

Rachid Finge (00:01):

Welcome back to the Made by Google Podcast. I'm your host, Rachid Finge, and this is the podcast where we bring you behind the scenes at Google, talking to the people who work on our devices and services. And today we have three design legends for you. They're the ones who create colors, shapes, materials, finishes, and hinges now as well. So if you ever wondered what it takes to design a piece of hardware at Google, then this is the episode for you. And I'm so excited that we're just going to dive right in.

So let's say hi to Ivy Ross, Isabelle Olsson, and Claude Zellweger. Ivy, Isabelle. Claude, thank you for joining. Please tell us about your role at Google and how you ended up here. Ivy, can we start with you please?

Ivy Ross (00:48):

Sure. I'm the Vice President of Design for Devices and Services, and that's over all of design, industrial design, store design, packaging, et cetera. And I came to Google through Google X actually - I was hired to work on the potential second edition of Google Glass. And I think it's been almost nine years. And actually Isabelle and I met that way because she was the head of design for Google Glass at the time.

Rachid Finge (01:18):

Exactly. And, frequent listeners of the Made by Google Podcast already know that story from Isabelle's previous appearance on the Made by Google Podcast. But Isabelle, for people who haven't heard before, please tell us a little bit about yourself and how you ended up at Google.

Isabelle Olsson (01:31):

Sure. So in my current role, I'm the VP for Industrial Design working on our home products, tablets, wearables. And then I also oversee colour, material and finish for all of our hardware products.

And like Ivy mentioned, I started my career at Google working at X and so that was a very interesting start. But I am now excited to be working on Google Hardware.

Rachid Finge (01:56):

That must be a great place indeed to start at X. Wonderful. And Claude, what about you?

Claude Zellweger (02:01):

So I am the director of industrial design for phones and AR. I also lead the packaging team.

And the way I got into Google was I was brought on to lead a VR specific team at the time because I had some experience in the space. And so I joined Daydream as my first team and then slowly shifted over from VR to AR and closer to the sort of our core business around phones.

Rachid Finge (02:33):

Amazing. Thank you. So, before we dig in, listeners of the podcast know that we have this internal directory at Google where everyone can state their own personal mission. And I just

always like to read those and see what they say and maybe they reveal something about our guests. So Ivy, yours says, play design manifest. Why did you write that?

Ivy Ross (02:52):

God, you know, I haven't looked at that in years, but when I saw that I sat with it, I go, yeah, I still believe in that.

Well, you know first of all, play, to me, the opposite of play is not work. It's depression because playing is doing something without a predetermined outcome. And I think that's how creativity comes - to give yourself some time to play with ideas. And I just sometimes think we don't give ourselves that permission. So that's a big mission of mine.

And then, the next is design. Design to me is solving problems within boundaries. So after you play without an outcome, then it's time to create boundaries and be creative, to break out of the boundaries you're given and, and then manifest. I mean, I love bringing ideas to life, kind of starting with nothing, which is really making magic, starting with nothing and ending up with something. So for me, those are the mantras I live by play, design, and manifest.

Rachid Finge (03:51):

Yeah, it sounds like you capture the essence of your work in just three words there.

Ivy Ross (03:56):

Okay. Good. Success

Rachid Finge (03:58):

Amazing. Isabel, three words as well. Make people smile.

Isabelle Olsson (04:01):

Yeah. This has been a mantra for me from the beginning of my career or maybe even before I started in design. And for me, the most important thing is when we create products we're solving big problems with new innovations,

For example, the new Pixel tablet where we're making the tablet more useful in everyday life. It could be things like that, that just people respond to and think, okay, that was helpful, or that was thoughtful. But it can also be things like coming up with new surprising colorways. Or you turn the product around and you see a pop of colour. So for me, it's making people smile. It's about adding that delight and joy. And again, going back to Ivy's point about solving problems for people.

