

Final Project Work

Design proposal for Gerrard Street

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Abstract

This research aims to understand and analyze the headphone subscription-based service offered by Gerrard Street, a startup founded in the Netherlands in 2016, to identify opportunities to improve or expand their service offering.

The project started by exploring the users' experience of the service, the market and the competitors, and trends in the headphones industry. Then, primary research was conducted to further understand the users' experience and what some key pain points or opportunities are. The findings were then organized and analyzed to identify opportunity areas. Finally, a solution was designed through ideation, conceptualization, and prototyping.

Four key insights were identified through the research, the biggest challenge being the perception of the subscription service in the long term. Several themes of improvements were identified after ideation, and two main ideas were prioritized based on their impact on the business and consumer. The final solution integrates a customization platform leveraging Gerrard Street's modular design; and a digital interface (through a mobile application) to personalize and improve sound quality, leveraging AI to learn and provide modifications based on preferences, activity, and environment.

Through these solutions, Gerrard Street can offer a more engaging service. Users can tailor their headphones to their specific and evolving needs and can continuously interact with the brand through the personalization app. Gerrard Street will create a better feedback loop with its users, understanding how people use headphones. It will increase their user lifetime value and satisfaction and will be able to target a larger audience. Overall, the subscription service value is improved and allows Gerrard Street to have an edge over new competitors in the market.

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Introduction

Electrical and electronic equipment (EEE) is essential to our everyday lives. It includes a wide range of products present in almost every household or business, such as kitchen appliances, toys, computers, televisions, and mobile phones.

While EEE benefits our lives, the waste it produces, also referred to as e-waste, constitutes a major environmental issue with many hazardous and toxic materials that contribute to air, water, and soil pollution (UN Environment Programme, 2015). According to the UN's E-waste monitor 2020, in 2019, the world generated 53.6 Mt of e-waste, out of which only 17.4% is formally collected and recycled.

Gerrard Street is a startup founded in 2016 in the Netherlands. Their goal was to offer high-quality sound while reducing e-waste. They achieve this by building headphones that are modular in design and offered through a subscription, so that old or defective parts can be easily replaced or reused. These two models, modular design and creating a service around a product, help contribute to an economic model called the circular economy, where no waste is produced, where materials are in constant use, and where each system helps each other thrive (Ellen McArthur Foundation, 2012).

This research aims to explore Gerrard Street's service and the headphones-as-a-service offering in general and detail the design process followed to find opportunities for improvement and ending with the design of a service concept and prototype.

Methodology

This section details the activities that were carried out during the research phase to explore the headphones industry, audio trends and technology, and Gerrard Street's offering and experience, with the purpose of finding insights to drive the design process.

Secondary research

To better understand the context in which Gerrard Street is competing, the research phase began by analyzing the headphone market. An exploration was done to find direct competitors to Gerrard Street, meaning other headphones-as-a-service services. The purpose was to gather information about what is happening in the headphones-as-a-service industry in terms of service and innovation to drive the design process and understand positive and negative attributes, touchpoints, and business models. One direct competitor was found, called NuraNow.

Research was also done to discover trends in the headphones and audio industries. The purpose of the activity was to identify future innovations where Gerrard Street can participate, in order to remain valuable to consumers in a market with many alternatives and choices. It would also help understand where Gerrard Street stands in respect of the competition.

Information was gathered from industry experts to understand where the market was moving towards concerning innovation. Several articles and websites by technology, audio, or headphone experts were analyzed. Qualcomm, a technology company, developed a report called "State of Play Report 2020" that includes insights based on 5,000 consumers from the U.S., U.K., China, Japan, and Germany. It provides an overview of user behaviors and desires regarding consumer audio. The details of the sources can be found in [appendix 1](#).

Focusing more on Gerrard Street's service, an analysis of the users' perception towards the service was done to discover pain points or struggles users may be having. The analysis was done by exploring over 150 reviews left by users in Google and Trustpilot.

Some initial discoveries made through the previous activities suggested a lack of interaction between Gerrard Street and the user. This was an opportunity for improvements in the service. To find opportunities for Gerrard Street, other circular, modular, or product-as-a-service companies in different industries were identified. Understanding the offering of such companies, like Swapfiets and Fairphone, was useful for the context of the study.

Primary research

First and foremost, it was necessary to understand in more detail what the experience of the service offered by Gerrard Street was. Understanding the users' experience for the direct competitor, NuraNow, was also of interest for this project. In addition to the above, after concluding the secondary research, some opportunity areas had emerged that provided an interest to further develop with primary research: the opportunity to enhance the service with better interaction with the brand and the opportunity to improve the listening experience through innovative technology.

To further gather information on the topics mentioned previously, an online survey was developed. The survey contained 20 questions and covered headphone usage, headphone experience, headphone technology, and headphones subscription. The first topic refers to when and where the headphones are used. The second topic details the experience and interaction the user has had with the headphones. The third explores the interest in new headphone technology. Finally, the fourth briefly discusses headphones subscriptions to understand any barriers with the service.

The survey was shared with general and enthusiast users. The survey was shared in several headphones, audio, or technology communities for the enthusiast users, as shown in table 1.

Community	URL
Head-Fi	www.head-fi.org
Audioholics	www.audioholics.com
The Headphone Community	www.forum.headphones.com
AVForums	www.avforums.com/
/r/Headphones	www.reddit.com/r/headphones/

Table 1: List of communities where the survey was shared.

The survey was also shared in social networks such as Facebook and LinkedIn to gather more casual users' insights.

The survey collected the responses of 74 users from across the communities and platforms.

Then, to further dive into the experience of headphones-as-a-service users, in-depth interviews were planned with Gerrard Street and NuraNow users to gather quality insights on their experience, likes, and pain points of using the services. The method used was a 45-minute semi-structured interview, and it discussed the themes of general headphone usage, experience with the service, likes and dislikes of the service, interaction with the brand, and technology interest. See [appendix 2](#) for the full questionnaire.

NuraNow users were recruited through an online community of users of the brand, Nuraphone. As for Gerrard Street users, they were recruited from online communities of The Netherlands. The details are specified in table 2.

Community	URL
Nuraphone	http://reddit.com/r/nuraphone/
The Netherlands Free	https://www.reddit.com/r/TheNetherlandsFree
The Netherlands	https://www.reddit.com/r/thenetherlands/
Amsterdam	https://reddit.com/r/amsterdam/
Rotterdam	https://reddit.com/r/rotterdam

Table 2: List of online communities where recruitment for the interview was posted.

In total, four users of NuraNow and two users of Gerrard Street participated in the interviews.

An additional survey was created for NuraNow users who could not participate in the interviews but were willing to share their experiences. The survey contained 15 questions and covered headphone usage, experience with the subscription, and headphone technology. In total, 16 responses were collected.

Service context

It was essential to gather a deeper understanding of Gerrard Street's service and the market in which it is competing. This section details their service offering and explores the headphone-as-a-service and headphone market.

Gerrard Street

Gerrard Street is a high-end headphones subscription startup founded in 2016 in The Netherlands by Dorus Galama and Tom Leenders. The founders were themselves music lovers but saw themselves breaking headphones often, contributing to the e-waste generated. Dorus Galama says, "I break headphones two to three times a year," and that throwing headphones is "a huge waste" (Bota, 2019). This situation motivated the couple to create headphones that were modular in design.

Modularity is a design principle that enables companies to separate a product into its parts to remanufacture and repair product components (European Environment Agency, 2017). Modularity allows Gerrard Street to offer properly working headphones at all times, as they can replace any broken part with ease. It also helps Gerrard Street contribute to the circular economy as they are producing less waste and keeping their headphones in circulation as long as possible.

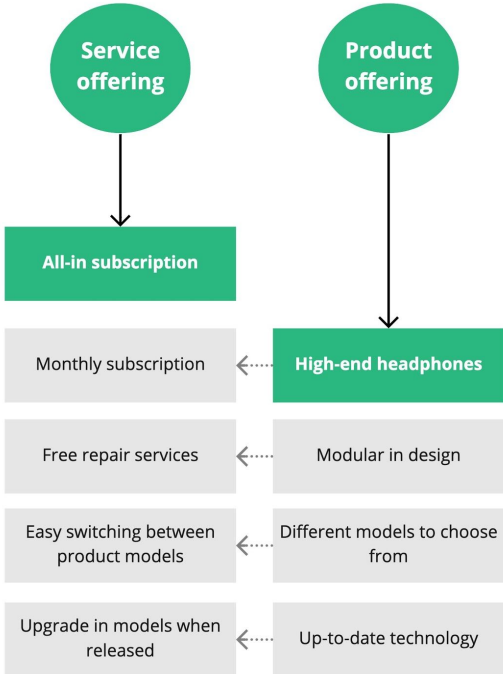
Modularity facilitates not only repairability, maintainability, and recyclability but also upgradability (Rombouts, 2020). The latter allows companies to increase and tailor their products' performance by changing parts in their products. This is being taken advantage of by other product-as-a-service companies, such as Fairphone (Fairphone, 2021). While Gerrard Street is not currently offering upgrades, it is an opportunity that will be explored in this research.

