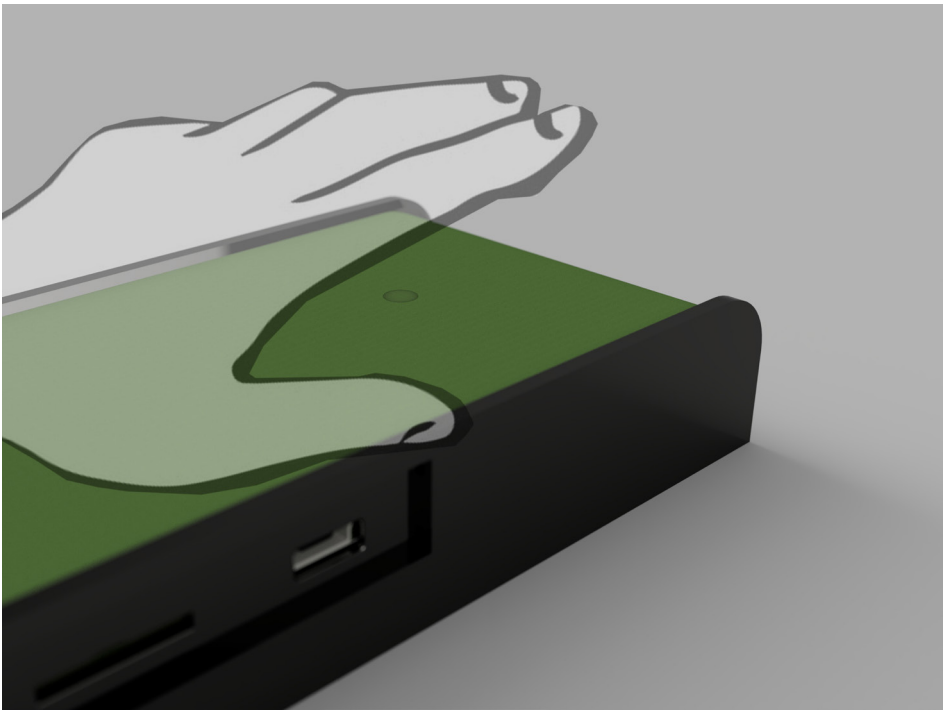


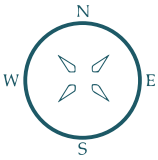
USER EXPERIENCE

In addition to the experience with the haptics, it was also important how the shape and weight of the device would effect the users ability to hike regardless of the feedback. After accurate measurements, I also provided some participants with dummy devices that did not contain any of the electronics required for the final model, however 3D printed Shells that contained the approximate weight of the summation of the electronic components in addition to the micro SD card.

These devices were primarily focused at ensuring the placement was in an appropriate position without getting in the way when walking regularly. Another aspect to look out for was the sizing of the hip pads for different brands of bags.



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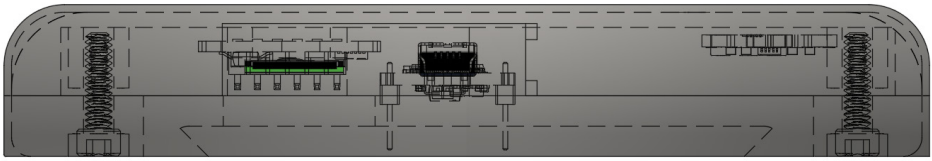
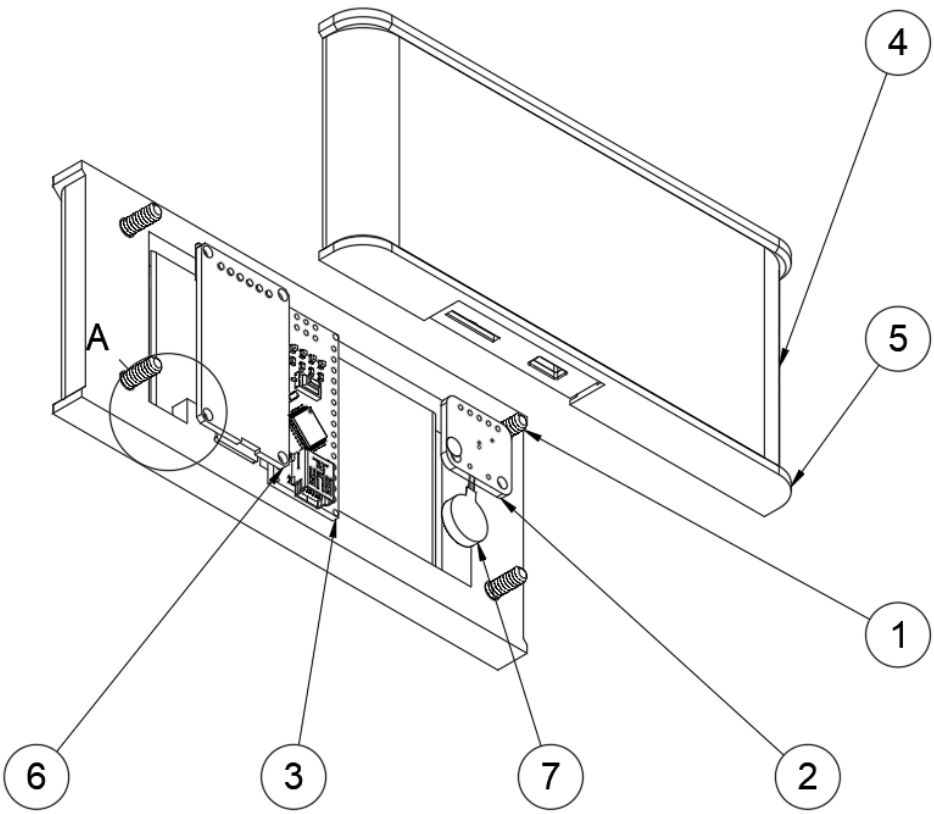
EXPLODED ASSEMBLY