Rachid Finge (04:52):

Amazing. And it worked because people can't see, but I have the coral pixel seven A definitely did make me smile. So great job there, Claude. Finally design more less.

Claude Zellweger (05:03):

Yeah, sure. So I think as designers, we always look to do more with less, right? And that could be said about our aesthetic approach. Where we aim to delight our users by making something really complex, very technical, simple. But it also applies to how we think about resources,,

when our goal is to reduce materials and to simplify manufacturing. So it kind of goes both ways and I believe in that very strongly.

Rachid Finge (05:29):

Today's guests are responsible for the look and feel of our hardware. Ivy Ross is our Vice President of design UX and research for hardware. She's known for a lot of things like her jewelry design. Some of her work is part of the permanent collection of a dozen museums like the Smithsonian.

Isabelle Olsson is our vice president of home wearables and color material finish. Originally from Sweden. Isabel worked on furniture before joining Google 12 years ago. If you love the look of your Pixel watch or Nest wifi Pro, you have Isabel and her team to thank for that. And Claude Zellweger is the director of industrial design for AR and phones. Claude joined Google a few months after the very first pixel phone launched, the camera bar that we've had since pixel six, that's Claude and his team way back. Claude designed things like shoes, and as you'll learn, that's a valuable skill when designing phones.

I hope you'll enjoy our conversation. I guess for today we're talking about the three recent pixel devices. We launched Pixel seven, a pixel fold and pixel tablet. Maybe we can get into colors and materials and finish first. So what went into selecting those? I guess Isabel, you're at the perfect place to start with that question.

Isabelle Olsson (06:52):

Yeah, I love that question and I'm going to correct you and be annoying and say we don't select color, we create colors.

Rachid Finge (06:59):

That's a good shout. Yes,

Isabelle Olsson (07:01):

<Laugh>. It's not like we just open a color book and pick a color out. It's an involved process. A balance of art and science where we really create every shade from scratch.

And you know, it's in a way, pretty simple. We are just really inspired by the world around us. So that could be anything from a bag of tea from Japan to soap from Italy to a little pompom that you found in your kids' drawer of toys. It's just we're trying to surround ourselves with these objects that gives us a sense of delight and surprise. And then we create these physical mood boards and start there and develop the colors.

Actually during the pandemic, a lot of our color development came from water coloring. We were actually trying to remove ourselves from all these devices that, we rely on so much for, you know, being able to work remotely at that time. But it was almost like a need to fight against that a little bit and go back to basics and our kind of real world physical tools for collaboration

Rachid Finge (08:07):

And any manicures happening, creating those colors. Because one of the things you told us in the previous episode, of course, so that's a way to sort of see all the colors in day and at night.

Isabelle Olsson (08:17):

I mean, there's multiple methods to the madness, and I think we all have our different tools and tricks. But again, it goes back to how do we surround ourselves with the world that the consumer eventually would live in? And how do we make sure that it's a colour that is both delightful, but that also can stand the test of time?

You know, these are phones and products that you might live with for many years. So even if we wanna develop a new kind of brighter, uplifting colour, we wanna make sure that you don't get tired of it immediately. So again, that goes back to that deep prototyping and experimentation. And sometimes that involves painting our nails. We actually did a nail polish colour exchange party a year ago. Yeah, that was a lot of fun. So it's still part of the process, but it's not the only part of the process, I should say.

Ivy Ross (09:08):

I have to say, the other day we were interviewed by a few YouTubers, and they made this comment that they said, wow, your colours, even when you do bright colours, never look cheap. They always look sophisticated. And, and that's a testimony to the colour materials and finish team, because it's about dialling it in until that colour becomes that right level of sophistication. And then understanding that colour is different on each material. So then translating it to each material and tweaking it because we always want things to be the right colour for each product individually, but also as an ecosystem look great together. So it truly is an art and science.

Rachid Finge (09:53):

So if we look for example, at the color C, which was new for pixel seven a, like how many prototypes of maybe a similar color are they lying around there before you finally say like, okay, this is the perfect color C that's going to be on the device.