Gerrard Street headphones are offered through a subscription plan. Consumers pay a monthly fee that includes the headphones and free repairs and upgrades. This is a circular business model called Products-as-a-Service (PaaS), which replaces a traditional "buy and own" model and where products are used and shared by one or many customers (Accenture, 2014).

Gerrard Street designs high-end headphones comparable to brands such as Bose, Sennheiser, and ZMF, to name a few. This makes the subscription plan an accessible way for consumers to acquire headphones with high-quality sound and design.

Gerrard Street currently offers three headphone models: the DAY, a wired option; the BOSS, the wireless model; and the PRINCE, the noise-canceling headphone. Consumers can quickly switch between models or request repairs through their accounts.

Gerrard Street's business model is supported by its innovative product design (as shown in graphic 1). Dorus Galama says: "you can't run this model currently with a very cheap product. [...] at [a low] price point people would rather buy." (Metabolic, 2019). Also, the modularity allows offering free repairs in a cost-efficient way for the company while contributing positively to the environment.



Graphic 1: Gerrard Street’s service offering made possible through their product design.

Gerrard Street has created an attractive product-as-a-service model, but there are still some challenges to overcome as with any startup. Galama speaks of the difficulty of creating a 100% circular product, but the most challenging problem comes from getting customers (Metabolic, 2019). People are used to buying headphones, and “leasing leaves a bad taste with many people.” Galama mentions that subscriptions are seen as unfavorable because they are not valuable and that companies use them to get more money. This, as will be discussed in later sections of the report, is one of the main challenges to consider for the solution.

Competitors

A brief competitor analysis was done to identify and evaluate other headphone brands. The market is very fragmented, with not a few but many competitors such as Bose, Sony, Sennheiser, and Beyerdynamic, among others. These brands sell products but do include some services as part of their offering. Most brands offer repair services or parts replacement (both under warranty), have a buyback program in place, and have different communication channels to support their users and potential customers.

While many high-quality headphone brands exist, only one other company was found to offer headphones-as-a-service: nura.

NuraNow

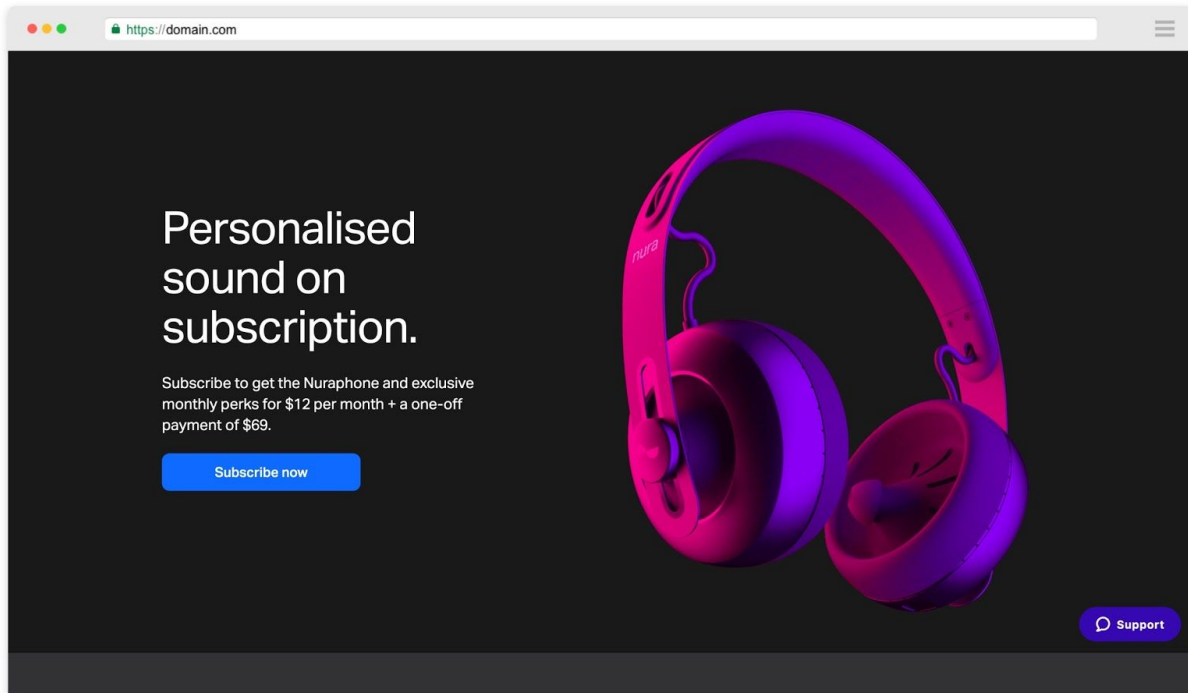
Nura is a consumer electronics company founded in 2016 by a medical doctor and hearing scientist, Dr. Luke Campbell, and an electrical engineer, Dr. Dragan Petrovic. Nura has developed a proprietary technology that measures otoacoustic emissions or sounds produced by the inner ear when responding to a sound (ASHA, 2021), to personalize audio to a person's unique hearing.

Nura has developed two products where this technology is included: the nuraphone, a pair of headphones released in 2018, and the nuraloops, an earphone developed in 2019.

While these products can be directly purchased, nura has also developed a subscription service called NuraNow, available in the United States of America, the United Kingdom, and Australia. Through this service, consumers can access the nuraphone headphones via a monthly subscription and receive additional benefits such as free repairs, a new device every year, a free high-quality cable, discounts, and giveaways.

The products come with a mobile application that allows users to create their unique profile and control additional features, like immersion (bass level) and noise-cancelling. The headphones do not work without the application for subscription users, as they need to be validated to belong to a subscription; else, the headphones are disabled until the subscription is reactivated or the headphones are returned.

Nura has partnered with many experts to market its headphones, creating many reaction videos and collaborating to create articles and regular content in their blog.



Graphic 2: NuraNow, the headphone-as-a-service offering by Nura.

Trends in the market

One of the key trends for audio relates to personalized audio. This means using technology to adapt sound to the user's hearing ability, and can extend to include their preferences and environment. Several applications exist offering this service, creating tests where users listen to different sounds in different decibels and sounds and frequencies are adjusted automatically. Other companies also offer a more sophisticated service, where sound is also enhanced in terms of clarity and detail.

A second trend identified is, context-awareness. This trend would allow headphones to recognize the context where the user is at, by listening and identifying the sounds coming from the environment, and provide enhanced features such as audio augmentation, automatic enabling or disabling of features, among others.

AI is a key factor for both trends, and can be further used to enhance the listening experience, by better filtering out noise or measuring and tracking fitness data to provide users with valuable information.

Bio-materials are another direction for headphones. Sustainability is a big topic gaining more interest from users, and influence headphone design and production. Other trends are seen regarding how headphones are controlled, like using gestures or voice to change settings and control music.

Use cases for headphones are also changing. While headphones are mostly used for listening to music, more and more users are using headphones for gaming.

Finally, it is important to note that quality has continuously been the number one purchase driver for headphones, so offering solutions that enhance this aspect would be perceived better by consumers.

Key findings

The main findings of this study are described and summarized in the following section.

Analysis

After concluding the survey and interviews, the information was organized and clustered using a synthesis wall in order to find patterns and insights. Additionally, a customer journey map was developed to visualize the experience of the service from awareness to offboarding (See [appendix 3](#)). The 'use' phase of the journey is the one where the most pain is experienced by the user, and therefore the one with more opportunities for developing solutions. The analysis of the information gathered is detailed in the next section, and then summarized in four key insights.

Usage

From the survey, we understand that the most given usage to headphones is for 'Listening to music,' with 97.2% of respondents selecting this reason, and 'Watching TV/movies/videos,' with 62.5% of responses. 'Voice calls / Video calls' and 'Gaming' also represent a significant use for headphones, with 47.2% and 41.7% responses, respectively.

This data correlates to the one found in the "State of Play Report 2020", and a similar pattern emerges from the interviews.

The setting in which headphones are mostly used is at 'Home,' where 100% of respondents specified they used their headphones, followed by 'Work/Office' with 48.6% responses. 'Outdoors,' 'Public Transport' and 'Airplane' also represent significant settings with 36.1% responses for the first two and 30.6% for the latter.

From the interviews, reasons why some users do not use the headphones on certain occasions are identified. For one user, the headphones do not work for gaming, as the bass is overpowering. The mic does not produce quality sound for a couple of users, so they avoid using the headphones for gaming or voice calls, or video calls. A couple of users also mentioned not wanting to use the headphones when commuting, as the noise-cancelling feature does not let them hear what is happening outside.

Most of the respondents have been using their headphones for over two years, with 66.7% responses. The respondents use over 15 brands of headphones, the most widely used being Sennheiser with 40.28%, followed by Sony (20.83%), ZMF (11.1%), and Bose (11.1%).

Users from the interviews have had their headphones mostly for around a year, a couple of users for 2-3 months.

