


Reimagining Hearing Care with Cambridge Audio

Appendix



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Interview Guide and Transcripts

Interview Guide

Pre use:

1. How did they come to know that they needed a hearing aid
2. What were the subsequent steps to getting a hearing aid
 - a. Going to the GP - which gp, why, choice ?
 - b. Audiologist - waiting time, access, which audiologist, why, choice, what did they say, was the consumer fairly informed, choice of hearing aid, any other anecdote
 - c. Feeling after you knew that you have to use the hearing aid
 - d. Wait period - how long did it take to get the product (also mention other main user journey points), why wait, process of waiting - any confirmation, any update ?
 - e. Get the aid - matches expectation, first experience, process of getting it
 - f. Payment associated and choice based on payment?

Product review

1. Choice on hearing aid, what was it based on, what were the driving factors
2. Functionality, comfort, maintenance
3. Use when, attachment, detachment
4. Different features / use cases and experience
 - a. Listening to music - headphones / earphones ?
 - b. Noisy area (pub, train station, outdoors)
 - c. In office
 - d. At home during the day (weekends)
 - e. At home at night (while in bed lying)
5. Re visit to the audiologist - how often, experience pre and post, impedes routine ?
6. Any specific experience(s) faced during use (positive, negative) -
 - a. ear wax,
 - b. infection,
 - c. fit,
 - d. settings change,
 - e. hearing change over time,
 - f. phone calls
 - g. Any other positive / negative experience
7. How long does the product operate over time? How is the process of replacing the product
8. How often replace batteries, is it cumbersome, easy ?
9. What can they change if they had the option to change in the product / process

Lifestyle change

1. How does it affect the lifestyle of the consumer
2. Any specific experience after starting to use the product
3. How does the product help in different cases
4. Where does the product fall short (use case)
5. What was the experience with (positive, negative)
 - a. colleagues / friends / family
 - b. People around you
6. What changes would he want in the
 - a. Product
 - b. Process
 - c. System and why

Consumer 1 Interview Transcript

Roy

We will be discussion today about your hearing loss journey.

Consumer 1

Friends started making comments about you know, like, you know, having to repeat themselves for a lot of things and so they kind of picked up on it which made me think, too I have a bit of a problem. And so I went to my GP who disrupted referred me to an audiologist and my nearest hospital. I went back and was told by the consultant afterwards that I have a condition called sclerosis.

Roy

Can you spell it for me? Sorry, could you please spell it for Because I think I'm learning this term snow still.

Consumer 1

sclerosis. So basically it's where, in your, in your inner ear, you have the space there and like vibrates which helps to transmit the sound into your brain. So over time, and that state bone, I think it gets like the pockets and on the lack of like calcium or other minerals or something, and it stopped by waves and basically effectively it should be, and so it's not as flexible to transmit the sound as normal people have. And so anyway, so the consultant explained this to me then basically said that he could offer me an operation and put the issue and all he could offer me.

Now as I say, I was only 21 then I got into disappointment and had no idea I didn't really seem to find anything at all honestly, and I wasn't prepared, you know, to, to be told that that basically I do have hearing loss. So I took it quite badly. And so I, I am leaving the appointment after appointment, said I didn't want anything that was that. So anyway, then I just continued to kind of carry on with my life basically.

Probably about six years ago, about four years later on from them. So actually, maybe I do need to go back and you know, See what my options are again and, you know, chime in, you know, a bit more about what I've been doing. And so I went back and so I different consultant, again had more work to do different consultants.

Roy

If I could stop you one second. Yeah. So, for the audiologist to keep on saying consultant, so that basically means like an audiologist?

Consumer 1

Yeah, yeah.

Roy

Okay. Okay. Okay. Is there any specific reason why you were calling him or her a consultant and not an audiologist?

Consumer 1

Okay. Yeah. Okay. So yeah, so when I decided so when they have operation, they take this, this bone and they put it out and they replace it with a prophetic, prophetic piece instead.

So I did that in my left ear. And that did make a huge difference and I suddenly had all this hearing back in my ear, which is great, but then I still have the hearing loss in the other ear as well. In My name is well.

And he said to me at the time that he wouldn't operate on both of them who just do one and then see how it goes. So I pushed on the one side on the left side. And He then said if I want to talk to him on my right side so I said okay, so I don't have an appointment. at my local hospital and a few months later and got his name, right. So that was about five years ago for the production operations are getting about five years ago. So I do not use it. Okay.

Roy

I have so much to ask you like now because you do not. So that's really good. Okay. So in your story, I'd like to go back just about 15 seconds when you were like in your left ear, you had the prosthetic put in, you had an operation and everything was perfect. Like you could hear as you should hear on your left ear, but You also had a problem on your right ear. Did it start during the same time? Or was it also there when you were 21?

Consumer 1

Yeah, it was. Okay.

Roy

Okay. Okay. All right. And you do like the doctor suggested to have an operation on the left ear and see how it went. So, why didn't you go for an operation also on the right here? difference to my hearing

Consumer 1

at the time, I mean, I guess I guess in theory, I probably could go back and see, you know, now operate on the other side. But you know, haven't seen a doctor since then.

Roy

okay. So it depends to some extent on Also what the doctor says is good for you. Like he or she is playing an important role in this decision.

Consumer 1

Yeah, okay. Okay, okay. Okay.

Roy

Okay. All right. I'll come back to this point later. Okay, continue.

Consumer 1

So yeah, basically so well, at the same time, I'm very much in denial about my hearing loss to be like 31 years old, and to be told what, even 21 years old and macabre, which is kind of instinctively associate very much with aging with old age. And I just, I just struggle to accept it, you know. So I just throw my head in the sand and just carried on with my life and just became, you know, our hopes that this thing's going to go away, which I know isn't as scary. It's not going to get away which is something that I can't be too concerned with.

Roy

Hmm. So the the main, the main reason one of the main reason why you do not want to wear the hearing aids or do not feel like taking them on is because hearing loss is associated with old age and that is not something you want to get associated with, as I understand, right. Okay, okay, okay. All right. I think I got a background of your story more or less. Really interesting. I'd like to break this this journey down a little bit now, like one by one. So, initially when he was when he went to the GP when you were 21, or let's say, let's start it from the 25 because for the first four years, you were just in denial and you didn't really take any action. Yeah, that's about it, let's say. So, so at the at the age of 25, when you went to the GP, did you have a choice of which GP to go to or how does the process look?

So it's basically okay. So it's basically based on the distance. So distance is the parameter of the factor here.

Okay, okay. So he's the GP for every problem that you have. He's a general practitioner, you go to all the time.

Okay, okay. Okay. And he's already assigned to you from before, right? Because you go to him, okay. Got it.

Got it. Okay. And once you go to him, he refers you to a consultant or an audiologist.

okay, how long does this run Real Time take and do you have a choice on which person to be referred to? Or do you need this choice?

Consumer 1

Like the doctor though about this hospital, so, yeah, the second time I specified which which hospital I was, I wanted to go. Okay. And I think it probably took about two months to get my appointment, okay, okay.

Roy

Okay, I'm gonna I'm gonna write all of these down. These are really important information, I think. Okay, so, just following up on this question. So the first time at the age of 21, you went to the consultant or the audiologist and you did not really like that experience. So when he went back again at the age of 25, we wanted to change it to a different doctor. But, uh, like, did you change it based on some information or did you just feel like okay, I didn't like the previous one. Let's try a new one. Okay, so, okay, so, okay, okay, so you just went to a different one. You didn't really search online or ask someone like, should I go to this one?

Consumer 1

Okay. Okay. Okay, you just change to a different option. That's about it.

Roy

All right. All right. And the waiting time for the audio largest was about two months. Okay, from the date the doctor referred you as a Sunday?

Consumer 1

Yeah. Okay.

Roy

Okay. And you had a choice. Okay. All right. Now, could you explain a bit to me how did it go with the audiologist after two months?

Consumer 1

Okay, so yeah, so I had a hearing test done and they also They also did a CT scan as well on my, on my ears as well, just to see if there was anything else that they couldn't see. You're interested in CT scans. Okay.

And yes

Roy

Could you explain the hearing tasting a bit more in detail like what exactly happens in a soundproof room

Consumer 1

You have headphones on and on both both ears. You have to listen for the sounds and noises and when you hear a noise in either ear, whichever ear you hear, you hear a noise. You press a button that you have in your hand and for every night up so some noises aloud and acquire some high pitch from a low thing. And then they both the then did that test, they then also put a separate thing on sort of took off the headphones. They put a thing on I don't even know what it is, it's like behind your ear. So, so you hear the sound through your like three of gothrough your through the valence. Oh like the bone induction. Yeah. Both of us as well. And then Rosco with you and that one also, they would also play background noise on headphones in my ears so that I'm trying to listen for the noise and which obviously made it a bit harder.

Roy

Let me just stop you for one second. So the bone induction medical product which is put behind the year. So so that is put along with the headphones. Like first is only headphones and you listen to the noise and the press back. Yes. Okay. All right. Hi. Yeah. So as I was saying, so, you were talking about pressing a button. So that basically is for what noise you were hearing on. Like, what is this button for?

Consumer 1

Yeah, so when you hear the noise, oh, just just press the button when you hear the noise..

Roy

Just to hear it. Okay. I told you how to recognize what it was like a number or something. No, it's not like that. You heard the noise. Yes. Right. And when they put the bone in section one on, you also have background noise. Yeah.

Consumer 1

Okay, okay. Okay. Okay,

Roy

got it. Got it. And then that's about it. Okay, okay. And the CT scan is off course like a normal CT scan a few years. Okay, so after you've had this, how long does the appointment go? Normally on average? About 20 minutes?

Consumer 1

About 20 minutes okay for this hearing test, yeah 20 minutes.

Roy

So as I understand the soundproof room is necessary so you cannot really do it in at home. I mean, no okay. Okay. All right, got it. So once you are done with this, what kind of information does the audiologist give you like, once you have done at the tests, let let the hearing test and the CT scan. What's the outcome of this?

Consumer 1

I can show you like the graph of your hearing of the noise that you heard in the night that you didn't hear Okay, do you understand the graph when they show you the graph?

Roy

So not really, okay, this is very important. Okay. So the game information, okay, but it's not understandable. Okay, okay.

Consumer 1

And you know that they just keep they just keep it but I think actually, it would be handy to be able to you know, have a copy to take away yourself because you know, you just get to see it literally for 10 seconds and then it's gone so you don't really have much time to you know, to lightly surface it.

Roy

So you think it'd be nice if you could get a copy of this

Consumer 1

Yeah, okay,

Roy

I like to ask a little bit more because as you just mentioned, this this graph which the doctors show you or the audiologist shows you, you do not quite understand because it's a technical graphs probably which is not possible for us to understand we're not doctors. So how would you gain or why do you think it would be important for you to take it with you?

Consumer 1

Okay. Actually Are you know, because I think in my in my left ear, depending on where you are on the graph, depends on your hearing loss. So in my left ear, I have mild hearing loss because that's where you know the graph is showing. But then in my or the rear, I have my to moderate you could keep them and you could refer back to them as well.

Roy

You could compare all these graphs and see. Okay. Yeah, Okay. Really awesome. Input Marian. Love this. I'm loving how it is going, do you think is going good?

Okay, okay. All right. So the graphs would have been helped. And and and do you think it would have been even better if you could actually or if the information would have been processed or showcased in such a way that it was understandable to, to you?

Consumer 1

Yeah.

Roy

Okay graphs, keep them and even better if you could understand the information we will present it. Yeah, understandable. Okay. All right. Got it. So, after this has happened, so this graph is shown to you instantly, like just after the hearing test. Okay, okay. Okay. All right. And all of this is done. And then after that what happens?

Consumer 1

So he went through the results of the graph. The graph. Yeah. So then he said to me that I have this condition called a tough corrosive that I could have this operation in my left ear because at the time, that was the worst, or I could have been here at night. So he basically said to favor the same thing as what the doctor that I saw. And so this time, I've kind of prepped for that. So I said, I would like to go down the operation route. So then that was decided

Roy

Okay, all right. I'd like to stop you a bit and ask us this thing. So, firstly, when the doctor gave you these two options, did he give you enough information as to what are the pros and cons of having an operation or having a hearing aid?

Consumer 1

He went through the hearing aid. Tell me the pros and cons of the operation.

Roy

Why did you choose the operation if you did not know enough about the hearing it because you're saying that he did not really explain the hearing aid. Okay, so that was the main driver for it. Okay. Perfect. Clear. Yeah, you did not want to wear a hearing aid. Okay. So, what kind of cons were there in operation? Do you remember? I mean, it's five years.

Consumer 1

And so yeah, obviously, it's the duty operations, but it's not a success. And it could, it could actually make your hearing worse, you know, you could lose more of your hearing. And there wasn't also there was a con as well that because where they operate, they get very close to one of the nerves inside of your face. And they said that potentially if they damage that nerve, the whole side of your face could drop. You know, so you could be like, permanently kind of, you know, disfigured, I guess. Okay. I think that was the main the main.

Roy

Okay, okay. Okay. totally understand, and then you felt like operation was the right approach for you. Okay. So and, Okay, next part is the operation. Let's talk about who does the operation and how long do you have to wait for this from the date of the audiologist or the consultant

Consumer 1

Okay, so the doctor I've been speaking with in the hospital he performs the, the operation, okay. And I think I have to find the operation. Okay. So five months, so two plus five total seven months from the GP date. Yeah. Okay.

Roy

operation. Okay. All right. And how did the operation go? I mean, you already told me that you were hearing perfectly fine on your left here. So as I understand it when good

Consumer 1

Yeah, yeah. Okay.

Roy

Okay, that's that's really good. Okay. All right. So after the operation was done, you did not have to read in hearing it and you're hearing was hundred percent on your left ear again. Yeah, okay, okay. Okay, perfect. Understood. Now let's come to the payment part in this whole process. Could you show as I understand, I mean, I'm not from the like, I'm not from England. I'm from the Netherlands actually. So in the Netherlands payments work in a different way but as I understand England has NHS correct? Yeah. So, did you have to pay

at any stage or was everything covered? Or how does it go? Could you explain a bit? pay for anything? payment uncovered by NHS?

Okay. All right. Is there anything else in the previous Could you talk a little bit more about so you did not want to wear the hearing it at all in the left ear As well initially, and the main reason was it was associated with an old age problem. And you did not want to get associated with that. Could you could you talk a little bit about that feeling like, just describe as much as you can

Consumer 1

take I'm sorry.

Roy

So you did not want to wear the hearing aid because it's associated with old age. Could you discuss or describe that feeling a little bit more? Or did you see anyone or did you see no one who was young wearing hearing aids? Or did you see old people maybe in your family or someone around you were hearing it? Like why did you have that feeling like it's for old people? I cannot wear it.

Consumer 1

Like you know, my relatives? I don't know. Anybody, beyond all you know my age. Where can we go? I didn't know I kind of just so yeah, so it's not like, you know, I knew anybody that talked about there or anybody else to have hearing loss and that was, you know, my age. And I guess I kind of felt like if I do you feel if I do wear hearing aids? Am I going to be treated differently? You know, if people see that I'm wearing hearing aids are going to treat me differently, you know, are they going to talk louder to me because they, you know, they think that I am deaf or you know, where they go? I don't know, you know, and they treat me different. Basically,

Roy

this is really interesting information. To me. Treat differently. Okay. So these were your, yeah, totally understand. Okay. All right. So, now let's come to your right here, the left ear part of more or less understood. Now let's come to right here. So on your own Do you had the similar diagnosis from the doctor and the tool that you could go for a hearing aid? Five years back?

Consumer 1

That's right. Yes.

Roy

So at that point of time, why didn't you go for the operation? Could you explain once more?

Consumer 1

didn't give me the option.

Roy

Did you ask the doctor like his operation option?

Consumer 1

Yeah, I did. Yeah. Okay. Okay. All right. Now Now let's talk about hearing aid.

Roy

So how often have you worn it or how often do you wear it

Consumer 1

at about five times.

Roy

Okay, okay, yeah. All right. Explain to me as much as much like whatever you can say about the hearing aid and why did you wear it just how does it look? Everything about it?

Consumer 1

Okay, yeah. Okay, so it's behind the ear. So it has like the little part that hooks behind my ear and then pipe comes down and then it goes into my console. You know in my ear. I could have when I chose to choose the different color that goes behind your ear, you could have had like brown black, like a skin color and black and gray gray color, which is why I went for so yeah, so it just has it has batteries and obviously these are placing when you wear it. Okay. Okay, so this one.

Roy

Okay, so this one doesn't have Bluetooth doesn't charge. You have to replace the batteries if you want to use them late if you want to keep using them, okay. stratasys doesn't charge. So when you had this problem in 2015 I mean, of course it was also 2015. So the number of options were way lower than they are now in the market. But still at the same time, at the same time, then did you have an option of choosing the modules that you that you wanted? Let's say

Consumer 1

I could have had one while it was like

Roy

Okay, okay, okay. All right. All right. So one was behind the urine one was like a big plastic, which you could see. I think that is in the ear canal, as I understand I'm not sure. Does it have a component behind the ear as well in the second option?

No. Okay. Okay, so that was the insight the color. Okay.

All right. So while we were, like the number of times that you're worn it of course, it's not too many. But still, how is your experience with the product? I'm not sure how relevant The question is still.

Consumer 1

And it's good. It does help. It does increase my hand And the main times I noticed most people when I'm at work, and I work in an office, and you know, it's an open plan office, that people often you know, talk or you know, shout across the office, and if I'm not, you know, if I have my back to them I, you know, can't hear as well. And also, you know, people have computers and screens that block you know, their mom. So again, when someone talking to you, you can't pick up the, you know, the sound as well. And so I struggle the most at work. I don't I want one, because your family is today. So, for the past two weeks, when I've been at work a few times, I have actually worn my hair in a few times. Because it was getting to the point where I was I was getting anxious about going into work, because I was scared that I was going to have to keep on asking people to repeat themselves. I haven't told I haven't told anyone at work or my boss, I have a hidden problem again, because I just don't. I don't know, I'm just scared almost to tell them that I have a human problem. They'll say like, I'm sorry, please speak up because you know, I'm hard of hearing, you know, because I have to tell people, they don't know that. They just constantly have to say like, pardon, pardon all of your data. And again, if I were coming to the US or not, to say the past few weeks, I have decided to start where my hearing aids and it's a bit it goes, Yeah, it does. Absolutely. house because I you know, I pick up I hear more.

Roy

Okay, okay. Okay. All right. Going a little bit back. How much time did you have to wait to get this hearing aid? When you were like 25 and the doctor told you, you should go for a hearing aid.

Consumer 1

took about six months from from early to actually Getting it?

Roy

It's okay like choosing the hearing in between the btn, etc. Could you explain a bit more? Why did you choose the BT the behind the ear option?

Consumer 1

Better? It could be a better sound than the bending of the wall. I think the other one in the near one they said generally, for all the people who either find it harder to put either the hearing aids in many years and things like that.

Roy

Okay, and so you had to wait for about six months. Do you think this waiting period was too long? Or did you think? Yeah, okay.

Consumer 1

You think it was quite a long time? Okay. So I didn't even, I didn't even hear from them. And, you know, after months went by, I actually ended up calling and saying, you know, are you still getting me to the hearing aids? Because I haven't heard anything from you? And they said, Oh, yeah, we are just a long process, so they didn't really keep in touch with me. So there

Roy

is a communication gap between opting for the hearing and actually getting it. Okay. Yeah, okay. Okay. All right. Could you explain a little bit more the first time that you got the hearing and because the amount that I've read online and understood from research is the audiologist or the doctor, they fit the hearing aid and put the settings based on your exact loss, or something like that. Yeah. So could you explain a bit more how how curated it was exactly to you? Or how much was a different from like, Yeah, okay. The same as last time, the same as with the headphone with the bone conduction, the same thing. They use the results to program it. So the results was basically those graphs to do you know, or did you have any idea of how this programming was done?

Consumer 1

But I don't know.

Roy

Okay, okay. Yeah. Yeah, it's kind of like an auto auto auto tune function. Yeah, that's what I saw online. Yeah. So they put the graphs in and they take with the graphs as the input and like the different functions or features in the hearing is as output. The attitude function basically tunes towards the graphs. Okay? That's how it works. Okay. All right.

Consumer 1

So,

Roy

after after it was done, like after the hearing aid was tuned towards your problem, let's say, did you have a lot of options to tweak it based on if you needed to, like for example, increase the gain a bit or the microphone direction or something like that. Okay, so you do not have any control as to how the hearing aid can be treated.

Consumer 1

That's about it.

Roy

Do you think like, like some controls, based on how the environment is could help. For example, if you were listening to music, that might can be very different from, let's say working in an office or sitting in a pub or train station. So how is the experience for you guys different places? Yeah, as you say, you might be a lot of background noise

Consumer 1

you know, trying to filter out those different types of noises.

Roy

Okay, but you do not get any of those options.

Consumer 1

Yeah, okay.

Roy

Okay. So when you were saying like, it would be nice to turn the volume down, let's say in a train station, or in a pub, or somewhere. Do you feel this in real life too? Like when you're in a pub, you feel like oh, yeah, it's it's too loud as you're turning down a bit, but I can't.

Consumer 1

Yeah,

Roy

okay. Okay. Perfect. Perfect. So with all these problems that you have, let's say in a hearing aid. Okay, before going there, could you tell me the company of your hearing and the one that you use right now? Yeah, you can you can text me if you want. It's not really that important. I think it would be probably signia. Because that's what anytus gives. But yeah, if you could text me on Facebook, that should be fine, too. Yeah, yeah. Oh, you were in office right now, or are you in office right now? Like, because you were saying when to get back?

Consumer 1

Okay, you're in your car. Okay.

Roy

All right. So, could you explain a little bit to me, the different experiences you had in all these different places or where he really felt like the hearing it was not helping Okay, let me make it a bit. Let me make it a bit easier. Could you tell me the different scenarios in which you use the hearing it and where you don't use it?

Consumer 1

Occasionally, occasionally around the house, okay. Okay, so you're ready to anyone going out or going to a dinner party never Okay, okay. So don't feel confident confidence. So when you were wearing it, let's say In the in the house occasionally. Is the environment different from at work? Because in the house I understand probably it's your kids and your partner talking and in the office it would be everyone

Yeah, yes

Yes. Like though in the house, you know, the could people could be further away from you that could be in another in another room. You know, there could be noise coming from outside or said so, yeah. You know, you know, throughout the whole of the house really, and I hid things. Yes. To hear all my hairoutside.

About before my husband finds he has to repeat himself to me when I'm out here.

Roy

Okay, okay. All right. So which of the two experiences would you say is better? Like working in the house? working? like staying in the house versus

Consumer 1

in the in the office? Yeah.

Roy

Okay, so in the office it's been so it's probably good at already canceling externalizes and getting to the one that you want to hear maybe. Okay, all right. Now let's go to any positive or negative experience that you had with the hearing it. So how do I do weather heating it continuously something like, let's say tonight or something.

Consumer 1

So if I

put it in my ear,

Roy

and I take it out, okay. Okay. Okay, so just doing that time okay. Let's talk about revisit to the audiologist. Did you revisit your audiologist in the last five years? Yeah, like go back to him for some reason.

Okay, you have never been okay. All right.

How often do you have to change the battery of your hearing it?

Okay, so you haven't changed the battery of your hearing aid in the last five years even once?

Okay, you didn't really need to

change batteries. Okay. Do you think it would have helped a bit more if you didn't have to change the battery or is it easy to change the battery or is it difficult?

Consumer 1

And it's quite easy. I would say though, that if I was wearing all the time, but it's actually right now, I think I would have to take the whole hearing aid out to replace the battery, which I don't think I would like to because then you know, people are going to do that and I wouldn't want people to do that.

Roy

Okay, okay. Okay. Very interesting. Okay.

So

yeah, they're there.

Okay, all right. So, I don't know if you know of this product called airports by Apple, which go with iPhones. So they're like really small. They're not hearing aids. They're just earphones.

Okay, so do you know about that product?

Okay, okay. You know, do you think if you had a hearing aid like See, which looks stylish like that. And I'm putting the word stylish in air quotes, like I'm making air quotes with my hand. I mean, I can't see you. That's what I'm saying. So, like, yeah, like more more than stylish like that.

Roy

you would have been able to accept this and wear it more often?

Consumer 1

Yeah, I think so. Yeah. Yeah.

Roy

Okay. Let me do the small.

Consumer 1

I just think that's all obvious. You know, when it's in your ear, it's obvious to everybody who sees it is what it is and there's no hiding it was something that blended in or was you know, look like, you know, an icon or whatever. And, you know, people are necessarily saying, oh, that person from here, make a call that, you know, I think the music or whatever else

Roy

Let me let me give you two options. Let's say you you had an option to blend it in or hide it, like let's say a really small hearing and within your ear or let's say you could make it into style statement like airports right now are almost turning into style statements everyone wearing it, and it could be such that it's, it's, let's say part of a hearing or it looks like something like that. Which one would you prefer more?

Consumer 1

Okay, all right. And I know that those aren't always they don't always have to say

my options or they're good hearing aids because they aren't

good for sample. And so which case you know if they, if I could have one thought the second option you said like the air pods or something that was like an earring, but how

Roy

Okay, okay, do you do you have an option to search the internet? Or do you have any connectivity in front of you? I thought I talked to you about a product. I mean, I'm not selling this product or anything but as researching and they could find this. So what do you think about this product? Could you search signia? Si G and I A

Yes, yes, yes you Yeah.

signia then stay little. So the so the word stiletto is sp y, l e, wt O. And if you go to the first link, let's say Which is the official signature website then you can probably find it out. And there could be if you want to have a little bit more Look, there could be this video called stylet or connect like once you were in the webpage and then go down a bit the second video not the first one, the first one just shows the product. The second one is someone wearing it, like this TV, TV presenter wearing it. So if you just play this video a bit and just have a look like 1015 seconds you can get an idea already. Yeah.

Consumer 1

Okay, yeah,

Roy

yeah. Yeah. What do you think about this product?

You like the look of it? Okay. Okay, interesting. Okay.

Okay, okay. Okay. Okay, again, I'm not selling this product. I mean, I'm not a salesman or anything. I found this like this attitude. All right. Yeah, I just wanted to know because a lot of people actually thought that I'm trying to sell stuff would have not.

Yeah. Okay. So you think that it's quite stylish, it's more discreet, but also at the same time, it's a stain statement. It's more modern.

And it also has features like, let's say Bluetooth connectivity where the sound is directly trying smid inside your ear as I understand you don't have that with your hearing it. Oh, okay. Do you because you were hearing aids and when you were wearing it as I understand you cannot wear your pants or hear phones or anything like that. So maybe you miss that idea of wearing earphones because you're wearing hearing aids, right. So it would be definitely good if it had that inbuilt feature. Yeah, okay. Okay. Okay. All right. Let's talk a little bit about the maintenance of the product. Did you have any problem with with maintaining the product or like it broke down or something happened?

Yeah, yeah. These are the questions which are not so good for you as I understand.

He says don't use them.

Okay, no. So the battery that goes inside the product you told me that you did not ever change it. You did not have to. But still, if you have to do you think it's easy to find those batteries in the market? Like you it's very easily accessible or

Consumer 1

replace the battery.

Roy

Okay, okay. Okay, so you just have to go to the hospital and they're gonna replace the mattress. Okay.

All right. All right, totally, totally, totally understand. I think about the product. I could, I could ask you as much as I could because you did not use it so much. But you also don't like it. Which is which is interesting for me. Let's let's talk a little bit more about the life sentence because this is something I think you can really talk about. Because since you do not use it and that's the main reason. So, so when when you were using The product, let's say so do you think it affects your lifestyle? Or how does it affect your lifestyle? Yeah, when you were using the hearing it Yeah.

Like any positive negative boat

so when you were wearing the hearing aid or using it talk about any any kind of lifestyle change on the positive and the negative side like positive for example would be you can hear better so people don't have to repeat. So yeah talk a little bit about this. Yes. Yes.

Consumer 1

I when I watched Tell me at home I use the subtitles on just because my husband didn't want the telly to be really loud. Normally, if I have my hair in a you know, I don't need to pay for going on in my head

Roy

Okay, okay. Thank you for being so direct. It's really helpful. Yeah, these are like very personal information as I understand. Okay, really good. So you keep your head down, always trying to hide it. Okay? Okay. Okay. Okay. All right. Any any anything else you could just keep keep talking
Yeah like about these kind of scenarios yeah how it affects you

Consumer 1

Yeah, so I guess what I do I get a bit more confident because I know that I you know, I can hear more I'm not missing to increase my confidence after a while it can get a bit

Roy

okay, okay is important. Okay. Okay.

Any any kind of situation where you were, let's say bonding better with your children because of the hearing aid, or any specific thing.

Right, right, right.

Do they have? Like, do they change their impression towards you? Like your husband or your, like your closed ones? I mean, not your office colleagues. Does it change when you were not? Were not.

Okay, okay. Okay. It's the same. Okay. All right.

So how does the product help this really explain the telly? Is it also the same with music? Like it also helps with music as I understand when you read it It's a it's the same as the telly, do you feel? Like do you feel it's nicer when you go and go out and watch a movie? Have you ever tried it because there is a feature called telecoil in a lot of hearing aids, so I don't know if yours has that, too. So that actually helps when you're in an opera or when you're in a movie theater, and the sound is directly transmitted into your ear. Not like enhancing the sound, but more like directly transmitting it. So have you have you ever used your hearing it in such a situation? Like opera or? Okay, okay. All right. All right. If yours has that, okay. All right. So I think I've understood more about hearing it. Talk to me about where the product or the service like the whole journey you can talk about the whole journey by the way, where did it fall short for you. When did you feel like it's not good or you wanted to change it

you can talk about your whole journey from the age of 25 till now not only the product

Consumer 1

operation to get the hearing aids I kind of said before you know no one really kept in touch or communicated you know what was happening next and knew what was happening. And I also think it falls short the options of hearing aids that I have and you know, I guess yeah, obviously a lot of a lot of people around these will be the elderly some that perhaps they they're not looking for something as stylish as someone like me someone

younger, you know, agents, happy to wear it because you know, it will help their hair Right, which is great for someone like me that's gonna have to wear it for a long time, you know, for lots of years you know? Yeah, I think that it will be good to have more options more more modern or more and more facilities that they can have.

Yeah, I can't really know now like, I can do like, I don't know I don't see any audiologist now or my doctor and again, I kind of just feel like you know my mind is having operation in my

Roy

so you are not explained properly of your options. You were just given one which is where the hearing aid and choose one of them. Oh, sorry. Yeah, sorry. I think that got disconnected for a bit, but yeah, yeah, it's working. Okay. many options. Okay. All right. Anything anything else with respect to the product? The stylish part is definitely something you mentioned and the features but you mentioned it would have helped if you had a more stylish more options as to go for stylists and features. Anything else?

Okay, okay. Yeah, I mean, that covers everything I guess. And for the process, you told people were not in touch during your waiting periods. You just didn't know what was going on. You had to call them and that's not nice. Yeah. You had less. You feel like you were given less options and less information at every stage. Like initially when you mentioned the graphs, which were not shared with you and then you did not have time to really comprehend what they were. And yeah, so tiny. You were just given hearing aids and not explained well as to you could also Go for an operation which might be better for you, as you think.