Isabelle Olsson (10:07):

I mean, I should say over the course of time, I mean, it's in the hundreds, but we often start very simply with a physical mood board where we look at different shades.

Like, let's say we are feeling that we need a calming yet refreshing colour because of the kind of the world that we're in, then we start collecting these objects, and then we start extracting colours from that. And then we actually have a beautiful paint painting facility in our building. So we go downstairs and work with the paint technicians to develop a whole range. It's usually around 20 colours. Then we start applying those to forms because like Ivy said earlier the colour might take a different look and like have a different look and feel depending on the size of the object, whether it's a tablet or a small ear bud or something that goes on your wrist.

Isabelle Olsson (10:57):

And there you start thinking about, okay, how does this go with different skin tones, et cetera. So we then apply those colours on different forms, and then we start kind of playing around with it. And then eventually we align on what is the right shade or set of shades. So again, it's not usually just one shade, but it's a family of shades. Right? And then we start, developing that in the different materials because again, the finish changes how the colour shows up and, and

the materials themselves. And then start working with our engineering partners, our material scientists, to bring this to life and into something that can be produced.

Because that's the other thing, we're not artists, although sometimes I think we wish we were, but these products have to be mass manufacturable. So there's a lot of work that actually goes into how, how does this colour actually stand the test of, for example, UV, these products go inside, outside, how does it fade over time? Is it a graceful fade? Or does it, you know, overnight go, from blue to green? That is not a great experience, although it might be a surprising thing, but it's definitely not delightful. So it goes from that more kind of artistic process into a more technical process as the project goes on.

Ivy Ross (12:15):

You know, I wanted to build on something that Isabelle alluded to - this idea that colour is also a byproduct of what society is going through and when certain colours come into being because a lot of times people ask us, well, why this colour now?

And so, you know, if you study this, it goes along somewhat with some societal trends. So right now, you know, there's, people need to feel happy. And so it was important that we have some bright colours.

There are other times where I remember when we introduced this colour green, it was very much when sustainability was on everyone's mind and nature. So it's an interesting juxtaposition with tapping into the psychology of society as Isabellele said, being aware of everything around us and all of the influences.

Rachid Finge (13:03):

And then I guess just coming back to the colour coral, which I think the first time we saw it was on the Google Home Mini, if I'm not mistaken. So now it's on the Pixel 7a, I guess it's a very bright colour, but perhaps not as calming as sea. Was it deliberate, maybe the opposite of sea, to introduce it?

Isabelle Olsson (13:21):

Yeah, I think when we develop colour SKUs for a particular colour line, or in fact our entire portfolio, we wanna make sure that there's something there that could appeal to almost everyone. And we know people have certain preferences.

Some people like cooler colours, some people prefer warmer colours, so we wanna make sure we have a range. And then we also wanna make sure that, you know, some people might prefer something that is a little bit more calming, like the sea. So it's that polarity. And then coral was really about this uplifting energy and confidence that we wanted to bring. And then you've seen this colour kind of pop up in various forms. Actually it was at the top of Pixel 6 - when we had the two tones. That's right. And you, you noticed we had it on, on the mini, and now we thought it was the right time to introduce it on the entire phone. And we think it's exciting.

Rachid Finge (14:18):

It definitely is. Now coming onto the Pixel 7a and Pixel Fold. The camera bar is there. It seems like we really embrace that as, you know, something that's core to a pixel phone.

Claude Zellweger (14:29):

Yeah, absolutely. We've started this design language with Pixel 6 and we wanted to really create something that you can recognize across the room. And that is also very efficient in terms of how we can pack some of our really impressive camera modules into a very simple and easy-to-read graphic. So we've built on that.

We started with the graphic on Pixel 6 and we've made it more and more durable and refined and simple and translating it into the I guess the 7a is interesting because we're borrowing a lot of the flagship design language, right? We want that user to experience, the full experience, of Google design with the materials, with the camera bar that speaks of durability, craftsmanship and precision.