Discovery of the service

In the interviews, users were asked how they first discovered the service and their first impressions. Users heard about the service from recommendations from friends or advertisements or videos online. For Gerrard Street users, the circular and sustainable proposal stands out, while for NuraNow users, musicians' reaction was what stood out the most.

Satisfaction with the service

In the survey, the respondents were asked about their satisfaction with the service of their headphone brand. Almost all feel satisfied with the service being offered, with 16.6% users feeling neutral about the service (scores of 5 - 6 out of 10), 36.1% feeling satisfied (Scores of 7 - 8), and 45.8% feeling greatly satisfied with the service. When asked about their answer, we can identify two main reasons for the scoring. The first is that users have not interacted with the service besides the use of the product, so the scores are either neutral or positive. The second, because of good experiences with technical support for repairs, getting replacement parts, or questions. This finding is validated in the next question about interactions with the brand, where 66.7% had not had interactions with the brand after purchase, and out of the 33.3% who had, most experiences came from repairs.

From the review analysis of Gerrard Street, the ratings are very positive, averaging 4.63. While most of the reviews speak of the headphones' quality, some comments also mention a positive experience with the repair service included and communication with the company. A few reviews also speak to the fact that they have never had to repair their headphones.

From the interviews, users are generally satisfied with the service. Only two users have had to contact customer support and repair their headphones during their experience. From the additional survey done to NuraNow users, 87.5% of users have not had to repair their headphones.

For Gerrard Street users and other headphones brands, the service is mostly experienced through repair services or customer support. For Gerrard Street, this becomes a problem, as that is their primary offering with the subscription service. Users speak to the headphones' durability, so repairs do not often happen or, in some cases, ever. This scenario leads to users not seeing the subscription value, as it will be developed deeper in the next section of this analysis.

Experience of the subscription

Users interviewed were asked about their experience and perception of the subscription itself. Regarding the subscription's positives, most users mention that the subscription is easier to get due to the lower entry barrier than the upfront cost of buying high-end headphones.

Other positives of the subscription are getting free repairs for as long as they are paying for the subscription, being able to cancel the subscription at any time, and being up-to-date with the latest technology. Especially for NuraNow users, the subscription is more valuable because it offers more than just the headphones, but other benefits such as software updates, discounts, and giveaways. For Gerrard Street users, the subscription is also seen as a positive due to its impact on the environment.

When speaking of the negatives of the subscription, the only concern is also about the pricing. While a subscription costs less upfront than buying the headphones, subscriptions are seen as expensive in the long term. This is especially true for Gerrard Street users and NuraNow users who are not interested or aware of the additional perks.

The finding is also corroborated from the survey. The respondents were asked about headphone subscription. The majority (88.9%) have not heard of such a service, and when asked about their interest in it, there is some interest in trying it out (58.4%), while others would not want to try it (41.7%). Some of the comments about not trying the service are regarding the subscription itself, and the dislike towards them, or not seeing the need for regular repairs.

Users from the interviews were asked about what would make the service better or more interesting for them. Users mentioned discounts tailored to their interests, upgrading parts of the headphone (as different modular services such as Fairphone or Swapfiets), getting new or better accessories, or partnerships with other music services are currently using (such as Spotify or SoundCloud).

In conclusion, subscriptions offer a lower entry barrier for all users. However, the benefit is perceived differently in the long-term depending on how valuable the additional services are for the user.

Headphone and audio technology

In the survey technology section, respondents were asked about their interest in headphones and audio technology. 77.8% of the respondents are highly interested in technology, with scores of 4 and 5 out of 5. From the additional NuraNow subscription, 93.8% of respondents are highly interested in technology.

From the interviews, users were also asked about their interest in headphones and audio technology. Most interviewees mentioned an interest in technology, learning about news from sites they follow or youtube, and sharing and discussing news with friends. A couple of users mentioned interested in following the headphone brand to learn news and updates about their services and products. When discussing software updates for other tech products they own, most mentioned interest in always being up-to-date but without going into the details.

From the desk research, six specific trends about headphone technology emerged (see table 3), and users from the survey were asked about their knowledge and interest in them.

Technology / feature	Description
Sound personalization	Every person hears sounds and frequencies differently, even from each ear. With this technology, the headphones can recognize your own way of hearing and deliver personalized audio for higher quality sound.
Context-awareness	With this technology, headphones can recognize the context around you, and decide to block external sounds or to let them in. Eg: better reduction of background noise or let some sounds in, like voices or a car horn.
Voice UI	This feature allows you to control your headphones with the sound of your voice.
Live language translation	The headphones can listen to audio, voices or prerecorded sources and deliver a translation in real time from another language.
Wireless charging	Allows you to charge your headphones without the need to plug them in, usually through a charging dock.
Gesture UI	This feature allows you to control your headphones through gestures, like nodding or shaking your head.

Table 3: List of technologies discovered in desk research and asked about in the survey.

The features that show the most interest are Context-Awareness (55.6%), Live language translation (51.4%), and Sound personalization (48.6%).

In the interviews, users were asked about sound personalization and context awareness. All users were interested in sound personalization, and they perceive it as an upgrade to sound quality. Users mentioned liking the idea of having some control over the feature but having the headphones make suggestions or recommendations on the changes. Users like the idea of having different profiles for the different uses they give their headphones (gaming, music, or movies).

For content awareness, some users find the value, especially those who did not use their headphones outdoors or to commute before, as they wanted to hear sounds from outside.

Insights

From all the data gathered through the desk research, surveys and interviews, and after the analysis, some key insights can be identified.

Users don't perceive the value of subscriptions in the long term

A subscription model is an excellent way for most users to test the headphones without risk. However, when considering using the headphones for the long term, the users begin to question whether it is better to stop the subscription and buy headphones instead.

Many users perceive the subscription service as the headphones themselves, which is a communication barrier that needs to change to make the subscription valued more in the user's eyes. As seen with NuraNow users, some were not aware of the additional benefits of acquiring the subscription. For Gerrard Street users, unless the headphones are often breaking, the repair service is not enough.

“The costs start to rack up. If I've got these headphones for like two years, I have paid a very, very large sum of money for them. I am not sure whether they are worth that kind of money.”

Quote from an interviewed Gerrard Street user.

Users want updates for the best and latest technology

Through the interviews, users stated they did not consider themselves experts or were highly invested in headphone or audio technology, only having an “amateur interest” and learning about news casually while browsing the internet. Still, many users expressed their interest in the topic, considered themselves tech-oriented, and wanted to be updated with the latest technology.

Users also mentioned wanting to learn what the company is working on next and getting communication from them (as long as it is in their interest).

“This was a new feature, it was part of an update. [...] You can choose not to install it. I choose to update it because I like to be updated with everything.”

Quote from an interviewed NuraNow user.

Headphones are a piece of hardware technology that can be updated; however, for Gerrard Street, this has only been done twice: once to upgrade their first model, the BIRD, for which users received the new model for free (van Gestel, 2019), and when a new noise-cancelling line was launched. For users, this is a benefit of the subscription but is not something that feels tangible because it does not happen often.

For some NuraNow users, technology updates happen more often as they upgrade the hardware and have software embedded in the headphones, which can be updated more frequently without swapping the headphones.

Technology, in the form of updates to the product (hardware or software) or communication, is valued by users and can drive a better experience and perception of the subscription service.

“I like the subscription because I can get a new model if or when it gets released [...] that’s an important reason why I chose this.”

Quote from an interviewed NuraNow user.

“I would be interested to know what they are working on [...] but on the Gerrard’s Street website there are not any articles. They do have social media but I don’t think they have been posting about that [...] I don’t know if they are going to release anything new.”

Quote from an interviewed Gerrard Street user.

AI to augment the listening experience and expand usage

Headphones are used most often at home. While some users do use them to commute, some express concerns about not listening to cues when walking or cycling outdoors or mentioning the situation of missing people talking to them and having to choose between music or interactions.

Most high-end headphones already have microphones on the outside to provide noise-cancelling features (Furseth, 2017); however, AI can further develop this technology by identifying the sounds from outside and enhancing the ones that matter, and silencing the ones that do not.

AI would expand the context in which the headphones are used, giving users the ability to use them where they usually could not and potential users to use them where they want, all while improving the sound listening experience.

“When I am walking with my son I want to be able to hear what is happening outside. [Context awareness] would give me more flexibility on how and where I use [my headphones]”

Quote from an interviewed NuraNow user.

In addition to that, people hear pitches and frequencies differently than others, even from each ear. Aside from hearing sounds differently, people also have different tastes regarding what kind of sound they like. Headphones also sound different from each other and are used for varied activities, such as gaming, listening to music, drumming, and streaming movies. In short, the listening experience can be very personal, yet audio is built to appeal to an average audience and usage.

AI can create a more personalized experience by understanding how people use their headphones and understanding how people's ears receive sound (ASHA, 2021).

"I don't hear [high pitches]. I have never ruined my hearing with loud music but I still don't hear those sounds. For me it would be incredible to be able to hear high frequency sounds."

Quote from an interviewed Gerrard Street user.