Parts List				
Item	Qty	Part Number	Description	Material
1	4	92562A212	M3 *14	Zinc
2	1	Haptic driver	Digi spark haptic DRV2560L	misc
3	1	Arduino_NANO_CH340	Arduino nano BLE sence	misc
4	1	TOP-FABRIC	waxed cotton	Fabric
5	1	TOP-SHELL	shell and structure for the fabric	Steel
6	1	MicroSD Reader Assembly	PCB- Micro SD	misc
7	1	310-103 Precision Microdrive Haptic Motor	linear resonant actuator (LRA haptic)	misc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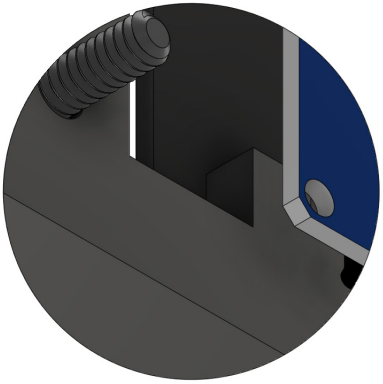


DELIVER.

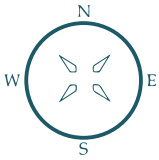
200 WORDS

A BRIEF DESCRIPTION OF THE PROJECT

Covid-19 has acted as a catalyst for many people wanting to continue or improve their mental and physical wellbeing by embracing nature. This has allowed many unexperienced people take up outdoor hobbies like hillwalking as a means of exercising. However, the feedback I have received regarding the social and self-induced pressures can often discourage amateurs, particularly during the map reading and navigation aspects when the others in the group are directly affected.

Compass Companion is a device that notifies hikers when they vary from their pre-planned route whilst encouraging people to engage in more outdoor activities and more confident in their own abilities whilst doing so. Compass companion works as a safety device for those who would rather have confirmation before possibly deviating from the route and would function alongside traditional methods of location identification like maps, whilst incorporating modern technologies like GPS sensors and haptic motors for unique and intuitive feedback.

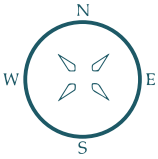
It is designed to provide reassurance to the hiker whilst maintaining a “low tech” approach, distancing it from the typical ping correlated with mobile devices. The use of a multifunction tool like a mobile device can often lead to distraction, which counteracts the positive disconnect of the outdoors.