But we also, you know, it's executed in a different way. It's a more cute version of it. It's a little more soft. And then on the foldable, we're using a variant of it. So we wanted to design that. We're trying to not have a cookie cutter approach to our design language. So that's how you can see that on the foldable. We've taken a little bit of a different approach with the floating island, but it's still very distinctly pixel and leveraging a lot of our materials as well.

Rachid Finge (15:42):

Now, of course, with the fold, you need to have a hinge to make that foldable thing fold, I guess. And it's a stainless steel hinge. Why did you choose that?

Claude Zellweger (15:52):

So we call this the spine, which is the hinge cover. The hinge itself is not stainless steel, but the cover is. So I think generally speaking, like for us, the ideal material is one that checks both boxes in terms of mechanical properties such as stiffness, you know, scratch resistance, but also the visual and tactile appeal of it. In this case, you know, it's the high polish stainless steel finish, which is really at the place where you, where you hold the device most of the time. And so yeah, that's been a really critical piece.

What's happening on the inside is also really important. You know, we're trying to make the thinnest foldable on the market, which puts a lot of pressure if you want, on the engineering to build a hinge that is extremely compact, but also extremely torsionally, stiff and clever. So a lot of time was spent in this kind of song and dance with engineering to find just the right hinge that also has just the right feeling when you open and close a device. Right. It should be a very satisfying feeling really that we're going after.

Rachid Finge (16:58):

Yeah. It was something also we talked to some of the engineers in previous episodes about the Pixel Fold, like it needed also, you know, if you use tabletop mode, you have to of course be sure that the device remains in tabletop mode when you put it that way, for example.

Claude Zellweger (17:11):

Exactly. Yeah. It has to, I was just going to repeat that..., I mean, it needs to work really well in a couple of different stages, essentially. And yeah, a lot of trickery goes into it.

Ivy Ross (17:21):

All I was going to say, I'm really proud of the team because there was another foldable model that we had created that we had the discipline to hold back and say, nope, it's not good enough yet. And really wait until we felt like we could do something that was good enough or better than what was out there already. So it's really a testimony to the fact that we're able to do that and recognize when something isn't good enough.

Rachid Finge (17:52):

There's a lot of discipline, I guess, involved in design as well then.

Ivy Ross (17:56):

Yes.

Rachid Finge (17:57):

Excellent. So we've talked about phones, we didn't even touch on the Pixel tablet yet. And speaking of touch, it has that nano ceramic coating that we talk a lot about. Isabel, can you describe what it is and perhaps what it feels like even if you've never touched it before?

Isabelle Olsson (18:12):

Yeah. The goal was to make it feel exactly like a smooth matte piece of ceramic, and I think we actually succeeded. It was a fun process in the beginning when we were working with engineering and they were trying to get us to come up with a spec.

You know, what is, what are the numbers, what is the coefficient friction? Like, how do we measure this? And, and, and even though we tried, there was no way of capturing the feeling we were trying to create in numbers. So we invited our team members to come and feel this little piece, this little ceramic plate, and the instruction was just like, let's make it feel this way. And then of course, through a lot of prototype and experimentation, we were able to get there.

But yeah, the idea, you know, the same way is when you hold a piece of ceramic, you have a little bit of a cult to the touch and then it's smooth, yet a little bit grippy. And so the idea is that when you hold it in your hand, it feels really satisfying, but then also when it's in its docked mode and sitting in your home, it doesn't feel out of place.

Like, you know, more traditional tablets that have that cold metal look. So it was kind of to both have that comforting feel in the hand as well as the aesthetic. When it's, when it's in its document,

Rachid Finge (19:36):

So when I'm not recording podcasts, I'm talking to a lot of journalists and we had them, of course, in briefings for the product, and you can see their sort of mind blown when they actually for the first time saw the Pixel Tablet case because of the stand - that you don't need to remove the case when you dock it. I guess it's maybe also one of the first times you have to experiment with magnets, making sure it's easy to dock in a way that's satisfying. So could you tell us a little bit more about, first of all, the dock and then the case as well?