"[The headphones] don't work as good for games, [...] the bass is really deep so when you are playing games other tones get overpowered."

Quote from an interviewed NuraNow user.

Users like having the flexibility to choose how good their tech is

Users have different expectations and use for their headphones. Users who need to use the microphone a lot for work or gaming require this piece of the headphones to have higher quality. Other users take their headphones for commutes so that they might see the need for a travelling case. Other users move around with their corded headphones and require a longer cable.

Gerrard Street headphones are already modular in design, so different parts can be developed to enhance each user's experience.

"[With different versions of the same component] you have a choice how good your technology is."

Quote from an interviewed Gerrard Street user, talking about FairPhone

Service opportunity

After finalizing the research and synthesising phase, this section details the process of ideation and conceptualization of a solution, and the final proposal and prototype of the service.

Concept and ideation

Once the research was finalized and organized into insights, the right problem statement needed to be defined to drive the design and ideation process. The “How Might We (HWM)” method was used to turn the problems into opportunities and help trigger ideas to improve or expand Gerrard Street’s service offering.

Each insight was transformed into a How Might We question, as indicated in table 4:

Insight	HMW question
Users don't perceive the value of subscriptions in the long term	HMW make Gerrard Street's subscription valuable to their users?
Users want updates for the best and latest technology	HMW keep Gerrard Street's users updated with innovation in technology?
AI to augment the listening experience and expand usage	HMW use AI to improve the experience of using Gerrard Street's headphones?
Users like having the flexibility to choose how good their tech is	HMW give Gerrard Street's users flexibility to choose their headphones?

Table 4: Insights and its respective How Might We question

A 1-hour ideation workshop was set up to generate ideas, where headphone users were invited to participate. The workshop was run in the online whiteboard collaboration tool Miro (miro.com) and the video-communication service Goole Meet (meet.google.com).

The workshop consisted of a presentation of the participants, an introduction to the service and research insights, check-in questions, followed by a warm-up and brainstorm activity on each HMW question. In total, seven headphone users participated in the workshop.

After the ideation session, several ideas had been generated. These were clustered based on similarity and then organized into themes. In total, 23 themes were identified and are listed in table 5. The ideas identified with an asterisk (*) speak of features already offered by Gerrard Street.

Idea themes	
<ul style="list-style-type: none"> ○ Discounts based on user preferences ○ Redeemable points ○ Trade-in ○ Risk assessment to lower price ○ Beta tester program ○ Partnerships with audio influencers ○ Adding products to portfolio ○ Personalized audio settings ○ Personalized designs ○ Selling headphones ○ Subscription box 	<ul style="list-style-type: none"> ○ Tracking ○ Personalized audio based on use ○ Noise cancelling using AI ○ Fix-it-yourself ○ Audio settings change based on routine ○ Sync with health apps ○ Community and news channels ○ Gesture UI ○ Customizable parts and accessories ○ Chip NFC for easy connection ○ Synchronises well * ○ Switching between models *

Table 5: Themes after clustering the ideas from the ideation workshop.

To select the most valuable idea to develop, a framework for prioritization was to be selected. Two were identified, the RICE scoring framework (Ibanez, 2019) and the Service Design Scorecard framework (The Moment, 2021). Both frameworks evaluate ideas based on a set of factors and help minimize bias when prioritizing ideas. The Service Design Scorecard was selected for this project, as it offered more flexibility when choosing the factors and their importance weight.

The values and measurements for the scoring are detailed and described in [appendix 4](#). Three highest value scoring themes emerged, followed by two high valued themes, as indicated in table 6.

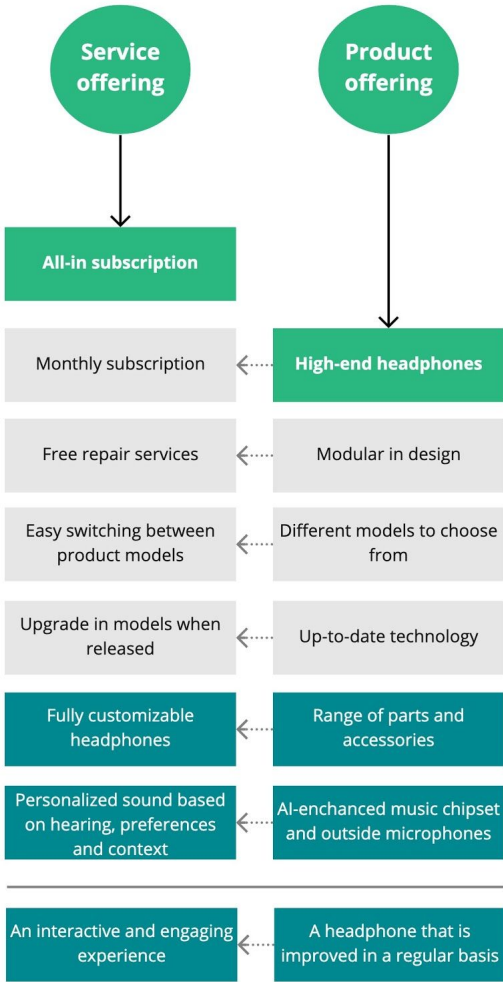
Top idea themes	
<ul style="list-style-type: none"> ○ Discounts based on user preferences ○ Redeemable points ○ Trade-in ○ Risk assessment to lower price ○ Beta tester program ○ Partnerships with audio influencers ○ Adding products to portfolio ○ Personalized audio settings ○ Personalized designs ○ Selling headphones ○ Subscription box 	<ul style="list-style-type: none"> ○ Tracking ○ Personalized audio based on use ○ Noise cancelling using AI ○ Fix-it-yourself ○ Audio settings change based on routine ○ Sync with health apps ○ Community and news channels ○ Gesture UI ○ Chip NFC for easy connection ○ Customizable parts and accessories

Table 6: Highest (green) and second highest (light green) scoring ideas.

These themes were further explored through the use of storyboards (Interaction Design Foundation, 2021) and concept cards, to explore the context in which the services could be used and the benefits offered to the consumer. The final solutions are presented in the next section.

Service offering

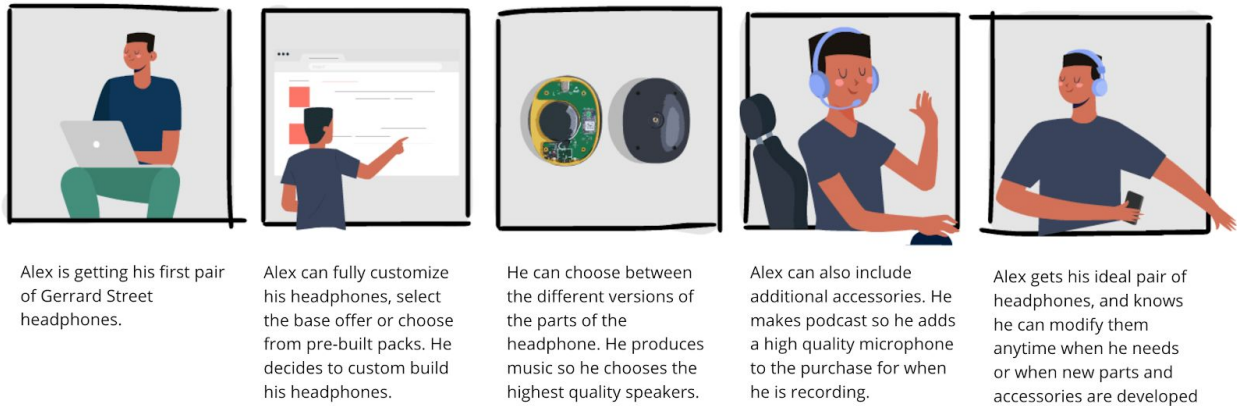
The final solution consists of developing a customization platform for consumers to be able to build their ideal headphones; and a sound personalization interface (named **SONAR**), where users can get their sound personalized to their specific needs and usage, through the use of AI.



Graphic 3: Gerrard Street’s proposed service offering.