Consumer 1

Yeah. Okay. Okay.

Roy

Yeah. Okay. So as I was saying as a route online, it was a paid like a paid engagement. So I'm not quite sure how I can compensate but I talked to the office and

yes, yes, yes. I'm in London. I live in London. So okay, okay. Okay. I will talk to the office and then and then to text you on Facebook, how how, how we can how we can compensate you. All right. And I think I think it was really, really, really nice talking to you. And if Yeah, if you'd be coming to London at any point of time, I don't know if he'll come here often. Hello. Hello. Hi. I think the call got disconnected again or

Okay, can you hear me

Consumer 1

Hello

Roy

Yeah, can you hear me now?

Okay, so I'm saying do come to London often. Okay, okay, so when you if you're coming down then maybe if you'd like to come to the office once like the office that I'm working at, because so so what what we are trying to do so during the interview I never asked you a question with respect to the price of like why didn't to go for a non NHS product because a lot of these entities products as you said, the product is not good enough for you or you did not like it because of multiple reasons. But if I asked you now would you have gone for because I don't know if you know, there are, of course private options with thousands of pounds of cost and a lot of people

Consumer 1

looking at the website about possibly going down the pipe. Okay.

Roy

Okay, so. So our whole idea is we're trying to see if we can do something about it because it's really expensive. And NHS products are not good enough, as you were also saying, Yeah, so, but the price of private products

are \$2,000 plus for one piece. Yeah. So, so that's why we were trying to see if we can go into a different direction. So by the way, I work in Cambridge Audio, I don't know if you know this company.

Cambridge Audio.

Consumer 1

Okay.

Roy

Okay, so so I'm, I'm basically a student, a master's student from TU Delft in the Netherlands. And I'm in London for a few months, and doing research with them and trying to understand how, how the industry of hearing aid is. So that's why so if you were if you were in London, in the in the future, and we were trying To develop some hearing aids, and of course, it would be really nice if there are people who want to try them out. So if at any point of time if you're in London, I may be text you a month or so now, if you want to. You are definitely welcome to try them out.

Consumer 1

Okay.

Yeah. Yeah,

Roy

probably, I think I'm in London for two months now. And after a month, we're going to the US for some work. And then after we come back, we should have the first first product. So maybe mid of next month, so mid April ish.

Okay, so that might be interesting. Yeah, so, yeah, that'd be really nice. Well, I'm like a design student. And we have this thing called generative sessions, where we work with where we work or sit down with a number of present users or non users in your case, you were mostly a non user. And then and then give them an Give them things like let's say Legos, like building blocks, let's say building blocks and ask them to create something which they think would be perfect for them. So So you could say, Yeah, I would want this a little big or small, or I would want this feature or things like that. And then based on that, try to understand, what are user insights? Yeah, so I contact you maybe a month or so from now, but it was really, really helpful as of now talking to you and really understanding how your journey was.

Consumer 1

If you have any more questions. Yeah.

Roy

Okay, okay.

But But anyway, since I have your Facebook, it should be fine. Then I could just call you if we quit or we could. We could FaceTime like FaceTime or so. Got he later on if you want to. If you want to show me you're hearing it like literally, and then show or this part of state or this part gets ready or anything specific.

Great. Thank you very much. Okay, thank you so much for talking to me. My Yeah.

Consumer 2 Interview transcript

Roy

From TU Delft in the Netherlands, I am studying strategy design. Right? And so I am graduating in this semester. So this is my final semester. For my graduation, I'm tackling this problem of hearing aids and how hearing aids could be redesigned, or the whole service could be redesigned. Because let's say in the UK, we have the NHS where most of the cost is covered at this for to some extent for some of the hearing, it's not for whatever people want, as asked, yeah, talking to people, but outside of the UK. It's mostly not covered and it's a huge financial burden for the person who is actually getting Yeah, so I tried to understand if that could be changed. And there are also some legal changes which is happening recently, which makes this industry ready for disruption. So

Consumer 2

now like what so what do you mean what What's kind of what's happening in the industry? Okay.

Roy

Yeah, I can also talk a little bit about that. So what's happening right now is buying hearing aids for quite some time specifically in the US and also European market was not possible for a customer to buy directly from the seller for exile. Yeah, okay. You cannot buy you're hearing it over the counter if you are in the US or in Europe, but right now that is changing. And so FDA, FDA is Food and Drug Administration, it's a government body in the US. So they are putting up a law and it's going to be effective from the mid of 2020 it's it's not there yet. We're hearing it could be bought out. Like OTC OTC is like, directly to the customer or over the counter, like you buy, let's say, medication for very easy problems.

Consumer 2

So does that mean that they're going to be cheaper for people?

Roy

So the interesting part about hearing aids is the cost of hearing aids is about 2500 to \$3,000. When you are actually buying it like not the entities one, of course, that is paid for by the NHS, but normally someone in the US if he or she wants to buy one single piece, not a pair, it's about 2500 to 3000. And that breaks down to about 100 to 150. dollars to manufacture the hearing aid. About \$900. Okay, yeah, it's it's a huge difference, like one dollars to manufacture it, and then it eventually comes to the consumer sanded about 20 \$500. That's, that's a situation right now. And there has been a number of studies which is done. Do you know about the company called Bose vo sc.

Consumer 2

Yeah, it's a sound.

Roy

It's a it's an audio engineering. Yeah, sound engineering. So recently, they came up with a product and then There was a comparison where there are two sets of sets of patients like about 23 each set. And the first set of patients, they set up their own hearing it by using the Bose app. I mean, it's not out in the market. So this was a closed study. And on the other set of patients, it was set up by a professional audiologist, out of the, like the outcome of the of this experiment was that the people who set up their own hearing aids like created their own settings, were on average happier, the setting rather than the people who were, who use the help of an audiologist to set it up.

Consumer 2

That's really interesting. And I know that for the NHS, obviously, you don't get one like unless you don't see an audiologist. I think that a lot of people, particularly in the group that you posted in they say that this way That the audiologist sets up is as important as the brand or the type of hearing aid. So that's really interesting that there's an app that could be like really effective that people could use themselves. Sounds like that would be quite a high level kind of app, you know? Or maybe they're just just ability to like fine tune things a lot of people wearing.

Roy

Yes. So should have

Consumer 2

to go back to the audiologist if you can keep updating. Hmm.

Roy

Right. So basically what happens and this is a common tone that I'm hearing when I'm talking to more and more people in most cases. So first, you do a hearing aid and right now talking to other people I know a little bit of course, I'll ask you the same questions again, I know how the hearing test normally goes. And then based on that you get some graphs. And those graphs are normally put into by the audiologist in the system. And then he just he or she just presses a button for auto tuning it like auto tuning the hearing it based on what the outcome was from the hearing. Test, they do not only add a lot of value to the value chain. So if if this is done by a system anyway, just like putting the input, which was bought from the hearing test and then getting an output through a computer program, then that

Consumer 2

well when you let them do that, and then when you put them in your ears somehow that they adjust as well, automatically to the sounds right. It's kind of automated anyway.

Roy

So in that case, what we are questioning is how much value is the audiologist adding to this whole system? in setting

Consumer 2

up the hearing, and

Roy

I'm not saying in in the initial part, like where the testing happens. That is also a little bit automated, but to some extent, as I understood is the audiologist does have some value there. But in the second part where the hearing aid has to be set up, does the audiologist have a lot of value addition is what I'm kind of questioning. So that is one of the main research questions that I had. And then the point

Consumer 2

you kind of you moving towards Like, satisfy people by their own age, and they set themselves up. How much cheaper would there be like from say two and a half to three grand.

Roy

So if you do if you directly remove the overheads, and if you just keep the cost of manufacturing and price margin or the profit margin of the manufacturer, then the cost then the cost of that hearing, it could be in the range of 500 \$600 apiece, so, that's a

Consumer 2

big difference. Yeah, so

Roy

that's a huge difference for people who are not covered by insurance or not covered by NHS or some kind of a body like that.

Consumer 2

Okay, that's interesting. Yeah. So

Roy

yeah, so that's kind of the premise of my project, I think. Yeah, I think you were really into so it is super good, because I have spoken about my project to you for the first time in so much detail in among

Consumer 2

Yeah, no, I like because obviously and I don't know, I think what I would say overall, the biggest thing I think A lot of people would agree with me the biggest issue is not about I think for me Okay, so like just to tell you a bit about me so I had this disease called cholesterol Toma I think it's like one in 20,000 but that still means quite a lot of people have it I had that when I was 13 Okay, so it was like a middle ear sock a benign cyst, but it's quite it's quite destructive. So the little bones in the inner ear just got totally in a way by it and they only found out because it had like really bad pain. So it had been growing for probably quite some time but that left me with so conductive loss so like all you know, the nerf and that is all intact, but they're shaping my inner ear is is is not how it was but at that age at 13 I didn't want hearing it because you don't want to be different at schools. I like brown and they're you know, they lit like a bit of medical equipment. So I think even for me now like at 45 I'm just About a second one, like my most kind of anxiety around it is what it's going to look like. Yes. You know, and I think like there's so and there's still so really unattractive and I don't know why it's not been more designed, put into the Yes, I can do my own research. Like I said she like I'm a jeweler, so I'm kind of thinking about making something myself in terms of something cosmetic to fit over it. That looks like a piece of jewelry. I did

Roy

your post. Yes, absolutely. Yeah.

Consumer 2

And so yeah, just I think obviously the cost is a factor the way they work. The fact of I think there's like this barrier for people buying the like they say something you probably know this, like people wait 10 years on average before they get a hearing aid. Yes, yes. Yes. Yes. And I think if they looked better, you know, like, people talk about glasses how they used to, you know, be a stigma glasses are quite trendy now. Yeah. I think if aids look better than like a high piece of you know, like, really cool earphones or something right. I really think That would make a huge difference to people like taking that first step. It's like a metal block where people can't get past. Absolutely. I think absolutely.

Roy

I think I think I'm gonna do this conversation in a way I did with one more person who was the first person I interviewed, I think you guys have a very similar kind of point of view, which is the stigma is a huge problem. And also, she's aged probably about I think she was 38. Like you told you were 45. So yeah, 38. And then she also had this similar kind of problem. And in the end, I'm going to show you one or two products, I mean, again, to say I'm not selling any product, but I think that those are good benchmarks of where hearing it's good, go, and then ask you what your point of view is of those products. That would be land. Okay, so shall we begin then? Yeah, okay. Okay. All right. So to start with, I'll just let you know beforehand. So is it okay, if I record your conversation? Yeah, that's fine. Okay. All right. I'll be taking notes on the way so it'll be nice if you could speak a little slowly then I am not liking what you're saying but yeah just to get a piece of it okay to start with and start with a very open and general question add as much detail as you want. Tell me your whole story about hearing loss and getting hearing it and where you are now.

Consumer 2

Sorry, say it again you want to like clear the background to

Roy

Yes, the whole story of when you started when the first hearing loss happened when you got to know to where you are right now. Everything as much detail as you want.

Consumer 2

Okay, so so as I said before, when I was 13 I had the cholesterol tomia I love to look up how to spell that. Yes, I'll do that nobody's and so that that kind of overnight because of the operation to remove it. My hearing loss probably maybe lost about 40% of my hearing loss. My hearing in that ear at that time, the doctor said that a hearing aid wouldn't be useful because it would just mean I would get a lot of infections. And I was, as I said, I was quite glad because I didn't want one. So I just struggled, not being able to hear very well. And then when I was 19, I had the same thing in the other area, which is really quite rare. At that point, I was at university in the first year and the hearing loss time was too great with both sides to you know, be able to hear lectures, things like that. So that was the point I got a hearing aid. That was through the NHS and it would have been

like a behind the ear. No, hang on. Was it through the NHS? No, I think it was privately actually. But it looked like an NHS one. It was a kind of old fashioned

Roy

But private. Okay, I'm gonna stop you looking at history later on, like, try to break it down but keep going. Okay.

Consumer 2

Okay. So it was kind of useful but it did it did mean I got a lot of ear infections so I didn't wear it all the time I didn't find it that comfortable in terms of the audiologist that set it up, I didn't. I didn't really feel I had a lot of feedback, like I know quite a lot now, but I didn't know things about different programs, different environments, even things like volume control. I don't remember why I only got one for one year, even though at that point I had hearing loss in both. So I didn't really feel like I got a lot of information. And so I probably will On and Off through university. And then when I was 24, I went and got a private one. I wanted an end. I wanted something as invisible as possible. I got an in the year one. Okay,

Roy

so the previous one was also private. As you said,

Consumer 2

the first one must have been private. Yeah, it was.

Roy

Yeah. Okay. Okay. The second one you got was also private one.

Consumer 2

So the second one was private. And at that point, I think the audiologist was better. I felt that she had more time to talk through different options with me. I just felt Yeah, I felt that I felt more kind of understood. She explained a bit more to me about the fact that I'd been reading for years I probably didn't know that. So like when people can't see their faces. It's harder. Okay, but that was just something I was doing automatically but she kind of explained a lot more about how I've been managing with it.

Roy

It sounds more like boring.

Consumer 2

Yeah but what I would say actually is when I went to get that fitted I now know that if sheets the kind of behind the ear one which is what I've got now is like a dome fitting is actually much more comfortable. And I find actually, it's not as visible even that's behind the the little plastic tube. Like I know I need someone six months before I even noticed I had hearing aids. I think the ones that are in the ear, you can see them from the side. But because I was kind of set on that option at that age because I thought it was going to be less visible. She didn't really talk to me about other options. That probably would have been useful. This was a did

Roy

FISA Is the in the year? Or did you say I want something less visible. So let's go for in the, like, I

Consumer 2

think I did say in the, in the models, but um, I never really found that comfortable either because then they move around quite a lot like when you just move your master talk or he kind of works its way out. So I'd be pushing it back in a lot and you're sort of very self-conscious of that because it would whistle. So it wasn't really a great option for me. But I think I had that for a few years. Now probably Yeah, probably had that for five or six years.

And then I got an NHS, which is what I haven't bought, I think I've got an updated model but the NHS audiologist that I saw in Scotland in Glasgow, and she was very, very good. She was she took a lot of time with me. Talk to me about different options, different AIDS. I think I'm sort of picturing you know, that Saying people could buy and set them up themselves with a phone? I, I would find that a little bit daunting, I think.

Okay, okay. But I would Yeah, I would maybe work to get passed up, I think. You know, I'm very comfortable with technology with apps and saints, but I, I don't know, I feel like the audiologist would have more knowledge about how the equipment works and how to fine tune it for different environments. But then I haven't tried it. I haven't tried it myself. But it feels to me because I've been in the system, I've gone to people that are allegedly experts that they would have to knowledge about, you know, it's not like putting on a pair of glasses, it's a bit different. And your brain needs time to get used to learning. You know, you might not know that with the app. But for me, it's different. I've got the luxury that it's paid for. So If I was faced between, you know, three grand and 500 pounds, and I've had to program myself, of course I would, of course, I would go for the cheap option. But I do, I do feel like the audiologist I saw for the one I have now was really helpful, actually and really useful. I think obviously that depends on their training, you know, and that people skills and but I do think there there was an extra value in having someone to

Roy

talk. Yeah, yeah. Okay. Right. And then.

Consumer 2

So that's kind of where I'm at now. I'm just in I'm on the waiting list to get an upgraded aid and one for my other ear as well. So obviously, I'm nervous about that process. I don't know what they're going to offer me and I think I've been told that they might have to be slightly bigger because one ear is worse. So I have to have a pair the same. So I've got that anxiety again of, you know, what's it gonna look like? I've just got Why not? I'm used to wearing one and I feel I don't really think about it once I put it in, but with two that are more visible, that's gonna be quite a big shift for me. Right. Right. Right. So again, that's about, you know, the color of his design.

Roy

Yeah, and he was saying that you were a product designer yourself. I did go through a little bit of your Facebook posts. You design jewelry,

Consumer 2

and Majola. Yeah. Yeah, so I was thinking about, you know, trying to make something that would either highlight it or you know, like, fit in with it. Like a piece of jewelry, like, you know, nearing some kind of wood on top of it, or maybe like it. Yeah, I'm saying I've got a few ideas. But then people, you know, people would decorate them with stickers and things, but I, you know, that's not really a kind of high end option for making the more attractive.

Roy

more classy, Yeah

Consumer 2

You know, like a, you know, a piece of slick equipment or something.

Roy

Yeah, right. Right. Right.

Yes. Okay. All right. I think I think I got your story more or less. Just one thing, which, like before diving deeper was, you don't like at the age of 24? Yeah. You got a second pair of hearing aids, which was in the year.

Consumer 2

But yeah, just one. I've only I've only had one. Yes. Oh, yeah. I mean, I got I think it was a wide x. moto.

Roy

Yeah. The name of the company was same way.

Consumer 2

Yeah. Okay. Sorry. Yeah. The company. Yeah.

Roy

Yeah. All right. And you were wearing it for five to six years. So at that time, it puts your age around 30. Right. Yeah. And then you went to the audiologist in NHS. Yeah. And that is more or less. Okay. Okay. Okay. All right. And then you have been wearing the one that you got from her the most recent one for almost 15 years now.

Consumer 2

No, I won't be no. So I think this one is about four

Roy

years old. Okay, so what happened in the middle like last 15 years? I think goodness,

Consumer 2

yeah, God, I don't I'm gonna have to check. But I think that I've had NHS ones but just I've been upgraded because they upgrade them every every five years, something like that.

Roy

Okay, you get an upgrade every five years.

Consumer 2

I think it's like three to five. But I'm, I think you have to ask for them.

Roy

Yeah, that's what

Consumer 2

yeah, there is a provision there for them if you need them, right. Or if you're hearing loss changes and you need something stronger. Yeah.

Roy

Okay, okay. All right. So you have had two or three hearing aids in the last 15 years, but mostly also NHS Yeah, right now you're waiting for your next upgrade and also, one more hearing it for your second year.

Consumer 2

That's right. Yeah. Okay. Okay. All right.

Roy

So, diving deeper a bit. So when you were 19 years old, you voted going for a private auction, like, what was the motivation behind that?

Consumer 2

I actually can't really remember. But I think it was more and I had the operation when I was on my, like summer break between I think it was second and third year of university.

Roy

Yeah. And the operation was also private, or was it true?

Consumer 2

No, that was NHS. But I think I probably would have I would have been looking to get something fairly quickly. So I had it when I went back like in September.

Roy

Okay, so maybe Time was an issue.

Consumer 2

I think time was an issue and I think I also thought maybe it would have a bit more choice of styles like cosmetically.

Roy

Okay, choice of stance. Okay. Do you remember how much was the spending and that? I mean, it was of course like 20 years.

Consumer 2

I don't know. I can tell you the one that was the one that was in the air because I've got Hang on. I've got the report, but I can't remember the first one how much that would have been okay. Okay. I think my parents probably paid for it. Yeah,

Roy

your mom and dad probably paid for Yeah.

Consumer 2

Just actually found out my eligibility. ology put it the other one was so in Sterling so 1975. So that was one in the year. That was when I was 24. Yeah. So what 20 years ago, so that's pretty pricey, then. Yeah, that's 20 years ago, and it was already in 1975 pounds probably come down a bit in price, even allowing for inflation but yeah, it's quite pricey.

Roy

Yeah, it's it's quite pricey. I would say it's probably 2500 pounds now.

Consumer 2

Yeah, yeah.

Roy

Okay. All right. And do you remember why you went for a private option? In the second case?

Consumer 2

That was definitely because I wanted something in the air and that they don't very often offer you that option on the NHS hardly ever I don't think so. And it is more expensive and I think that they probably harder for the NHS to maintain because they're actually still the property of the NHS even though you get them they still kind of own them. So they'll do maintenance for free, but I think the in the year ones are harder to maintain. They're not as robust.

Roy

right to it, I wouldn't

Consumer 2

have been an option which is why am I private?

Roy

Okay, okay. Okay. All right. And after that, Could you speak a little bit about the experience of the audio largest you had? Like, what did you do? And what was the test everything like everything without just

Consumer 2

Okay, so I think she would have done she probably would have done a kind of sort of brief examination of my ears to check them

Roy

do kind of examination.

Consumer 2

So I think just to look like him with a microscope to check that there was no infection or just to check the shape of the ear. Check the suitability of the hearing aid because the operations changed the inside structure of the ears a bit. And then there would have been a hearing test that was in like a soundproof booth. So it all felt very high tech. I think she would have taken a mold of my ear.

Roy

Yeah. Oh, is that done? Could you explain it in a little bit more detail?

Consumer 2

What how they do that?

Roy

Yeah, like what exactly happens when they take a mold of your ear.

Consumer 2

So for an in the ear one and they would need to obviously be fitted to fit, you know there needs to be fit to fit individual people's ears so they put I think they just put like some cotton wool in as a barrier and then they pipe in I don't know what it is it's probably a silicon, similar to what they use for like a kind of dental impression. Put that in for a few minutes.

When it hardens, take it out and then they send that off to the laboratory to get to use that to get the you know, the mechanisms put into the hearing aid. I probably would have had a couple of weeks away before I went back to get that. Okay, this is important a couple of weeks ago. Yeah. So examination hearing test mold of my ear I think probably had to pay a deposit and then go back and get fitted. I don't think there was any kind of fine tuning after that stage.

Roy

Okay, so they did everything within this couple of weeks and inside the Mall of your year they put all the electronics and whatever was needed to that. Yeah. And then gave it back to you. Okay, okay. And then you went back again to collect it. And at that time, it was a lot of fitting done. Or

Consumer 2

I can't really remember but i think i'm sure to check the fit of it and just check the sound quality.

Roy

Check it like Do you remember this? Is this ask you or

Consumer 2

am I remember talking like across the room for me with a bat to me? Mm hmm. You know, to sit back and pick up enough sound that way. In terms of tuning in Computer I'm not sure at that stage. If it was just calibrated to my hearing test that she'd done that, you know, previously. I think it had it had had a remote control and it had three different settings for different environments. I think mine might have been like in a noisy environment one might be kind of everyday one on one might have been like music or something like that. Yeah, yeah. I didn't really use them. Now. I didn't really find them that useful. I think I maybe use one of them because it gave me like a volume boost. Okay, okay.

They want to have now I don't I only use like one of the programs just have it on that all the time. And it's just got one kind of volume.

Roy

Okay, and that's about it.

Consumer 2

Yeah,

Roy

okay. Okay. All right. I think more or less, I have understood your backstory. Now. I'm gonna go into a little bit more pointed questions, okay, just one second. Okay. intent is often slow to solve

Okay, all right. So, now I think you have, of course answered some of the questions, I guess. But still, I'll be asking like, questions, which is very specific to like, okay, portions of your journey. So, the first question will be, how did you come up? Like, how did you come to know for the first time that you have hearing loss?

Consumer 2

That was like because of the operation.

Roy

Okay. So after the operation, you just started listening less or you asked people to repeat them? I was it. And

Consumer 2

I just I think that was that was difficult because I wasn't actually told that I would have hearing loss because I don't really know why I wasn't I would have been really helpful to be told that I would wake up and I would have some hearing loss. And the doctors just said that their job was to you know, make it safe, you know, remove the dust. But they would have known that it probably would have meant hearing loss. So I didn't know and I had a bandage like in my ear for like three weeks. So I just thought that point everything was muffled and I guess when that was taken out, I probably would have noticed a difference. And I would have been at school then so yeah, like, struggling to hear enough in like lessons. Okay. Okay, struggling to hear the essence lectures.

Roy

Then it feels like I'm just thinking it feels really problematic late when you were 13. You were young.

Consumer 2

Yeah, it was horrible. It was really it was really hard and not having any kind of support around it. And I just wanted to kind of hide it really actually, because you're really self conscious of that age. Yeah. And I think particularly like studying like studying French and German. Obviously trying to learn a new language is difficult anywhere but with some hearing loss. That was hard. So those classes, what always kind of made me quite anxious.

Roy

Okay. And I'm so sorry for you this. Yeah, I'm hearing my feeling. Okay. So after this once this happened, I mean, you were quite young you could also talk from any Lake independent person like maybe 1819. So, what were the steps after you did that? Because probably for first few years you didn't really do anything.

Consumer 2

How do you mean so after what 19

Roy

let's say when you were 19 that's when you first thought I should get a hearing it.

Consumer 2

Yeah, so that's when I got the first behind the ear one.

Roy

Yeah. So what was the step? So did you first go to the GP or did you directly?

Consumer 2

Okay, um, no, I think we just booked a private audiologist.

Roy

Okay, directly booked private audiologist What was the waiting time? Was it easy? I mean, it's probably a long time back, but still, I

Consumer 2

can't remember. But I think it was. I think if you go private, it's usually quick, you know?

Roy

Could you just define quick a bit? It's like,

Consumer 2

it might be within two weeks, I was within two weeks. Okay. Whereas if it was on the NHS, you're talking, I don't know, a few months, maybe that was probably the main reason people go private. Okay. And the quality

of the service, there's not necessarily any better. Okay, it's a time saying, you know, time and probably choice of different models would be why someone would go private, I would think,

Roy

okay, okay. quality of services, simple choices. All right. So, you told me you didn't go to the GP so that's gone. The audiologist, I think I already heard from you about the experience was it was basically three steps more or less. First is looking in the microscope and looking through your ears, yeah. And the second layer is the soundproof room check. Test. And the third one is mostly if you're doing in ear then silicone. It's not that.

Consumer 2

Yeah. Okay. All right.

Roy

So when you went to the private audiologist the first time, like when you were 19, do you feel like you will fail because you already told anything, you felt like you were not fairly informed? In terms of the choice of hearing it in terms of what options you have, what was the problem and all these things?

Consumer 2

And yeah, I don't know why he decided to give me the one that he did. I don't remember them talking at that point about lots of different options. He did talk about the one we have that can be like in the frame of glasses. Okay. And if you know about there, like a bone conduction one, yeah, it would mean a particular style of glasses. And obviously, I didn't want you know, I mean, like big massive spectacles. So even though that would have been better for my condition, because it wouldn't have been provoking an infection by being in the air. cosmetically, you know, I didn't want that. So I think that, you know what I was saying earlier that that's such a big factor for most people.

Yeah, yeah. Okay. Okay. All right.

Roy

What was your feeling when you knew that you are when you had this thing that you need a hearing aid? How did you feel? And

Consumer 2

I think I spent from like, 13 to let 19 sort of trying to pretend that it hadn't happened. Okay. Okay. And then probably when I was 19, and I knew I had to have another operation that was that was actually quite devastating to know that it would affect my hearing even more and probably need to have a hearing aid. So it was a kind of a sort of felt forced into it because I needed to hear in lectures. It wasn't like I fill up quite different now like even I'm a little bit anxious about what they might give me and like, I'm kind of excited about what I might be able to hear and what I've been missing. Whereas at that age, I was just like, if I can get by it doesn't matter, you know. So it was more a kind of necessity really, rather than Yeah, I'll get, you know, people go for glasses, and they'll be like, I can see much better. That's really exciting. You know, it wasn't like that. It was just like a neat,

Roy

okay. Okay. And then

Consumer 2

or device to like, you know, like, I don't know, maybe someone might feel that about a pacemaker or something. It doesn't feel it doesn't feel like a very nice choice. It feels like something you have to do because you you've got a problem. Yeah,

Roy

yeah, absolutely. And when one is so yeah, it's probably more.

Consumer 2

Yeah, I think even like you said your grandmother had to get a hearing aid. Is that right? Right. Hearing loss?

Roy

Yeah, yeah, my grandma. Yes. But for her, of course, the journey was very different. It would be from yours, right? Because she got to

Consumer 2

Even you know, like, I have a friend who's in his 80s. And he's probably needed to hearing it for quite a few years, but he was very reluctant to get one even at because there still is that stigma. I think. I think it's changing, but it is surging to some extent. You know, even people that you think.

Roy

Yes, absolutely.

Consumer 2

You know, most people have age related hearing loss at that age, but yes, he was, you know, I think that's, that's a really common, yeah, living across the population.

Roy

Yeah, absolutely.

Okay. All right. Wait, period, I think you already explained the wage period to me. So during this rate period of, let's say, two weeks or something, when you went to a private audiologist, were you sufficiently informed like I next is your turn or blank, just to make sure that you were updated to the most recent updated

Consumer 2

I can't really remember. I think we probably just would have got an appointment and then gone along. Okay, okay.

Roy

Yeah. lead to an email or something.

Consumer 2

Yeah. Yeah. Okay. Yeah, just went along had a hearing test and had it fixed. Okay. Okay.

Roy

And for the payment associated, I think you probably don't remember for the first time. Make sense. Do you remember for the second one when you were 24? Or in terms of when I paid in terms of when you paid how you paid? Like, was it in in, like lump sum total or was it over a period? Or how

Consumer 2

I think there was a deposit of about 200 pounds. Okay. And then the balance just paid at once? I think, okay, just just once. Okay, yeah. Okay.

Roy

No, I think I got an idea of like how the brief is worked for you more or less. Now, I'm going to talk about We're more about the product itself. Okay, hearing it. So, initially, what kind of choices did you have? When you were 24? in getting the hearing it

Consumer 2

I probably would have had more choice than I knew about, but I didn't know what was on the market. Really, I just knew that I wanted something in the year, so. Okay, so I just said that to them, and then I let them pick the one that they thought would help most of my hearing, but of course, they could have sold me something more expensive that I didn't need. I don't remember looking at different models in one range or anything like that. Okay? Just like that's the kind of style that I want, right? Okay, this is what you're gonna get kind of thing.

Roy

Okay. Okay, so you were pretty much fixed on that I want in here hearing it and then the tone and this is what fits you in the interior.

Consumer 2

But I know now that there's you know, there's a lot of different companies that make them so there probably would have been a bit of choice. But I don't remember like looking at different ones or having a discussion around that.

Roy

Okay. Okay. Okay. Now let's talk about the same question. For the NHS one. What was the option of choice when you got it? And like everything?

Consumer 2

I don't really think you get a choice. Other people have probably told you this, the less that you kind of push or ask for it, I think it gives you in Wales. Yeah, didn't really get very good hearing. It's not good quality, whereas I'm in Scotland, and maybe they've got a bit more money. I don't quite know how that works. But depending on the area that you live in, that might be just the size of a city, you know, or big city, you could get a different choice from someone in the next city.

Roy

So for London, for example, people might have more choice than let's say,

Consumer 2

Yeah, I don't really know how that works, but otherwise they'll pick out what they think you know, is the most effective one for you. I guess then will probably be a kind of a flesh colored one you know, like a big one. Yeah.

Roy

Okay, okay. All right. Now the second question is let's talk a little bit about the functionality comfort and maintenance these three parameters

Consumer 2

and the one that I've got I find really comfortable so it's like a dome fit. I don't know if you know what that is. Yes, I know. I've got a dome fitting so I actually can't really feel it. I've had once before made with like a mold fit in a hard plastic which I don't find comfortable they fill out your is blocked up. And maintenance. I don't really do anything with it.

I don't think I've ever made I don't think you know, apart from 10 The batteries haven't, hasn't been required to do anything. I think there is an option to get them kind of serviced every now and again at the NHS. Yeah, but it's not broken. And, you know, I couldn't be without it for, you know, I couldn't just leave it and then go back and get it, I would need it. So, okay, okay. It's been fine. It's not broken or anything. But for years, I've had it. So.

