

OpenAir

Life on Land

Overview

OpenAir is a piece of speculative design based on the 'Life on Land' UN Sustainable Development goal. OpenAir provides users with a subscription service for access to purified, clean air in a world that has been overrun by pollution and climate change. Through a wearable filtration device, users can experience what breathing is supposed to feel like; they never have to inhale polluted air again. The filtration device connects to a smartphone application, where the user can monitor how much purified air they have inhaled throughout the day, view the air quality of their environment, and manage their subscription plan. The service offers a choice between three plans, a 'Basic' tier, a 'Premium' tier and an 'Elite' tier. Basic tiers offer users polluted but filtered air, while premium and elite tiers offer users with imported and purified air from unpolluted environments around the globe. The aim of this design fiction is to highlight the potential socioeconomic climate that may emerge from an unsolved climate crisis. It outlines how essential resources like water and energy have been commodified in the current day, applying this to a future in which air is also monetized. OpenAir also exaggerates modern-day subscription culture, where an essential resource like clean air is behind a paywall. The inspiration for this project came from real-world products like the Dyson Zone and Razer Zephyr, other design fictions like the 'Flooded London' series by Squint/Opera, and videogames like Metro Exodus. The design process involved a series of sketches outlining what potential advertisements and the mobile application design may look like. These were iterated upon to create an advertising campaign involving a series of posters and a brochure, along with a small prototype showing the dashboard and subscriptions available on the OpenAir mobile application.

Problem Space

It is no secret that climate change is one of the biggest challenges facing the planet. According to the World Meteorological Organization (2025), the average temperature of the Earth's surface is 1.42°C warmer than it was before the industrial revolution, with the last decade warmer than any previous decade since 1850. One of the main contributing factors to climate change are greenhouse gas emissions, sourcing primarily from the combustion of fossil fuels. Greenhouse gas emissions contaminate the Earth's atmosphere because of air pollution. Air pollution is defined as "the contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere" (World Health Organization, 2026). The common sources of air pollution include motor vehicles, industrial facilities and forest fires. WHO data shows that almost all of the global population breathe air that exceeds their guideline limits. Air pollution is already a public health issue in our present day, with mounting barriers to our access to clean air. Environmental inequality in regard to air pollution is already prevalent, with low and middle-income countries suffering from the highest exposure of pollutants. Richer areas will often have cleaner environments, but poorer communities will experience greater exposure to pollution, proving access to environmental protection is already dependent on wealth. OpenAir highlights this

inequality through providing a monetised service, where customers must pay an expensive sum to gain access to cleaner air.

Wearable technologies are already a prevalent piece of hardware in today's society, primarily with the function of monitoring a user's fitness and health. From smartwatches, fitness trackers, wireless earbuds and more, people are often wearing some form of technology. These wearables can collect data about your health, location and more to summarise your daily activities and bodily functions. People are becoming increasingly dependent on this technology because of its ease-of-use and informational value. OpenAir functions through the use of a wearable filtration device which the user wears on their face. This mask will track the amount of air the user inhales, along with recording the user's location at any given time to monitor the current air quality. This information will be recorded and displayed to a mobile device, much like current day health-based wearables. Subscriptions have become an increasingly predominant method of offering services. From streaming platforms to software-as-a-service products, people have become accustomed to renting access to a product and paying continuously every month. OpenAir exaggerates modern day subscription culture by applying this logic to the very nature of survival itself, where access to clean air is locked behind a subscription service.

Design Context

The design of OpenAir was inspired by a number of examples, the first of which being a real-world product. The Dyson Zone (Dyson, 2023) is a set of noise-cancelling headphones with the added functionality of air filtration. A detachable visor projects purified air to the wearer's neck and mouth, capturing upwards of 99% of particle pollution. This product attempts to tackle the dual challenge of city noise and air pollution. This real-world application inspired elements of the speculative design, such as the wearable filtration device. OpenAir takes this product a step further by providing a more elegant and less invasive aesthetic, while tying the product to a subscription service and data collection. In addition to this product, the Razer Zephyr (Lyles, 2021) was a product created by gaming peripheral company Razer as a result of the COVID-19 pandemic, including a number of features such as ventilation, RGB lighting, anti-fog coating and voice projection. While this product resulted in a number of controversies, including a \$1.1M fine for misleading customers about its N95 grade-filters (Lyles, 2024), its elegant and futuristic design was a source of inspiration for this design fiction, with the Razer Zephyr being used as the representation of the filtration device offered by OpenAir in the fictional advertisements.