Customization platform

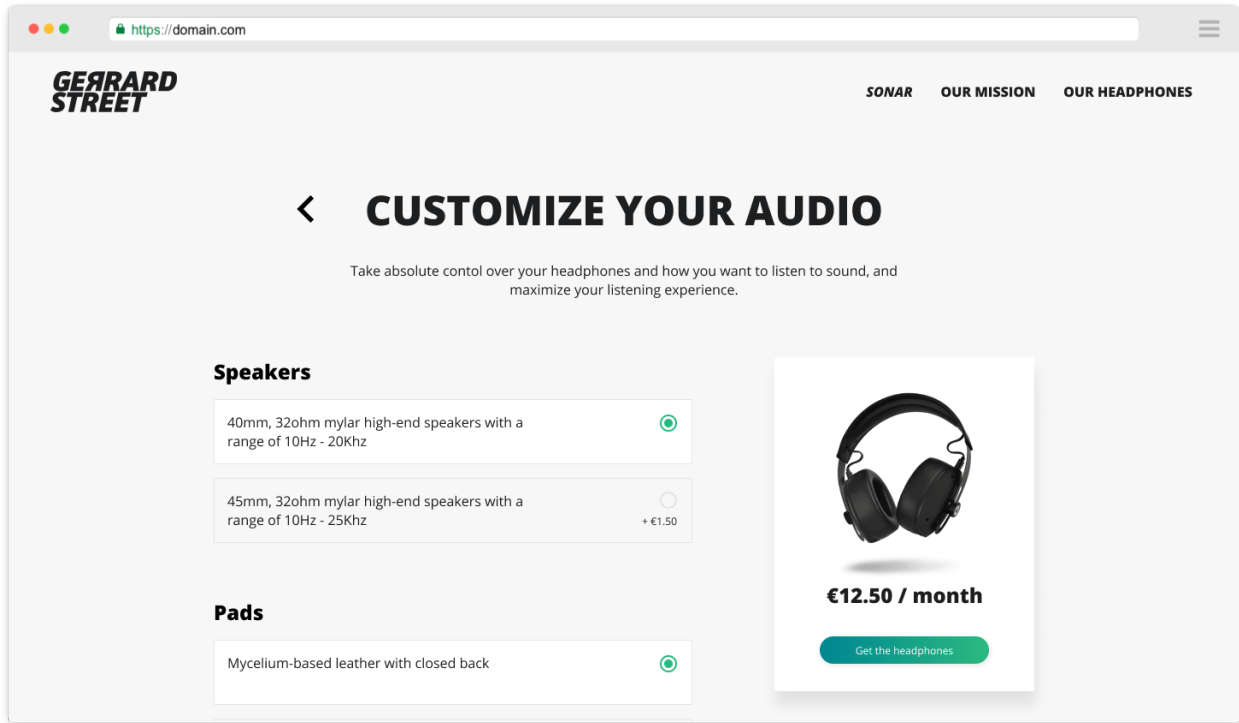
The customization platform allows Gerrard Street users to select the individual parts they want in their headphones and build the ideal headphones for their specific needs. Some combinations can be predefined to create “packs” based on common usages (e.g., gaming) to help users with a place to start or with a selection made for them, to make the experience easier for those who are not looking for much personalization.



Graphic 4: Storyboard of the customizable platform. Full concept card in [appendix 5](#).

The solution leverages Gerrard Street’s modular design, allowing them to easily create parts that can be exchanged with each other and create new accessories that can be used or attached to the headphones.

During purchase, users will select a pack or decide to customize their headphones from scratch fully. Different options for parts will be shown for each component, each with its increase or decrease in price. Various accessories can also be added to the subscription. Users will have total control over what they want to pay for and what they need.



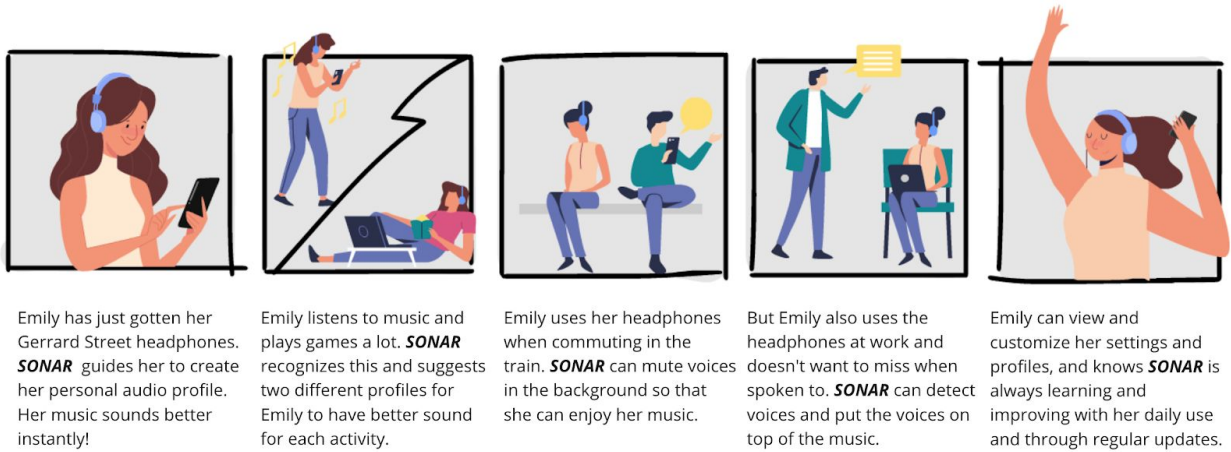
Graphic 6: Customization screen in Gerrard Street's website. All screens in the [prototype](#).

Users can also modify their headphones during their subscription as their needs change or Gerrard Street develops new technology or creates new attachments.

This solution will create more interaction with the brand as the subscription becomes more active through flexibility, upgrades, and additions. New parts and accessories also allow Gerrard Street to serve a more significant consumer base, as the usage of the headphones can be expanded and improved. Overall, it creates better satisfaction and life-time value with consumers.

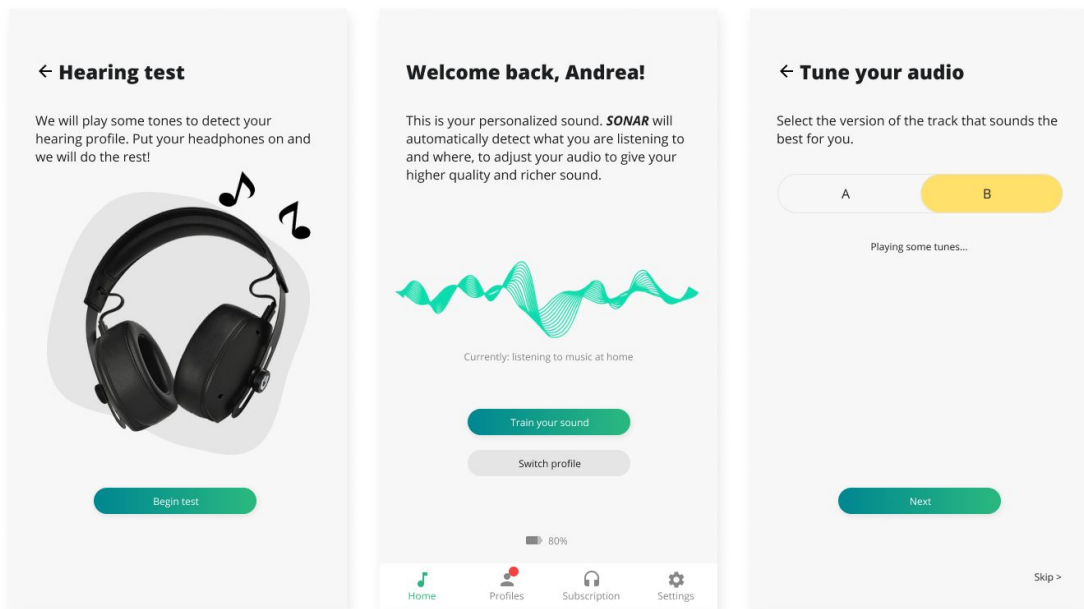
Sound personalization interface

The digital interface for sound personalization is a mobile app called **SONAR** that lets users create a personal sound profile based on their own and unique way of hearing. It also tailors sound based on the activity and location where the headphones are being used, learning from users' routines and preferences.



Graphic 7: Storyboard of the digital interface for personalization. Full concept card in [appendix 5](#).

To create a personal sound profile, the solution uses an AI algorithm and microphones in the headphones to test the users' hearing and then adapt frequencies and tones in every sound. The algorithm also learns from daily use, recognizing the activities (e.g., gaming) and locations (e.g., outdoors) where the headphones are used, to adapt sound and the noise-cancelling features according to the users' needs at the time. Additionally, users can train the AI to their particular preferences in sound, further improving sound quality.



Graphic 8: Screens of the **SONAR** app. All screens in the [prototype](#).

This solution extends the service's experience throughout the subscription, as sound can continuously be personalized and enhanced as the AI learns from the user. SONAR adds a differential value to users by improving sound quality and by expanding headphone usage using technology. It also helps Gerrard Street offer continuous upgrades without any material use, in contrast to what upgrading the hardware would entail. As the previous solution, it helps improve satisfaction and life-time value with consumers.

Service delivery

Once the final solution and offering had been defined, the final deliverables for the service were developed. These deliverables would help with understanding, testing and implementing the solutions.

Since both solutions involve digital interfaces, a digital prototype was required. This would allow Gerrard Street to test the solutions quickly before development, and validate and test the ideas. User flows were developed to identify the screens required and the journey of the user while using the solutions (see [appendix 6](#)). A benchmark was also done from other similar services, such as laptop purchase flows for their customization journey, or other mobile apps offering sound personalization. Finally, the final screens were designed in Figma, an online prototyping tool (www.figma.com).

- [Customization platform](#)
- [Sound personalization interface](#)

In addition to the digital prototypes, a service blueprint was created to visualize the resources and processes required to deliver the service.