Roy

Okay. How long do you use it every day?

Consumer 2

And I just put it on when I get up and then take it out when I go to bed. So,

Roy

okay, so the whole day. And so normally, how does your day long do you work from home? Or

Consumer 2

I partly work from home and then I partly work in an office. Okay. Okay, but

Roy

because you were saying that you were a jeweler. So you have an

Consumer 2

office? Hello, I work at home doing that. And then I work like, a few hours each day in a university. So in a small office environment, okay.

Roy

Okay. Okay. All right. Um, going to talk a little bit about that in the upcoming sessions. Okay, comfort to tone maintenance you to talk a little bit about functionality. What do you do with the hearing aid like do use it like click buttons or do something.

Consumer 2

I know I just have it on like one setting it's got think it's got three options. It's got a button on the back, and you can move between settings with that. I can't even remember what the settings are set up for but I know that one of them It feels like things allowed us to sometimes I'll, I'll move to that setting. Okay, so that's it. I really just use it the way it's set up. I don't really do your math.

Roy

Okay, okay. All right, good. Now let's talk about different use cases like in different places. So, while you have this hearing and on do listen to music, with headphones or earphones,

Consumer 2

no wouldn't be able to, I don't think you just wouldn't be able to. Okay.

Roy

So you did get hearing loss quite some time back like when you were 13 that's fairly young. So I'm asking Did you ever listen to

Consumer 2

what I think I probably would have used when I didn't wear it all day every day I would have you ever would have listened to music through headphones.

Roy

Okay, but right now I just don't anymore.

Consumer 2

But now I don't because I probably could fit like an earbud on top of the dome, but the other areas not great so I don't get enough power for my phone and I've not really investigated different options to be honest, partly I think because unlike another, you know, listen to loud music on headphones is can harm you know, hearing and I don't want to damage any remaining hearing that I've got today. But what I am really keen to do when I get the next hearing aid is to get Bluetooth enabled. would get more expensive hearing aids they're much better technology, Bluetooth, colour and comfort would be a bonus. So I can Yeah, make music directly and use the phone If I can't get that in the NHS, I probably will consider going privately.

Roy

Okay, okay. Okay, got it. Alright, so this one doesn't have Bluetooth, but if you have that option and you were hoping that you might get the next one, so you really want to try that out?

Consumer 2

Yeah. Okay. All right.

Roy

Now let's talk about the second one which is noisy area. How does your hearing it perform in noisy areas, like give example, say for example, in a pub, or when, in a social gathering, everyone is talking together, like let's say a birthday party, or things like this?

Consumer 2

Yeah, I probably missed some of it. And probably lip read a bit. Mm hmm. I don't really find that that would stop me going out because I think you just get used to what you hear and you don't maybe know what you're missing. Does that make sense? Yeah, don't feel that I miss like what people say in a way that is embarrassing. I might have to ask them to repeat themselves like once or twice every so often, but it's not like when I didn't have any, I really couldn't make anything out. And I was just guessing really. So that was really difficult.

It doesn't yet doesn't make me anxious. The only environment that I struggle with actually, ironically, is kind of something like a meeting in a big room with high ceilings of the acoustics, okay. It's like they get lost when people speak, you know, like, I'd rather be actually in a noisy area or in a kind of one to one in a small space. So maybe outside as well. I might miss things.

Roy

Okay.

Consumer 2

an environment where Yeah, meeting room that can be a struggle. So maybe the walls

Roy

or the encasing actually helps you, like helps you hearing when they're small. Yeah, that's probably better than when it's just outside are very big.

Consumer 2

Okay, okay.

Consumer 2

No, but I know, I know what that feelings like from when I first heard it and didn't were an agent. Yes, yes. I totally understand why people just avoid things because it is, you know, it just rather someone doesn't ask you anything because you might get it wrong. It's, it's hard work you guessing. Pretending a lot. And so now that's difficult.

Roy

Right? Right. Right. Okay. Okay. All right. How does it function or perform in an office environment when you're working in office?

Consumer 2

Um, I think if I was in like a big space with a lot of people that was open plan, I think I would find that hard on which direction people's voices are coming from, so I wouldn't necessarily be quick to pick up who's talking or where they're talking from. I work in quite small room is like this five of us. Maximum and I haven't really had any problems with that?

Roy

Okay, okay. All right. And normally at home, do you live alone? Or do you live with your partner or children? Just

Just one second. Could you repeat the last bit? Once more because I think

Consumer 2

I can remake

Roy

you live in the room a tutorial.

Consumer 2

Hello. Okay, and so you rent the room right in my house.

Roy

Okay. And you live there. Liquid damage. Perfect, perfect. Okay. All right. So I think I got the home pod. Now let's come to the

Consumer 2

house and then somebody lives in my house in the spare bedroom.

Roy

Okay, okay. All right. Come to the next question, which is, how often do you go to the audiologist? Or do you have to go or not? Hello?

Consumer 2

And I don't really, it's not something I've ever really had follow ups for.

Roy

Oh, you never had for me? Yeah, I can hear you. Hello. Yeah, I can hear you. No.

Consumer 2

But they are good in that. If I need to go in and make an appointment. I can just do that. Whereas a lot of other NHS is, you have to go to your GP to your doctor and they have to refer you on okay, because I'm already kind of in the system. I even make an appointment myself. But there is I think I'm waiting between two and four months at the moment.

Roy

Due to four months wait time on average.

Consumer 2

Okay, okay. Go in, maybe get batteries from from the department. I don't know, maybe once a month,

Roy

once a month. Okay, so you go there once a month. Is that a problem in your like in your schedule? Or is it okay?

Consumer 2

It's fine. It's quite close to me. I used to go to a different department that was further away, but you can do it by post as well. So, okay, just request them by posting them. So that's, that's really good actually.

Roy

Okay, okay. Okay, so that's fine. All right. Now, I'm going to ask a little bit about any kind of, like, problems that you had around the hearing it like, did you ever feel the problem of having earwax filling up your canal or?

Consumer 2

No, no, that I did when I first started wearing one because then I got ear infections a lot anyway, but it wasn't caused by the hearing aid.

Roy

Okay. So the second part was infection.

Consumer 2

That's not an issue. Now Oh no. Okay,

Roy

so right now, wax is not an issue infection is also not an issue. Yeah, that's right. Okay. And with respect to the fit, it fits nicely or do you have problems? Yeah.

Consumer 2

Yeah, that's a good fit. Okay. Okay, that's great.

Roy

And I think you already told that you do not really use the settings much you just use one and sometimes, yeah, go to a second setting to have a volume. Okay.

That's right. Yeah. Okay. Because I think you already mentioned that you don't go to the audiologist often or you haven't been there for a long time. So do feel like there's some hearing change happening over time because that's what happens. So hearing loss changes over time. So

Consumer 2

I don't think with the type of hearing loss I have, that it's going to change any faster right now than someone that doesn't have hearing loss. Okay, so it's not some types of hearing loss conditions progress. Mine, mine is conductive. So it's to do with the structure of the ear. So as long as that structure doesn't change, and it's probably not going to change that much.

Roy

Okay, okay. So there's not a lot of change over time and the hearing loss.

Consumer 2

No, but I think for some people that is really common, okay, okay.

Roy

Yeah, yeah, yeah, actually, that's what some other people told me. Okay. Could you remember or would you like to talk about any positive or negative experience that you specifically had with the hearing aid?

Consumer 2

And I think just again, like the way the design of them the way they look, I was given one for the so I'm waiting for a second one. And I was given one today before a few years ago, but I didn't wear it because it wasn't comfortable because it had a different mode. And, but I didn't go back. I can't remember I just I just decided just to keep going with the one that I have. And so the fit of that one wasn't comfortable. Okay, and actually, I didn't really find the the volume. I just didn't really find that it helped my home that much. It was a different brand to the one I'm used to. So I switched back to my older one.

Roy

And the brand that you use right now is

Consumer 2

so I think the brand is called Donna Donna logic.

Consumer 2

And then I was given OTA calm and other ones I didn't they didn't really know what's good for me. Yeah. Sam didn't seem to be great. I think people just have different preferences. But

Roy

yeah, probably. Okay. Let's talk a little bit about the batteries. How often do you have to change them?

Consumer 2

I think it's like once a week.

Roy

Is it an easy to do process cumbersome?

Consumer 2

is a bit fiddly, but it's okay.

Roy

Okay, so you were fine with that. So if I if I talk to you about two scenarios, let's say in one you have, what you were doing is you were changing batteries once a week. And the second one is, you have seen the airports, right? The Apple airports. So you just have hearing aids like this, you just put them in the box at night. Ah, and then in the morning, it's chosen again, which one would you prefer?

Consumer 2

And I think it probably would go for the rechargeable ones. There's not an extra expense and you don't have to keep worrying about you know, making sure to get batching I do want to know that they would have enough charge then they wouldn't suddenly run out.

Roy

Oh, yeah, of course. That's that's of course necessary. Yeah, I was because you're told that you don't have to remember taking battery. So I wanted to dive deep deeper and ask like, did you does it happen often that you forget taking batteries.

Consumer 2

So So what happens when it's running low? What beep in your ear and it gives you like a warning and it's supposed to be that you have like how Half an hour. After that, we need to change it. But it'll be every, like 10 minutes or something. But in actual fact, it doesn't, you don't really get like five or 10 minutes. So it can be, it can be a bit awkward, like a value environment that can't get away from someone's talking to me and I need to change the battery. Okay, I'm just aware of it beeping and when it beeps, it cuts out their sound so you miss things. So there's not really a way to predict that they're running low except for that, like, I don't periodically go right. I'm going to change them every weekend. I just wait until I hear that. And then right right. There's been a couple of times I've been out like walking my dog and having coffee with someone I happen to have like, my batteries with me. And so that's been a bit difficult.

Yeah, we're probably worried about that. It's the rechargeable ones if they like suddenly cut out Yeah, cuz I think it's quite new technology. Isn't that

Roy

actually see that is the most interesting part like now. It's not new. Totally, he lives, the size of them. And so it's basically lithium ion battery and they have been perfected for the last 678 years. Like, okay, we have had phones like normal mobile phones in good. Yeah. Yeah. And template Android phones or iPhones.

Consumer 2

So you think that'd be quite reliable than like rechargeable one? Yes.

Roy

Yes, absolutely. That's the whole idea of it. This industry is so old. It's just that there is not a lot of disruption because it was safeguarded so much for a long time. By law, right? Yeah, crush them. Or else how can it be that in 2020 you need to change batteries from a fiddly plastic piece every Yeah, this shouldn't be like that.

Consumer 2

How long though would you expect like a rechargeable battery to kind of be able to take it like so? Yes, but it lasts for before you know, kind of broke or didn't take a charge anymore. So normally rechargeable batteries have one time In cycles

Roy

1000 recharge cycles on an average the batteries that we put on phones or on laptops like MacBooks or something

Consumer 2

that's only that's only about three years, then

Roy

1000 recharge cycles would be about if you charge every day one. So that's about three years then. Yeah,

Consumer 2

yeah. So that's not that long. I mean, they say like, hearing aids lasted three, like three and five years,

Roy

then it usually depends on the things because since hearing Yes, cost so much. That's why people expect them to last so long. I mean, if the cost is 400 bucks, lets it with three years and really good experience, that would have been fine. Yeah, so

Consumer 2

that's it if I was to buy like, because I am sort of thinking about private I think it'd be about 2600 for a pair of the rechargeable ones. No, no, about three, four. I think it's about food and bones. I think. Like I would rather they lasted for five years and three years. Actually, do you think that if there were rechargeable that I wouldn't maybe get more than three years?

Roy

So we need to look at what's the add on cost of the batteries as well in that case? So yeah, that to some extent turns into a business case and seeing like what happens, right? Or, for example, can you replace the battery? Like replace the rechargeable battery? Like for example, with an iPhone if the battery Yeah, I don't have to replace the battery?

Consumer 2

Because I know that like with phones, like my batteries that you know, they don't have they don't go forever. Yeah, rechargeable ones. So that's kind of a consideration, I guess. Yeah. Because I know that this hearing aid I've got, I've had this with bad cheese, but I've had it for years. And you know, I've had no problems with it. But if I paid like, three and a half grand, and they, you know, they wouldn't charge us to say two and a half, three years. That's bad. That's bad. That's not great. I'd rather have four or five years out of them. That's quite big outlay.

Roy

Yeah. Yeah. That's right. That's it. Okay. Now I'm gonna go to the last section, which is the lifestyle change. So, how how did wearing hearing aids all the time change your lifestyle? Or did you do something before you don't do any more? Or do do.

Consumer 2

I probably it made me more confident, you know that I could just go into situation and not struggled too much. I probably did more like further education because that environment would have been difficult before but I've always been kind of studying and working for the last like 10 years, so. Okay, I would probably be you know, I put myself in more situations. Okay. Okay. It's still not like the hearing persons, but it would you know, it would allow me to access things that before I probably wouldn't have been able to do you know, that just would have been a barrier. So it's Yeah, I mean, of course, it's a big change. It's important. Okay.

Roy

Do right now go to places like Joe witches or operas? Are these kind of places. I'm asking this because there's a function in hearing. It's called telecoil.

Consumer 2

Yeah, I've never used that. But I think I might get that put on the next one and, and try it because I've heard it can be quite good.

Yeah, I think that was that work directly gets kind of piped in. Right. Yeah. So I think that would be a good feature. Yeah. It's it's funny because as shoving the other day in the tube, and

Roy

the stations and buses in London have telecoil installed.

Consumer 2

All right. Okay. Yeah, it's probably getting better. It's probably more options. Yeah, becoming Yeah, I think that would be a useful feature for sure. Yeah. Yeah. Okay.

Roy

Did you have like, the people around you or the loved ones? Did they have a different perception of you after you started hearing it or did they Act or behave differently?

Consumer 2

Um, not to my knowledge. I don't think I was probably. And probably because it was in my teens when it first happened, it would have been me that was like more self-conscious. so, yeah, I don't really know, to be honest, I don't think so. Okay.

Roy

Okay. All right. So that is okay. If you will, given an option to, I don't know, redesign or change this whole journey, and that includes basically three things. The main is the product is the process of getting the product using the product, maintaining it, the around it, and also the system, which is good for controlling, what are the things that you would want to change

Consumer 2

And the design of them I think that's really important. I think it's obviously it's a bit different because we have the option on the unit test but the choice I guess, different picture. I think if you're if you, you know, the future kind of moving towards a market maybe UK is a bit different because of the NHS but places where at the moment they're paying a lot of money privately but they're then people are able to buy them for 500 pounds, set them up themselves, they look a bit more like, you know, a cold headphone, I think that could actually have a massive impact on the perception of hearing aids. Yeah, that's true, you know, because I've been actually been looking at different models and seeing what's out there because there's a few different design, you know, designed ones kind of and there was one really cool one that looked like, like a pair of kind of DROP EARRINGS. So there was like plugs that went in the way which was like the the hearing aid. And then there was a kind of like a monitor that hung down below the air and it showed it was like a readout of what you were hearing. Nothing cool, like it look really cool. It's but it's like a fantasy designer don't think it's been manufactured yet but okay, you know, people in the 20s have got hearing loss now. Like, they can go and buy something over the counter set out with an app and be like this cold Look what this does, you know, absolutely.

Like Bluetooth or whatever, you know, I think that that changes it from like, perception of you know, it would just be you know, elderly people that like that can't hear very well their hearing aids usually they don't work that well their whistle you know, they don't look attractive. It's a very different it's got that age kind of stigma. Yes, yes. Yes. Like if it moves towards you know, like glasses like oh, you know, I've friends that she wanted to wear glasses for ages, but she couldn't get What you didn't need to know he still was, I want to wear glasses because they look cool. You know? There you go. Yeah, you got a point where people aren't hearing it. And I was able to do this and then I can turn that off when it's too noisy. Wow, that's actually really cool. You know? Yeah, I think to make them more trendy and a young looking at more high tech.

Roy

Okay. Okay. I think that

Consumer 2

you know, I suppose it's like, you need kind of, like prosthetic limbs, you know, like they would they make them look like these to make them look like an arm? And yeah, I think that really fake when they're like, they look like a cyborg or something that's much cooler. You know, but if that was that sort of equivalent? I think it would do a lot to help the stigma.

Roy

I think it would the proper candidate to try out new

Consumer 2

things. Yeah. Yeah. Yeah. Yeah, definitely. I think it's I think it's really important and because people that people that have hearing loss and or hearing aids is a massive percentage. Yeah. Because I wanted people are hearing loss, but yeah, exactly. You don't really still see. I probably see them more now. Maybe I just look for them. But I notice more was when I was kind of in my teens. I didn't know anyone who was reading that.

Roy

Yeah, yeah, yeah, yeah, that's right. Okay.

Consumer 2

So yeah, if they were more kind of, you know, people everyone that needed one war one they would be as common as classes. So

Roy

yeah, then it would be fine. Yeah, exactly. Yeah, totally.

Consumer 2

You know, be like competing with the different models and the color and you know,

Roy

yeah, yeah, absolutely. Okay, I'm gonna I'm gonna show you one product. Again, I'm not a salesman, I'm not selling this product or anything. I just feel like the product is quite interesting. So do you have a internet connection with you?

Consumer 2

Yeah, hang on. Okay.

Roy

Because this product actually to also the some of the other people who I thought had similar points of views like yours.

Consumer 2

Yeah, and I think if you like I'm on the phone as well but if you if you can, like send it in the messenger the

Roy

pose Yeah, actually yeah, that's actually

Consumer 2

do that that way. Yeah.

Roy

I'm going to send you a photo.

Consumer 2

Wait.

Roy

I'm gonna send you a short video. So then you can get an idea of how it fits into the life state.

Consumer 2

Okay. Yeah, I've actually I've actually seen those online already. And yeah, they're nice.

Roy

Yeah. So I really feel like there could be a starting benchmark as to how products like hearing aids could look. Yeah. And they're already quite different from the hearing is that normally are associated with?

Consumer 2

Yeah, exactly.

Roy

Yeah. So they, they could be one direction to go for I think Yeah. Okay. All right.

I think I do have quite a lot of information from you. And I took one hour of your time. So probably,

Consumer 2

right. Yeah. Just Just drop me a just drop me an email if you need anything.

Roy

Yeah, absolutely. It was really nice talking to you. And if you are in London By any chance, let us let me know. We could have coffee or something.

Consumer 2

When Ronnie and so when do you finish? Do you finish in June or?

Roy

Actually, if I am in London for one or two more months, more or less?

Consumer 2

All right. No, I probably Yeah, I was probably my cousin lives. That way, but I don't think I'll be there. I might be but I'll let you know. Yeah,

Roy

yeah, absolutely, then,

Consumer 2

yeah, keep me updated with your project, because I'm interested in like, the way that things are going.

Roy

Absolutely. Absolutely. I'm gonna I'm gonna keep posting and telling you How's it going? And this community is so strong and really, really warm.

Consumer 2

In the last sort of three weeks, and yeah, it's been really good.

Roy

Yeah, yeah. They always help out and they talk about it. I spoke with quite a number of people already. So. Okay, all right. Thanks so much clear. Have a lovely weekend.

Consumer 2

You too. All right. Okay.

Roy

Bye. Bye bye.

Consumer 3 interview transcript

Roy

Then trying to understand the common problems with users or consumers. Yes. Okay,

I'll tell a little bit about myself and then we can start.

I'm gonna say a little bit about myself, and then we start, okay. Okay? So I am a design student at the Delft University of Technology in the Netherlands. It's in Delft. And this is my graduation project. And I'm working with Cambridge Audio for the five months right now. And we are trying to see how Cambridge Audio can go into this new market of hearing aids. Okay, and for that I'm interviewing some consumers from different markets who have different level of hearing loss and also who use or do not use hearing aids right now. And the reasons behind it, okay. All right. So now I'll get into it. Like the whole setup that I created just one second.

Consumer 3

By the way, how did you find me? Did you put my name? Or did you put what? I think I was registered? How does one look for somebody on Skype?

Roy

Oh, I just put up your name because you sent me the name. And that's the unique name of Skype. The full name or justice tr nights No, not the full name the TR nine. So because that's your unique name. The full name could be common for multiple people. That's the one that someone like the user puts up on their own. But the man cell is a unique name, which Skype creates for us. A unique name we can that we can directly find the person that is I am yeah So how is it in Germany by the way with the corona virus, it's increasing really fast. It's becoming worrisome.

Consumer 3

Ah, what not? Well, yes, but people get so hysteric so I'm not afraid I will go anywhere because you should. I think you should stay away from people who have just had Holiday Inn in a ritual in Italy, because we have holidays here and ski holidays. So when I was young, I like to go to do to go skiing. I don't, I don't mind. I mean, I wash my hand more than usually. I take care of not to do things, but otherwise I'm very relaxed. Okay, okay. That's okay, because we can change the situation. Yeah, is not in our control. Absolutely. Yeah.

Roy

Okay. All right, so we'll start with the interview now it will last for more or less 40 minutes to an hour. I hope you have that much amount of time. Ah, haha.

Consumer 3

Okay, an hour. It would be nice because I have to leave the house at six o'clock. Oh yeah. So we can rather go keep on going another time tomorrow whenever. So that's just Okay, we'll start and then we'll see how far we get. Okay, okay. All right.

Roy

So I will start with a very open question. I'd like you to detail out your whole hearing loss and hearing aid story from the beginning when you first came to know about it till what all you have done. It's a very open question. Say as much as you want with as much detail

Consumer 3

what I realized when I was working left. I wrote to you when I started with this earphones yeah aids because I always I said what if Becky Thank you pardon I have never other people realized that I was asking all the time to pour reputation to repeat the sentence. So and then I went to the doctor and Oh, she said, are you how you have it rain you are deficient on both sides. So and she I got a subscription for AIDS and then I waited for a long time. Not a long time, but I moved here to Eastern what was East Germany before and I started To ask for this to solve this problem here in this country, my notes have been Yeah, now it's okay again. Yeah, I think there's a problem with the song. It's okay. Yeah. Can you hear me?

Roy

Yes, I can hear you. Okay, so, all right. So I'll go a bit more detail into each of these. So you were saying like, initially, you saw people around you telling that you were asking for repetition too many times, like, beg your pardon. Could you repeat again, this kind of stuff?

Consumer 3

Really? Right. Yeah. And when was it like how long back upon

Roy

how many years back was it? Like, when did this happen?

Consumer 3

I brought you 2010 2010. So about 10 years back more or less? Yes. Okay. Maybe was five years ago?

Roy

Okay. Okay. All right. And then you went to the doctor, right?

Consumer 3

Right. Okay.

Roy

And so this doctor, was he like a general practitioner, he or she or was it already an audiologist?

Consumer 3

No, he was not an audiologist you was especially specialized for this part of ears. throat.

Roy

Yeah, yeah, it was. Okay. Okay. Okay. And see, he gave you a so he first understood that you have a problem on both ears.

Consumer 3

That's right.

Roy

Okay. How did the test go? Like what kind of tests Do

Consumer 3

at that time I think you get earphones Hmm. And then they make different noises and the higher level and low level like that

Roy

different frequency and then

Consumer 3

frequencies and then asking

Roy

you if you can hear like you have to click a button if you can hear Okay, okay. Yeah, I know that I was talking to other patients as well, who also told it's similar kind of test so I guess it's same in Germany.

Consumer 3

Yes. Okay.

Roy

All like and after that after this test, was there any other test beyond this?

Consumer 3

No.

Roy

Okay, just this test and after this test was done, what did the doctor say?

Consumer 3

I had free to, to go to an audiologist and and try different models. So And that's what I did.

Roy

Okay, so what did you do after this? Well, the doctor just told you that you have a hearing problem or a hearing loss.

Consumer 3

I asked some friends who had earphones, not earphones. Want

Roy

to

Consumer 3

get a reputation? Mm hmm. And

then somebody told me here and in this case where I'm living there was at least two of these audio artists because many old people live in this country. Yeah. Um, and he briefed me in that way that he said don't take more than three different candidates, big channels because all the others are not necessary and only cost a lot of money more each each other for some special purposes to hear. You don't need to take three and then it's okay.

Roy

So, could you explain a little bit more about this challenge because I'm not in this field so I'm not quite sure

Consumer 3

you can switch there is an automatic automatic. I mean, I wanted to have this The second is they take back the noise if you are in surrounding with many people, which is difficult anyway and the third is for music.

Roy

Okay, so they're kind of like three modes.

Consumer 3

Yes. If I have problems now, if I'm sitting in a church for new music, I have always tried two different things and I found out music it is the best thing because it gets very sharp. Okay, so they're kind of

Roy

music mode and noise mode or outdoor mode,

Consumer 3

auto mode

Roy

and auto mode, okay, which tries to on Then which is the best scenario and does it on its own

Consumer 3

article should you should should put his loudspeakers till this point of stupid English I have lost my English because I've never I never had the chance to speak English anymore. It's very long ago since every day okay.

Roy

All right. Um, but you you are doing really great man. You're already helping with all this information. So after he went to the audiologist, how did it go? What kind of checks did the audiologist do with your ears?

Consumer 3

Just the first the first audio largest I had don't have very good membranes because compared to what I have now, it was a very bad one. Very bad service

Roy

to the first audiologist you are not happy So you went to a second when

Consumer 3

I was not happy he put the installation which is made by computer was wrong when I got the when I decided to get to a helps on the it was wrong I could not hear properly but and later on because in Germany Yeah. These aids are made for six years

Roy

and made for six years.

Consumer 3

I didn't medical insurance says these office six years you can apply to get

Roy

Two shorts for the socials again an additional

Consumer 3

In addition, you get your medical insurance pays a certain amount for you your age. Okay. And after six years you can apply again okay maybe exceeded

Roy

yeah updated. Okay. So with the medical insurance you can apply for hearing aids every six years. Okay. Okay.

So you went to the first one and you had medical insurance right? Okay, so you got your this first set of hearing aids for free, or like covered.

Consumer 3

Okay, I didn't take those. I tried this pair which I could get for free. Okay. I don't want to have them because I tried them on But for some they were big I think big models and I cannot remember that really look like a but I decided this what I brought to you in my mayor is demons from Zima and the thing was that these the price for them was more than 3000 5000 yeah all 5500 euro and the medical insurance at that time only paid I think 1200 and the rest, I had to pay myself for the

Roy

price was about 3000 euros and insurance cover was about 1200 so you had to pay 1800 euros on your from your own pocket,

Consumer 3

at least

Consumer 3

I mean you have a concept how to ask but I tell you now and I told you about my letter that I changed the audiologists Yeah. And because when these six years were over, I went these aids one year more because I didn't I didn't know that there was better things. But my audio artist started to charge me the little small little plastic adapters on on these aids and they got they get stuck in the ear. Sometimes. They got four fell off and, and they chat. Every time I had to get a pair of new digital plastic aids, they charged me one euro for each, which I think was so bad because of this is a little thing and that the custom service is just not done from my a customer who had paid so much money to to charge for these little things. Okay.

Roy

And how often did you have to get this new plastic adapters? Because they were getting lost or stuck in your view?

Consumer 3

Yes. Well, maybe every three months or so.

Roy

Okay, all right. This is quite pointless when you were charging 2000 euros for a product.

Consumer 3

But now I have the opposite. I would switch to a new one probably know that. The company CMM Actually they deal and deal in glasses and spectacles or glasses for your eyes, okay. This company is located, they have many, many branches all over Germany and they are very close to because it was generous in, in in treating the customer customers so and I got the reputation from a friend of mine Hamburg and because I didn't know that they also have ear aids now and this service was like black and white, Louisiana one price as well. I'm not having these. I think this is a Canadian brand I don't know what money corner the only time when you are in fear man gives You first of all, they test and they ask you where are you? Are you with many people are you often sitting in restaurants are you hearing music are you they try to see your life surrounding what you are doing and according to this, they adapt, they will put the right things in the AIDS and I have now better, better aids and I only had to pay 20 what would what everybody had to pay if you get a description a prescription from empty okay from the medical insurance, you have to pay 20 euro the tip in Germany. So, these are the only thing these earphones ignore a cost me it was 20 euro.

Roy

So is it 20 euro per month or just one 1020 years

Consumer 3

no no, just one euro for for the priests priests scripture okay for completely out of charge, no charge and I can go there and they help you any time and they also produced what is called not these little plastic adapters but out of silicone or nice soft silicone cheerier where they are form. So, you cannot lose anything there and you it does not get stuck in your ear anymore. Okay. They produce that for me. And that service is excellent.

Roy

Okay, all right. So, if I if I understand once again, so if you have the signed copy from the insurance provider, you just pay them 20 euros and you get them service of they try to understand how your life is and they give you the right hearing it based on your lifestyle.

Consumer 3

That's right. Okay.

Roy

So also the hearing aid price is covered in this 20 euros

Consumer 3

everything is covered for some reason this company fear man. I don't know what they have contracts. I don't know. And is I don't have to pay the service they every year I think you get a booklet. Yeah, sorry. And then they check on your earphones that clean them. And at least once a year you'll get a complete new hearing test. complete new

Roy

Oh feel free of cost. Wow.

Consumer 3

complete new, okay. And they adapt the age according to this protocol.

Roy

Oh, really good. Okay.

Consumer 3

Which was my first audiologist never added? In all the years. So,

Roy

how long were you using your first audiologists? hearing aid? Six years?

Consumer 3

Seven years? Oh, okay.

Roy

You told you use one year extra, right? Yeah, seven years and then you went to them, and they give you a complete hearing test for year. One new one. And then based on this test, they really like to do it again. So that you can hear clear based on the more recent test, okay. Okay. Okay. Do it again. And, and you just pay 20 euros for the whole of six years, basically,

Consumer 3

fatherhood, medical insurance gives, I think, a little less than 400 years to this audiologist For reparations for Reparations, and then they take this money, which is a take and they deduct then what if there's ever something wrong with the technique of hearing one such comment? Oh, you Yeah. Let me confirm the microphone. Oh, the microphone is broken. They will. They will repair it. I'll renew it and then you don't is deducted from this power. amount. 400 euros. Oh, okay.

Roy

Okay, okay. Okay. I think I put is given

Consumer 3

by the by the medical insurance.

Roy

Okay. I think I can understand. No, I think so for for this new service that you were using. I do think, and I think you were really happy with the service. They're really

Consumer 3

happy. Okay.

Roy

Could you explain that To me a little bit in more detail how the whole service works like, whom did you go to? And how did it occur? How much time did you have to wait everything? I'd like to know.

Consumer 3

Well, I have, I have regular entries in my service book. And then I ring there and I make an appointment. And I don't have to wait very long. They serve a coffee machine or they ask you what you want something to drink. And all these things are not very common today anymore. I mean, where I was working, I don't think you get a black glass of champagne and iOS work just as well. But this kind of habit is not very common, at least in Germany, not in Germany. The Germans are not very friendly. I'm not very friendly people. So then, Don't have, they all have very good educators, they get a very good education for this job, and you can really feel it that they know what they are doing.

Roy

What kind of tests to do. Is it the same as your previous audiologist? Or is it different

Consumer 3

now? complete different, okay?