In addition to similar real-world products, other pieces of speculative design were used as inspiration for this product. The Flooded London series designed by Squint/Opera (2019) was a series of speculative visualisations first created in 2008, which depicted how London may look in the year 2090, when climate change had left much of the city underwater. These visualisations identify how London citizens may adapt to such conditions, with people appearing happy and relaxed in these depictions. This set of portrayals inspired the thought of how climate change may

impact other elements of day-to-day life. The Flooded London series looks at how rising sea levels may affect people's lives in an optimistic manner, whereas OpenAir looks at the effect of air pollution at a more pessimistic angle. Lastly, the game Metro Exodus (4A Games, 2019) was another source of inspiration for the design concept. In Metro Exodus, the player must wear a gas mask in order to survive the radiation and toxic fallout of Moscow's surface air. This game mechanic inspired the speculative concept by applying this idea to the real-world. Instead of the radiation seen in Metro Exodus, air pollution is the reasoning behind OpenAir's creation.

Illustrated Design Process

As a result of the previous research, the final concept was decided upon. A wearable device that could be bought to deal with air pollution; a design fiction that outlined the extremities of the possible effects of climate change, while tying it to a subscription service to highlight present day issues surrounding essential resources being commodified and subscription culture. Some of the ideation process involved a discussion with ChatGPT, allowing for the conclusion of specific details such as the inclusion of a subscription model and the inclusion of a mobile application. From this, a combination of physical sketches and digital wireframes were created in order to be iterated upon to create a realistic and thought-provoking speculative design concept. The OpenAir app is an important part of this concept, as it showcases the intrusive oxygen intake monitoring and the lucrative subscription plans. Figure 1 shows rough sketches of what the home dashboard and subscription plan pages may look like.