- [Gerrard Street Service Blueprint](#)

Finally, a short video was produced to showcase the solutions and communicate the value to Gerrard Street, users and other stakeholders.

- [Gerrard Street Service Video](#)

Conclusions

Through this study, it was possible to identify some problems and opportunities in Gerrard Street's service. Using the How Might We questions and ideating with headphones users', multiple ideas were generated, ideas that could improve or expand the service. It was possible to select the most promising ideas to develop further through a prioritization method, which resulted in a customization platform and a sound personalization interface.

For implementation, three recommendations are suggested. The first one involves testing the prototypes with potential consumers. Ideally, the testing could be done physically to include the initial test and get insights on the whole experience for the sound personalization interface. The second recommendation relates to the AI algorithm required for the sound personalization platform. AI models can be created using machine learning and recommendation systems based on users' needs and continuous training. Creating partnerships with other companies that are already exploring these solutions, such as Mimi (mimi.io) or Bragi (bragi.com), could also be considered to reduce implementation efforts. The third and last recommendation, is to identify the minimum viable service. As these ideas represent the ideal state of the service, it is necessary in terms of time and resources to begin implementation with a smaller set of features. For the personalization platform, for example, manual tests could be set up in an APP to still personalize sound based on hearing, without the need to develop an AI algorithm or create a partnership with an external company.

It is important to note one limitation to this study, as Gerrard Street was contacted but did not participate or provided information. Some strategy and backend considerations may not have been taken into account, and some assumptions had to be made throughout the project.

Nevertheless, the solutions designed were based on user insights and the state of the headphone market. They would create an additional touchpoint, more moments of interaction with Gerrard Street, and customization and personalization features, giving users more flexibility and sound quality. Ultimately, these ideas can serve Gerrard Street and any headphone-as-a-service company to create value for their consumers resulting in a more engaging service.

Bibliography

Accenture. (2014). *Circular Advantage. Innovative Business Models and Technologies to Create Value without Limits to Growth*.

https://www.accenture.com/t20150523T053139_w_/us-en/_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Global/PDF/Strategy_6/Accenture-Circular-Advantage-Innovative-Business-Models-Technologies-Value-Growth.pdf

Ahmed, S. F. (2016). *The Global Cost of Electronic Waste*. The Atlantic.

<https://www.theatlantic.com/technology/archive/2016/09/the-global-cost-of-electronic-waste/502019/>

ASHA. (2021). *Otoacoustic Emissions (OAEs)*. American Speech-Language-Hearing Association (ASHA).

<https://www.asha.org/public/hearing/otoacoustic-emissions/>

Aubertin, C. (2019). *From Product to Product-as-a-Service*. The Start Up.

<https://medium.com/swlh/from-product-to-product-as-a-service-37baed471cd6>

Bota, A. (2019). *Gerrard Street: The Leasable Headphones For Music Lovers*. YES!Delft.

<https://www.yesdelft.com/news/gerrard-street-the-leasable-headphones-for-music-lovers/>

Ellen McArthur Foundation. (2012). *Towards the Circular Economy Vol. 1: an economic and business rationale for an accelerated transition*. Ellen McArthur Foundation.

<https://www.ellenmacarthurfoundation.org/publications/towards-the-circular-economy-vol-1-an-economic-and-business-rationale-for-an-accelerated-transition>

European Environment Agency. (2017). *Circular by design — Products in the circular economy*. European Environment Agency.

https://circulareconomy.europa.eu/platform/sites/default/files/circular_by_design_-_products_in_the_circular_economy.pdf

- Fairphone. (2021). *Camera upgrades for your Fairphone 3*. Fairphone.
<https://www.fairphone.com/en/camera-upgrades-for-fairphone-3/>
- Flynt, J. (2019). *All Ears: 27 Surprising Statistics About Headphones*. 3D Insider.
<https://3dinsider.com/headphone-statistics/>
- Furseth, J. (2017). *Noise-cancelling headphones: the secret survival tool for modern life*. The Guardian.
<https://www.theguardian.com/technology/2017/mar/16/noise-cancelling-headphones-sound-modern-life>
- Gibbons, S. (2017). *Service Blueprints: Definition*. Nielsen Norman Group.
<https://www.nngroup.com/articles/service-blueprints-definition/>
- Ibanez, L. (2019). *Management: RICE Scoring Model for Prioritization*. The Startup.
<https://medium.com/swlh/rice-scoring-model-for-prioritisation-88d879bfbac0>
- Interaction Design Foundation. (2021). *What are User Scenarios?* User Scenarios.
<https://www.interaction-design.org/literature/topics/user-scenarios>
- Metabolic. (2019). *Circular economy solutions for e-waste: headphones as a service*. Metabolic.
<https://www.metabolic.nl/news/circular-economy-solutions-e-waste-headphones-service/>
- The Moment. (2021). *Service Design Scorecard*. The Moment. <https://info.themoment.is/sd-scorecard>
- nura. (2021). *nuraphone - Music in Full Color*. nuraphone. <https://www.nuraphone.com/>
- Rombouts, S. (2020). *Why Modularity is key to Circularity*. firmhouse.
<https://www.firmhouse.com/blog/why-modularity-is-key-to-circularity>
- This is Service Design Doing. (2021). *Building a research wall*. This is Service Design Doing.
<https://www.thisisservicedesigndoing.com/methods/building-a-research-wall>
- This is Service Design Doing. (2021). *"How Might We ...?" Questions From Insights And User Stories*. This is Service Design Doing.

<https://www.thisisservicedesigndoing.com/methods/how-might-we-questions-from-insights-and-user-stories>

UN Environment Programme. (2015). *Waste Crime - Waste Risks: Gaps In Meeting The Global Waste Challenge*. <http://hdl.handle.net/20.500.11822/9648>

United Nations. (2020). *The Global E-waste Monitor 2020*. E-waste Monitor. <http://ewastemonitor.info/>

van Gestel, L. (2019, 4 30). *Rotterdamse startup Gerrard Street lanceert nieuwe lijn koptelefoons op abonnementsbasis*. Hardware Info.

<https://nl.hardware.info/nieuws/64923/rotterdamse-startup-gerrard-street-lanceert-nieuwe-lijn-koptelefoons-op-abonnementsba>