Isabelle Olsson (20:09):

Yeah. It's an exciting system that required a lot of prototyping and collaboration with our research team, our industrial designers, our material scientists, and our engineers. I mean, it was a true collaboration across disciplines.

And yeah, you mentioned it's a really tough balance to ensure that when you dock it, it feels really secure. I mean, the fact that we were able to float this, you know, device off of the table is pretty awesome. At the same time, balance that with the ease of removal and we spent countless hours and days and months, you know, really tuning that so that you could one handedly dock with confidence and it would still stay in place.

So, you know, because if you make the magnets too hard, then it makes it very cumbersome to remove. But if they're too loose, it would fall off.

Isabelle Olsson (21:05):

So at some point we're like, we don't know if we're going to be able to thread this needle. I mean, there were many moments where we were, you know, really, really worried, but, you know, we tried all these different layouts and experiments and, finally we, we got to a point where, where it was that goldilocks of an experience. And it involved even things like, experimenting a lot with the front plate material, which is a kind of a rubberized textile that would give it that satisfying, you know, both sound and feel when you dock it.

And it also not only felt and sounded good, it actually helps with the magnet and the docking interaction. So this is where, you know, function follows form or form follows function depending on how you look at it. So every single piece of this hardware has been deeply considered to have that moment of surprise and delight and, and sense of calm and security and trustworthiness of, of this product.

Rachid Finge (22:08):

And so where does the case then come in? Because I'd probably make that rookie mistake, that maybe we have it all figured out and then you're like, oh gosh, now we need to have a case on it. And maybe now the magnets are not strong enough anymore. Or how do I make this stand without being in the way? So, how did that come to life?

Isabelle Olsson (22:26):

Again, through prototyping, you'll probably hear me say, if you count the words <laugh>, the number of times I say prototyping is probably up to a hundred. Experimentation, prototyping, living with our devices in our, in our everyday life, I think it's very important, again, to step away from our computers to step away from our offices and, and use these. So we would take prototypes home, we would live with them and don't tell anybody, but we would give them to our kids and we would see how they would interact with them just to make sure that we're thinking through those use cases and those serendipitous moments.

And early on we started realising, well, once you bring the tablet home and you make it useful in the home, that family members are going to wanna use it. And then you're like, wait a minute. You know, I spent X amount on this product, I might wanna have a case for it.

Isabelle Olsson (23:17):

But, you know, this idea of it being useful throughout the home, throughout the day, we thought, well, we do need a way once it leaves the dock. You know, how do you, how do you prop it up? How, you know if you wanna do yoga on the floor or you know, you wanna play Lego with your kids

I think many of you might have experienced when you're trying to prop something up and it falls down and it's kinda annoying. But then we wanted to create a stand that obviously didn't incur any more friction than necessary. Imagine you would have to take off the case to docket them back. Like any moment of friction leads to people kind of just putting it back in the drawer.

And that's the antithesis to what we're trying to do in the first place, which is how can these be more useful in your everyday life? So then this idea of this ring came up because we're like, wait, when we create this stand that is more like a ring, it can be an infinite angle. So we call it the infinite hinge, and then it can also go onto the dock without you having to remove the case.

So yeah, again, I think the ideas really came from using early prototypes in our everyday life and having that moment of discovery and then, you know, tuning it and perfecting it over time.

Claude Zellweger (24:34):

It's interesting when you talk about friction, Isabelle, because I think about friction a lot when I think about the category of foldables. In the past there was a big hurdle to overcome for people when they wanted to get into foldables. Yeah, you get the bigger screen, but you also get a clunky device. So you're making a big trade off. And so for us, for the design team, we really spent a lot of time thinking about how we can reduce those frictions? And that was kind of the impetus that led us to this new form, you know, which was kind of inspired by, you know, like a moleskine book or a passport, this kind of very handy small form factor that is thin and slides easily into your pocket.