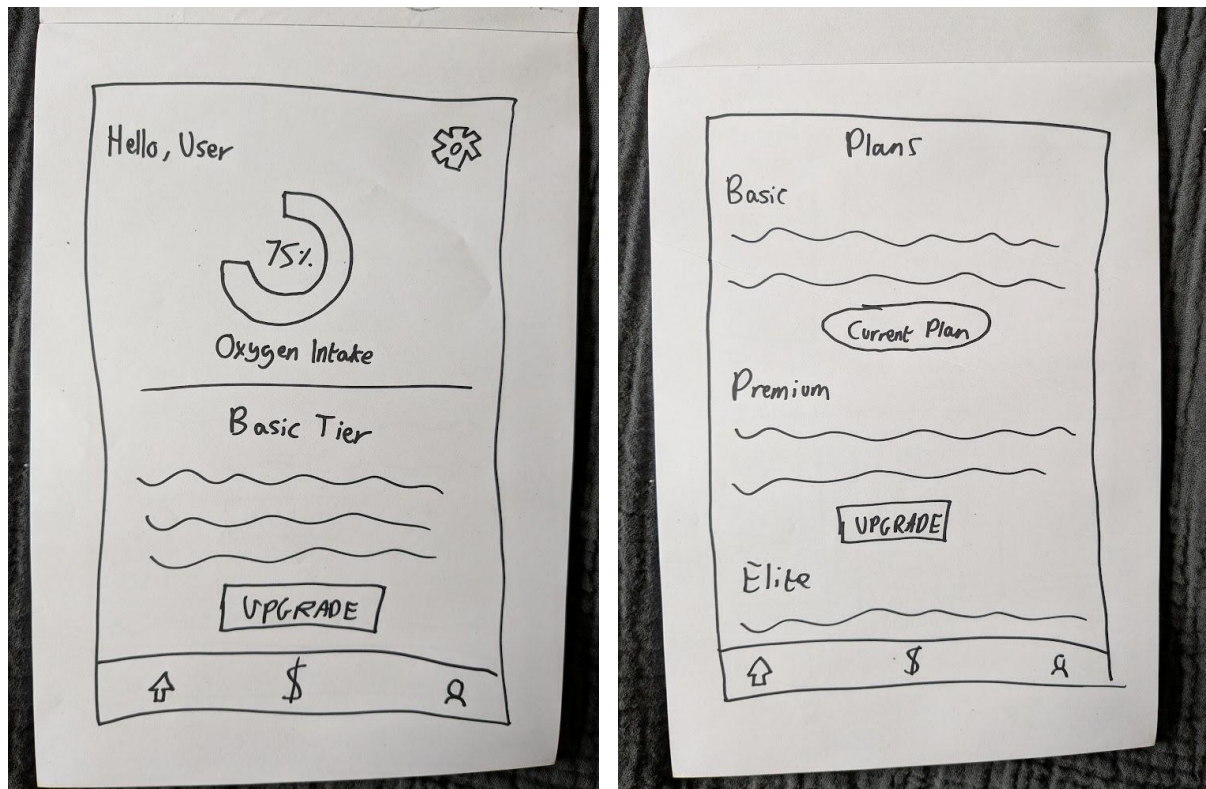


Figure 1. Initial sketches of the OpenAir mobile application.

These early sketches outlined what the purpose of the application will be. It needed to show users their daily oxygen intake, while providing information about their current subscription plan and the different tiers that was available to them. This sketch also outlined the initial layout of the application, while also outlining how oxygen the oxygen intake will be presented visually through the use of a circular progress bar. Figure 2 iterates upon the previous design, providing a digital wireframe of the mobile application.

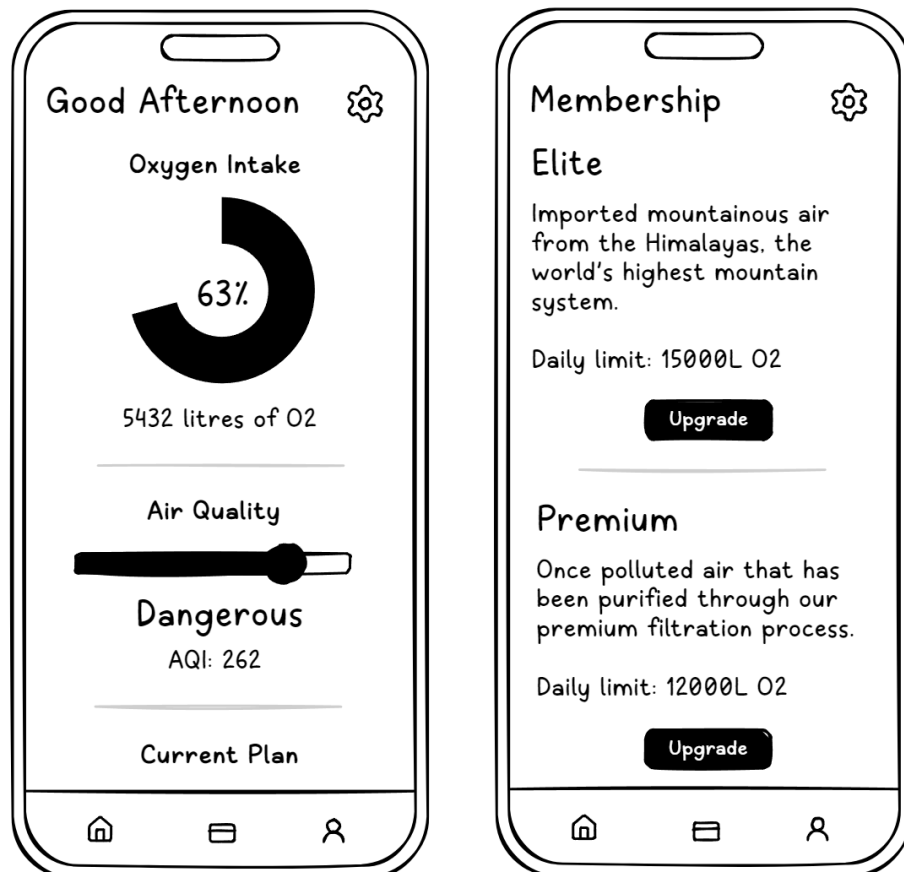


Figure 2. Updated design of the OpenAir mobile application.