Roy

Could you explain a bit more the kind of test

Consumer 3

you get different machines or different things on your body and have the computer or you can look at it how the scales run up at the top they have the best equipment you can imagine. I'm not very technical, so any but it is. It's really very professional. But then there's a problem that if it doesn't, it's not very much more. Abandon last time as if it depends also depends on how good you feel if the blood pressure or the weather you cannot you do not have to change so much if the here capacity a little bit differs a little bit

Roy

okay and so once this is all done then they tell you that you need a hearing aid or something like they tell you how much hearing loss you have right

Consumer 3

oh yes I don't need I don't need her and all that for notice at this special doctor I don't need anymore. Okay, okay. I don't need to frequent to visit a doctor to port for this prescription. Okay, okay. I think they communicate with an insurance. They have to say okay, we pay this and there's not a doubt in my insurance now pays 1500 euro Huh 1500 they put in addition whatever you buy, and this audiologist can prepare can prepare can give me this aid for this price. Okay. Okay. nothing except the

Roy

stretchy Oh yeah, just 20 years. Okay. Could you talk to me about how long do you have to wait? or How long did you have to wait to get your hearing aid? after going to the audiologist?

Consumer 3

I can really I cannot remember. But I could always have some earphones earrings and yeah, it's to wear and and to test.

Roy

No, I mean, I'm asking for the first time was it like no, I'm not asking like after going there. Is it like an hour or something more? I'm asking. So after the test is done, do you have have to wait four months for the hearing aid to come? Or do they give it to you instantly in like a day or two?

Consumer 3

That's I can I can really not remember why. I cannot remember that anything positive or negative and that respect. But if they are, if there are repairs to make, they always offer you a pair. Okay. Okay, another pair for in the meantime because if you have to change the microphone, it takes a while. Could you

Roy

say do you have to go there to get it or do they send it to you and then you send the replacement back? How does it work?

Consumer 3

No, I go to I go to the office, I go to the office, the audiologists

Roy

office there. Is it is it a hassle Do you think it would be better if if they just sent it to you and you just sent back mail? And replace me No,

Consumer 3

I don't have a contact with people you can exchange what your problems and okay? Right away. Okay you

Roy

actually want that it's good man could you talk a little bit about which company of hearing aid they're providing you

Consumer 3

whereas I said they suggested I tried at that time point of view time I tried again different when I changed age I tried again different, I cannot those who are more expensive, more expensive. They were not better than than that what I have now. Okay. So,

Roy

but could you say which one you have No liquid hearing aid you were using now.

Consumer 3

I'm now using

Roy

this only unitron Okay, okay, that's the one that's the one that provide unit one. Is it like a behind the ear thing? Or

Consumer 3

is very small and controlled. If you can,

Roy

it is very small. I think it's so small that I can't see.

Consumer 3

The small ones were in former times very expensive.

Roy

Okay. Okay.

Consumer 3

Very small.

Roy

And you seem to be quite happy with the hearing heads right?

Consumer 3

It's the first one I put in the morning. I put in my ear.

Take off.

Roy

Oh,

Consumer 3

never wear them. Or I cannot hear I can just if I don't have them in my ears. I can only hear this person who is just in front of me.

Roy

Okay, so you never take it off you wear it in the morning take it off before going to sleep

Consumer 3

right because I don't want to be I hear radio all day and I don't want to make it high on high level yeah so I can hear the birds I can hear the ships so i don't i don't hurt or anything

Roy

bother me at all so it doesn't bother you at all like you were waiting for the whole day.

Consumer 3

Okay, okay, I can show you the thing that I have in the ear you want to see this?

Roy

Yeah, that is really nice if you could show

Consumer 3

yes you can this is something for the ear you put in you can use see. Oh

Roy

yeah, yeah, yeah, yeah,

Consumer 3

I can. I can just fine it's it fits. They make another

Roy

Yeah, yeah, I can see

Consumer 3

in German.

Roy

Okay, okay. Okay. So very comfortable. Do you? Okay, I think I got a good idea about your journey with hearing aids. I'd like to now speak a little bit about the hearing product itself, like the aid itself. You already give some idea that it's quite comfortable and you're wearing it for the whole day. That's right. Okay. So could you tell us a little bit about your life like you told to the audiologist and which function of the hearing aid do you use? Because you told me you went for three? Ah, so could you explain a little bit that

Consumer 3

and most of the time when I'm here in at home, I use

Roy

automatic. Okay, automatic. So how does the automatic sequel can just click a button and you don't have to do anything.

Consumer 3

When I put when I put the earphones when I put them in the morning this always starts on automatic

Roy

Okay, it's already How do you switch it on? How do you start it?

Consumer 3

I started this little marks Okay, where the battery is inside. I close the battery box and then it starts. Oh, okay.

Roy

So you have

Consumer 3

Okay, I realize now for you this thing is completely new. So good that I know that

Roy

I'm so sorry for asking so many stupid questions

Consumer 3

in this thing in this thing. litter box here That's open now.

Roy

Yeah.

Consumer 3

And now it's off duty and then I look at it's

Roy

working. Okay, okay. Okay.

Consumer 3

Press any other buttons? Okay. I press buttons. Nah, I press buttons if I want the second or the third channel.

Roy

Okay, so you have this one button to click for the second or the third.

Consumer 3

Yeah, it says wondering if you have one accepting and the other one for hire in churches are in rooms without curtains. So I sometimes try out to hear what event it has makes two tones and music channels three tones, okay, okay. Okay.

Roy

Clear. Clear, very clear. Okay. All right. So you normally use the automatic one, when do use the other two options.

Consumer 3

Um, I use them as I said, Churches I go relatively often in churches to hear choirs and music. And then I try I try and what channel is best for me then? And also, I visit many concerts, classical music. I try how to hear best with always with the music channel, except when you have violins that can be very high and

Roy

you don't like that.

Consumer 3

The violins with the music is sometimes

Roy

too loud. Okay, okay, this is very interesting. So the violins could be improved. To load balance is too loud in the music channel because the channel three

Consumer 3

makes it too sharp. Make uncomfortable, uncomfortable, okay. Okay. Okay. I think I got it. Could you talk to me a little bit about the maintenance of your hearing and do you have to do something to it like for example to clean it or change the battery or anything anything you have to tell everything

Consumer 3

well I just clean it was a cloth what's your use of your glasses without microphones are gonna adjust and at the beginning of the year produces Nazi a woman and a woman is the grease in your ear which so that bacteria is cannot enter and that is the sense of this yo yo x and if this starts to such to get into the filters, you cannot hear anything. experienced that in the beginning, but now I don't have this problem anymore. And if something if you have the feeling it's has to be Clean, you just go to the audio. Listen, he was at one moment and they will clean it and you get it back and all his service.

Roy

Like free of cost you just go and get it

Consumer 3

free of charge.

Roy

Okay, okay. Just please, and it's done quickly. You don't have to feel like I'm waiting so long it's not like

Consumer 3

oh no it's done quickly sometimes I say I go for lunch and then after get back if I don't want to sit there. No, but I can also wait because I say us or Tasha would shy were you or Tasha was that in Niger in English? You put

like to clean time things published in the base and it comes. Electricity gets moves the water, okay, okay. Very well. In English then I

Roy

actually even if I'm not sure but I think I understand what you're talking about. I don't know how

Consumer 3

spectacles also became that way. Okay, okay. Oh,

Roy

yeah, it's a Yeah, it's a machine. Okay. Yeah, that's good. Okay. All right.

What kind of so the only controls that you have while hearing are changing the channels, right? That's all you do not have any other control. Well, okay, just changing the channel. I do feel at any point of time. Like for example, it is too loud, let's say in a supermarket or in a loud environment and they feel like you could drop it or something.

Consumer 3

I don't have because the audio microphones Yeah, they stop something. Very loud noise then

Roy

it cuts it down. Oh, so the microphones already understand

Consumer 3

with the automatic microphone understands this. My, my expensive Siemens didn't have this option. I don't know. I don't think I can really feel it if something turns around.

Roy

Ah, okay. Okay. All right. So how often do you change the battery? or How easy is to change the battery?

Consumer 3

It's very easy. I change it because I get up early and I, I think almost one week, a little less than seven days. Okay. This week.

Roy

Where do you buy the battery from man? I mean, is it easy to

Consumer 3

do this because also they're they're very reasonable.

Roy

Okay. Get the battery from the You know, just

Consumer 3

because nobody else can beat the price.

Roy

Okay? Is the price of the battery less more? Are you okay with it? I didn't get you. So for example, when we started the conversation you told me initially like you had this problem where in the previous hearing and they kept on charging you for the small covers, which kept on getting lost, but that's like one euro for a piece or something. But also here, you have to keep on paying for the battery every one week or

Consumer 3

that time I bought zeeman had the option. They had a real loader, a charger battery charger, a box, and I had Akos aku anok ackles and every night, they ran out within a day, okay, okay. And I put I put the articles and I put this in this reloader No, no I didn't I didn't have to buy batteries. Yeah

Roy

so do you think having that charging capability is easier for you and you like it more or is the battery option you like more? And could you explain?

Consumer 3

I mean I can rely more on these batteries because they last me for a long time. I can remember with Patrick the arco minor with a reload and sometimes they gave me ackles and they did not last for one day.

Roy

You mean the battery did not even last for a day in the car.

Consumer 3

I said they cannot be I told me a lot of a lot of things. They gave me bad apples and They did not even last for one for 12 hours.

Roy

Oh that is really bad.

Consumer 3

Yeah then then later on I had better ones. I got better ones in the internet. I bought about better ones

Roy

you bought the better ones on the internet which lasted a long time. Yeah. Okay Okay. But tonight no you just get the batteries and you change them every seven days

Consumer 3

change when it says being that drink twice and then I know I always have batteries with me and I change when it is necessary

Roy

okay you change when it is necessary. So if I may ask you. So you have to visit the audiologist once in a few months to get a new set of batteries, right? Like for example 10 batteries or something. Or how do you do it normally?

Consumer 3

I buy Can I buy 10 boxes, it can look Part of I think there are also 10 batteries in them I buy not only one I buy in a box 200 batteries 10 into 10, I think so. Okay.

Roy

Okay, so and that's not a hassle for you you always keep on in your bank like an extra one. So when you need to change batteries

Consumer 3

I always have the left has always something a little small now. That

Roy

wasn't me. Okay, okay. Okay, so they're pretty easy to carry and so is it okay, so you never faced a problem sometimes when you're like oh shit, the hearing aid is off and I don't have battery. It was not like that ever.

Consumer 3

Well, in the beginning it happens once in a while but you have you changed your handbag or importantly the interior that it has happen sometimes and that replace them right away. It's always in a moment when you were at a ship you want to hear this. No, no, I think it doesn't happen anymore. Always make sure I have some with me.

Roy

Okay, okay. Yeah, so it might happen when you started using it and you couldn't remember sometimes that you needed battery. Oh, something like that. Okay. All right. Could you tell me about what what would you like to improve in this hearing it if you had an option, what kind of things you don't like about it?

Consumer 3

This problem which are If you are in a get together with many people and everybody speaks...says something then the microphone have difficulties to set their attention, then it is very difficult to understand, everybody complains, This is a big problem.

Roy

So this is a common problem among most patients okay.

Consumer 3

has not arrived there to solve this problem probably not here. Okay.

Roy

Did you try to find alternate hearing aids because you were already using now which you are really happy with except for this case which you told Did you try to find any alternate hearing aid which does not have this problem. You just accepted it.

Consumer 3

As far as I know, none of your aides are able to hear and have the same quality no matter where you are. There's always a problem where many people get together and it's loud.

Roy

Okay.

Consumer 3

And everybody says something different.

Roy

So the speech separation is a problem. Yeah, okay. Okay. Okay. I think I got got this issue of yours which you're talking about. Could you tell me Is there anything else that you feel like is a problem? No

Consumer 3

everything. I'm just happy I hear so well without. I hear so good with these eight, so I don't miss anything except problem which I told you, okay,

Roy

if I if I may ask you man like I'm talking now you can hear clearly proper proper Okay, okay. All right, perfect. Do you listen to music with your hearing it does your hearing and have a function where from your phone, it can directly transmit music to your

Consumer 3

No, I don't have that.

Roy

Okay. Do you feel like you never tried it? But do you feel like do you feel like it would have been nice to have it?

Consumer 3

Maybe I can try it and sometimes I read in churches, people with hearing aids ivig they have you can sit on specials places where you can hear directly what is the priest or the music or what are the earphones? Yes,

Roy

yeah, it is called the telecoil function. Yeah, I did read about it. Okay, but you You're hearing it does not have that. You have never done that.

Consumer 3

No no, I think you have to be equipped with this. Yeah,

Roy

but you don't have that you're hearing it. That's okay. No. Okay.

Consumer 3

Maybe next time I will ask them if I could try to say I have to test test models I could, I would maybe try to test it.

Roy

Okay. Make sense? totally makes sense. But you normally do not listen to like for example, before you were using hearing it, did you listen with earphones or headphones a lot.

Consumer 3

Now headphones, I don't use anymore. Okay. Long, long, long, long ago, long, long ago. So I know it's a good except for my smartphone. If I repeat my lessons I go to voice go to I like to sing there. Imagine I go to

school, I go to school to learn about technique to sing. And then the what we do there in the lesson, I put these little ear phones from Cambridge from Cambridge. But these these models from Cambridge, I cannot I have to take these eight out because when the adapters are you have to put into the year and I very I had in former times very old from 10s of I had earphones which you just put hanging over your ear, maybe they're not produced anymore. So if I want to listen to what I have on my smartphone, I have to take out the

Roy

Do you feel like it would maybe be a nice feature to have this thing? Because some hearing aids already have that. You can directly transmit the music from your phone or from your laptop to your hearing it. So do you think it might be a good idea to have that?

Consumer 3

Without that anybody else can hear it?

Roy

Yeah, without anybody.

Consumer 3

I don't have to bother other people with my mind. Yes. Um, maybe I should try it. Maybe then I could say I wanted like, I don't know about the calm for. So. I don't know what I miss.

Roy

Absolutely, absolutely. Make sense. Okay, so maybe if you try it, it might be nice. That's right. Okay. Okay. Make sense? I asked you about the replacement of batteries. You told me it was very easy. You always remember it. Do you have frequent problems with your hearing it or does it last nicely over time?

Consumer 3

Very nicely. Okay, okay. It's

Roy

okay. Okay. I think you were really happy with your hearinother people.

Consumer 3

When before I had that as an art, when I speak to you over the phone, I have to I have to move the what is this card here from the telephone the receiver, we see that the telephone receiver I have to hold one meter away from my ear because people who cannot hear as they speak very loud.

Roy

Okay, no.

Consumer 3

I think that problem is solved with

Roy

no, it's perfect. You can hear it normally. Okay,

Consumer 3

I don't think it has to do this way. Good. Time to call him. He never has time me because he is so engaged in your company. I'm going to talk to my new colleagues.

Roy

I'm going to speak to Okay, okay. All right. I think I'd go to the last section of it. It should take 10 more minutes and then we should be

Consumer 3

done. Cuz then I have to stop then.

Roy

Yeah. So it should be done. I think it doesn't affect you too much. But still, I'll go to it. How much has your lifestyle change? Did you ever feel like oh, I don't, I don't want to wear hearing aids for old people or anything like that.

Consumer 3

I never, I never ever out in public, it runs out the other day. I have the choir we were trying different things. And I have no problem to take it out because it's so small. No, I do it. I take the battery that put it in. I put it back out. Ah, I know in German in Germany people think oh, only old people are wearing this and they try to make all different year. Jewelry out of all this. No. Okay, I don't I don't feel that way.

Roy

Okay, okay, really good. Okay, so jewelry or any kind of hidden stuff that's not required.

Consumer 3

I like Siemens he'd had to change the channels he manufactured a bore bore pin farm, that other people will not realize that you have it, you could manipulate manipulate by this thing to take the ball pen and make the movement to check this. This this is made for people who think ah, it's only something for old people and you have You're not perfect. No.

Roy

Of course.

Consumer 3

Nobody is perfect. Yeah,

Roy

yeah, of course, man. Okay, all right. So this is not a problem at all. Did you have any specific experience you'd like to talk about while during your hearing your journey or your process?

Oh, no and nothing like that. It's just normal life. Okay. One more thing I wanted to ask you is so the as as you mentioned before, all the insurance problem are the insurance things are taken care by the audiologist, you don't have to do anything. Oh, so that's not a problem to do anything. Okay. So they talk to the insurance they get it done for you. And you're okay. Okay. What else? So after you started wearing the hearing it Did you think at any point of time, like the people around you are behaving differently or since you were born very neat, your lifestyle changed for better or for worse?

Consumer 3

Well, the lifetime changed as so far as I don't have, I can understand the people clearly and that's for good and take part of what they are

saying. Hmm,

Roy

absolutely. Okay. So I end with a closing question, which is, so during your whole journey of the hearing aid process or the hearing loss process, where do you think you could improve? Because you've talked about the product already about the process? Where do you think you could improve it if you had an option to change something?

Consumer 3

As I said, and so if you're in society and if there are many people that you are able that is is able to separate a way to separate the noise background noise. And you Only you clearly can understand your partner. Right? Are these people at the same table?

Roy

Yeah, like the people who want to listen to

Consumer 3

people I want to listen to. Okay.

Roy

Makes sense. And you talked initially that the first audiologist you went to even not at all happy it was really bad. And the second one was really good. So yes, yes, I wanted to ask you once more. Why did you not go to the second one? Before going to the first one, why did you go to the first

Consumer 3

I didn't know about it at that time and then time this specialist for glasses did not deal in India.

Roy

This is new. Okay.

Consumer 3

New part of this company.

Roy

Okay, okay. Good you like later on once we are done could you send me the name of the company especially for glasses? I could not wait to get it. Well, you were saying yes, but

Consumer 3

I tell it to you and you can look into the internet that you will notice a big big company shear my f i l m a n feel man. Yeah. very capable. Very

Roy

good company. German a rare company. Yes. Yeah.

Consumer 3

They don't talk about audio much because they don't make much publicity for it because they are not everywhere That's why they do it. All the side. Okay. Academy. Lear the hardstyle they bought a castle and that is their Academy to ANOVA otherwise I told them that their employees can study their research research this research research and study okay. On your largest okay Could you

Roy

just Could I just ask you one more thing which is so fulfillment ag they just provide the service with the audiologist and everything but the product that is a new neutron right that is not there. That is separate.

Consumer 3

Yeah, they don't fabric themselves different models. They have different okay. And our price ranges.

Roy

Okay. Okay. Yeah, but for you you have to pay very little because of

Consumer 3

the quality is so fine. Okay. I don't need to have these expensive, more expensive. I palpate. In addition, last time, 2000 euro, and these Which these are better? The ones I have now,

Roy

which are free almost. Yes. Yeah. totally makes sense. How much is

Consumer 3

the medical insurance covered the whole price for me?

Roy

Right. Right. How much was the medical insurance? How much does the did the pay?

Consumer 3

It was 400. Now pay my default it varies on. You know, in Germany, we have many social medical insurance. And my soloqueue paid a one address because I looked different. paid more than 1500 euro

Roy

okay. 1500 euro to the company to feel months. Yes, right. Okay. Okay. And how much do you pay the medical insurance per month?

Consumer 3

Oh, I don't invest and now I'm I'm, I'm not working anymore. And when I when I was working that deduct each month. deducted according to your income to your

Roy

salary, okay,

Consumer 3

I think I cannot remember it was quite a lot. I think it was 19 or 18% of your income of your salary.

Roy

That's a lot of money.

Consumer 3

It is a lot of money. While you're working when you're not working anymore, you'll get a cheaper pension. Mm hmm. You pay a minimum of that small amount. Okay. Okay. So it's not like a small amount.

Roy

Okay. And this 15,000 euros, sorry, 1500 euros that they're paying to feel man. It is once in every six years.

Consumer 3

That's right. Oh, okay. I think it was a shame because the first ones I had they only paid 1200. Right. So they increase this because I think maybe it's Christmas and others. Other things they don't pay for it depends on the insurance. Absolutely. Yeah. So I think I have to stop because I have to get ready.

Roy

Absolutely, ma'am. I think I have gotten all the information. I've talked to you for almost an hour. No, I think it was really, really helpful. Thank you so much.

Consumer 3

Oh, yeah, I hope your English is so fabulous. But I have lost my eye while I was in America when I was 24. And that was a long time ago.

Roy

I think it's really nice.

Consumer 3

If you have any more questions, please don't hesitate to ask me.

Roy

Okay. I will email you if I need to. Talk to Matt to call you.

Consumer 3

Bye. Have a nice day.

Roy

UK I'm here for two and a half months. Are you yeah In London Oh yes. And then go back to Delft in the Netherlands in two and a half months. Yes. Have you ever been to the Netherlands?

Consumer 3

I have been in the Netherlands yes by I was on a bicycle tour in the Netherlands. It was very nice.

Nice country. Yeah. Nice. Amsterdam. City. Yes. It's

Roy

beautiful. I go there quite often. Yes. It's really nice. It's quite close to I live in Rotterdam actually. So Amsterdam is not so. Yeah, yeah. Okay.

Okay, bye bye. Have a really nice day.

Consumer 3

Bye bye.

Consumer 4 typed response

Pre use:

1. How did they come to know that they needed a hearing aid
*** I had hearing loss after having measles aged 5 (1950)

2. What were the subsequent steps to getting a hearing aid
*** I don't remember much and don't think it would be of interest in 2020! But... I would have seen GP and went to the audiology department of hospital. Issued with huge aid with a large battery pack about 15x7x5cm with a cross body strap linked to a microphone about 8x5x2cm clipped onto my clothes with a long wire feeding into an earmould in my ear. Needless to say at age 5 I was not anxious to wear or be seen wearing this. Fortunately in early 50's the NHS brought out the Medresco body worn aid www.theguardian.com/society/gallery/2011/jun/14/rnid-action-on-hearing-loss#img-2 and I was very happy to change to that. Up to my 30's I had various bodyworn and then ear-level aids from NHS until these were no longer strong enough when I bought two private Phonak aids (NHS would only give you one aid which lead to my right ear, although it retained more hearing becoming not nearly as discriminating as my left, aided, ear.) I learned to lip read from age 5 and was dependent on that to supplement the very poor and distorted help I received from the aids. I paid about £1000 (a lot) for the private aids in my 40s but still dependent on lip reading. In 2003 I was assessed for a cochlear implant and had the operation in April 2004 at Addenbrooke's hospital Cambridge.

3. Product review
 1. Choice on hearing aid, what was it based on, what were the driving factors *** I chose the MedEl Tempo CI as the clinic seemed to recommend it
 2. Functionality, comfort, maintenance *** The CI turned my life around. Although I was still hard of hearing I could hear all "normal hearing" frequencies with the restrictions of CI functionality. It was a steep learning curve to find out what the source of sounds was ... e.g. wind in the trees and reeds, bird songs, bells and beeps in kitchen, car, everywhere. The learning goes on as I come up against new sounds even 15 years later. I have been "upgraded" twice and now have a Sonnet processor. I worry about how as I grow older (and less dexterous and "with it") I will be able to do required maintenance e.g. replacing microphone cover, re-charging rechargeable batteries (they last only 9 hours but I don't want to use disposables because of the environment), etc. etc. The CI is very comfortable to wear.
 3. Use when, attachment, detachment *** I don't understand this question I use the CI from waking up in the morning until going to sleep at night except for showering and swimming. "Waterwear" is a product which enables you to wear the CI in water, but it is fiddly to use, uncomfortable to wear and, since I have never heard anything when in water in the past, it doesn't bother me. However I do envy people who can have a chat when in the pool.
 4. Different features / use cases and experience
 - a. Listening to music - headphones / earphones? *** I sometimes use an Artone device to pair with my processor to listen to music or speech and TV and could use it for phone but I tend not to use a phone as it's too stressful http://www.artonecs.com/store/p15/Artone_TV - new_optical_TV - hearing_aid_transmitter_.html and http://www.artonecs.com/store/c2/Hear_your_phone.html
 - b. Noisy area (pub, train station, outdoors) *** Noisy areas very difficult and sometimes stressful. Outdoors in countryside I don't need to look at a companion to lip read as I used to.
 - c. In office *** I am now retired but I think my CI would have helped a lot had I been able to have it whilst still working.
 - d. At home during the day (weekends) *** Usually very helpful except when a lot of people around..

- e. At home at night (while in bed lying) *** I take the processor off at night. I would have a problem if I needed to hear at night e.g. if husband sick. I have an underpillow vibrating pad linked to doors, phone and smoke alarm for when husband away.
- 5. Re visit to the audiologist - how often, experience pre and post, impedes routine ? *** I have an annual checkup and opportunity for a change to my “programmes”
- 6. Any specific experience(s) faced during use (positive, negative) -
 - a. ear wax, *** irrelevant now
 - b. infection, *** not had any
 - c. fit, *** comfortable. I had real problems in the days I wore hearing aids because they had to be a really tight fit as feedback likely otherwise due to high volume
 - d. settings change, *** easy
 - e. hearing change over time, *** irrelevant now
 - f. phone calls *** I avoid using phone – too stressful
 - g. Any other positive / negative experience *** I am much more confident about going about my daily life and can take part in many things not possible before, but the sense of isolation persists when I don’t know the people I am with. I can enjoy music a lot more than before CI.
- 7. How long does the product operate over time? How is the process of replacing the product *** the NHS gives lifelong support
 - 8. How often replace batteries, is it cumbersome, easy? *** See 2. Functionality above re. batteries.
 - 9. What can they change if they had the option to change in the product / process *** Easier battery change and microphone cover change. Lifelong batteries???! Maybe a charging station to dock the processor at night and a charge long enough to last as long as you are awake. Totally waterproof so I could swim in it without the fiddle and discomfort of “Waterwear”.

Lifestyle change

- 1. How does it affect the lifestyle of the consumer *** A miracle. I wonder how different my life would have been had I received a CI or two in 1950??? I am much more confident in communication especially with strangers.
- 2. Any specific experience after starting to use the product *** I could hear the banns read before my daughter got married soon after my switch-on and talk to the wedding guests with ease.
- 3. How does the product help in different cases *** everywhere I need to communicate or hear warning sounds
- 4. Where does the product fall short (use case) *** it does not give any idea of direction of sound, but with only one source of sound this would be impossible anyway I suppose. It would be very useful to have a device which told you which direction sounds are coming from.
- 5. What was the experience with (positive, negative)
 - a. colleagues / friends / family *** very positive
 - b. People around you *** very positive
- 6. What changes would he want in the
 - a. Product *** as in 4 above
 - b. Process *** don’t understand question
 - c. System and why *** ditto

Consumer 5 Interview

Roy

Okay, okay. All right. So I think it would take about 45 minutes to one hour of your time. hope that's okay. Yeah, I just I just wanted to let you go first. And how are you doing now with the corona virus and everything. It's all safe. Yeah, yeah. Yeah, I think I think it's definitely best to be saved for some time and question time. Right, right, right. Okay. All right. So I don't know if Yeah, I think I did not tell you. I have come back from the UK. have come back to the Netherlands because well, because of the corona virus and Then all the countries that closing borders, so I just have to be safe. And then I spoke with James James told me it's best that you go back now. Okay. Yeah. So that was it. So yeah, I mean, it's just, this is how we could do all the interviews now. This is this way. Telephone. So the problem is I am living at home now. And then my friend who is my roommate, so she is doing a call on the different room. So I'm in the kitchen. Yeah. Oh, we can do a Skype call. Definitely if you want. Okay. Yeah, yeah, no problem. You could also call me on Skype. If you want

Consumer 5

Okay, okay, no problem. Since you did not use hearing aid yet, or you have not used it before, so a portion of the interview Of course, I would not be doing, which I have done with other people who are used hearing it. So, so I'm going to start with a very general question, which is, how did you come to know for the first time that you had hearing loss, and what steps have you taken as of yet?

Consumer 5

Every time To listen to the TV, I have to turn it up much, much louder than my wife hasn't. And she's always complaining that if I'm watching TV on my own and she comes into the room, why you got it so loud? And then more recently, I found that if I go out for dinner with a group of people, and somebody the other side of the table or a little bit further away is trying to talk to me or, or just talking. If it's a noisy environment, I really struggled a the conversation.

Roy

Okay, okay. Okay. And for how long is that?

Consumer 5

Long? Oh, good question. So, the TV things probably been getting worse for about the last three years. Maybe maybe longer is difficult to say the restaurant problem of listening to a conversation is maybe nine months to a year around it. Again, it's, it's so gradual that you don't really notice it.

Roy

Okay, okay. Okay. It's very good.

Consumer 5

Yeah, I mean, I have I had a hearing test not so long ago as part of our company medical. And they said there was nothing, you know, really specifically wrong.

Roy

Okay, how long ago was it?

Consumer 5

Six weeks ago

Roy

Oh, so late recently, like after all this problem started, okay. Okay, okay. And then what was the outcome?

Consumer 5

Just, they don't do anything. They just, you know, do a report. send you a report. I mean, I could try and find, I could try and find that part of the report and send it to you if you'd like to see if it's useful.

Roy

Yeah, that'd definitely be useful. If you could find that report and maybe if it's online, then it's easier just forward the email or if it's offline, maybe take a photo or something, if anything is. Okay. Okay. And what did they say? So, was it like an appointment with a doctor or a GP? Who was it?

Consumer 5

A medical sort of company that do all sorts of different things. It wasn't just a hearing test. I had blood pressure, everything it was all medical that the company pays for their senior people to go to benefit.

Roy

Okay, okay. Okay. So it's like a general all around. medical test maybe yearly or something which is paid for by the company

Consumer 5

every two years. Okay,

Roy

by yearly Okay, okay. And the outcome was there was no problem with reviewing is what? There was some hearing loss but it was not too severe for a person of 64 years old. Okay, not too severe for a person of 65.

Consumer 5

But in real life not a problem, I can turn the TV on. Restaurants is a bit more of a problem, but I can just see that maybe sooner or later. If it keeps deteriorating then hearing aids may be something that I will have to consider.

Roy

Yes.

Consumer 5

I just saw that know if you guys are going to develop, then I might be a person that will be useful, useful for you. And then it will be useful for me to see whether they do make any difference. Yeah, well

Roy

yes, I really hope that it works.

Make sense? Okay. Okay. Okay. So I think I understood that you had kind of two lifestyle changes one is you had to turn the TV up, which might have been a little bit of problem with your wife sometimes because you don't want it that loud.

But so we the restaurant problem, how are you mitigating it right now? What are you doing about it?

Consumer 5

I miss a lot of the conversation. Sometimes I will cup my hand around my ear to try. That helps a little not a lot.

Roy

Okay. Okay. Okay. Do Do Do you think with with this kind of an issue, let's say where you are missing out on conversation or you are asking people to tell you later or cupping your ear. Is that affecting your social outgoing abilities to some extent or is it still the same it still going out equally?

Consumer 5

Oh, no, no, no, I don't worry about it.

Roy

Okay, don't worry about it. So it's more like a fun thing. Sometimes it's not something you worry about so much.

Consumer 5

person. It's part. It's part of old age. You know, 65 this year?

Yeah, there are various parts of my body that don't perform like they did 20 years ago.