And then again, sort of the satisfaction around opening and closing it just like a nice book. So a lot of these elements were inspired by this desire to reduce friction because we knew we could offer something really unique with our services. We could offer a really unique experience in the foldable space, but we needed to make sure that it wasn't going to be something that people feel like it's a trade off they make.

Rachid Finge (25:37):

What would you say, Claude, in designing the full is your most proud achievement of you or the team in, in getting that exactly right?

Claude Zellweger (25:45):

Probably two things. One is this song and dance that Isabellele was describing between us and, and engineers, you know, to make that form just exactly the right you know, the right form that feels really great when it's both open and closed, right? You have to really design for two instances and that's an interesting constraint that you have as a designer. You can't just optimise for one versus the other, even though we know that people use a Fold mostly when it's closed, like it's still like a 70 to 30% rough usage.

So it has to be really great like a phone first and then also be delightful as a foldable. And I think the other, yeah, but the other thing is around the materials. I think being able to shift user's

perception of what foldable could be, particularly when I look at the lighter SKU - the porcelain SKU. It's really interesting how just applying that colour across the product just really shifted from a technology first product to more of something that feels luxurious and, and personal, and you can imagine as your daily device.

Ivy Ross (26:55):

Yeah, I was going to say with the launch of these products at this time, I love that we're giving the consumer choices and launching two larger screen possibilities. And because I do think the future is about more personalization of how I wanna work? What do I need? And so I'm very excited to round out the portfolio with these products so that we can give the consumer's choices that we feel great about.

Rachid Finge (27:25):

So Ivy, maybe I should ask you this question. So we have these devices that are intended for, I guess, different audiences. You also mentioned you also work on, on the Google stores for example. So these are wildly different things, but how do you ensure that they sort of feel and seem like family in the way they're designed? Like what's sort of the secret behind that?

Ivy Ross (27:48):

Well, I think the secret is that we are one design department. We're a design discipline and then I have different design teams working on these products. But the mission, we've all aligned around a core set of principles that underlines all of the aesthetics. And so when you have that held together as the glue and we come together weekly to share the different teams, share what they're doing. And we always use the test of, is it, you know, human optimistic and daring? You know, where's the daring part? Where's the optimistic part? And we kind of spot check each, you know, each group spot checks each other. And then when we lay them out together, the idea is that, as I said, we wanna do what's right for each product, but as a group it always has to feel like it came from either the mother or father's DNA, you know, there's some relationship. And so that we really have an aesthetic that people recognize as Google. So I think it's a byproduct of us having a central design team, but then with these focused areas and that we come together constantly.

Rachid Finge (28:58):

I also wanted to talk about sustainability as that's one of the key focus areas for Pixel. How do you make sure the designs are sustainable and I guess maybe sustainable in, in the way of materials, but also sustainable perhaps in timelessness in, in a way. So what does it take to achieve the goals when it comes to sustainability there?

Isabelle Olsson (29:18):

Yeah, so sustainability, designing for sustainability is a complex and multifaceted approach. It's you know, we talk about reducing waste in processes and materials we're very focused on developing healthy materials. And then the third one is designing for longevity. The piece on longevity is both in kind of the use of it as well as how it lasts over time. And I think what's interesting, for example, with the tablet is this idea of how do we make our products more

useful? So that's a component to sustainability too. The most sustainable product is the product that people keep around and don't throw away and want to upgrade immediately. When it comes to developing healthy materials you've seen every year we're advancing our recycled content.

Isabelle Olsson (29:18):

Yeah, so designing for sustainability is a complex and multifaceted approach. We talk about reducing waste in processes and materials we're very focused on developing healthy materials. And then the third one is designing for longevity. The piece on longevity is both in kind of the use of it as well as how it lasts over time. And I think what's interesting, for example, with the tablet is this idea of how do we make our products more useful? So, that's a component to sustainability too.