This updated wireframe builds on the initial sketches by providing a more visually appealing design, with information being presented consistently, following conventional UX heuristics that are in line with other mobile applications. This wireframe now also features the air quality of the user's environment, in order to present more related information on the dashboard and to outline how the user's location is being tracked in order to present this information. The membership page is also slightly more detailed, presenting a product description for each tier of the subscription plan, along with showing the daily limit of oxygen that the tier gives. In addition to the mobile application, the wearable filtration device needed to be visualised in order to present the speculative design concept. Because of this, a small advertisement campaign was devised. The advertising campaign would consist of a number of posters and advertisements, as well as a brochure. The brochure would need to present the product in a believable and realistic manner, so that the viewer could suspend their disbelief. Figure 3 outlines the potential layout of the brochure and the information that it would consist of.

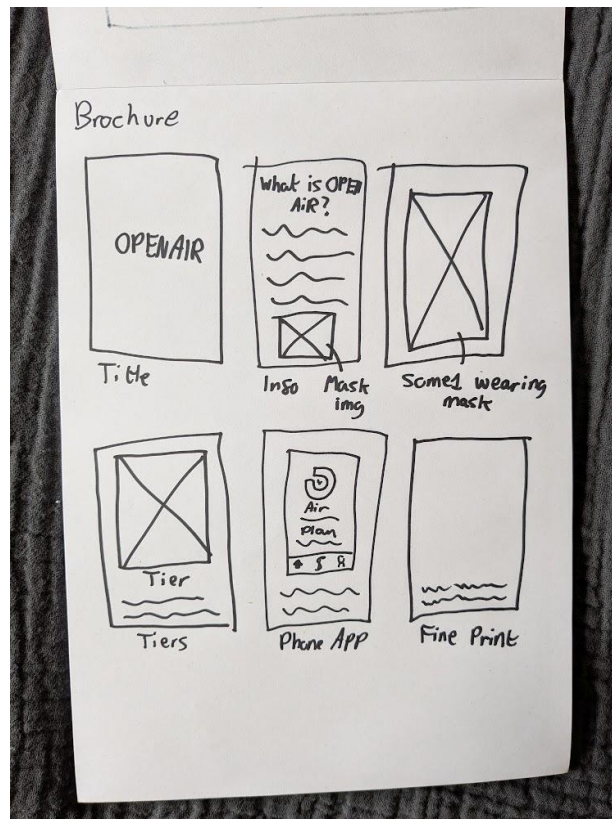


Figure 3. Initial sketches detailing the layout of the brochure.

Illustrated Speculative Design

At the end of the design process, the final speculative concept was created, including a series of advertisement posters, a brochure, and a mobile application prototype. Figure 4 shows a collage of the advertisements made for the design concept.