Roy

Absolutely. It's about a basic sir. Yeah, makes it

Consumer 5

a serious problem at the moment, you know? Oh, I'm gonna have to go and get some help. When the subject came up, I thought, oh, that could be interesting. And it could be useful to me.

Roy

Absolutely. Makes sense. Makes sense. So, have you ever looked into the hearing aids or have you ever research as to wanting to get to one?

Okay, never. Okay. All right.

Consumer 5

A friend of mine has some very he started he has a similar problem is considerably worse. He used to drive cranes and heavy machinery. And he now does wear some very very nice, very discreet earphone if

Roy

you're hearing aids and

Consumer 5

he has said that when he's got his hearing aids in you know the problem of the meal noisy restaurant is resolved.

Roy

Okay, so the other thing that made me think

Consumer 5

but he's a very expensive and I do not intend spending a serious amount of money on them at this point point in time

Roy

okay okay. Let me ask you a little bit like break this down this information that you gave me about your friend. So to start with I think you said on a very positive note that he was a hearing aid which is very discreet. So do you think that is something you'd want? like would you be uncomfortable if you are wearing a hat? hearing it and people could see it.

Consumer 5

Yes, I think I would certainly, depending on the cost, I would certainly want to go for something

Roy

that was pretty discreet. Okay. Okay, depending on cost. Okay. All right.

Consumer 5

Hold on, let me explain that really vague, you know, Crikey, you know, thousand pounds 2000 pounds doesn't matter, I will still, you know, I've got to have the great ones. I would I would play the cosmetics side of it versus the cost.

Roy

Okay. So it's a balance between how discreet it is versus how much is it costing? Right?

Consumer 5

I mean, the first thing is I'd have to work it would come down to the

Roy

First round, right tonight tonight. So if I if I may tell you right now, NHS provides free hearing it, of course, to people with hearing loss. I mean, you haven't gone to the GP yet. So I do not know if the NHS GP would recommend you to an audiologist to get one. So that's a separate thing. But what I wanted to say so the NHS hearing aids are normally bigger behind the ear, which are very visible. So if I may ask you, how much would you be willing to pay? Let's say, I mean, it's a very speculative question. How much would you be willing to pay for the discreteness of hearing it?

Consumer 5

Very, very difficult question because I haven't looked into understand what the range is, you know, I could say, you know, I don't know, two or 300 pounds and you might laugh because I have no idea whether

Roy

right Make sense? Yeah. It's, it's not the right question to ask actually, when the research has

Consumer 5

you might not get the answer you were looking for.

Roy

Right, right. No, make sense? Yeah, yeah. Yeah. Okay. All right. So, what else I can ask you is, do you have do listen to music through earphones or headphones?

Consumer 5

rarely,

Roy

rarely. Okay. Because right.

Consumer 5

podcasts are not so but that's much more speech.

Roy

Okay. No, I mean, that's fine. That's fine. So what I wanted to ask was, I think I put the question wrongly. My point is, do you use headphones or earphones a lot?

Consumer 5

Yes.

Roy

Okay. This is

Consumer 5

almost every day when I'm commuting

Roy

every day when you're commuting.

Okay, flying so basically, let's say it's a it's a part of your life. Yes. Okay.

Okay. Okay. All right. So let me tell you this scenario where there are kinds of hearing aids where the sound from the from the speaker or not the speaker the phone or the laptop could directly with transmitted into the hearing aid like earphones right now. And so these are not the feature so this is a feature which came into hearing aids quite recently I'd say like last year or something. Do and and he just does not offer this like the NHS hearing aids are the older ones, the ones that are offered for free So do you think this is a feature you'd really require? Because the other option is you need to take out the hearing aid every time you'd want to listen to earphones. Listen through earphones.

Consumer 5

Yes.

Roy

So this is something you feel like would be necessary to you?

Consumer 5

Yes, yes, I think it would, because obviously I'm doing I do a lot of I do a lot of Skype calls, I tend to use over the air phones with a microphone on them at work all the time. You know, I'm talking to China and Hong Kong. significant part of the day I talked to other service departments around the world. So Skype, a Skype call for me, is a very, very common thing.

Roy

Okay, so this is absolutely necessary to have here hearing aid which can transmit ear directly to from the phone The laptop to your ears

Consumer 5

I must admit I have never ever considered that Okay, okay.

So right now as I have recessed all the hearing aids that do not have a microphone functionality, but that does not mean that it cannot be integrated into the future in our hearing it or in competitors. But at the same time, I think putting in a microphone might increase the size of the aid or I mean those are considerations which we have to look at later on. By looking at your use case, it seems that direct transmission of sound to the year and the microphone to pick up your sound is absolutely necessary in your real life. The microphone is not necessary. Hearing aids out every time I got a Skype call or A phone call that's impossible

Consumer 5

would be a pain in the ass is not so important. And in some ways, certainly on ml amania ones, which I think you probably aware of quality is awful.

Roy

Yes, yes. So then having to switch

Consumer 5

your phone to not be paired with mela mania ones when you take the call is a real downer for me. And I don't know how we got away with it, but we have

Roy

a lot of pairs. So yeah.

Consumer 5

I agree with you.

Roy

Yeah, it's kind of a deal breaker. Okay. So. All right. All right. Do you think right now if you get a hearing aid to help you

Consumer 5

Only at the moment. Yes, but it would save me having to have the TV so loud. And it would make social gatherings which you're not allowed to do. Only two areas at the moment. I know there is a deficiency, but it's not horrendously bad.

Roy

if you are going to let's say watch a movie in a theater or opera or a play, you do not face such a problem.

Consumer 5

Right. Okay. Sorry. cinnabar plot. I was reading a text message from my friend. He uses Do you know Phonak

Roy

I know that Yeah. Oh, they're the ones he uses so far.

Consumer 5

I don't think you can just buy them to link them to a computer.

Roy

Yes, yes, yes, yes. Okay.

Consumer 5

ever come into I've not tried them but come into contact with a good friend of mine, which made me sort of more aware about them. So I'm sorry. Go back to your question. Did you say?

Roy

Yeah, so a cinema or opera play? Do you face problems? They're like listening.

Consumer 5

I never go, okay.

Roy

Okay, okay. Okay. All right. Make sense? So,

Consumer 5

I do have travel sometimes in movies or on the TV. Okay. out what they're saying. And so I turned it up to hear the voice But then when some of the action starts I have to turn it down again. And I don't know whether that is because there's a certain area within my hearing that is Davis but like I said, I've got just about to try and save June 2019 because I've just found it all perfect.

Roy

Okay, okay. No worries. Alright. So the next part of the question is, so there are right now the kind of periods which are available. They normally need replacement of batteries. That's a common way to do it. But recently a lot of hearing aids are coming up in the last one or two years, which have rechargeable batteries every few days, or maybe once a day you kind of recharge it. So, in your opinion, which you which one do you think is going to fit your lifestyle better? I could give you a little bit more context. So for rechargeable batteries, if you have to recharge them almost every day, like if you're reading them for 1920 hours, like the time you were awake, let's say or active, and for battery batteries which need to be replaced. They are normally replaced once a week.

Consumer 5

As long as we use user replaceable ones that would bother me too much. Okay. prefer that you just stick them on charge overnight. Okay, so

Roy

That one is easier for you because you anyway charge your phone you just also charge that other thing.

Consumer 5

Yeah, exactly. So something like that. Sorry to keep referring to it but like I said, it's the only spiritual I got my my friend to that we were talking about just now. We we went on holiday together and luggage was lost. And he had his hearing aids. But the charger was in his luggage. And he didn't get his luggage back for four days. Somewhere were obviously impacted with him. Yeah, so whether in future I guess he would pack his charger in his hand luggage.

Roy

But this is really interesting info because it's almost part of your life. It's not like an earphone. You really need it. I mean, your friend really needs it. He does. Yeah. And when this is lost, the treasure is lost. It really affects his social life. Yeah.

Consumer 5

That's why I mentioned it, you know, because there's just something

Roy

else to consider. Yeah, yeah. Make sense. may ask you one thing you were saying that your friend he paid quite a lot of money to get this discrete, advanced version of the Phonak hearing it. Why didn't he go for the NHS one which is provided normally?

Consumer 5

I would, I would guess, because he wanted it.

Roy

Okay, so that was one of the reasons

Consumer 5

why I that I think would be my friend pretty well. I mean, I've got short gray hair. He's got short gray hair. It's another thing about admitting

Roy

Yes, yes, yes, yes. Yes, absolutely. Okay. Okay. Yes, I do get to a point question. Yeah, you'd want it to be discreet. Okay. It's good is one of the reasons.

Consumer 5

You know, I'm in an enviable position where I still got a good job earning reasonable money. So, yeah, a lot of people the cost of these things would probably, you know, put it out of a lot of people's reach.

Roy

Yes.

Consumer 5

Yeah.

So that's just sort of adding that that he is in an enviable position as well because he could also have access to be able to do

Roy

so he can he can afford the hearing aids that he's affording. But there's a lot of people who wouldn't want non discreet hearing aid but the cost kind of data them.

Consumer 5

Oh, but most people would prefer something discreet, small. etc. But a lot of people the cost would, would outweigh that, because they just wouldn't be in a position to be able to afford it.

Roy

Right. Right, right. Yes. I think I totally understand it. All right. All right. Anything else I can ask you because I'm really screening through the questions, and then trying to understand which are the ones that I can ask you.

Consumer 5

Yeah, sure. I understand.

Roy

Okay, product review. Yeah, this part is gone. So, if looking at the current scenario, and also talking to your friend, I don't know if you guys discuss this this topic like the hearing aid or the hearing loss topic, do you think or is there anything specific that he says are the shortcomings of the product?

Consumer 5

It's really, really interesting because before we have Call I sent him a message. I think he's working. Because I said to him, anything you don't like about them? And he hasn't replied. So I will. Next time I see him I will have a more detailed conversation. He's, he's a driver, so he drives he may well be.

Roy

Make sense Make sense? If I may, I'm not sure if I should ask this. Would it be possible to talk to him as well?
Like,

Consumer 5

if you ask him, I meant to ask him last night.

Roy

That would be perfect. That would be perfect. If he's, if he's happy to talk to me. That would be really helpful.
He's going to give me a lot of info I feel.

Yeah, because he uses it. Yeah, he uses it and he doesn't like NHS products. Yes. So that is like above. Perfect.
Humor we would want. Yeah, okay. Okay. Okay. What else is possible right now? I think there is not a lot more
I can ask you, I told you for one hour, but I think this this would be like

Consumer 5

the amount that I could actually ask you to be on the show. Yeah, I did sort of. I don't have a wealth of
information with probably some small bits of information that were

Roy

less useful. Yes. Yes, absolutely. And you could be a very, very, very good early adopter, like the product once
Cambridge Audio has the product with all the coronavirus stopping and all that. I think you could be one of
them to try it out and see if it fits your lifestyle.

Consumer 5

Yeah, because

Roy

you are in that conjunction which is you would want something discreet, but you wouldn't want to spend a
fortune amount of money so It's a it's a mixed thing. And we are trying to get into that position where we're
coming up with something not too expensive for everyone, but at the same time distinctly following those
other features.

Okay,

Consumer 5

really, really a lot of times to help me out. Yeah. And hope the quarter innovators get sorted out as soon as
possible and hope I can come back to England again, because I didn't quite get to talk to you guys actually
meet much. And so that is one part and definitely let me know if your friend is okay with talking then that
would be really nice too. Yeah.

Okay, thank you so much, and please stay safe. Yeah.

Sales Person Interview transcript

Sales Person

And the thing is that you can sell it quite free you don't have these medical restrictions what we have river hearing aids because they are you need to have this in this and that I had also one two days just to selling them to the Christians I had also two days a proper thing we've really tested everything on medical issues. So even even as a normal sales guy you know who just says just doesn't do something that directly to the end customer has to do this. So the restrictions are very high. And the second thing is we have quite good health system in Germany. I don't know how it was in the Netherlands but here in Germany it's it's like this way, if they find out okay, you need a hearing aid. Then you get about 700 euros for one year, from the from the health insurance from the state. If you Private, it's a bit different. It's just the question how intensive is the what is in your contract but from the from the state. Everybody was in the state health insurance gets 700 euros per year,

Roy

per year, but the cost of per year hearing it can go up to 2000 euros.

Sales Person

Yeah, it could. Yeah. But But the thing is, there is a passion. Like it's called, we call it passive. It's, it's like, yeah, let's say the health, health insurance hearing aids. There is a complete class, because the classes are in our six, six classes. Quality classes. The first one is is that one for for health insurance. Yeah. That's what you normally don't don't have to pay 666 years and is an acoustician. You Even service and all the stuff you can't put the money on the on the customer. It's free. It's free. So you got about 120 euros for servicing. Also, in the six years, I think roughly after three years you can you can take this and that and that's that's the point. That's why the acousticians Of course, always want to sell up a bigger, more expensive hearing aid because the thing is, if it's not this hearing aid for class for the normal and health insurance game, you're not inside this, this thing that is that is free for the for the customer, then the customer

Roy

also to pay for the service. Okay, every time something happens the customer has to pay.

Sales Person

Yeah. So even if the hearing aid is not costing, let's say 700 euros, only 800 euros but it's not in this case. Class defined, then you can sell it that any and that's why they try to do it a bit better, you know and so on and so on. But to be honest, the 700 hearing aids it is this health insurance hearing aids are still very, very good. So we got most of the time, you know, for microphones and and many about three or four programs, the new rig systems like receiver in here in channel, you know, not any more like, like the old one. And it's really looking very nice and very, very good. And the acoustician is buying it for roughly 95 euro.

Roy

Yes, that's the thing. Okay, so that acoustician is buying it for 95 euros from the manufacturer and who is the manufacturer in this kind of hearing aids

Sales Person

in these kinds of hearing. It's like signia phone opticon y dou x wherever, you know the bigger company the biggest companies are of course let's say Santos and then it's the Nova group and then it's coming also or econ or something that way so I mean mainly Wi Fi for groups of six companies here in Germany is the most from just from the brand is article number one from sales, then it's coming Phonak and then we'll signia and from the group sonova is the biggest one because they got also about three or four brands and they can also have their own shops. Like Yes, okay, okay. Yes, it's directly as unova group. Okay, so so they sell their let's say only only normally for narc and or something like this. But it's it's

Roy

their own shops who do it Started one thing because you were saying in one cases where the independent audiologist they're buying this product for 9500 euros and selling them for 700 euros to the customer along

with the service and everything, but when so Nova has its own shop and they're manufacturing their own hearing it's like their own brands.

Roy

that's costing the 95 are still selling in their shops by shops I mean this audiology shops for 700 yeah

Sales Person

because because they got it they got the 700 from the health insurance that's why they're not dropping the price. there anyway there are no prices since prices

Sales Person

then no sales prices no okay yeah, because when will we be at only normal prices what you pay as a crustacean you know, and that that was the price list and normally then then after that prizes, it goes down. It depends in in between Buying class you were because they got also some buying groups and so on blah, blah, blah. And normally it's about roughly 36 38% going less down from the normal. So the normal margin is about four even for the average for the more expensive hearing aids. It's about let's say factor free or something that way, roughly, roughly 30% Yeah, no. More much more. If you sell it for let's say, you sell it for 10,000 euros, you buy it roughly for 3300 if you sell it for 10

Roy

Yeah, so 300% Yeah, yeah.

Sales Person

Okay. So this is three times as Yeah, instead what what they have no, normally okay.

Roy

And and that is for these acousticians, or is it for the companies that manufacturing acquisition for the acquisitions? Okay, okay. All right.

Sales Person

factoring companies it's a bit hard because, you know, and there are many differences because, you know, let's say perhaps they can they don't earn so much money, of course, on the smaller ones, but they are, they are they don't have any more long how you call it r&d or something that way because that's all done. So and but for the newer equipment, you know, there is a very, very big r&d because, let's say for signia, they have about 300 300 engineers.

Roy

Oh, wow. That's a lot of people.

Sales Person

Yeah. And then they sell it and it's sold in Germany, roughly about let's say 70 million euro. Okay. Okay. So my day to day data, got all the support back also from from Siemens. So they did they're doing their own chips and all that stuff, you know, I mean, the pet bed thing is, you know, To produce it, it's quite cheap. Yeah, let's have the r&d is really really, really hard. Yeah, yeah. Because they have got so much ideas and what you can do with them and genome, they the new one is doing and working with two layers, you know, they're always scanning around surrounding and then you did a day, realize if somebody is speaking directly to me, then it's going, then it's mixing more the direct voice and less their surrounding noise. when nobody's speaking directly to you, then it's getting a bit more the surrounding noise that you get to realize that somebody is coming to you, and all this stuff. You know, it's really really, really very technical and also, like, wind sounding, how the wind that you don't have something that we want to hear sometimes on the telephone, and all the other things also the directional hearing and so on. There's big, really, really very big and intensive, high end For that, also. So it's, it's hard to say, you know, the product itself is cheap. As I said, to manufacture it, it's not a problem. But, but you need to really be r&d in the background, if you really, really wanted to work on the on the top level.

Roy

Yes, yes. Okay. I'd like to ask you a little bit. So, these products which have so much amount of r&d liquid, so they are the cutting edge products, so they do not come under these hearing. It's the class like the 700 euro free ones.

Sales Person

Oh, no, no, definitely not. Definitely not. Six, six quality. And that was started from Siemens, actually. And everybody holds it's a bit the same. It's Today's the class one. This is the first class after the normal hearing aids from from health insurance, then as class two, and it's class free. And then it's not a class for something that is class five, either Know what? Nobody knows it Why? And after five, it's coming seven

Sales Person

and one, two, he was always called, like basic hearing aids, you know, and then 3457 was just the better ones, like the five had the much more better when sounding more directional or more, more also memory setups, what you can put on it, you know, like you want to have more the sound of the voice, less compression or more compression or whatever. So there is still that there's many things which you can do on it.

Roy

Okay, and the plus zero like before, this is the free ones. Yeah, it's the free ones. Okay, before this is the free ones.

Sales Person

Okay. And the other one on is normally costing a customer about let's see 200 euros on top of that bonding is from the sale so 900 euros

Roy

in fact okay so if I ask you one thing so if a consumer buys a class one even in that case he gets 700 back and 200 yesterday okay? Yes Do you always get 700

Sales Person

okay got it always seven Okay The only thing is if you buy the other one you're forced to pay the service now the maintenance the service everything you have to pay for. Okay? That's perhaps what but but you know, the fighting there is not so big. That's why down all the prices makes the acoustician. It can be that you go to one acoustician, he says okay, you want to have 1000 for that. And you go to another one. He says yeah, I want to have 1200 or something.

Roy

Okay, this is important. So there is no fixed price million Not at all. Okay, based on what you want.

Sales Person

Not, not that the main thing there. There's a bit Because that started a bit, let's say in the last two years. Also signia started with them. It was what what was the start up it? It's called Adi beanie. It's it's an it's an online seller. Okay. Which is a bit funny because the problem is you have to go to the acoustician because nobody if you're not really proper, proper skilled for it, you know, it will sound really shit.

Roy

So you want me to ask you to later on but okay.

Sales Person

And then that's the point and it depends also. Okay, it's a question how differentiated is the the hearing aid you know, some sums are easier to make some bit more complicated and so on. So, but that's the main thing so that that was always the target. How can we do online sales, because the guy has to go to the internet and then they dandy In that way, and as Sydney or savant has bought them, it was also I think, now it's last year it started there. It was half a year before they bought it. So let's say two years now. And the idea is in that way, you can buy it online. You've got more or less, you can look at it. It's already been a dot d or something that way. And you buy, you buy the hearing and online. Yeah, on a fixed s. Yeah, of course.

Roy

How much of the fixed price we would have, like close to the 95. Or

Sales Person

no, a lot of the fixed price will be always the same. Like it's, it's, it's what more most of the customer than the retailer's Do you know, as I said, you know about if if you if you say normal Would a retailer done 5000 then it's the same. The difference is in that way that because they don't have to go be price aggressive for this, okay, okay. Because it's it's it's a small brush in here, it's much turnover, but it's, you know, everybody knows each other, you know, in the bar, you know, if you got the domain fair, it's two holes or something. But anyway, that's it. 10 manufacturers, let's say that three groups, and that's all nobody wants to pick the one with the other one, definitely off, you know.

And at the moment, so somehow pitch, Bedales gentlemen's agreements. It's not like it was in the past, let's say 10 years ago, because now it's also their pressure because many investors are in and they will want to have the money, of course, but the thing is to say The idea was before the being is to say, okay, we send you to, to a retailer, to a retailer to acoustician. You will you start as a partner with them. I am doing that. And then when you get there good thing is, you got a fixed price, of course. And acoustician doesn't get the same amount of money what he normally gets.

Roy

So they're cutting your deposition in a way.

Sales Person

Yeah. Yeah. Because they say, Oh, of course, I brought you the guy. Fuck him and, and so on and so on. So it's, it's not so much less but it's a bit less let's say if I want I think it's 20% less or something that what they normally are, okay, okay. So the

Roy

cost to see is about 20% less.

Sales Person

Yeah, okay, okay, okay. And the problem is always the same. They don't want to to piss off the acoustician because they are still still the major power until now it says 60% of the turnover on the acousticians in all know them each other because they are all also lots of much many were together in the school and so on and sold them The thing is there you get to be very very sensitive main market up we believe online deals or something that way that's why they don't put the price down.

Roy

Okay, okay. Okay. So it's not about the the margin but more about Don't be some of the acquisitions anymore. Okay.

Sales Person

Yeah, that idea is the idea is to, to have a sales channel online, but not to piss off everything around and not because online okay. They are have to do in the discounts or something that way. It's it's, I mean, mainly it's the same because you you can't sell it. Like let's say, normal headphone. Yeah. No way just put on it. It you don't have to do something with it. Yeah, because the main, the main time, you know, normally it's about two until it's ready with a real hearing aid you needs about normally

Roy

two months. So first the hearing aid is sold and then after that there is a two month period where it needs to be

Sales Person

even before even before because by law you have to as acoustician. If you come to me, I make an acquisition and you come with you at the doctor and said okay, we I got this in this province. So I have to show you three models. Okay. Three different models always. I have to show you first, but one model must be for zero money. That's it. Then the health insurance thing and the other one is free. It's free what products I show what what manufacturer show you whatever? No, no. Our deep this showing goes actually at the most of the time that they they're there if they're good, if they start to discuss okay what what are your main things? What are your

main problems? Are you many times outside, you know because of the wind screen and all these things you know. And so it goes into it this way, this is the first thing then sometimes you have also to show two different models.

Roy

You have to show

Sales Person

Yeah, you have to show and then afterwards you can also if somebody says okay, I want to start with this one, then you have to adopt it. Then you have to do all settings, which takes normally roughly. Let's see. about one hour, the settings only, that's the first setting the first setting. And then you have to go out and too worried about two, three weeks. After that, then you come back. And then how was it experience? And then the 10 the settings are optimized? Because again, so it's a quite long, let's say quite long procedure until it's really ready with the with the hearing aid. And it can't be that after, let's say two weeks or three weeks, if you say, No, I don't like it so much. Can you please can you please give me the better one, or even I don't think that I need this one is perhaps too good for me. You can give me the cheaper one. And that's all free until the until that point. You really, really say Key as a customer, I will buy it now. It's done. So it's also a big amount of time. On the other hand, the acousticians don't have to buy demo stuff or something that way.

Roy

Okay.

Sales Person

All that all the stuff, it's, it's given for free by the companies and most of the times now and they did change it to that thing that you got. It's called the demo, or SDM or whatever. A special demo stuff. And this is free, programmable. So there's everything inside of the top model. Yeah. But you can, you know, you can do it by programming. You can do it the lower models. Ah, okay. So you can't

Roy

do some of the features. Yeah. Okay. So, if I ask you, so for this higher models, and because of course in the higher models, you have an r&d cost. So if I kind of not take the ind cost into account right now and see like, Is it like similar costs to manufacture the higher model and the lower model?

Sales Person

In, let's say about in 90% of the cases, yes.

Roy

Okay. So they just lock some of the features of the higher models and sell them as low. It's like those Tesla cars, they just love some features

Sales Person

made mainly based on on the software.

Roy

It's mainly based on the software. Okay, now, because what I'm thinking is right now in 2020, FDA is going to rule a legal proceeding where you can by hearing it directly like that, like consumer could buy hearing, which is not possible yet in the US, because it's illegal right now to buy. So what I'm asking is, how difficult is to do this software program in your supply for consumer? Is it possible or is it really an audio problem?

Sales Person

It's really odd logistics because I I have done it also. A bit and To say some some major things so that you can have a listen to it, you know, just just did you find out oh what is the difference between the better one or the worst one, you know, but which I also showed to some audiologists or some acousticians here in Germany. And so they understood okay as to the better one is better because they got from the class 335 and seven from signia, they got their own voice processing, it's called, and what they do that they look where we're where your voice is, is, is actually based, I mean, like, not not from the sound of your voice, but just where it is, you know, like Wi Fi and thrown in and that scanning and then afterwards, and your own voice gets an own

channel. So you got other compression things and these things, you know, because for their own voice, that's the main problem for the First Lady. Listening because your own voice always listening is different. Yeah. It's like like if you speak on your on your on your phone and you hear it after, I mean, because you don't have the resonances of your body and all that stuff too. And also some some automatic systems. It's called like, most important speaker, you know, it's normally you want to have this guy who is the loudest speaker, of course, because he's speaking to you. Because if you got 10 people in our party in a normal party, you know, somebody's talking to you he's of course because he's more nearer to you and bit louder than all the other guys around so you don't want to gain all Yeah, up. Okay. Okay. But it is automatic works quite fine. That's not a problem. But in the meantime, I am mostly most of the time I'm the most loudest Speaker I have my own words because yes, yes. And in this one they also done some some tricks because then it has a good balance between own voice and so on. And and also did this you could show in a fast way but still to do a real proper thing. I was doing it one time with with acoustician, which fly friend alike and so on then I would asset to him okay. I've done it by myself and I want to see how much better you can do it. And it was a big difference it was really big difference. Still, even even if I had known this because the program is quite, very differentiated. You can you get 48 channels, let's say and you can 24 channels you can work on it, not only the frequency response, but also every channel you can do a different compression

Roy

So there are two

parameters in each channel, the frequency and the compression and 48 channels and and audiologists are the acquisition sets them up. So that it's okay Okay, so that's

Sales Person

it's not a it's not only the frequency response because many things compression is more most most important thing of course if something cracks in profit so you need a compression of course, when when something is very, very, very tiny sound more like you too, but not too loud, so so you need always quite good, you know, thing if you compress too much then the tiny sounds are too loud. Yeah, and compared to last and you get all noise sounds gets gets too too heavy and so on. And that's the problem because the main problem for for hearing aids is that many people to be honest, the brain doesn't have this information anymore for years. So the brain can't evaluate it to see like, you're doing like something like this year with a card, you know the sound of a card. And this you didn't hear before 10 years or something that way and then then you hear it the first time. And it's very loud.

Roy

That's like when we clean our ears after a long time, and it feels super

Sales Person

hot, but many things are too loud because you'd never never hidden didn't hear them for a while. And it's that that's the same thing. And that's why the hearing aid must do so much things, you know, because until the brain started to learn that normally you start with a bigger compression with let's say, a bit worse than it should could do that the hearing it and then afterwards, you start to improve it a bit. So that's why it's also a time factor very much It's like, like if you if you got glasses, I don't know why it's called. We call it in Germany flights. That means in the downstairs, it's for the near. Yeah. And in Indiana. Fourth thing is it's far away. So, so that you can read also but can also see something outside. And that's also to learn. Yeah, when you get when you get a new mood and you're dizzy and you have to work on it and that's the same with hearing aids but even more, more, more more impressive and more and more in the normal way. And that's the the main main thing is the the first acceptance of a hearing aid. It's why they work very, very much on that point. I mean, opticon had done it quite good. Because it's you don't hear everything quite well. But it's it's a very big accept In the beginning, because not everything, you don't hear every detail in all like, very impressive.

Roy

Probably. Yeah. Ah, okay. I'd like to ask you a bit. So how many times does the consumer on an average go back to the acoustician to recalibrate it because you were saying one or two weeks, then they go back again.

Sales Person

layout. Normally, normally, this is until you buy it. It's until until you really, really have bought it and you have your own hearing. It takes Let's set about normally two free months. It's a question how critical the consumer is, of course, if you want to really try actively to try three different models, yeah. What he can do,

Roy

like what you can do,

Sales Person

yeah, you have to do so you can't say no, no, I don't wanna do it. So. So the but normally, the most people don't don't want to try it like this. No, but that's why I mean, it's about two months and then afterwards it can be also that like, like, after a few months, they going back to them and saying okay recalibration or something that way it's, it's really a question how how critical the consumer is can be also that that you do with a consumer, you know, to, to settings and afterwards you don't hear him six years ago. It's fine because after six years he can get in the next 700 euros.

Roy

Yes, yes, that's the same love year as was every six years you get the next model or the next 700 euros. Okay.

Sales Person

So after, if you got six years then then you can get a complete new product, a new product, okay, okay, okay. Okay. I mean, you can buy it before also. pay for it. Okay.

Roy

Let me ask you a little bit about the legal thing. So For a consumer, is it possible or legal to buy directly from the manufacturer for let's say 100 euros?

Sales Person

No, You have to buy the manufacturer. Let's say for the for the consumer Yes. He could buy it but the manufacturer don't have to sell it. He's easily forbid that a manufacturer sell it

Roy

to the manufacturer don't sell it cannot sell it. Okay, so

Sales Person

you must buy true acoustician.

Roy

Okay, okay, that's what I was asking. Okay, it's the same as us but it's changing like this year descending.

Sales Person

Yeah, that's for the hearing aids for the hearing is different. As I said for the hearing helps. It's a bit different. Yeah, that you can buy that you can buy everywhere that you can sell. Also, Sennheiser has some like motoring helps blah, blah, blah, yeah, headphones, whatever, you know, for telephoning or something that way or Television listening Yes, I mean that was in the last years okay it's streaming possibilities for the hearing aids you know like telephone is going to lie on the on the hearing aids and all the stuff this is also a big big issue in the next few years I think this end and the actual power because long years it was really funny because as I started at signia they said to me are We are the real the company that have the most accurate power models. Okay, what did I say? And I said what what is out there then didn't accuracy said no, no batteries batteries was long, long, long. The biggest thing because the acousticians on very very much money on the on the batteries. They made a lot of because it at the all the time. Let's say 10 years ago, it was always a saying you know for you open acoustician shop and you sell the hearing aids for the for for your two houses but for the Bentley you get the batteries no it was really at that time they they bought it you know like a like a 1010 pack or something that way for 90 cent and it was sold by 1515 or 20 euros

Roy

Is it the same still now?