Appendix

Appendix 1

Trend analysis

Data Sources

Author	Organization	Title	Year	Source link	Summary	Main findings
Tim van Hiltzing	Mimi	"Esprimo" or the introduction to personalized sound	2016	https://medium.com/@timvanhiltzing/personalized-sound-esprimo-8d108848	Better understanding and overview of the market and the potential that goes along with customizing the audio experience. What personalized sound is and small pieces on different companies in the field.	- Personalized audio means the things you hear can possibly be adapted to your hearing ability (how well your hearing works), your personal preferences (more bass, more treble) but also to the environment you are currently in (e.g. while commuting). - The idea behind Esprimo is to adapt the sound to your hearing ability and the environment around your environment. - People who suffer from mild to severe hearing loss are able to hear music again without too much distortion and without the need of wearing the hearing aid.
-	Sonarworks	Your personalized sound profile delivered on your headphones	2021	https://www.sonarworks.com/soundid	Mobile application that takes sound based on tests done to several headphones products, and that can be imported based on user preferences hearing.	-
-	Audiodo	Personalized sound for everyone	2021	https://www.audiodo.com/7004	The Audiodo Personal Sound™ is a software library built into the Bluetooth chipset of the headphones. The software is made up of refined coding and patented algorithms that customize audio to perfectly suit the unique hearing characteristics of the user.	-
-	WHOO-SH!	Personalized sound for everyone	2021	https://www.whoo-sh.com/	Personal audio profile (just 4-6 minutes), based on a hearing test. The algorithm uses the test result and adapts the music to the hearing level and considering the headphones' peculiarities.	-
-	Mimi	Sound Personalization	2021	https://www.mimioz.com/	Mimi Sound Personalization is a unique processing technology that replicates the way the human ear works. It adapts the audio signal to a user's hearing ability, compensating for less than a perfect hearing.	-
-	Aurimo	The world's first AI-powered audio	2021	https://www.aurimo.com/	One of the major barriers to great hearing is that everyone hears differently and our hearing varies by environment. To solve this, AURIMO has developed a cutting-edge software to tailor audio to individual hearing and to customize audio for different environments.	-
-	Bragi	Make your products truly smart	2021	https://www.bragi.com/	Bragi offers a modular Software Suite with embedded AI that enables brands and manufacturers to create truly smart audio products efficiently, by providing natural UI, advanced audio, smart systems and service integrations.	-
Rima Sabina Aouf	dezeen	Avan grows from fungus and yeast	2019	https://www.dezeen.com/2019/02/24/avan-headphones-by-lundulund-fungus-yeast-robot/	Fungus, yeast-based bioplastic and other materials grown by microbes have been used to create Avan headphones, designed by Finnish audio Avian in collaboration with scientists.	The Korvaia headphones feature six different microbially grown substances. They were designed to showcase the potential of the technology, known as 'synthetic biology' or 'synbio' for short. The team chose headphones because of the variety of materials they contain — from hard plastic to pliable mesh and feathery soft textile.
Mike Jiang	CNBC	AirPods don't go far enough. The effort to reinvent earbuds for the 'hearables' era	2017	https://www.cnbc.com/2017/02/17/airpods-technology-inside.html	Sensor-enhanced headphones are called hearables, a new category of headphones that do more than just stream music. Hearables focus on several key features. Advanced audio technologies that actively listen for human voices and cancel outside noise, devices that more actively assist with navigation, and health-and-fitness-centric devices that monitor and give user feedback.	Taking users more about themselves is one key to making headphones beyond the era of the audio-first focus. Tuning information into action through the next generation of wireless headphones is becoming more important as Bluetooth headphones sales boom. - German start-up Bragi recently released the Dash Pro, completely wire-free headphones with sensors that measure everything from heart rate to distance, step count and breaths. - Chovvala makes a 'wearable assistant,' neck-worn wireless headphones that integrate Amazon's Alexa voice assistant so wearers can use their hands-free. - LifeBeam Labs' neck-worn Vi wireless headphones include sensors and a miniaturized computer that analyzes data and gives active feedback to users while running. - Both Apple and Samsung have been making inroads collecting health data.
Frank Melchor, Anthony, Sade, Sacha Spors	SMIPE Motion Imaging Journal	Emerging Technology Trends in Spatial Audio	2012	https://www.smipe.com/2012/04/11/emerging-technology-trends-in-spatial-audio/	Academic research trends in spatial audio of the last decade are finding their way into commercial application, a development mainly driven by the computer game and entertainment industries. A focus on applications and new paradigms for storage and future formats.	- Better and new experiences have proven to be important for spatial audio developments (e.g. motion picture sound). - Further audio is routinely used by the gaming industry. Advanced techniques with better quality and realism can be expected with further audio. - For mobile devices, spatial audio is currently rarely deployed. Due to a general shift towards mobile devices it is likely that spatial audio will also find its way into the mobile world. As a consequence, an increasing number of individuals use headphones when listening to audio.
Olivia Tambini	techradar	How audio is in 2019: the biggest trends we've seen so far	2019	https://www.techradar.com/news/how-audio-is-in-2019-the-biggest-trends-weve-seen-so-far	Lots of audio trends taking shape over the last months, thanks to tech and audio geotographers like CES 2018 and the Bristol Hi-Fi Show.	- True wireless earbuds continues to grow and wireless audio sounds better than ever thanks to new codecs and technology. - 360-degree audio to replicate the soundstage of a full surround sound system in a pair of over-ear headphones. Also recording and editing audio from multiple sources coming from certain directions, like noise from outside the video frame suppressed, leading to higher quality videos. - Eco-friendly audio gadgets, the audio tech world is looking to recyclable materials to appeal to a more eco-friendly customer base.
Johan Pierson	Crunchie	Technology trends - Meet the new wave of AI headphones	2019	https://www.crunchie.com/2019/12/10/tech-trends-2019-ai-headphones/	As with most other sectors of the consumer electronics market, brands are inclined to look towards Artificial Intelligence to make things much smarter and solve real consumer needs, by feeding consumers information in a whole new way. AI is poised to become the new selling feature of headphones – and a really useful one.	- Vi Sense Wireless Headphones by LifeBeam boast a voice-controlled artificially intelligent coach that spots training patterns and uses live performance data to offer real time coaching advice. - Using AI technology headphones can spot over 5,000 sound characteristics and filter out noise more specifically. - Bragi has said its hardware business is a B2B buyer and that while it is not going to license its IP and AI, it will no longer be making consumer headphones. - Expectations are getting ubiquitous because of the fundamental needs for better listening, the privacy it provides by shielding away noisy environment. There is an opportunity to embed sensors into earphones that everyone carry with them, and empower people with their personal bio-data to use as they deem fit. - Expectations are getting ubiquitous because of the fundamental needs for better listening, the privacy it provides by shielding away noisy environment. There is an opportunity to embed sensors into earphones that everyone carry with them, and empower people with their personal bio-data to use as they deem fit.
Qualcomm	Qualcomm	The State of Play Report: A global analysis of user behaviors and desires driving consumer audio	2020	https://www.qualcomm.com/2020/02/24/state-of-play-report-2020-wireless-audio-popular-cultural-music-phenomena-2020-02-24	The 2020 State of Play report is the 4th annual study by Qualcomm featuring user insights based on research data from 5,000 consumers across the U.S., U.K., China, Germany, and Japan—and shines a light on evolving consumer attitudes and behaviors that drive buying decisions for wireless headphones, earbuds, and speakers.	- Adoption of truly wireless earbuds has almost doubled globally, along with strong growth in every geography - Corrupt jobs battery life as the second most important wireless headphone and earbud purchase driver - Video media consumption is now the second most popular use case. Almost half of all consumers surveyed reported using wireless audio products while gaming. - Noise cancellation gains critical importance - Sound quality is the single most important purchase driver in consumer audio, with 77% of respondents interested in high-resolution sound quality.

Interview Guide

The objective of the interviews is to find insights about the experience of acquiring and using headphones subscription services.

Interview structure

- Introduction (3 min)
 - General headphones usage (Warm-Up) (5 min)
 - Experience with the service (20 min)
 - Technology (15 min)
 - Wrap-up (2 min)
-

Introduction

Hi, I'm Andrea Pastor, a student of the Poli.Design Master in Service Design. Today I am here to learn more about your experience with your Gerrard Street Headphones.

I would also like to record our interview, this will be used by myself only to come back to take notes on the things we will discuss today. Nothing will be shared.

The interview lasts around 45 minutes. As I mentioned to you, I am trying to explore what your experience was with the Gerrard Street / NuraNow headphones and what are some ways in which it can be improved.

The interview will be a spontaneous and informal conversation, there are no right or wrong answers, I also do not work with Gerrard Street / Nura so feel free to be as candid and honest as possible.

Do you have any questions before starting?

General headphones usage (Warm-up)

- What do you use your headphones for?
- Where do you use them mostly?
- Have you had other high-end headphones? What were you using before?

Experience with the service

- How long have you had the Gerrard Street / NuraPhone headphones?
- Why did you choose Gerrard Street / NuraPhone?
- Do you remember when you made the purchase? What was the experience like?
 - How did you hear about the service?
 - Were there any challenges or barriers before making the purchase / anything stopping you? What were they? Why were they a concern?

Likes and dislikes

- Now that you are using the headphones, how does it live up to your expectations?
- Besides the headphones, how do you feel about the service offered by Gerrard Street / NuraNow?
- What benefits do you get for the subscription?
- What do you like about the subscription?
- What do you dislike or think can be improved?
- What are other things you would like Gerrard Street / NuraNow to offer? What would make the service even better for you?

Interaction with the service

For Gerrard Street

- Have you experienced the repair or decided to change models? How was the experience?
- Aside from that (or if no), have you had any other interactions with the brand? Have you reached out to them or them to you for anything?
- What do you think about the level of communication you have with Gerrard Street?
- Would you like some more communication from them? What about?

For NuraNow

- How do you feel about having your own personalized sound?
- How often do you go through the process of personalization?
- Is that something that you like to have a lot of control over?
- How often do you use the APP? What do you use it for?
- Have you had to install any software updates to the headphones? What was the experience like?

- Will you continue using them? Why?
 - What would make you consider another brand?

Technology

- What do you think about headphones and/or audio technology? Is that something you are interested in?
- Do you consider yourself to be an audiophile?
- Do you own any other high-end audio products or accessories?
- How do you keep up with news about the topic? Do you discuss the topics with friends or colleagues?