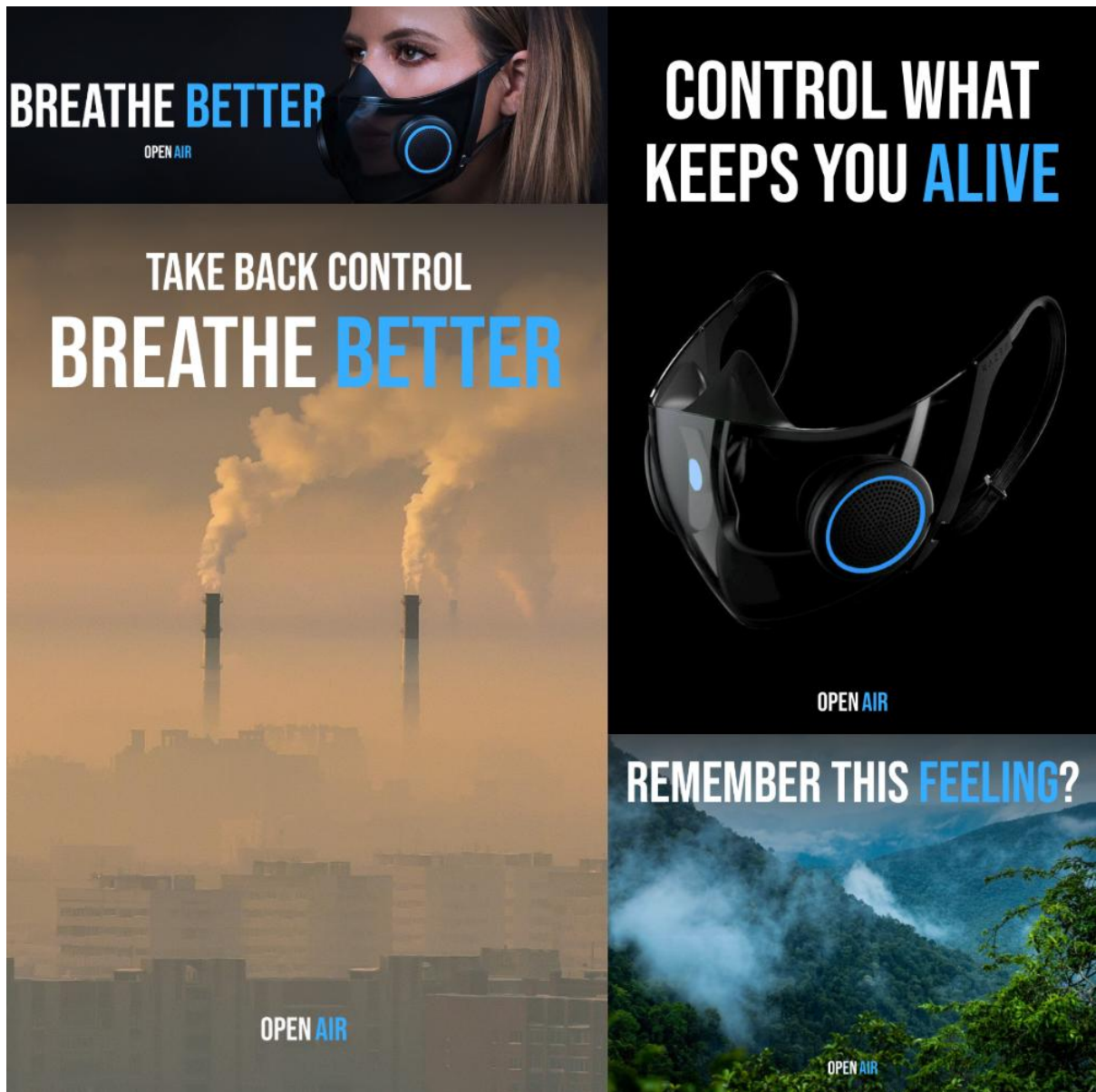


Figure 4. Collage of OpenAir advertisements.

The four advertisements displayed above all feature a slogan in relation to the image or the brand of OpenAir. Each of the advertisements feature a slogan, an image showcasing the product or the environment, and the OpenAir logo. For the image on the top left, Adobe Firefly was used in order to extend the background of source image and to select the subject in order to make a slightly more aesthetically pleasing advert. In addition to these advertisements, a brochure was created. Figure 5 shows selected pages from the brochure.



Figure 5. Selected pages from the brochure.

The brochure features a consistent design that gives key information about OpenAir. The brochure provides information relating to the purpose of the service, the appearance of the wearable filtration device, the different subscription tiers available for purchase, the appearance and functionality of the mobile application, and additional fine print about the service itself. Lastly, a mobile application that pairs with the wearable filtration device was created and can be seen in Figure 6.