Sales Person

No. Because the big chains like Aldi and so on now everybody knows about too bad it's still it's still it's still business but not in this business and many more and so they're very long they were blocked. Because everybody done the fear the customer from requisition says you know, we've done our code and it's Dennis Okay, it was also the older times they accused me of not not not not likely to Mian today no If you didn't get a long time it worked. At the beginning you need after five hours to charge it. And the batteries you had, let's say, two three or four days Yeah, you can, you can keep it and then you just change right on the battery and then you can go on and that's what they always told the customers at that time. I don't don't buy a vacuum model it's not good because you can change always the battery and you can always hear and the other one you have to charge blah, blah, blah, blah, blah. But now changed not from the acousticians. But from the from the consumer market, the consumers want to have a cost

Roy

to the consumers when the rechargeable battery so Atlas is basically rechargeable batteries. Okay, okay. Okay. So this is something which is going to be big. What else like which kind of feature do you think is going to be really important like the Bluetooth directly

Sales Person

to here or online. You don't have the details is the most important thing in the last years. Telephone calling your music listening and television direct connection. Because anyway, this is logical, you know, everybody knows what you have normal normally speakers in the in the flat screen. Yeah. Of course. And then you, you, you gain that shitty sound with your hearing aids. Yeah,

Roy

it doesn't make sense. Yeah.

Sales Person

So it's better to have a direct contact from your television to your hearing aids. And of course, how can better models you know, you you you can divide it the normal microphones if somebody's speaking to you, or how loud is it internal next to the microphones. If you don't want to talk to your wife, you just turn it down. See just television.

Roy

Let me ask you one thing. So these kind of features, they are not available in the free class 01 yet? No, no, no, no, not yet. Okay, not

Sales Person

definitely not yet. I guess that's all always. It starts normally, let's say,

Roy

in the class free minimum in the class three and how much does the consumer have to pay extra for this?

Sales Person

Let's say that the free class would be about 1800 euros

Roy

so the consumer pays 1000 extra more or less? Yeah. Okay. For for peace and also for maintenance. How much is the maintenance cost, on average for something that you don't buy for free? Like not not free ones? isn't what you mean? I'm asking because you were saying the service and the maintenance the consumer has to pay if it doesn't go for the free model. So how much is the service cost for these kind of things?

Sales Person

It's a question how often you are there. Do you need to change the called the adapters or something that way or you? You You kill let's say a Rick, which is the receiver in the channel, you know, let's say the speaker, a small, small thing and so on it. It depends, you know, but normally it's about hundred euros or something that way. Okay,

Roy

so hundred euros. Yeah.

Sales Person

And then if you if you if you change the speaker or something that way is normally very easy, quite fast and then because that's the main main thing what happens, you know that the cable breaks or something and breaks. Okay.

Roy

I think I'm gonna talk to you again if that's okay with you, because you're so much information because these are the things we need in the future if you're going out with a product, like they should be taped that it shouldn't break because if that's common problems, yeah, okay. Okay, the cable breaks. And I think when we started our conversation, And the second what is

Sales Person

also very important is mainly for the rig systems in order the receiver in channel got Of course from from from the here they take they get down, they get filled up

Roy

with earwax with your ex.

Sales Person

Yeah. And that to clean is a point and sometimes afterwards after some years you can't clean it anymore you have really to change it. So did the speaker that the receiver in channel system has always been too changeable for my opinion, okay, that

Roy

Yeah, as we were saying so the wax gets filled up. After a few years, you just cannot clean it anymore. How much how much is the cost of this product as well just to replace Usually hundred euros.

Sales Person

The artist this was about yeah hundred euros normally they charged for the for the customer and they bought it for 25 euros. Okay. So they do it normally normally you know because it's a work of five minutes you know if it's changeable and you know they say are you are you a nice guy and you just have to pay this

but anyway, even if it took only five minutes they got it you got the money. Okay, okay then

Roy

the talk and everything and yeah, make sense. I think when we started our conversation, you told that 60% of the sales go through this independent audiologist which is changing a bit because of the change buying them what is happening with the remaining 40%

Sales Person

change.

Roy

Okay, those are the tenants Right now the jeans number is going up because they're buying even the new bound audiologists Okay.

Sales Person

What is and they also that their own shops like like I said so Nova group does with chaos, they own shops and so so I think they will be slightly different in the next year slide but more and more difference would be okay.

Roy

So in the sonova groups when they have their own shops, so they have this audiologist or these kind of people in their own payroll, so so Nova PSM, okay, okay, okay. So it's totally owned by them the end to end. So this thing which is happening in the us right now, the FDA is ruling that consumers could buy their own hearing aid

and set them up. So I'm going to give you a little bit of background so there was a test, which was, I think, sponsored by boats, and they show that product is not in the market yet. So they had a product, which was given to both. So it's like a hearing aid, it was given to both audiologists and to consumers. And then there were, there were two groups, there was one group which had just consumers setting up their own hearing it. And then and then putting it in their ears, the Bose product. And the other group, it was set up by an audiologist for the

Sales Person

consumer and there was not a big difference. It was

Roy

actually opposite the consumers were happier when they set up their own product. And that was the basis of how earlier how FDA thought that this might be changed or it could be changed. So what I wanted to ask you is do you think if this happens in Germany as well, then the market is going to shift a lot like the importance of audiologist or? Yeah,

Sales Person

of course, I mean, I mean, the point is always the same, you know? There are two souls. What I'm thinking of this, this ideas, one thing Like it's like the you cure yourself, you know, medicine or something, then you won't do the hard things because you don't like about yourself. You know what I mean? Yeah, yeah, yeah, I think it's okay. If I do it just with a plaster plaster. I don't I don't don't don't sue it. Let's say a plaster is okay. It's okay. And that's something I think the same problem. Why did why it can be in this thing. The first thing is, of course, I've done it like, I want to have it hundred percent. So it's mine. That's the first thing But the second thing is even that you needed to be a bit different because many people because you have to learn on it. Yes. No. What? What I said with the glasses, you know, yeah, you take first, the glasses when you said, well, it's crazy. I don't wanna know. And then you take your But get you get all the other bad things only did you have to change your glasses and all this stuff, you know what I mean? And that's, that's the same with the hearing it because every consumer which I always say say that for the first thing is I used too much. I hear too much, okay. It's too much it's too much information. I don't want to have it, you know, in the first. That's the first impression what I said before, because if you didn't hear years ago how paper sounds you're turning the page of a magazine. And now you hear it before you didn't hear it at all. So brain must, must do to differentiate different Jason, but in the moment, it's just information that you don't know what to do. And that's, it's so loud. So that's what I mean. You begin always with the less information and then you get to grow it a bit off. And that's how it works.

I think to be honest, it's, it's I'm quite sure that it was like this, the end end result, but the end result is not good. As I said, you know, because if, if everybody was cured themselves, many people would die because they wouldn't do the real cure because it was perhaps and isn't good. Okay. Okay. But but that's my meaning, but I can think that that is true. And perhaps I don't know how the audiologists are, how good they are in the US or something that we can't, I can't say because perhaps they're better or

Roy

perhaps they're worse. I don't know. The main thing how the US market is different from the European market is here. There are two things Firstly, in the UK NHS covers everything. So I think money is always a big barrier and also in Germany in the Netherlands, you need the basic health insurance. That's the law in most of Europe, you basically need one health insurance and that pays for some of it. But in the US, that's not a mandatory law. And then in the US, the acceptance rate or the usage rate is less than 25% of the total number of people who need and the reason is because, like there are so many people who cannot pay 2000 \$3,000 for a hearing and and that's why this market is fundamentally different from this market here. It has been covered so people don't care so much. They're like, okay, I just go there and I'll it will be paid for by the state. So I think that's a main barrier which which is when you wish to change a lot.

Sales Person

Yeah, what I'm 100% sure that's that was awesome as beans told me about this ideas. I said, Okay, I don't know, in Germany would be a bit hard because it's, you know, it's a tough market and it's it's very, not fragile. It's it's So it's it's a bit like a stable market it's all done yeah break in it's a bit hard because all about but the main issue is really that when as you said the money and everybody can get quite good very good hearing it for zero

Roy

yeah that's the main thing.

Sales Person

Yes. And they are really quite good that no not not shaky Okay, they don't have this extra things like Bluetooth LTE and all the stuff, you know, windscreens, directionality functions and so on. But, but mainly it's it's quite late everyday

Roy

thing they do they do quite well.

Sales Person

Yeah. I mean, it's really, really, you can have a very good thing with that. If If acoustician takes his time and do is do it really well. And then and then and then that's, that's the point. But I think it's very different to the US Bureau. And the second thing is, you know, you Okay, apart from from from this from the cities and of perhaps California, but you have normally long distances in, in in the US. Yeah. So perhaps you have to drive, let's say three hours to the next largest. Yes. So you need some some possibility, like online to do and to have an easier access and also to make them do the things by yourself.

But the question is always the same, you know, how complicated is it? Yeah. And how differentiated is it at the better the hearing aid, the more you know, let's say the the smallest hearing it from signia. They were eight channels. Six is, is needed. No, this is by law needed and so on. And, of course, it's a different thing. If you've got 48 channels, you can make it much more better, but you could screw it also much more easily. If you don't know what to do, like like everywhere, you got more possibilities, you can screw it also more. And if it's done quite simple, that's the Bowser style always been, you know, not to blame or it just just that was the idea always. And because I visited him about two times as a review ad, and I was in front in Framingham and looked outside on the r&d and the goal was always the same for them. They just said maybe we don't never have to. If you talk to them directly to some some engineers, it was different from the marketing sighs of always saying we make the biggest bestest Lava lava the engineer said okay, no, the most important thing is must be easy to use.

Roy

Yeah.

Sales Person

We have to get, let's say, very fast the 60 70% maximum of the of the product. Yeah. must keep for a total dumb idiot. possible to make. Yeah, yeah. Yeah. So then that's the other thing. So so they they designed it really sometimes wanted with a low level a bit you know, but the end effect was quite okay still. Okay, whatever problem like you know, screws up because he doesn't estimate can't come to the setup right.

Roy

Okay, I'm gonna I'm gonna ask you this question. So, you know the proper hearing is because you have been in this business for quite some time. And you also know both. So if you have a person with a mild to moderate hearing loss, do you think there is a huge difference in terms of someone using the Bose product versus someone using a proper hearing aid set up by an audiologist?

Sales Person

I would I would say yes, still Yes. Even if we have a minor thing. The question is for me hearing it always changes a bit. What do you mean that changes a bit the way how you hear? Okay, of course, it has to. And, and the better the hearing aid is, it's easier to get on it. That's, that's one thing and many artifacts, let's say like wind stream, it would be for me a very big impact. If I'm walking around and the wind is coming and always, you know, then we take them out. That's a very important thing for me. And that's why I think from my personal point of view, it would be a quite big difference perhaps for somebody else. Not a guy I'm always listening to my ears is for me the most important thing you know, so that's why I'm always critical. That was always a funny thing because as I talked to our engineers at that time to, to Sydney, they were just very seldom somebody recognized that that was their artifact when when you can get some siblings or whatever, whatever. Nearly nobody recognized it until now. You will find it. Okay, because I'm a hi fi freak, I'm listening

to you It's like, it's like a it's like a gummy, you know? recognize perhaps one, one piece of sugar on it and it's perfect.

Roy

Yeah. So,

Sales Person

from from that point, I'm perhaps a bit a bit extreme. I think. Let's see, the more People perhaps not,

Roy

to be honest asking you this is because I have no like, This conversation is very different from when I'm talking to a lot of patients or consumers of users. So one of their main problem is all the hearing aids look so bad. So that is something they just cannot accept initially. So when I'm speaking with people who are, let's say 40 specifically women a bit more work earlier 3540 their main issue is that I just cannot wear it and read it in public. And that is something they find very difficult to accept. And they are always looking for ways to change it to beautify it or to look for products which look different. And the NHS does not give too specific like i think you know, there is a product called styler to connect. Yes, that

Sales Person

was just coming, just coming in. As I started at signia, they were just opening it that time. And it was really funny because it was a differential It's very very much for my opinion does the stiletto Connect was very well accepted for people who didn't work with more customers than from the audiologists. Because what you know is always the same you know, and you like that what you know? Yeah, it was like looking bit different. Yeah. And also that did the style was a bit different was for some archaeologists problematic but on the other hand for the consumers, they liked it because it was different because it is stylish and it did not look like a hearing aid.

Roy

Yeah. Oh, that was I'm gonna emulate it down just a bit. So how was the sales figures? Like was it good for style interconnect compared to others or?

Sales Person

It was, it was actually quite good. The problem was they started with just the first stiletto and he didn't had a connection. You know, he didn't get Bluetooth on. And that was for my opinion of wrong wrong decision. At Time to start with it but it's okay it's it's another thing and as the Connect came we had quite good sales with it as a really really good was wasn't the main sales definitely until now not because they got still one problem they got this and that many audiologist it didn't didn't like they got no Connect no changeable Rick,

Roy

I know yes a lot of people I have been going through YouTube comments

Sales Person

was the main thing would make it problematic you know a part of that even if this is a really really hard and tough fact. We sold it quite wild and agava and stiletto started with with the with the free class free five and seven. So you are always in the in the higher class anyway. So it's about 2000 euro, let's say thing about roundabout with that. Was it costing customer

Roy

so the consumer half has to pay 1500 2000 euros on top of. Okay. So I also was so is going through some of this YouTube videos and then there was another thing which is this tiny little Connect doesn't have telecoil I think you already know that.

Sales Person

Yes, yes. So is the is

Roy

the telecoil feature very necessary or noise

Sales Person

it's a way with Bluetooth it's I mean, to be honest it's a question how old the people are and how the other thing is he in Germany it wasn't any more than than the issue you know, because I was I was as a salesman I was in the hunter area from from us. So we got always these people who weren't very let's say into the into the brand. So we had to bring the brand to them. And then they were more much more critical than the normal acoustician was always selling signia he's his main brand or something. So I was I was more on the on the critical side, but nearly no one mentioned. Me they said oh, there is no telephone call. That's our that's why I don't want to sell it. Nearly nearly no one. Okay. Okay. So that's the main critiques. Were just not the changeable rake. Okay, that was the main main thing. And sometimes also the form because it was longer No, I liked it very much because it was quite good fitting with because it was thinner. And it's quite good fitted with the with the glasses. Yes. You know, that and that's why I personally liked it. But, but of course, like always, you know, if you got something What is different? somebody likes it because it's different. But somebody don't likes it because it's different.

It's this design is always the same thing and you will find enough people who don't like it and you're like telecoil I think it's in Germany actually,

Roy

not Israel. Okay, okay. telecard is not any shorter. Okay. All right. On the 40%, they understood it. I think I'm more or less got, I think you explain way more than it was extracted.

Sales Person

And I know, really, really good. I think

Roy

I might even, like, call you or something, maybe later, let me know I'm gonna mail you. And then you have been really helpful, like so much of

Sales Person

a problem, right? Because I think I think it's a real step. Even if I think it's in Germany, it's a bit special. But I think for worldwide display, a big step if we can do something in this way, you know,

Roy

thinking, Okay, I'm going to pick your brain. So because you were a salesperson, maybe we can have different sales channels for different regions like with Germany, I think you just cannot go to consumer. It's just not like legally possible. Or we can have, like hearing, not not hearing aid but hearing health or hearing help. Yeah, that's how it's called in Germany. So we can market them as hearing help in Germany. But in other parts like in the US, we can market them as hearing it and change the features accordingly, like the same product but software lock some of them so that they are legally compatible. So that that might be one of the launch strategies. I'm just thinking could

Sales Person

could be could be a good idea to test but also because to say okay, it's just a hearing help. It helps you a bit. It's okay, but it's not so good as the this one, you know, and you don't have to pay so much but you got the other possibilities which a normal, let's say a hearing aid from which fields comes from the health insurance don't have no like, like Bluetooth possibility.

Roy

Yeah, these kind of things. Yeah.

Sales Person

And to say okay you have to pay it. It's true. Because for a normal hearing aid you don't have to pay. That's right. But you have to pay let's say two or 300 euros, whatever, you know. But you got you got a hearing help. And you can do you know, connectivity it has Bluetooth,

Roy

it is rechargeable. It looks very important, like the styler to connect kind of thing. Yeah. And it's for new leg is for people who have lower hearing loss, but younger, younger generation, not like 75 Plus or something. Yeah, sure. Yeah.

Sales Person

And that's also to say to you, it was the main thing was always to try to do something watch the glass in Gopic recall the glass industry has achieved you know, that It's a feature. Yeah, yeah. I mean, it's it's not any more stigma. Yeah.

Roy

Yeah, it's a feature.

Sales Person

Yeah. Because many many people look or accessory. Many many people look take normal normal class inside. No. Just to where just where it

Roy

is absolutely. Thank you so much.

Sales Person

yo, you're always welcome not a problem. I can also if you have some specific questions I can also call up some some acousticians here Yeah. and talk to them a bit and also some some some some friends on still in the industry if you were to ask specific questions.

Roy

Okay, okay, okay, I'm gonna I'm gonna definitely take them through and if I have some I'm gonna send them to you via email. And we can set up one more call probably sometime later during the

Sales Person

process also to to send you all the all the things are what I heard from them, but it's not allowed, even if I left there are some lists or some price lists or whatever. So, but I can tell it's called about two weeks but it's it's mainly it's it's anyway in Germany at the moment that they do more and more shutdowns the schools are closed now and so on so and it's really not helpful perhaps to drive now to the retailer anyway it's a bit of a hot moment because what should I tell to the retailer okay buy something for for your stock raise you know, we have to see some other strategies what we would we could do now for the for that time now, I want to see if we have any way now to two meetings today still at 12. Anyway, and a man says

Roy

great. Bye. Really nice.

Sales Person

And all the best. Thank you so much. Yeah.

Roy

Thank you. Bye bye bye

Audiologists 1 and 2 combined interview

Roy

Yeah, so the first question would be, who are the people who are coming to your practice? Firstly, and why are they not going through the NHS setup?

Audiologists

It's a very long story that we should on what you should understand about our clinic because we don't sell hearing aids. That's not the way that we operate. We deliver treatment and care. And part of that treatment and care may also involve the personalization of hearing technology. So we're not in the business of selling hearing aids without treatments and care. So the two go hand in hand, and we're not sitting on the high street. We're not boots. We're not Specsavers. We're offering something very different. So we have a multidisciplinary team. We're looking at all the cognitive aspects, we work so closely with Cambridge cognition, and we can tap and initial consultation for us will last probably two hours which will involve not just audiometry but a lot of other facets and well, in fact, the actual clinical testing is a very small part of what we do with your look what illogical testing. We're looking at working memory type testing, we are engaging the patient engaging with significant others. We work very closely with the idea Institute in Denmark. So we're looking at patient motivations and differences. And then we come up with a treatment plan, which may or may not involve hearing technology. So, in that sense, I think the way that we work is perhaps different to others sentences. We're very much a clinic with a multidisciplinary team.

Audiologists

Hi, it's Audiologist 2 yet. wondering, we're together because we're also married. So Oh, social distancing, but Yeah,

Roy

all right. Okay, so I was just speaking with your husband, I did not get your name, sir. Okay, I was just speaking with that amendment trying to understand who are the patients who are coming here and not going through the NHS route which is free Of course, and Audiologist 1 was just talking. Okay, Audiologist 1, you could just continue.

Audiologists

Yep, that's okay. No. So I think one thing that we do have, we have time. We also have the ability to really engage the patient and the significant others. It's a very different experience going private Geminis are going to the NHS, although that said, a lot of high street providers have about Specsavers and booster for both NHS and private and the actual difference between the two offerings is not that significant, other than the choice of the technology that they're delivering, whereas what we're delivering is something very different, completely different approach. And that's something that we're recognized for something that we that we publicize quite widely.

Roy

Okay. All right. Do you see for the patients who are coming to your practice? Do they normally go to the NHS first and they're not happy that's why they come or the directly come to your place. In many cases.

Audiologists

I think the majority majority of people who would actually opt to go private with a general awareness of offers because a lot of our most of our patients, new patients are from existing patient referrals, as well as for EMT specialists. There are occasions when people go to the NHS First, there's definitely that but I wouldn't say that that actually, you know, is the majority or or is the most common route.

Audiologists

I think I would say that is an execution suggest to you Mendham would have actually already been using Bing hearing technology, and they might have been satisfied with the results or the approach. Many of them will have never used technology before. Although interesting, Lee even those that classify themselves as having never used hearing technology, often will have an NHS device that they've been given maybe two or three years ago, and they haven't used it and like a minute Probably damaging because that just takes them out of the loop. They

try something from the NHS, they don't have a great experience, they don't enjoy the approach, they don't enjoy the technology. So the size of the hearing technology is not for them. And that can be incredibly damaging because they've actually been not receiving benefits and care for us for another three, four or five years before they are forced to re approach it again. So a lot of them come to us with ambivalences concerns. They've had bad experiences and small proportion. I've never used hearing technology before. I just think that most of them will have used some form of technology or have tried something in the past as small proportion. Well, it had nothing.

Audiologists

Anything just to add here as well. What we do is we charge we charge 150 pounds, our initial consultation. So we say one of the few practices that actually charges for initial consultations and we charge 250 pounds for two hours consultation which is divided into exploring the human aspects We explore hearing and we explore cognition and obviously the education piece as well. And so most of the time when people book in with as they have done a lot of research, because we don't have any quibbles about the hundred and 50 pound fee, bearing in mind that we can go down the road to get a free hearing tests elsewhere. So they are largely very, very educated on the options by the time they actually decide to talk with us.

Audiologists

I think probably also, the best way to answer this question is to actually send you a link to an interview that was done both Audiologist 2 and live by the hearing journey in the States, which is the leading magazine for audiologists and for consumers that interviewed yet we were interviewed in was in March last year or may have forgotten number, but we'll send you a link to that because the whole article really was based around the answer to the question that you've just asked.

Roy

Okay, okay. All right. I think I think that would be definitely helpful. And at the Same time, you guys were saying the initial hearing test is about two hours or the consultation is for two hours. Could you walk me through to that two hours? And what are the things that you guys discuss? And what are the main pain points that are being discussed during this time.

Audiologists

And so, I mean, the initial thing really is understanding for ourselves, but also helping the patient understand their readiness for change. So a lot of our counseling initially is based on motivation, as well as attitudes and behaviors towards hearing loss. We, we really believe and through our, the way we practice, we do see more success without treatment plans when we've actually established with the patient, their commitment in the process, you know, so if somebody is actually kind of coming to terms with Hearing loss and they've actually attended the clinic, because they went on to attended, but they didn't bring their wife along. And the way we actually interview them is to extract information about their readiness for change. And if somebody is actually pre contemplating it or contemplating it, we're not going to actually deliver information on hearing aid technology at that point. What we need to be able to do is get them to a point of accepting this loss, but also engage significant others because significant others could be negative or positive influences in the journey. Shall we give information based on a person's readiness to take action? So that's probably the first 40 minutes of the consultation, a lot of gold establishment, lots of social network exercises ambivalences motivational interviewing by all very reflective. It's not really about as asking questions or giving sheets of paper, but it's getting the patient to reflect on the situation at hand, then we would go into a bit more education on the links between hearing cognition. We really feel it's really important that patients understand that hearing sensitivity versus everything else, you know, it's a bigger picture to just hearing sensitivity and using a hearing aid, and that the responsibilities not so much just on hearing technology, but it's on their abilities as well. And then we would go into testing and we'll do full diagnostics, but we also in addition to doing sensitivity tests and speech noise tests and special hearing tests, we will also do we'll also explore at that point working memory ability as well. And we will tie working them we'd look at comparing working memory ability to their speech and noise results as well. Because that actually gives us a lot more central information with regards to the type of technology that they may be able to engage with. Or if we are prescribing technology, how we actually need to manipulate it, in order to give them either more support or less support, depending on their cognitive abilities, not just hearing can't

Audiologists

just say just so that you're getting value from this, can I just because juicer missed your introduction as to what you were looking for from this. This gentleman essentially wants us to identify gaps in the market, because they want to basically design their own technology. So I mean, maybe we give you information. Not to we're not too interested, we're interested in hearing technology, but it's a it's a part of the process. It's an important part of the process. But it really whether we're dealing with white x or gone bone x, sigma is to some extent irrelevant. It's really the approach to treatment and the care. There is no A bad manufacturer out there right now. The current technology is very capable and I recommend hearing aids from all the major companies it is not about the manufacturer, but how the hearing aid is set up...So as for there being a gap in the market, I'm not sure that I'm the one that can give you that answer, you will have to decide where the gaps off yourself. Okay. Right. as I'm concerned, there is no significant gaps in the market. Because we're not so focused on the technology. It's almost not incidental. It's part of the process, but it is a part of the process.

Roy

Right, right. Okay. All right. I think I think I definitely understand because the way you guys look at hearing loss or like solving this problem is way more organic, then just putting a technology into the ear.

Audiologists

Absolutely. Right. So you know, the end of this, would we be the guys to buy hearing technology from you, if you design something? The answer is, is maybe the we're actually a very, very small clinic. You know, we may see four or 5000 patients a year. Yeah, NHS, and we're not Specsavers, so we're relatively small. So, you know, if you were developing a product, then you probably wouldn't necessarily be Targeting businesses or clinics like ours, because we're very much a minority in the marketplace. Right,

Roy

right. So I don't think at this point of time, we're really looking at sales strategy, to be honest, like that is really down the line and thinking of Who should we partner up with to sell the product. So, but right now, what I'm trying to also understand is because one, one point, which you told a little while back is all of these companies like AutoZone or widex, or signia, they're all quite good, there is no bad manufacturers. So, this is a group of hearing aids which are which are marketed as hearing aids. But on the other side of the spectrum or in the market, there are something called PSAPs which is sound amplification products, so which are not quite hearing aids. So do you guys know or think that the technology in these two kinds of products are different or is it how they are setup for the year is what makes the difference.

Audiologists

I don't think it's even how much they're set up for the year. I think it's the it's the approach and the care. That is the most significant thing. I don't know a great deal about presets. And we were looking at one funny enough.

Roy

Yeah, we're looking at one

Audiologists

falling off this morning, which is quite an interesting concept, which is in development at the moment, which is for a significantly reducing background noise through the telephone, and then actually then linking that directly to hearing technology, or using it direct from earphones. And that's a very interesting, very interesting projects. And then there's a lot of investment going into that at the moment, at least \$10 billion going into that just at this moment. So that's that's an interesting project. But we don't know what to do about these apps. I think it's definitely not the same as your question. Is it the same? No, it's not. It's very different. And I think if you look at the technology that sits behind outcomes, open one assets, for example, Research and Development is going about is phenomenal. absolutely phenomenal. And the way that that's able to recreate speciality and also mimic, to some extent the way that the, you know, the brain might work in those environments is, is outstanding. And I'm not aware of any piece apps that come close to do anything like that.

Audiologists

They don't need to either because it's a different price point. Yes. Different. Yeah. I mean, that's a key thing, though. It's whether it's whether the technology is supporting, hearing or whether the technology is actually supporting cognitive ability. You know, and there's this great technology out there but there are some that that are able to support people's cognitive abilities better than others. They are some that are a lot more

manipulative in their strategies and stuff that I but but but I think for definitely from our clientele, it's it all boils down to Ease of use, and being able to actually put something on and forget about it. So I didn't what is probably the way we approach our care, but we're not, we don't really have that clientele that have that hands on approach to hearing aids really want to switch this and change that and hold out and zoom in to this thing. They just want to get on with communication. I think it's fair to say that very few people do now watch that might surprise you.

Audiologists

We find that with our patients, hearing aids are sold on the basis of how many channels they've got, how many programs they've got, what they can connect to, and patients might get excited about that. But in reality, it's not really what they need. And when it comes to it, 3456 months down the line, you actually find that many of them have dispensed with a lot of those features. Certainly the connectivity to mobile phones is something that is essential to clients. Bluetooth 2.4 gig sectors absolutely essential that that's a given now, but a lot of the other interfacing with a patient is actually able to control the situations themselves. I don't believe it's an appropriate approach. On the contrary, we like to deliver technology with as little for the patient to do as possible. And most people will actually pay premium for that. So I think we call audiology, we called Yoda. So those are actually selling hearing instruments on the basis of the technology and how the patient can interact. We would argue the opposite of that, that to the best technology doesn't require you to interact. And it is simple. You're paying for the technology to do this automatically. Not to have to do it yourself. But I think the things that are essential courses, the is the connectivity and how slick that is, what it can do with that connectivity. And watch those become important. We didn't think it was important as it's become particularly in current times. is the ability to support patients remotely. Now, that's something that I was somewhat somewhat against. I felt that it was important to have that personal interaction. And the moment you start opening up the floodgates was my view to remote sessions and everything else you start to lose some of the USP is that we can actually deliver. We don't want to make it too simple because it's not simple. It's complex, having to deal with humans and their relationships. So we didn't want to over simplify it. But what is clear and very clear in the current times is that having the ability to provide remote support in a meaningful way, is very helpful. So there should be some kind of remote support with whatever's been delivered. Okay,

Roy

I think there's a lot of information there already in terms of the features and the point that you said, which is, the technology should be in the background, and as less interaction as possible with the patient. So that they can just put it on and forget about it is is a really good point. And that should be true for this kind of technology.

Audiologists

And I think that that, you know, that's why we spend a lot of time with our patients to actually build up the trust and the belief because some patients will think, well, if there's not very much for me to do, what am I paying for? And I think a lot of a lot of shops, a lot of in the high street would find it very difficult to come up with an answer for that, we're able to come up with that answer, because we're demonstrating what we're doing through our whole approach

Roy

is to talk a little bit about the so I have been reading a little on how the hearing aids are normally set up for a specific hearing problem. So something which keeps on coming up is real ear measurement, which is the pressure within the ear, trying to match it with the hearing loss, like the gains in each of the channels. So is it something you guys use quite often or what is your view

Audiologists

Real ear measurements, there is a place for it Most definitely. But it should not form the basis of the hearing aid fitting at all. I mean, it's it's an objective measure to ensure that the hearing aid is delivering what it should deliver. But at the end of the day, the individual the brain that we're working with is not is not a target. And so subjective, subjective work with the patient. And actually the whole journey of getting them to experience sound based on situations that will call situations and it's not about just the sound, or does the sound soft. It's more about how much easier was communication for you in these key environments. So you can actually you can match target, but at the end of the day, I've met a lot of targets. You have to be ready for the fact that that time It is not going to be what that patient wants. And it's not going to deliver an experience that supports the user or the wearer in terms of their ability to communicate with ease. So we've we're very much used that when,

when it's very complex hearing loss, as well as when there may be issues with actually establishing satisfaction, you know, with with the technology of the patient, but it's not something that we would advocate routinely. What's more important is the end user heading out, utilizing the technology in those situations that are relevant to them, their lifestyles, and they and the focus is more on how they apply their cognitive ability as well. I

Audiologists

think that it has to be in a way you have to be able to measure performance, you have to be able to measure benefit, but I think that goes beyond matching a line to crosses. Again, I'm afraid that I think really measurements to some extent, are quite dangerous, because they are fantastic for lazy audiologists, and lazy audiology. And I see it all the time with patients that have come from the NHS, where they have been told that because their hearing instruments meet the prescribed target, they are therefore the correct solution for them. As they, as I know, but I'm still having challenges. I still can't communicate with my family. The audiologist has the opportunity to say I know but you are now matched to prescription. And this is the best that we can do. And it suits the NHS because they have 15 minutes to spend with the patient. They can do their audiogram they can fit it, they can verify it, they match into an NHL target, which may or may not be appropriate for that patient and they can feel good that they've matched with argue with a patient. That's not at the best possible outcome. Because the technology is not meeting their expectations and is not moreso meeting their desires or their goals. So actually the best outcome mentioned is the subjective measurements that we do in a structured way. We're not saying to the patient, hey, how does that sound? How have you got on, everything is structured, everything is measured. Everything is diarize. So we look at outcome measures very seriously. And a lot of detail. That that's the way that we operate is not through REM sleep, or REM is a helpful as if you're troubleshooting. But as George says, if you've got a particularly complex condition, and you want to verify, and maybe someone with advanced dementia as well, it might be helpful just to understand that you are actually matching, but you still need to listen, it's always important to listen

Audiologists

to human relevance as well. And as far as the structure is concerned, you kind of start capturing a, this whole process of optimizing the technology to suit the individual. That's where you can't do that alone. You have to have the patient very engaged in that process. One of the things that would be amazing is to have software that allows the patient interact a lot more with the technology with you. I don't mean outside of the practice, but when you actually go into the process of you know, fitting and personalizing and optimizing the technology takes about four weeks as an in those four weeks a president maybe two times three times maybe. And what's really nice is having the patient engaged or involved in actually you know, sometimes even pressing those buttons, right.