For Gerrard Street

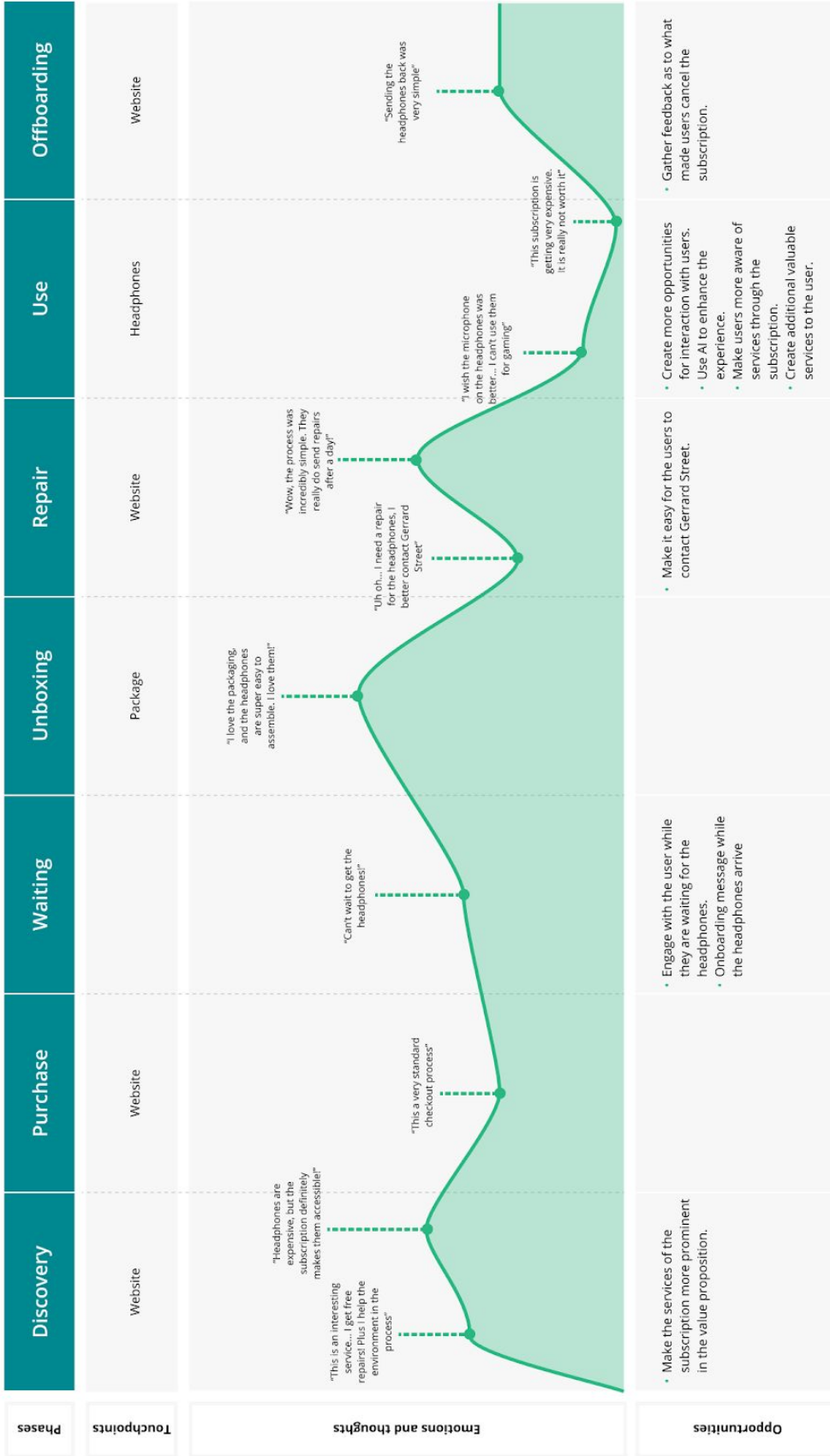
I'm going to talk about sound personalization: ___

Sound personalization: Every person hears sounds and frequencies differently, even from each ear. With this technology, the headphones can recognize your own way of hearing and deliver personalized audio for higher quality sound.

- What do you think about this technology?
- Is that something that you like to have a lot of control over?

Wrap-up

We are finished with the interview, thank you very much for your time, it was very useful and helpful to discuss your experience. Before leaving do you have any questions or anything you would like to add to what we have discussed.

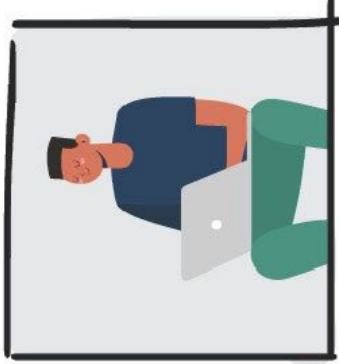




Service Design Scorecard

IDEA	STRATEGIC VALUE Program and Strategy	DESIRABILITY Customer Value	VIABILITY Business Value	FEASIBILITY Technical/ Organizational	TOTAL SCORE out of 100
CRITERIA WEIGHT %	30%	30%	30%	10%	
QUESTIONS TO CONSIDER	Does this align with our brand and strategy? To what extent does this stretch our capability and portfolio?	How likely is it to connect with new target audiences? How much value does the customer get in return? How excited might the customer be about participating?	How many potential customers? How much revenue might be raised?	How much effort will this take to develop?	100%
RATE EACH IDEA 1 (low score) 3 (average) 5 (high score)	1 - Tolerable 3 - Good 5 - Perfect	1 - Does not satisfy 3 - Satisfy 5 - Highly desirable	1 - Insignificant 3 - Medium 5 - Very large	1 - Hard, few resources 3 - Workable, some resources 5 - Easy, all resources available*	
Discounts based on user preferences	3.0	3.0	1.0	1.0	44.00
Redeemable points	3.0	3.0	1.0	1.0	44.00
Trade-in	5.0	3.0	1.0	5.0	64.00
Risk assessment to lower price	3.0	3.0	1.0	1.0	56.00
Beta tester program	3.0	3.0	1.0	3.0	48.00
Partnerships with audio influencers	3.0	3.0	5.0	3.0	72.00
Adding products to portfolio	1.0	3.0	3.0	1.0	56.00
Personalized audio settings	5.0	5.0	5.0	3.0	96.00
Personalized designs	1.0	3.0	1.0	3.0	36.00
Selling headphones	1.0	1.0	1.0	5.0	28.00
Subscription box	3.0	3.0	1.0	1.0	44.00
Tracking	3.0	3.0	1.0	5.0	52.00
Personalized audio based on use	5.0	5.0	3.0	3.0	84.00
Noise cancelling using AI	5.0	5.0	5.0	3.0	96.00
Fix-it-yourself	1.0	1.0	1.0	5.0	28.00
Audio settings change based on routine	5.0	5.0	3.0	3.0	84.00
Sync with health apps	5.0	3.0	1.0	3.0	60.00
Community and news channels	3.0	3.0	5.0	3.0	72.00
Gesture UI	3.0	1.0	1.0	3.0	36.00
Chip NFC for easy connection	3.0	3.0	1.0	5.0	52.00
Customizable parts and accessories	5.0	5.0	5.0	3.0	96.00

Fully customizable headphones



Alex is getting his first pair of Gerrard Street headphones.



Alex can fully customize his headphones, select the base offer or choose from pre-built packs. He decides to custom build his headphones.



He can choose between the different versions of the parts of the headphone. He produces music so he chooses the highest quality speakers.



Alex can also include additional accessories. He makes podcast so he adds a high quality microphone to the purchase for when he is recording .



Alex gets his ideal pair of headphones, and knows he can modify them anytime when he needs or when new parts and accessories are developed

What is the service?

A fully customizable headphone based on user needs. Gerrard Street has a modular system that can be expanded to include different versions of parts and/or new accessories. Users can custom build their headphones depending on their needs and preferences, and easily upgrade and modify the headphones through the subscription. Pre-defined packs could be created to help users.

What are the expected benefits?

For users

- Expand usage for users
- Customizable experience
- Increased interaction

For Gerrard Street

- Higher customer satisfaction and LTV
- Bigger customer base

What are required resources?

- R&D to identify the more valuable parts and accessories.
- A platform for users to select the parts and accessories

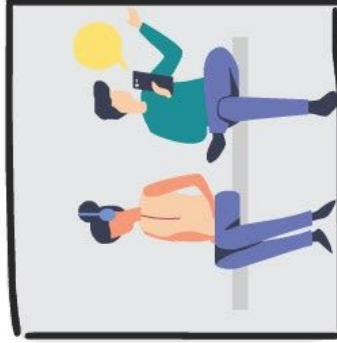
Smart personalized audio | SONAR



Emily has just gotten her Gerrard Street headphones. **SONAR** guides her to create her personal audio profile. Her music sounds better instantly!



Emily listens to music and plays games a lot. **SONAR** recognizes this and suggests two different profiles for Emily to have better sound for each activity.



Emily uses her headphones when commuting in the train. **SONAR** can mute voices in the background so that she can enjoy her music.



But Emily also uses the headphones at work and doesn't want to miss when spoken to. **SONAR** can detect voices and put the voices on top of the music.



Emily can view and customize her settings and profiles, and knows **SONAR** is always learning and improving with her daily use and through regular updates.

What is the service?

A smart personalized audio solution for Gerrard Street users. By measuring the sounds the ear generates in response to different tones, an AI engine can create a personal sound profile, which can improve over time. The engine can also identify the context where the headphones are being used (home, work, commuting) and the activities used for (music, gaming, videos) and together with user data create different profiles to customize the listening experience to its users, offering improved sound quality.

What are the expected benefits?

For users

- Better sound quality
- Expand usage for users
- Personalized experience
- Increased interaction

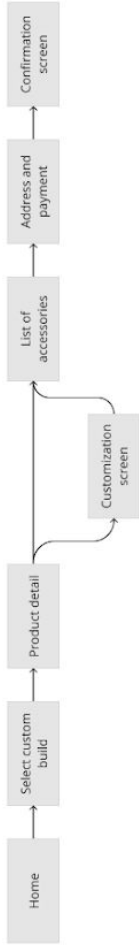
For Gerrard Street

- Higher customer satisfaction and LTV
- Bigger customer base

What are required resources?

- An interface for users to setup, view and customize their profiles and settings
- An AI engine and processor in the headphones
- Microphones to detect sound from the ear and from the outside

Customization platform



SONAR. Sound personalization interface