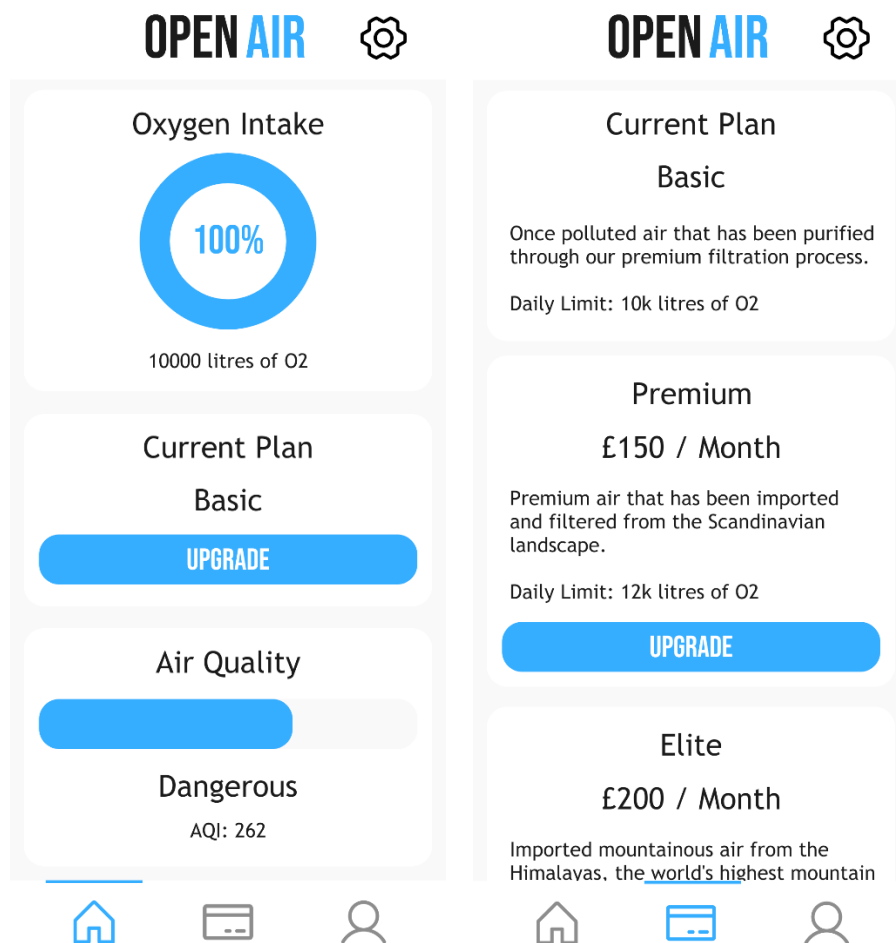


Figure 6. OpenAir mobile application prototype.

The application design builds upon the sketches and wireframes to deliver a visually appealing and realistic prototype that follows conventional design trends. The user can see the amount of oxygen they have inhaled through a circular progress bar, their current plan with a button to direct them to the membership page, and the current air quality of their environment. The membership page includes a description about each tier, the monthly price, and the limit of oxygen.

Justification

The choice of an advertisement campaign was done to effectively deliver a believable speculative design fiction that could be portrayed in the real world. The posters have been made in order to convey the feeling of a premium and plausible product, while also highlighting an uncomfortable side, such as with slogans like 'control what keeps you alive.' The poster showcasing the filtration device should immediately convey to the viewer about how the design concept works. The other posters showing a polluted sky and a rainforest along with the associated slogan have been made to convey how the design fiction's world will have changed from the present day. However, the posters on their own would not be enough to give enough context about the design concept. Because of this, a brochure was made in addition. The brochure has 10 pages outlining information about the design concept, the subscription tiers and the mobile application. The brochure features a number of images and descriptions to sell the viewer on the concept and provide contextual information. The information page shows a full image of the filtration devices, detailing how the use of them will improve the user's lifestyle. Each of the tiers of the subscription have their own page, with the image in the background becoming more aesthetically pleasing each time. The basic tier features a golden-hour photograph of pollution emitting from a factory, still portraying it in a positive manner but outlining the limitations of this level, such as with 'polluted but filtered air'. The premium tier portrays a photograph of the Scandinavian landscape, along with a description that builds upon the basic tier, outlining the additional improvements that a user would acquire. The elite tier page has the most visually appealing image with a photo of a Himalayan mountain, describing how this tier is the best of all and the 'obvious' decision for customers. From this, a view of the mobile application is shown from a template in order to convey that this product could possibly be real. The next page offers a description of the features from the mobile application. An additional page is provided detailing some of the fine print of the service, detailing how OpenAir does not guarantee an uninterrupted service, along with how it collects data and the requirement for an active network connection. This was included to again portray the uncomfortable and disturbing side of the service, very much outlining how the user is not in control of what they are purchasing. The advertisement campaign, including the posters and brochure, feature consistent theming and branding, again to convey a plausible design concept.