Audiologists

Because that that makes them feel as if they are also decision as to how their hearing instrument should sound. Taking that responsibility is what is important part of that decision making process and they can take a degree of ownership for it as well. Yeah.

Roy

I think I think you guys are touching really interesting points. So Break, break it down into two parts. The first question is probably a bit stupid, but I'm just asking it anyway, that the question is you don't the process is structured. Of course, it is quite subjective. You need to understand if the patient is gaining out of the technology and having a better lifestyle than he or she had before. But could you talk a little bit more about how the structure would typically go for let's say, a typical patient Yeah, again, stupid question. It might be because everyone is different.

Audiologists

So they attend for their so we don't call it affecting the quality personalize it personalization session. So let's just say technologies in order etc, etc as they're coming in for the personalization, our rooms are set up with Sound Studios that are also calibrated. And after personalization, the focus is more on the preference of the sound. Okay? So we're not really looking at too much of the cognitive aspects yet.

Audiologists

And we would need to target etc, etc. But we begin at the initial consultation, we would have established by goal situation to ease communication offers five to choose three a personalization session and simulate that.

Okay, and then the end user has the option of actually experiencing sound and then they decide how they would prefer for it to sound and we have to wrap it up or increase the

Audiologists

decrease compression or whatever. So it's not to say that the provinces are not necessarily based on volume, or frequency response or gain or outflows, not the preferences that we're looking at. The purpose we're looking at is what is the most important thing for them to hear in complex environments? So far the given situation which the party which would be stimulating, is it important they can fully engage in everything that's going on around them? Or is it more important that they can focus on just one voice? So those are those are very important decisions that they need to make, and they're not linked to gain or volume. They're more linked to the processing strategies and the technology and how we actually configure it. What do they want to give preference to. And the other thing that we would consider, because there is cognitive aspects actually to this is that you found someone who is eight years old and is never used to hearing that technology before, then they will need more listening supports. Because Because their brain is not attuned to coping as well in complex environments. If there's someone like you 30 something fully engaged, fully active, smart, then your brain will be better able to cope with complex environments. So we can have different needs. So we've configured the technology differently, not with different volume or different game that we give you access to more data more information more quickly. So those are really very important parts of the way that we would personalize the technology at the initial stage. And then as Audiologist 2 was about to say that then go into an experience phase, which will be led by a diary, and they'll then come back and we'll optimize it based on their experience, taking them back into the Sound Studio, and there might be two or three sessions like that. But going forward, we don't tend to have too many tweaking sessions in our industry. Or just talk about and patient talking about coming back to have their technology tweaked and fine tuned and fine. Should we do not do that or we do not describe it as that everything has to be evidenced by Again, it's lazy audiology, that the patient walks through the door. And they say this is too loud that's too thin or just says, Take your hearing aids out, or I'm going to connect you to the computer. So those are things that need to be explored and reconciled and discussed, because quite often, it may just be that it's a new experience for them. And I think too often audiologist will jerk them and these far too early and respond to what patient says because we have to listen, it's not always appropriate to respond by changing the algorithm or changing the prescription can

Audiologists

just evolve back or go back to the structure. So the individual needs the personalization fashion. And then they have a good two to three weeks with the technology. In addition to that, they have a what we call an active listening questionnaire, problems of energy diary. In there, we get the patient to list their three or four goal communication situations. We have a range of questions that dialogue deeper into a minute the questions that we ask again, more related to ease of communication, focus ability to concentrate that it does. So the patient goes and walk away remember and yeah and and difficulty remembering or how much information that we're able to recall in those situations, okay? And so the patient is actually kind of establishing this culture of thinking about their abilities in relation to how they engaging with the hearing technology. Versus you know, how did that sound which is what most of you only just scrape and then they would come back with that information and that information forms the basis of the next session, which is the optimization session. So if somebody let's just say one of the goals such communication situations were at business meetings award China for something right back. And let's just say he documented information on that. And what we found was that we could actually be providing him with a little less comfort. And we could actually be giving him a bit more of a complex signal response. And, and we would talk to him about this. And when we have the software out, we'd get them to actually understand what we're doing in terms of providing a more complex signal to him, and why we're doing it based on the information that he's provided to us.

Audiologists

I think whatever you choose to develop would be my recommendation that is linked to some kind of questionnaire looking at lifestyle, not just for the individual, but relatives as well to consider their preferences, their age, their experience, and then you can consider appropriate strategies to manage their situations in the best possible way. And also perhaps to have a system that will that can adapt over time to recognize someone using technology for the first time. I will have a different need to some perhaps been using technology for two or three years and can be adapted throughout. So in the first week or two, the technology is set in a particular way. And then over time, if they're starting to improve and get benefits and they're not experiencing any discomfort, then to have the option to actually then change the algorithm for a slightly.

Roy

Okay, okay, or maybe open up more options so that the technology over time becomes more complex. And people who are Yeah, yeah, yeah. Okay. I think I think I got a good idea about how you guys personalize it based on the patient's requirement or preference. The second part that I wanted to ask was, you were talking about our software, where right now it's very unilateral in terms of Audiology software's because one of the things which I'm because I've been talking to a number of patients as well parallelly like you guys, and one of the things That says they are not being empowered, which is also you guys too, because they do not understand exactly. All this technical graphs are what exactly is being done. So, and you also mentioned something, which is the software would be more helpful if it is used in a supervised fashion or within the confines of when you guys are there or when the audiologist is there. So, what kind of features would you think the patient should have access to, of course, with you guys being there?

Audiologists

It's really simple. I mean, it's kind of almost as if it's allowing them to touch buttons and more dials. But it's done in a controlled way, but it's just giving them that feeling of being the one who's in control of making a decision as to how they want to hear. So for example, let's just say, let's just say the guy who had the business meeting in China, whatever times in China, but anyways, let's just say he's, he came back and he basically We established through his notes that perhaps he does require a lot more high frequency emphasis, he could actually, he could actually deal with a lot more, faster acting compression, blah, blah, blah. He doesn't need to know about all of that. But if we actually have something on the screen where it's like, Okay, take the mouse, he has some studio, we can simulate this environment now. Okay, and I want you to actually move the dial either towards that end, which means that you'll be getting more support from the technology, or you're going to move it that way, which means that you're going to be getting less support, are you going to be getting more information? Let's have a play, and he has played with it. And then he decides, actually, I'm finding a lot easier to actually lock into the conversation. When I'm receiving support from the technology feels more natural. I feel as if I'm, you know, whatever, and he's making that decision. So it's not so much By giving them information on gaming and compression and stuff, but it's just handing the dial to them.

Audiologists

Now, give us a good idea. I think the key thing is to keep the changes quite subtle, not give the patient too much control. Because otherwise they're going to be like, well, I don't really know, can I take this away? Can I play with it? And this is exactly what we don't want. We don't want to be able to take it away and play with it, because then that's pushing the responsibility to them. It should be led by the audiologist. But maybe they can decide some subtle changes. I mean, what we we work quite a lot with OTA Comm. And as you're actually going through the genie software and personalizing the technology, the sound examples are linked to their preferences. And as they make their preferences. They get an impression of what it might sound like if they select those preferences for the technology. And currently, we would actually check those boxes to kind of Yes, no boxes and they're very, very simple choices the patient has to make. I think just by actually giving A patient, the ability to make those choices in other words, just to click the mouse, which is what you're doing, is allowing them to take ownership or ownership of the situation.

Roy

Yeah, I think I think it makes sense. So continuing on the subject, because recently, I don't know if you guys follow the news on FDA having a Deregulation Act where people could directly buy hearing aids from like in the US market, not not the UK market for mild to moderate hearing loss. And this started because both having an AV testing like an experimentation where consumers who set up their own hearing, it's like, for example, with a dial, not a lot of technical details as to gain or frequency or stuff like that, but making it way more easier for a layman who doesn't know all of this, to just set it up based on how he or she likes it, like we set up let's say headphone volume, something like that, but of course, more detail and consumers who set it up. themselves were happier compared to when it was set up by a professional audiologist. And that was one of the basis of the study where FDA is planning on passing this law, probably in 2020. So this is similar to what we were talking about, but giving more control to the consumer. So what do you guys think about this scenario? Like what would be the pitfalls? What could be the good things? Yeah.

Audiologists

I think one big pitfall is that patients will generally prefer the sound that is most comfortable, or the sound that is most familiar to them. And the problem with familiarity is that if they've had a hearing loss for many years, what is familiar to them is a particular way of hearing which is not serving them well. So you'll often find that when patients first make their selections, they feel the instruments is too loud. So what the audiologist might do is to turn down the volume turn down the high frequency See, make it all sound more comfortable. Whereas perhaps what you're doing should be doing is actually make them aware but that actually how it is meant to sound and to do so with confidence and to allow the patient to experience it before they make those sorts of decisions. Because you normally find that after a week or two weeks, the patient has started to adapt and they have starts to become accustomed to that way of hearing. So it's wrong to knee jerk too early and I think it will give them the patient the opportunity to make those changes themselves, you might find that they are under fit or fitting appropriately.

Roy

Okay. Did you show Do you like to add something to this?

Audiologists

I mean, I think it's, again, it goes back to the fact that is really the inspect element of giving control to the patient, but here is so complex, you know, so it really goes beyond being able to hear louder or softer. And if you are if you want to remain socially active and engaged That type of a solution is probably going to do a disservice in the long run because, again, you're comfortable with within those comfort that, you know, there's nobody helping or holding your hand and taking you into, you know, the bigger world and helping you understand the complexities of things and then allowing you to, you know, maximize your full potential. So, yeah,

Audiologists

it's particularly difficult when someone has been using technology for quite a long time, because clearly they're looking for improvements. But although they're looking for improvements, they have something which is already familiar. They want to improve number that you don't want it to sound different. And of course, that's impossible. Yeah. So we would normally preempt the personalization by making it look, if it sounds the same.

Audiologists

Really, there is no point there's no point to say

Audiologists

In order for there to be improvement, there has to be change. That cannot be generally there cannot be improvement otherwise, it's, it's true of all things in life, there can't be improvement without change. So, if there is change at something that they have to learn to accept over time.

Roy

That's the hand holding thing. Your Yeah. Yeah, makes sense. totally makes sense. Okay. All right. Are you asked one closing question, which is normally when patients come to you is it in the mild to moderate hearing loss or more in the severe end of it? Because one thing which I found out from research and also talking to them is, with this hearing loss problem, people are not doing anything with with this particular problem for a long period of time. And then when it becomes quite severe is when they really want to take action. So is it something you guys are seeing in your practice?

Audiologists

Now? I think we have we're very grateful. We see patients across all age groups. My background was pediatrics. I mean, those children that I was looking after many years ago, and now adults, but we have typically a younger demographic, we have professional musicians, we see people from all over the world. So, you know, our clientele is very broad. I would say that we tend to see more patients with moderate, moderate to severe, severe, profound losses. Patients come into a second, second or third opinions quite often. You know, if they are quite new to it, and they're just developing hearing loss for the first time, then their first point of contact might be the NHS or it might be to go to the high street, whereas they're more likely to come to us if they've had that experience. And they're now looking for something that serves them better. So I think we do see some of that we do see some very marked conditions. We see some people who are early adopters, people are perhaps in their 50s 40s and 50s and their professional people, their lawyers, for example, quite a lot of lawyers and barristers that we see where it's really important

Audiologists

that we're effective because there is their tools. So it's very important and they can look at paranoid about it. So they will actually will see a lot of very, very mild conditions. And then I would say there's a bit of a gap, and we see moderate moderate, so this Okay, okay.

Roy

I think I've got quite a lot of Yeah.

Audiologists

In a serious, I mean, I like the question, though, cuz I've not really thought through before, but I think that's just my quick reflection. And it's also just brought me back to the first one of your earlier question was, do most of our patients go to the NHS before coming to us? I think there's a large number of patients that come to us after they've been to Specsavers, which I understand that.

Audiologists

Yeah, yeah. You We have a lot of fat. However, because of the mild to moderate hearing loss, I think we do see a very decent amount of mild to moderate hearing loss, but not so much with the elderly population. There is this group of people, you know, young female professionals, and and when I say young, I mean 40, you know, 40, to about 60 be young 40 to 60 year old, a young 16 year olds, who are all professional, and be very much aware of the implications of not treating hearing loss. And we do get that group of young professionals who come in and kind of go, I don't really care what it looks like, you know, I'm going to get this sorted because I need to function effectively in my work environment. And they want to be mild, moderate, mild to moderate, early onset hearing loss. Yeah.

Audiologists

The other thing that's interesting, you haven't asked the question, but I think it's quite interesting. Actually, patients tend to not come in Asking for a brand or not asking for a particular style of technology. Yeah, it was going to allow. Yeah. And you see quite quite often we will actually make recommendations and we recommend treatments and care, without sorry, without necessarily even discussing the style or the brand. Because if there is trust there, and if you build the relationship, it's not about delivering a piece of technology is about delivering care. So not actually too concerned whether it's gone Siemens for Mac white x, whether it's a Ric, whether it's a custom product, there'll be a few that will be experience. Yeah, I mean, we're also a we're a clinic that works with lyric, which is a product you may or may not be familiar with. So lyric is a semi implantable device, which you would actually exchange about every two to three months. So the patient comes into clinic. We examine the ear carefully, we see if they're a suitable candidate, and we would then trial with them as soon as time that we do a trial, actually, we try them with for a month, this device that sits about four millimeters from the tympanic membrane. And of course, that is for a particular type of patient. Because the great thing about lyric is that nobody knows that you're using technology. And also you don't need to think about it either. You've been where to square, you can work to do bought sleeping it in there forever, take it out. So it's a great lifestyle solution is very, very comfortable and designed find those patients are very, very motivated. Even with virtually a mild hearing loss. They're very, very motivated to accept these devices.

Audiologists

Yeah, and it's only in that instance, people will call up and say, Hey, do you do lyric otherwise, the need for a discreet HA is there, but it is necessary to have the right setting for the hearing aid..

Roy

Okay, so there are some people who directly asked like, do you do this specific technology, which is the lyric you're talking with? So there was one product, which I was looking at it's called style it or connect by signia. I don't know if you guys have seen it, or style it or connect or still talk on it.

Audiologists

Oh, yes, yes.

Roy

Yeah. So that that looks, in my opinion a bit different from other hearing aids. I could even say like stylish or more modern. So are there people who who care really about how the hearing it looks or the discreteness of it because you were talking about young females with mild to moderate hearing loss or something like that. So that

Audiologists

is a really good question, because I know when I saw the stiletto, I was quite excited about it, right? It was attractive, it was well constructed. It didn't look like a hearing instrument or something I'd be quite proud to where I then discussed it with both patients and with other members of the clinical team, and most of them disagreed with me. Most of them disliked it. They dislike the fact that it was more visible. I was, I guess I was looking at the style of it. And I thought I'd be very happy to wear them. I really like the concept, but

Audiologists

to say, no matter how beautiful your hearing aid looks at the end of the day,

Audiologists

and there isn't anybody who wakes up in the morning and says, I'm so excited, I'm going to the clinic today to get my hearing aid. And as audiologists and people in technology and stuff, we may go Oh, wow, look at that. for the end user. It's a hearing aid. And and discretion is the key thing. So you know, it can it can look like whatever but the key thing is the discretion and and I feel the fact that they don't need to can you tell the phone government, the fact that they don't need to touch it all the time? Those are the two key things but nobody goes. Wow, look at that. Look at my hearing is so beautiful. Nobody does.

Audiologists

You see there was some minority that were there my word a tiny minority.

Audiologists

I'd be delighted to have something that was stylish and looked attractive. I wouldn't mind sharing audiologist stuff. No, no, I think the question was to other audiologist stiletto and most of them didn't like it at all. Yeah.

Roy

Yeah. And and actually Audiologist 1s point of view is interesting because like, maybe hundred years before we did not like looking at glasses, they were thought of medical devices, but now they're lifestyle products. So maybe hundred years from now, they will become lifestyle to lay killing it right now they are not, but maybe at some point of time, they will become state statements.

Audiologists

I think you should check up if you can find any information on Delta, the Delta hearing aid by ot con, which is probably what 2006 I mean, that really did revolutionize the whole style aspect. And that that was one of the first, you know, stylish, easy to use receiver in the canals. They have got it doesn't look like hearing aid. It was just like a little triangle. Yeah. But even even with that it did. It did revolutionize the industry for sure. But you know, even with that we were so excited about it, and take it off and show it to patients. Yes. I take three patients that were like, I want to show everybody my hearing it and I want a pink one and I was already into other colors. But that was probably just like, count them on one. You know, so even even though we were so excited about it, we opened this thing called beauty box and look at the range of the containers, the shell sets all the time and it really didn't have a great concept.

Audiologists

It didn't there's a lot of money put behind it. A lot of psychology went into the development of the product. It wasn't a flop, but what you found was that there were design so remember with the stripes, spots, people nobody bought. So but they did get the red dot Design Award.

Audiologists

Sound was amazing, but that's the point it was just, it's just the consumer or the patient or entities or whatever. It's just, it's just really how they view it. And in our world, it's revolutionary, but for them, and perhaps with an experienced user, it's different because they have an awareness of style and design, but definitely somebody who's first time, their first time is that's their first experience.

Audiologists

This is not a this is not a new approach. I mean, many years ago, we still got some items but we had a like a museum of hearing technology. And you can look back 120 and 130 years where hearing aids were actually designed so they can actually be embedded into a hair clip. And a hair clip might be made from a beautiful tortoise shell or the hearing device. I've got a beautiful one in my office with like 120 years old, was actually encased in a handbag. Okay, very elegant handbag, with a discreet volume control. dial on the front or you look at the king of Denmark's chair from like 150 years ago, which again, was beautifully designed because he was hearing impaired. So people would kneel at his feet and talk into these receptors, and you'd be able to hear them through a device that was in his ear, just an acoustic device. So I think the years we've been trying to make them acceptable and attractive.

Audiologists

Yeah, so this isn't Yeah.

Roy

Okay. Interesting. Very interesting. I think I do have quite a lot of information from you guys. And you guys have been really, really helpful. And yeah, yeah. And I guess that's about it. It was so nice talking to you guys. And thank you so much for again, talking to me. Yeah, and also with that any information you guys think might be interesting, just send it across. And yeah. All right. That's all I guess, bye!

Audiologists

bye

Selected Responses from Quantitative Survey

Link to survey:

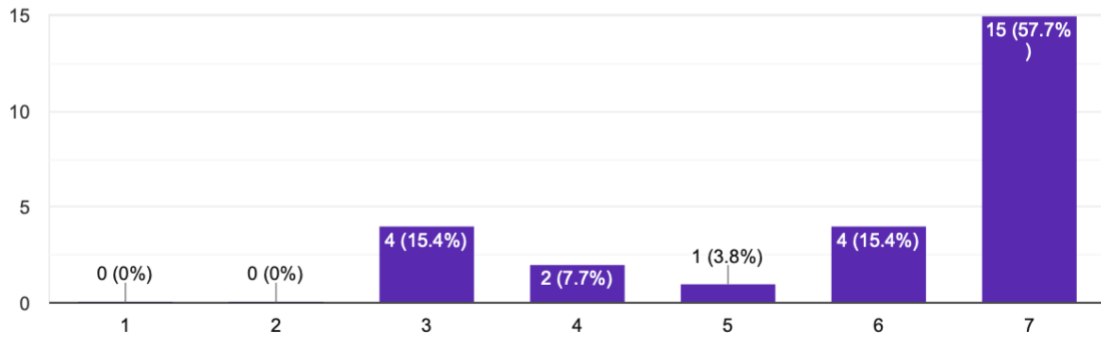
https://docs.google.com/forms/d/e/1FAIpQLSdSiKxG9u50Ck9ZCMsbLkQ9xeNS39G9tPXeBvPa5YDG4_xjWg/viewform?usp=sf_link

Link to Raw data:

https://audiopart-my.sharepoint.com/:x/g/person/anirban_roy_cambridgeaudio_com/EdwosIWtwBRGrAOX71H0zv0BH2bkaBZpCldRiGz36Jk_hQ?e=u8MaBE

how important (in your opinion) was the role of the audiologist in setting up the hearing aid

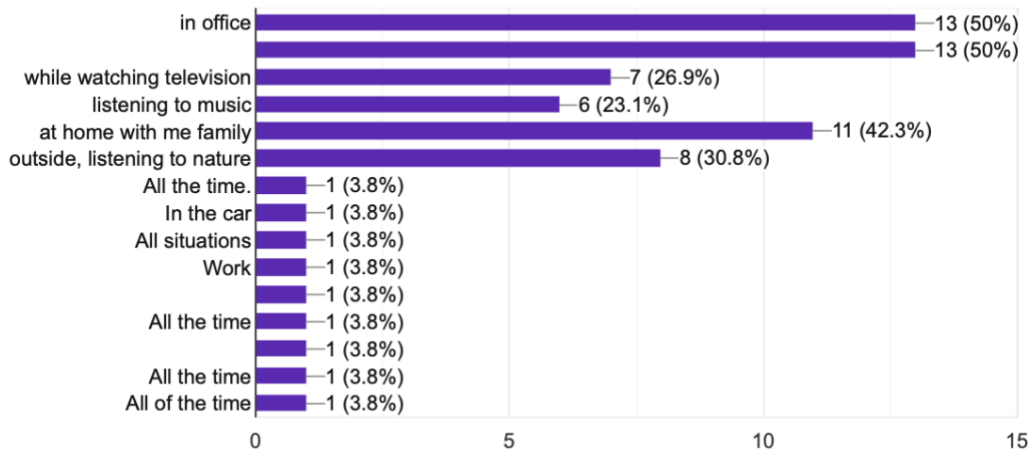
26 responses



In which situations do you use them the most (check box)

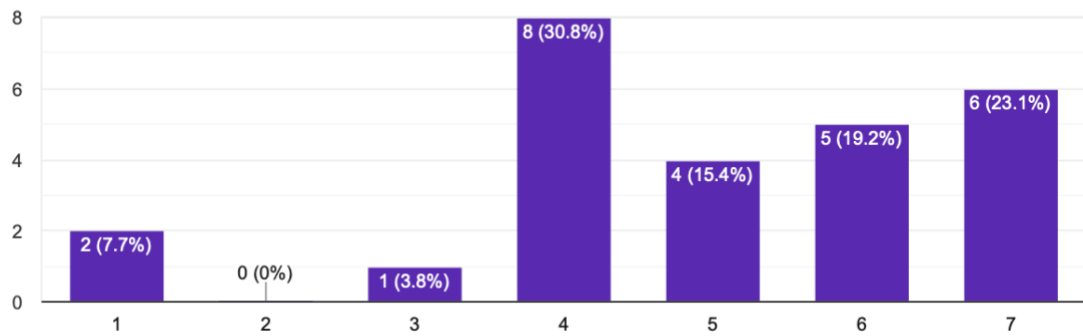


26 responses



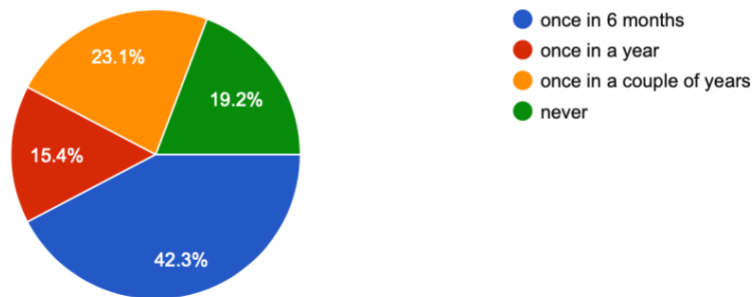
how comfortable are your hearing aids

26 responses



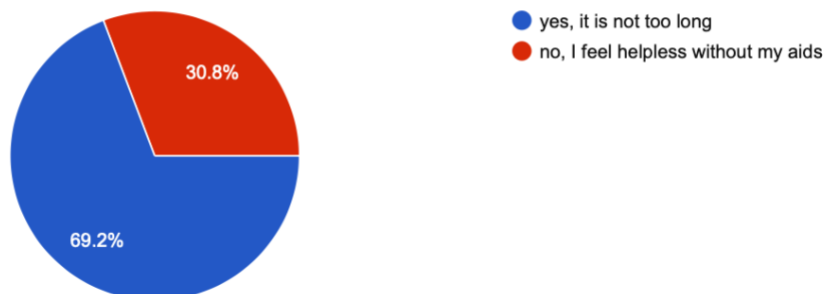
How often do you revisit your audiologist to get your hearing aid serviced / recalibrated based on your hearing loss change over time

26 responses



are you content with the current waiting time with the hearing aid repairs

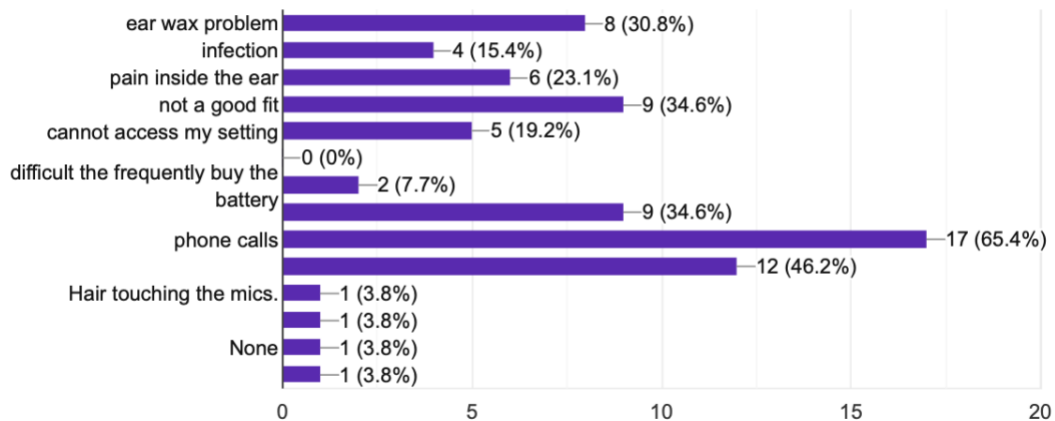
26 responses



Any specific experience you had with your aids. Please tick all that apply.