Isabelle Olsson (29:18):

The most sustainable product is the product that people keep around and don't throw away and wanna upgrade immediately. When it comes to developing healthy materials, you've seen every year we're advancing our recycled content. So in Pixel 7 for example, not only is the aluminium a hundred percent recycled, but also the back resin enclosure is made of 67% recycled material.

And then more recently we were also starting to design our adhesives to be recycled. So we're, we're not stopping at the exterior, we're going deep into the interior. We have a material science team who are dedicated to advancing this every year. It's the beginning of a journey, but we're trying to lift every rock that we can to, to do better. So that is a little bit on our approach and maybe you wanna speak to some of the packaging parts.

Ivy Ross (30:57):

Yeah, I was just gonna say, I mean, not only is it cross product, but across packaging, you know, we made a commitment to be a hundred percent plastic free by 2025, we're actually gonna be ahead of that in some products. So we're very excited about that.

And then our retail stores, you know, our retail stores are the home for these products and you know, we in our Chelsea store got the highest leeds platinum possible. I mean, there's very few retail stores that got that level of designation. And all of our stores are getting that high level of acknowledgement for sustainability because and it is everything, as Isabelle says, just like on the product, it's the same thing in the built environment. It's the glue that puts the flooring down. I mean, everything has to be considered. And, you know, we now have, with our product development process, there are checkpoints worked into the process where the team has to talk about what could we have done for more sustainability and make so everyone is aware of what the possibility is and then be conscious if there's a reason why we didn't do it.

Ivy Ross (32:07):

So that, you know, the first step is because there's always choices along the way. And we can't necessarily do everything at this moment, but really at least bring awareness of what's possible and what's in the way of getting there. So I think it's been a great education for the entire group, all levels. And we're proud of, you know, we are making progress every time.

Rachid Finge (32:32):

Amazing. Claude, anything to add there?

Claude Zellweger (32:34):

The only thing I would add is that in the phone space, we know we're starting to ship impressive numbers of phones. And so every little change that we make, particularly on the manufacturing side of things, right, that's the invisible part of it, can really have a huge impact.

So we're actually designers spending a lot of time with things like tooling engineers to figure out which design will be quicker to tool or quicker to, you know, machine out. If you have a block of aluminium, how long does it take for our design to be milled out of the solid piece? And that in fact has a huge impact on just how many devices you can produce in a certain amount of time and therefore the carbon footprint is accordingly much higher. So we spend a lot of time on the very finite production level as well.

Rachid Finge(33:25):

I wanted to close off with a question that touches upon your, your careers. You're all great designers, but I know all three of you did not start out in technology. For example, Ivy, I know you worked on jewellery before joining Google. So I'm wondering what did you take from a design career in a completely different field into designing technology products? So what kind of lessons did you learn there that maybe you uniquely can apply in your job today? Maybe Ivy we can start with you.

Ivy Ross (33:57):

Yeah, I think we're all a by-product of our experience, which makes for this beautiful diversity. And I love, I particularly try to assemble diverse teams and experiences because that's what equals creativity because we each come from a different place.

My career has been in consumer goods in general, starting as a metalsmith in jewellery through, you know, clothing, toys, I touch pretty much every category because for me it's the process. I have to love what the output is, but it's more the process of how we co-create together. Interestingly enough, in each of these categories, I was always a futurist pretty much ahead of the curve and that's where technology comes in because I think I've always had a love for the future and technology as a tool for creativity.

But, you know, from my personal background, I would say, you know, attention to detail is what I learned from my jewellery making experiences. I'm very glad I was a maker with my hands, right? Not just pure design on paper, because there's something about when you connect your mind and hand you get a new skill set.

So I would say that experience is something I bring unique but really this idea that in every consumer goods category I've worked in, it's understanding and having empathy for your audience as well. So that diversity taught me that there's a number of ways to solve problems, which is what design is about.