Lastly, the mobile application prototype was created in order to show how the interaction between the filtration device and the user's smartphone would function. A conventional mobile aesthetic was chosen that incorporates the colour scheme from the advertisements, as to deliver a consistent branding across all elements of the

design. The app features a dashboard and membership page for easy access to important information about the user's oxygen intake, as well as to highlight how the service is subscription-based. The oxygen intake was added in order to add more value to the subscription tiers in addition to the various levels of the imported clean air. The air quality level was added to display more related information to the dashboard, as well as to highlight how much worse the level of air pollution is in this design fiction. The membership page shows all of the plans with related descriptions and prices. It was important to make these subscriptions expensive as to highlight that the intended audience for this product would be on the wealthier side in order to outline the consequence of wealth inequality. The prototype video shows the user upgrading their membership from the 'Basic' tier to the 'Premium' tier, showing the easy process of this change and the information being updated on the dashboard. This interaction was shown as to detail how a user may interact with the application, and to view how easy it would be for a user to upgrade their plan.

(Word count: 2578)

Bibliography

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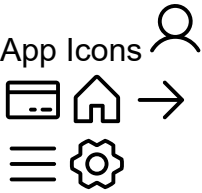
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Declaration

I hereby declare that the use of Adobe Firefly and ChatGPT to support the creation of the advertisements, as well as the use in ideation for specific elements of the speculative design concept.

Copyright Appendix

Description of Asset	Source	Location on prototype	License / Permission
Main font	https://www.dafont.com/bebas-neue.font	Across all advertisements, brochure and mobile application prototype	Public Domain
Razer Zephyr with black background 	https://techthelead.com/wp-content/uploads/2021/01/CE-S-2021-Razer-mask.jpg	Poster 1 and brochure	Used under Illustration for Instruction principle.
Woman wearing Razer Zephyr 	https://c.files.bbci.co.uk/D42F/production/_116491345_screenshot2021-01-12at16.03.54.png	Banner Ad	Used under Illustration for Instruction principle.
White and black Razer Zephyr with white background 	https://www.trustedreviews.com/wp-content/uploads/sites/7/2021/01/chromaMask_stills_BnW_compChroma_v004-e1610375627425-820x461.png	Brochure	Used under Illustration for Instruction principle.
App Icons 	https://phosphoricons.com/	Mobile application prototype across all pages	MIT License
Larger image of woman wearing Razer Zephyr 	https://i.pcmag.com/imagery/articles/01J0FnJ1PZUFha2VbuRFFem-1..v1623755227.jpg	Brochure	Used under Illustration for Instruction principle.
Golden-hour pollution image	https://pixabay.com/photos/industry-sunset-pollution-dusk-1752876/	Brochure	Pixabay Content License

			
River flowing waterfall image 	https://pixabay.com/photos/river-flowing-waterfall-nature-8279466/	Brochure	Pixabay Content License
Himalayan mountain peak 	https://pixabay.com/photos/ama-dablam-snow-mountain-peak-2064522/	Brochure	Pixabay Content License
Phone template 	https://uk.pinterest.com/pin/13581236385412505/	Brochure	Used under Illustration for Instruction principle.
Phone template 	https://uk.pinterest.com/pin/mockups--20969954510548643/	Brochure	Used under Illustration for Instruction principle.
Pollution image 	https://blogs.worldbank.org/content/dam/sites/blogs/img/detail/mgr/shutterstock_1040255047.jpg	Poster 2	Used under Illustration for Instruction principle.
Rainforest image 	https://onetreeplanted.org/cdn/shop/articles/rainforest_animals_3a191733-70a3-4567-9714-	Poster 3	Used under Illustration for

	25bcc2d333ca_1504x.jpg?v=1701359259		Instruction principle.
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