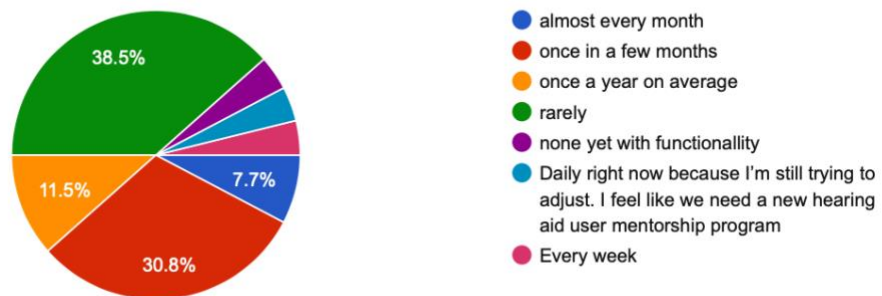
26 responses



How often do you have issues with your hearing aid



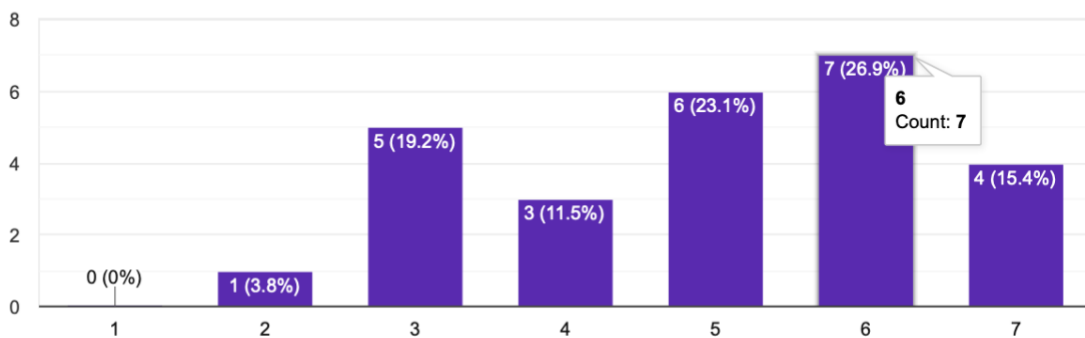
26 responses



How is the experience of going back to the audiologist, getting the earphones serviced and getting it back again

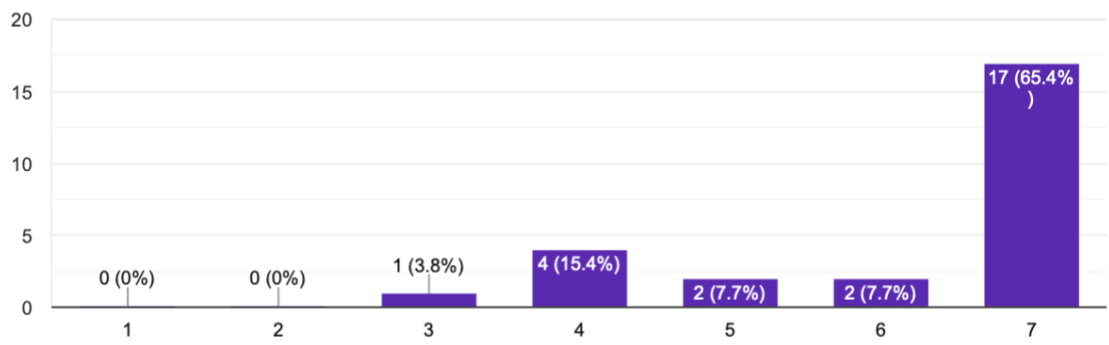


26 responses



is replacing batteries in your hearing aid a cumbersome process

26 responses



Projected profits and Revenue

Link to raw data with multiple projections:

https://audiopart-my.sharepoint.com/:f:/g/personal/anirban_roy_cambridgeaudio_com/EkXGdJIHgpEs5EgUBx2CWYBS9yLRo8HeA7d9M8N0i0PuA?e=ELTthm

Projected Profits UK, US, DE in year 1, 2, 3

	Year 1			Year 2			Year 3		
	US	UK	DE	US	UK	DE	US	UK	DE
Landed Cost to AP (inc application)	95.00	95.00	95.00	85.5	85.5	85.5	76.95	76.95	76.95
Credit card fees	11.979	11.979	7.986	11.979	11.979	7.986	11.979	11.979	7.986
Fullfillment cost	10	10	10	10	10	10	10	10	10
VAT (20 / 21%)	69.3	66	69.3	69.3	66	69.3	69.3	66	69.3
Returns cost (20%)	19	19	19	17.1	17.1	17.1	15.39	15.39	15.39
Total Cost (ex. marketing and amortisation)	205.28	201.98	201.29	193.88	190.58	189.89	183.62	180.32	179.63
Project amortisation	41.46	41.46	41.46	18.80	18.80	18.80	26.01	26.01	26.01
Marketing spend (10% of Sale price ex. Vat)	33	33	33	33	33	33	33	33	33
Cost to AP incl marketing and amortisation	279.74	276.44	275.74	245.68	242.38	241.69	242.63	239.33	238.63
Sale Price avg per consumer (inc VAT)	399	399	399	399	399	399	399	399	399
Net profit	119.562	122.862	123.555	153.617	156.917	157.610	156.672	159.972	160.665
Margin	29.94%	30.77%	30.94%	38.47%	39.30%	39.47%	39.24%	40.06%	40.24%
Projected Sale (realistic: 0.5% worst: 0.05%)	9020	1980	2640	9742	2138	2851	10229	2245	2994
Total profit (millions)	1.078	0.243	0.326	1.496	0.336	0.449	1.603	0.359	0.481

Note

Dali: Cost of top of line hearing aids \$95 (sold by large companies to the audiologists)

From meloMania data

from melomania data

UK vat 20%, EU avg vat 21%

average for consumer electronics items + Melo data

high due to initial setup in the 1st year (cleck income statement for more details

average of health care and consumer electronics industry (8% to 12%)

Based on the competitor pricing



Link to raw data with multiple projections:

https://audiopart-my.sharepoint.com/:f/g/personal/anirban_roy_cambridgeaudio_com/EkXGdJIHgpEs5EgUBx2CWYBS9yLRo8HeA7d9M8N0i0PuA?e=ELTthm

Breakeven Analysis

Break-even-analysis

Months till break-even

2 Months

	Months	Year 1 January	Year 1 February	Year 1 March	Year 1 April	Year 1 May	Year 1 June	Year 1 July	Year 1 August	Year 1 September	Year 1 October	Year 1 November	Year 1 December	Year 1 Total
Sales revenues	Euro	3,75,100	3,75,100	3,75,100	3,75,100	3,75,100	3,75,100	3,75,100	3,75,100	3,75,100	3,75,100	3,75,100	3,75,100	45,01,200
Input (variable costs)	Euro	(1,92,073)	(1,92,073)	(1,92,073)	(1,92,073)	(1,92,073)	(1,92,073)	(1,92,073)	(1,92,073)	(1,92,073)	(1,92,073)	(1,92,073)	(1,92,073)	(23,04,874)
Gross margin	Euro	1,83,027	1,83,027	1,83,027	1,83,027	1,83,027	1,83,027	1,83,027	1,83,027	1,83,027	1,83,027	1,83,027	1,83,027	21,96,326
Fixed costs	Euro	(3,43,667)	(20,167)	(20,167)	(20,167)	(20,167)	(20,167)	(20,167)	(20,167)	(20,167)	(20,167)	(20,167)	(20,167)	(8,73,500)
Profit / loss (before interest, depreciation, taxes)	Euro	-1,60,639	1,62,861	1,62,861	1,62,861	1,62,861	1,62,861	1,62,861	1,62,861	1,62,861	1,62,861	1,62,861	1,62,861	13,22,826

Sales revenues	Euro	3,75,100	7,50,200	11,25,300	15,00,400	18,75,500	22,50,600	26,25,700	30,00,800	33,75,900	37,51,000	41,26,100	45,01,200	45,01,200
Variable costs	Euro	(1,92,073)	(3,84,146)	(5,76,218)	(7,68,291)	(9,60,364)	(11,52,437)	(13,44,510)	(15,36,582)	(17,28,655)	(19,20,728)	(21,12,801)	(23,04,874)	(23,04,874)
Fixed costs	Euro	(3,43,667)	(3,63,833)	(3,84,000)	(4,04,167)	(4,24,333)	(4,44,500)	(4,64,667)	(4,84,833)	(5,05,000)	(5,25,167)	(5,45,333)	(5,65,500)	(5,65,500)
Fixed + variable costs	Euro	(5,35,739)	(7,47,979)	(9,60,218)	(11,72,458)	(13,84,697)	(15,96,937)	(18,09,176)	(20,21,416)	(22,33,655)	(24,45,895)	(26,58,134)	(28,70,374)	(28,70,374)
Break-Even	Euro	-1,60,639	2,221	1,65,082	3,27,942	4,90,803	6,53,663	8,16,524	9,79,384	11,42,245	13,05,105	14,67,966	16,30,826	16,30,826
time [in months]		1	2	3	4	5	6	7	8	9	10	11	12	12

Sales revenues	Euro	375100	750200	1125300	1500400	1875500	2250600	2625700	3000800	3375900	3751000	4126100	4501200	4956640
Fixed + variable costs	Euro	535739	747979	960218	1172458	1384697	1596937	1809176	2021416	2233655	2445895	2658134	2870374	3093011
Month		1	2	3	4	5	6	7	8	9	10	11	12	13

Link to raw data with multiple projections:

https://audiopart-my.sharepoint.com/:f:/g/personal/anirban_roy_cambridgeaudio_com/EkXGdJIHgpEs5EgUBx2CWYBS9yLRO8HeA7d9M8N0i0PuA?e=ELTthm

Income Statement

	Year 1	Year 2	Year 3	Explanations
Sales revenues	45,01,200.00	54,65,275.20	63,80,451.00	Average from sales revenue planning
Variable costs	23,04,873.56	24,03,650.13	24,52,626.03	Cost of manufacturing + shipping
Gross profit	21,96,326.44	30,61,625.07	39,27,824.97	

Fixed Costs				
Team Salary	2,30,000.00	2,53,000.00	3,78,300.00	dedicated team: one product manager in UK, 2 audiologists (one in UK and one in DE), 10% year on year salary growth year 3: one product manager in UK, 3 audiologists (UK, US DE) Salaries: UK, DE: Audiologist: 80k, Product Manager: 70k; US Audiologist: 100k
Web page and app development + set up + maintenance + update		12,000.00	12,000.00	Approximately 1000\$ / month for SME with Ecommerce - realistic estimate
Cloud based set up cost for HA calibration over the internet	12,000.00	12,000.00	12,000.00	Approximately 1000\$ / month for SME cloud cost - realistic estimate
Sum costs	2,42,000.00	2,77,000.00	4,02,300.00	

Initial Set up costs				
Initial setting up cost (tooling ODM, regulatory, other set up costs)	1,50,000.00			As per input from James
cost of samples and testing	10,000.00			
Initial marketing budget (30 days before product launch: 100\$ a day average)	3,000.00			realistic estimate
Initial Email marketing (30 days before launch: 50\$ a day average)	1,500.00			realistic estimate
Web page and app development + set up + maintenance + beta test	50,000.00			(with external integration as required) - should be reviewed
Intern Salary and misc. spend on intern	9,000.00			
Certification costs (UK, FDA, CE etc.)	1,00,000.00			Should be reviewed later (501K costs ~\$6000)
Sum costs	3,23,500.00	0.00	0.00	

Total Sum fixed costs	5,65,500.00	2,77,000.00	4,02,300.00
------------------------------	--------------------	--------------------	--------------------

Profit / loss (before interest, depreciation, taxes)	16,30,826.44	27,84,625.07	35,25,524.97
Profit / loss (per item)	119.56	189.03	227.93
Profit / loss %	29.94%	42.11%	45.67%

Variable Cost per (sold) product

Year 1		Explanations
Landed AP cost / product (incl applications)	95.00	Dali input - top of the line HA for 95 \$
Credit card fees (3%)	11.98	taken from Melo costing
Fulfilment	10.00	taken from Melo costing
Marketing budget 10% of sale price ex VAT	33.00	Average of 8 to 12 percent for CE and Healthcare
Returns costs (assuming 20%)	19.00	Consumer electronics average
Total variable cost	168.98	

Year 2		Explanations
Landed AP cost / product (incl applications)	85.50	10% drop in FOB cost (w.r.t melo example)
Credit card fees (3%)	13.47	taken from Melo costing
Fulfilment	10.00	taken from Melo costing
Marketing budget 10% of sale price ex VAT	37.10	Average of 8 to 12 percent for CE and Healthcare
Returns costs (assuming 20%)	17.10	Consumer electronics average
Total variable cost	163.17	

Year 3		Explanations
Landed AP cost of product (incl applications)	76.95	10% drop in FOB cost
Credit card fees (3%)	14.97	taken from Melo costing
Fulfilment	10.00	taken from Melo costing
Marketing budget 10% of sale price ex VAT	41.25	Average of 8 to 12 percent for CE and Healthcare
Returns costs (assuming 20%)	15.39	Consumer electronics average
Total variable cost	158.56	

Sale Price

Year		Sold products best case	Sold products worst case	Sales price (excl. VAT)	Sales price (incl. 21% VAT)	Sales revenues best case	Sales revenues worst case	Ø sales revenues (basis for further calculations)	Explanations
Year 1	Hearing Care Service	24800.0	2480.0	330.0	399	8184000	818400	4501200	
Year 2	Hearing Care Service	26784.0	2678.4	371.0	449	9936864	993686	5465275	
Year 3	Hearing Care Service	28123.2	2812.3	412.5	499	11600820	1160082	6380451	

	Year 1	Year 2	Year 3
Revenue (excl tax)	4501200.0	5465275.2	6380451.0

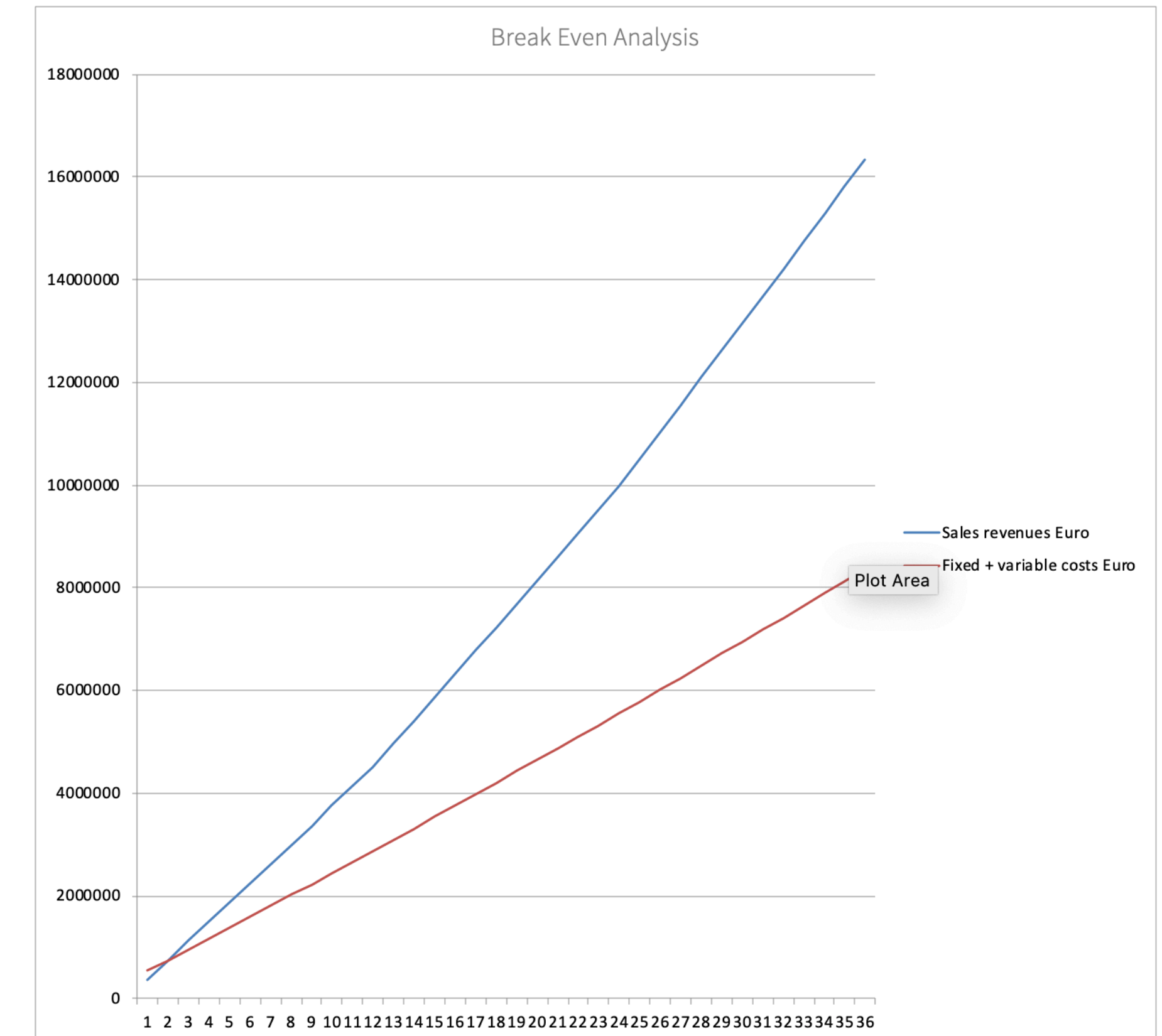
Background

Total UK population within 40 to 60 year range (approx)	18.0 Mil	
Total hearing loss population in 40 to 60 year age range (10%)	1.8 Mil	
Assuming 0.2% penetration on target segment (realistic case scenario)	3600.0	conservative estimate
Worst case scenario (0.02% target segment)	360.0	
Average	1980.0	
Total US population within 40 to 60 year range (approx)	82.0 Mil	
Total hearing loss population in 40 to 60 year age range (10%)	8.2 Mil	
Assuming 0.2% penetration on target segment (best case scenario)	16400.0	
Worst case scenario (0.02% target segment)	1640.0	
Average	9020.0	
Total DE population within 40 to 60 year range (approx)	24.0 Mil	
Total hearing loss population in 40 to 60 year age range (10%)	2.4 Mil	
Assuming 0.2% penetration on target segment (best case scenario)	4800.0	
Worst case scenario (0.02% target segment)	480.0	
Average	2640.0	
Total (realistic case)	24800.0	
Total (worst case)	2480.0	

Assumption of 8% and 5% total sales growth year on year

Realistic case	24800.0	average	13640.0	year 1
Worst Case	2480.0			
Realistic case	26784.0	average	14731.2	year 2
Worst Case	2678.4			
Realistic case	28123.2	average	15467.8	year 3
Worst Case	2812.3			

Break Even 2 months



IDE Master Graduation

Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSC E&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

! USE ADOBE ACROBAT READER TO OPEN, EDIT AND SAVE THIS DOCUMENT

Download again and reopen in case you tried other software, such as Preview (Mac) or a webbrowser.

STUDENT DATA & MASTER PROGRAMME

Save this form according the format "IDE Master Graduation Project Brief_familyname_firstname_studentnumber_dd-mm-yyyy". Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 !



family name Roy
 initials Mr given name Anirban
 student number 4844157
 street & no. ...
 zipcode & city ...
 country Netherlands
 phone ...
 email ...

Your master programme (only select the options that apply to you):

IDE master(s): IPD Dfl SPD

2nd non-IDE master: N.A

individual programme: ... (give date of approval)

honours programme: Honours Programme Master

specialisation / annotation: Medisign

Tech. in Sustainable Design

Entrepreneurship

SUPERVISORY TEAM **

Fill in the required data for the supervisory team members. Please check the instructions on the right !

** chair Erik Jan Hultink dept. / section: PIM
 ** mentor Sander Mulder dept. / section: MOD
 2nd mentor James Johnson Flint
 organisation: Audio Partnership PLC
 city: London country: England

comments
(optional)

⋮

Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v.



Second mentor only applies in case the assignment is hosted by an external organisation.



Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

Procedural Checks - IDE Master Graduation

APPROVAL PROJECT BRIEF

To be filled in by the chair of the supervisory team.

chair Erik Jan Hultink date 24 - 02 - 2020 signature Hultink, Erik Jan

Digitally signed by Hultink, Erik Jan
Date: 2020.02.24 14:14:38 +01'00'

CHECK STUDY PROGRESS

To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total: _____ EC

Of which, taking the conditional requirements into account, can be part of the exam programme _____ EC

List of electives obtained before the third semester without approval of the BoE

YES all 1st year master courses passed

NO missing 1st year master courses are:

name _____ date _____ signature _____

FORMAL APPROVAL GRADUATION PROJECT

To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked **. Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

- Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)?
- Is the level of the project challenging enough for a MSc IDE graduating student?
- Is the project expected to be doable within 100 working days/20 weeks ?
- Does the composition of the supervisory team comply with the regulations and fit the assignment ?

Content: APPROVED NOT APPROVED

Procedure: APPROVED NOT APPROVED

comments

name _____ date _____ signature _____

Disrupting the British hearing aid market with Cambridge Audio project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 21 - 02 - 2020 20 - 07 - 2020 end date

INTRODUCTION **

Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...).

Background: The hearing aid market has long been dominated by large medical device companies and accessible to 'patients' only through audiologists. The market is traditional with high supply chain and other overheads - with typical selling price for a pair of hearing aid of ~\$3000 compared to a manufacturing cost of ~\$100 [2]. Some recent trends and factors have primed the market for disruption. To start with, the intended user base of hearing aids is increasing fast due to longer lifespan in developed nations. The social stigma around wearing hearing aids is also diminishing thanks to technology acceptance - the ubiquitous presence of wireless earpods in recent years [5]. The US market size for hearing deficiency will touch 80 million consumers in 2020 [4] and only less than 25% [1] are of the current market is using hearing aids. Interestingly, the main reason for such low penetration is the high price barrier which can be attributed to medical certifications and other overheads of a traditional industry. Recent legal changes are easing the market - a ruling by FDA in 2018 removed certain kinds of hearing aids from medical certification requirement and they are currently working on a new law to ensure over the counter sale by 2020 [4]. As argued above, the market landscape is evolving quite fast and legal changes are repositioning hearing aid from a medical device to a consumer electronics product. This has led to technology giants like Apple and Samsung to start working on related products and services [3]. Another set of competitors - sound engineering companies like Bose and Harman are also getting involved in the hearing aid market [2].

Client: Cambridge Audio has been operating in the high end audio market for more than 50 years. Originally from Cambridge, their product line - amplifier, high end speaker systems, vinyl player etc. are geared towards the semi professional and professional market. The brand portrays British engineering, love for music and the best sound at the a fair price [1]. However in recent times they have started experimenting with consumer electronics like WiFi / Bluetooth speakers and ear buds while maintaining the high quality and brand essence offered in its more traditional product lines. The company has seen a significant profit percentage coming from these new product lines and want to diversify into the hearing aid market. Cambridge Audio falls in the second category of competitors (high end sound engineering and audio equipment companies), they are the right candidate to disrupt the British hearing aid market.

Project Goal: The aim of the graduation theses is to develop an overall strategy which will help Cambridge Audio to enter and disrupt the hearing aid market. They are planning to partner up with an ODM for detail design & production which will streamline the product launch in the UK market. The project scope is defined by the following deliverables:

- A. Strategic and Tactical Roadmap for the next 5 years - product and related service
- B. Business Plan (with a business model) supporting the roadmap
- C. Sub-brand creation and launch strategy of the first product and service

References:

- [1] Hearing Aids And The Sound Of Mobile Health Disruption | Health Affairs. (n.d.). Retrieved December 23, 2019, from <https://www.healthaffairs.org/doi/10.1377/hblog20160617.055421/full/>
- [2] Bose could disrupt hearing aid market. (n.d.). Retrieved December 23, 2019, from Detroitnews website: <https://www.detroitnews.com/story/business/2018/10/08/bose-hearing-aid/38095055/>
- [3] Disruptors In Hearing Aid Market Shaking Things Up. (2012, December 17). Retrieved December 23, 2019, from The Senior List website: <https://www.theseniorlist.com/blog/disruptors-in-hearing-aid-market-are-shaking-things-up/>
- [5] Erler Susan F., & Garstecki Dean C. (2002). Hearing Loss- and Hearing Aid-Related Stigma. American Journal of Audiology, 11(2), 83–91. [https://doi.org/10.1044/1059-0889\(2002\)020](https://doi.org/10.1044/1059-0889(2002)020)

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Personal Project Brief - IDE Master Graduation

introduction (continued): space for images

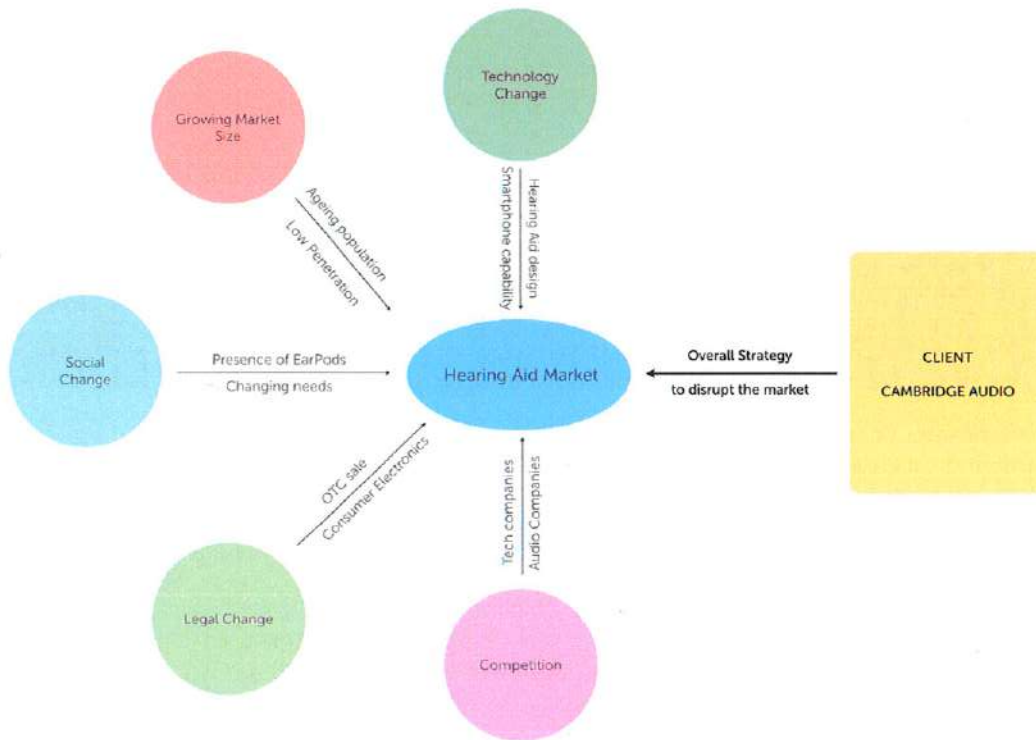


image / figure 1: External factors of the evolving Hearing Aid Market and Project Goal

TO PLACE YOUR IMAGE IN THIS AREA:

- SAVE THIS DOCUMENT TO YOUR COMPUTER AND OPEN IT IN ADOBE READER
- CLICK AREA TO PLACE IMAGE / FIGURE

PLEASE NOTE:

- IMAGE WILL SCALE TO FIT AUTOMATICALLY
- NATIVE IMAGE RATIO IS 16:10
- IF YOU EXPERIENCE PROBLEMS IN UPLOADING, COVERT IMAGE TO PDF AND TRY AGAIN

image / figure 2:

PROBLEM DEFINITION **

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

The overarching goal of the project is to develop a strategy for Cambridge Audio to excel in the hearing aid market. This leads to the problem definition: How can Cambridge Audio enter and disrupt the hearing aid market of the UK?

Currently, the project scope is undefined and Cambridge Audio is conducting preliminary investigation of this market. The nascent stage of the project gives me ample opportunity and independence to define and scope it down in order to deliver within the allocated time frame. As I envision it, the deliverables will be detailed product + service roadmaps complemented by the business model of the roadmaps. It will be followed by the design of the sub-brand and the launch strategy of the first hearing aid. The deliverables will be combined together into a strategy booklet detailing the approach Cambridge Audio can take in order to enter and disrupt the British hearing aid market.

In order to develop a detailed roadmap, I would start by researching the problem context (user, company, competition, other stakeholders) from a qualitative perspective. I will conduct interviews with consumers followed by generative session with lead users of current hearing aids. The outcomes of the research phase will be incorporated in the roadmap. It should provide design requirements to the ODM partner to collaborate with the in house design team and develop the first product. Running in parallel with the product design phase (out of my scope) will be business model (product / service) and launch strategy for this product. I will explore a service based business model in this market and validate it with a pilot program. The business model will include a brief financial overview with cost structure and break even analysis. The feedback from the pilot session will be incorporated into the final service design. The last phase of the project will be developing a sub brand and launch strategy. Since the parent brand is already established with a lot of consumer associations, there would be some boundaries in terms the new brand's position. I will create a brand DNA, positioning statement, and example marketing material for the marketing team to develop the sub brand further.

ASSIGNMENT **

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

I want to create a strategy booklet for Cambridge Audio to enter the British hearing aid market and disrupt the _____ incumbents. The document should include a product (and service) roadmap, first product design (ODM), business model and sub brand design and launch strategy for the first product.

I want to start broad with a thorough DEPEST analysis to understand the context and then dive deeper into the global hearing aid market. This phase will clarify the relationship between different stakeholders in the hearing aid value chain and their needs. The next step will include user research through qualitative interviews and generative sessions. I will use the Job To be Done approach for the underlying needs of the targeted users. The synthesis of user and market research will help me create a tactical roadmap which will be shared with the product design team.

In parallel, I will start working on the Business Model Canvas. The business model(s) will be validated with pilot runs to select users to find the right service design. In the last phase, I will develop a launch strategy which can complement the product and fit the brand image of Cambridge Audio.

I expect to deliver an overall strategy booklet containing these key elements: product roadmap along with a business model and a launch strategy which can enable Cambridge Audio to excel in the UK market.

PLANNING AND APPROACH **

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days; and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

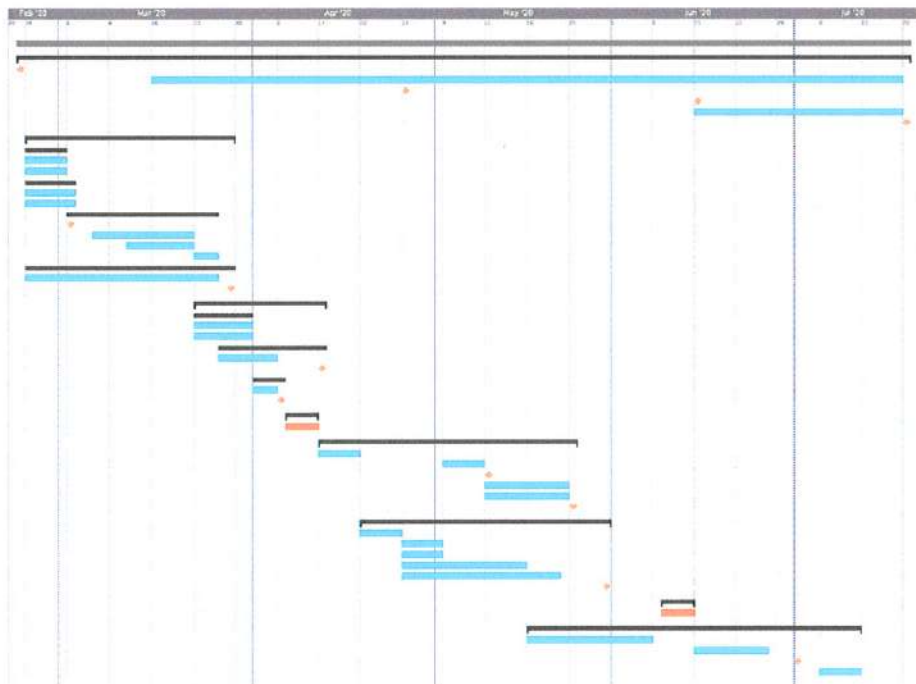
start date 21 - 2 - 2020

20 - 7 - 2020

end date

Graduation Plan - Cambridge Audio

- Over all progress**
- Kickoff meeting
- Overall strategy booklet creation
- Mid term meeting
- Share report and Greenlight
- Incorporate feedback from mentor and chair
- Graduate
- Information gathering and Synthesis**
- Trend and Company Analysis**
- DEFLAT
- SWOT Analysis
- Market Research (4C analysis)**
- 4C analysis (TBD)
- Stakeholder Mapping (later check)
- User Research**
- Travel to England
- Qualitative interview with potential consumers
- Transcription and analysis of interview
- Generative session with consumers
- Research Report - Input for product design
- Synthesis of all information
- Create Report and share
- Product and Service Roadmap**
- Product and Service Design Brainstorming**
- Product and service Design (not detailed)
- Validation with consumers (story telling research)
- Tactical and Strategic Roadmap
- Create Roadmaps
- Share it with stakeholders
- Engage with ODM (visit to USA - hearTECH Expo)
- Interact with ODMs in hearTech expo
- Select ODM
- BREAK (Easter)**
- Take an exact break
- Business Model**
- Create business model based on previous info
- Pitch session (first product) with selected users
- Leave England
- Gather feedback and incorporate
- Updated business model and service design
- Share updated service design and business model
- Launch Strategy**
- Competition Axis
- Brand DNA
- Positioning Statement
- Poster and other example marketing material
- Create launch strategy report
- Share launch strategy report
- BREAK 2**
- Break 2 before finishing up
- Launch Strategy Booklet**
- Incorporate previous reports into the booklet
- Wrap up booklet for the client
- Share combined reports (into a booklet)
- Discuss results and future involvement with the client



MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, Stick to no more than five ambitions.

Aspiration and Competency: My goal is to work in the business strategy of disruptive technology companies. Current courses like Design Roadmapping, Design Strategy Project, New Product Economics and Brand and Product Commercialization has provided the necessary tools and capabilities for me to take up this project. Also, my previous background in mechanical engineering helps me understand technology quickly and be comfortable with quantitative approaches. In my opinion, the combination of the mentioned courses along with my engineering background can help develop overall strategies and I want to combine these learnings in the context of a disruptive B2C market and see how the outcome plays out.

On a personal level, I believe that the right use technology can enable people to excel in their lives and it is our duty to develop the right strategy which can make technology more accessible. I have been working in B2B domain and helping shape the strategy of Nowi Energy (internship - Jul'19 to Jan'20). Now I want to move on to the B2C domain and develop competencies in that sector.

My personal learning goals are:

1. Research on consumer product and see how how consumer insights can be translated to the roadmap in a B2C setting.
2. Test my framework for exploratory competitive analysis (developed during the honors program) and get feedback on that model.
3. Become more comfortable with the employment market of England (specifically London) and decide if I want to work there.

FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant.