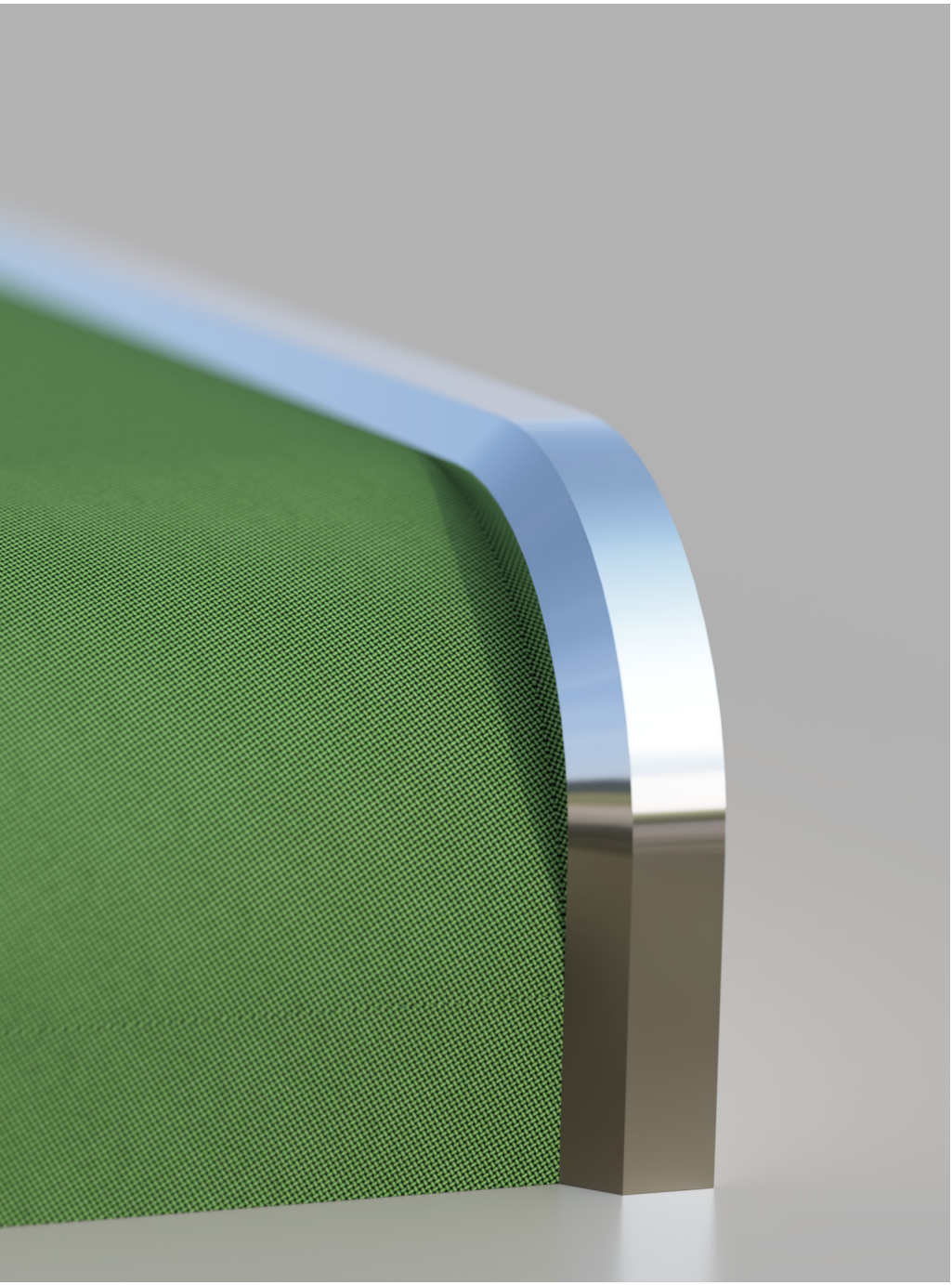



BUZZ
BUZZ
BUZZ

The natural experience.

Here is an advertisement celebrating the true nature of the use case, it is for those who are struggling and want clarification when navigating whilst trying to demonstrate how it can alert the hiker that they have varied from their route without causing an annoyance.Its simple capacitive touch sensor and haptic disc motor provides a much more tactile and immersive experience with added depth than a ping and a switch. The choices used for, materials, colour shape and even the use of electronic components all contribute to the raw and unrefined experience that the user wants. The natural experience.





Reflection

I was particularly lucky in that doing the first lockdown, I received a 3D printer for my birthday that I was able to utilize throughout the project and was able to use for both development and final prototypes. This allowed me to safely 3d manufacture the prototypes within the flat without having to worrying about other problems, because this was my own machine, it also meant that I was able to experiment with shapes and print different levels of experiment prototypes using my own recycled filament.

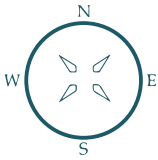
When reaching out to different professionals in the industry, there were a small number that responded or showed interest, I only heard back from a very minute few. I would stress that next time I make sure to promptly talk to as many people about the project as soon as you have a clear idea about what the project will become.

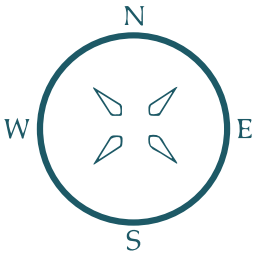
COVID- 19

This year has been the most challenging part of my design life, although the final section of my 3rd year experience was also impacted by COVID-19. This year has had a much more influence on my work flow. Other than the accessibility to materials and manufacturing that the campus provides, I was more surprised at the impression that the atmosphere and studio culture played as part of the early ideas and particularly in the development stages of the design process.

It was because of this that made me feel like I was lacking external influence and idea sparring with classmates regarding different routes I could explore.

In addition, Covid effected more of the develop stage, one of the examples is when gathering user testing data. Regarding the two shell prototypes, they had to adhere to the Covid-19 regulations and were cleaned and left untouched for over 24 hours between users to interact with. Ideally I would of also been able to go on walks with them as a group, being able to describe the process and the deeper aspects of the project. However this was unadvoidable due to the socializing outside rules enforced by the government in this area.





Compass Companion

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