Rachid Finge (35:24):

Claude, what about yourself?

Claude Zellweger (35:27):

Yeah, so I think the things that I've benefited the most from is being, having a really diverse set of you know, categories and industries that I worked with. Really specifically, I did a lot of work in the sports soft goods realm, designing boots, shoes, watches, you know, glasses, things like that. But then also getting on the flip side of it, always being really interested in new technologies that change behaviour, that shift behaviour, you know, so I was working at the time designing like the, the first Kindle and then the first like high-end VR headsets.

Those are always things that I thought, okay, this is gonna change the way that we interact with technology. And for certainly that's been a big reason for me to wanna work at Google because we have access to these incredible technologies and assets that really allow us to responsibly think about how people will integrate this technology into their lives. I think that sort of cross pollination that you get from a broad background is really helpful.

Rachid Finge (36:28):

So you mentioned you designed shoes. Is anything of that time that you did that, has that been useful, for example, in designing phones today?

Claude Zellweger (36:38):

Yeah, I mean, well the phones, I would say yes in how shoe design is cyclical. It's, it's, it's very much a fashion product, right? So the thinking that you have for footwear where you think about seasons and things like that can be very much applied to phones as well. And like, how do you create interest and desire and, and tension and so on. I think that and how you think graphically about a product also, right? It's about the form and the graphic application, I think. So that helped a lot also just from the material front, you know, always being really interested in soft technologies. And so how we think about our early VR headsets were all made of fabric, which was a totally different approach to the industry. And I think right now when we think about cases and things like that, right, there is a strong element that's about self-expression. So that translates.

Rachid Finge (37:29):

Amazing. And Isabel, what about you?

Isabelle Olsson (37:32):

I'll take one example. I had the chance earlier in my career and even back in school to exhibit at the Milan Furniture Fair and that was an experience in working together with other people and putting together a compelling story and exhibit that people would see and react to. And it made me very humble because you put your heart out there and you put this exhibition together, you, you sweat blood to your, like you drive a van down there. I mean, it's just an incredible kind of intense experience.

And then to see someone just walk by and be like, I don't like it or people engaging with you and being interested and asking questions and learning. Not not just how to, you know, also, yeah, the collaboration part and putting something together, but also learning how to receive and take feedback and listen to how, how people respond to your work and that that's

something that, you know, I've taken with me throughout my entire career, being open to feedback, being interested in how people react versus my personal pride in the craft.

Isabelle Olsson (38:44):

Like, you have to kind of set that aside because we're not designing for ourselves, we're designing for other people. So, so that's a critical piece. And I'll repeat what what Ivy said too. I think it's the making part versus being stuck in our computers, but creating things with our hands is another key part. And then now actually if many, many years later we had a chance to go back to Milan we just came back from our exhibit shaped by water. So it's been incredible to get to go back but with Google,

Rachid Finge (39:17):

That's the same exhibit as you you mentioned before.

Ivy Ross (39:21):

I mean, it's great, a lot of us go work on that together. It's a great coming together of applying our skills to both the built environment, different scales, which I think is really good. I believe that designers sometimes have to get out of the scale or do something different than you do every day. It's back to that play idea and being able to get, as Isabel said, real time feedback and see the joy that we bring to people.

Rachid Finge (39:53):

And you all three definitely do well. Ivy, Isabel, Claude, thank you so much for joining us today and teaching us about design at Google.

Ivy Ross (40:01):

Thank you.

Isabelle Olsson (40:02):

Thank you.

Claude Zellweger (40:03):

Thank You.

Rachid Finge (40:03):

You. Well, wasn't that great and what a great team they are. I learned a lot about design once again, and I'll never forget, designers don't pick colours, they create them. And rightly so. There's much more to come this season of the Made By Google Podcast. Next time out we're talking to the team that creates some of the apps for Pixel that you probably take for granted. I mean, the calculator app deserves some more love.