Design Notes

Material 3 Expressive Roundtable

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Liam Spradlin: Aneesha, Michael, Andy, welcome to Design Notes.

Aneesha Kommineni: Thank you, Liam.

Liam: Just to get started, I'm going to have each of you introduce yourselves one by one. It gets a bit tricky when we have three guests at the same time. So if you don't mind giving the listeners your name, your pronouns, and your role on Material.

Aneesha: Okay, I'll go first. My name's Aneesha, she/her. I am a product manager on the Material team focusing on Android.

Michael Gilbert: Hi everyone. So my name's Michael Gilbert, pronouns he/him, and I am the research lead for the Material Design team.

Andy Stewart: Hello everybody. I'm Andy Stewart, he/him. I'm the creative director for Material. Yeah, excited to be here.

Liam: So we are all gathered here today to talk about M3 Expressive, which at the time that this podcast goes out, will have just launched. I want to focus the

conversation on, first of all, what makes design expressive, and second, how you take that vision and actually translate it into a design system, specifically a design system at the scale of Material? But before we get into that, I want to get everybody's takes or everybody's definitions of what is M3 Expressive.

Andy: Starting with a hard question, Liam. I think that the way I see it is something you can feel. I think something that is expressive is something you can feel in all the ways you can feel, right? You can see it and you feel what you're seeing. You can hear it and you feel something when you hear that. And I think that's really what we try to continue to do is to make something that people feel, feel connected to, and it has a spirit. It's something we talk a lot about in Material 3, is this our spirited feeling? So yeah, I think for me it's something you can feel.

Michael: I think when we talk about what is expressive, we can have an intuitive understanding of what expression is in any particular context. When we're talking about expressive design, I think we start to veer a little bit more towards design that is able to communicate a particular type of expression and specifically design that can communicate a specific type of use. And ultimately it's design that becomes more understandable, more emotional, and more just easier to use as a result of that expression, aiming to communicate particular patterns of use more effectively through beautiful design.

Aneesha: I'm not sure how much more I can add to that because I feel like both of those are such good definitions. I think from my last year of working on expressive, I think a lot about what it's done for apps and hopefully everyone listening could see it as it rolls out in Google's experiences. But I think from that experience, for me, expressive is pushing Google and Google Apps and Google devices to meet the user more at where they are and specifically that means how they're feeling.

Liam: Andy, I want to get a sense from a creative direction perspective, from a system perspective, what was the impetus for creating M3 Expressive as a discrete update to the system? I want to know where the idea came from because to me it seems like more than the next step in M3, it seems like a comparatively radical expansion of the system, and I'm wondering what motivated that.

Andy: So the motivation I think really came from what people were asking us for. I think M3 laid the foundations for this, a new expression building on the foundations of M1 and M2. And really, research, like Michael said earlier, and Aneesha, meeting people where they're at in their context. And we found that M3 introduced new theming that was really for you to express yourself and also a new graphic language. So more things were contained in surfaces and surface colors. And we found that that was actually something that works really well for people. And the research has showed that it's faster,

it's easier to navigate the experience.

And really, it came from also this desire to keep creating things that reflect a personal choice. So we really, again, like I'm saying, for M3, introducing tokens, things like that, that gave us this new framework to be able to dial in that expression. So M3 Expressive is really dialing it in, dialing it up, and again, like we said earlier, meeting people where they're at. And I think M3 didn't cover everything. That's the other part of this, that we have components, we needed to upgrade the other components that got left behind. So we had loads of good ideas that we felt excited about and we wanted to complete that.

Liam: Towards the end of last year, we wrapped up a series on M10. It was the 10th anniversary of Material. And I feel like a common theme through that and through the past 10 years of the system has been this kind of tension between wanting to open things up to more theming capabilities while at the same time wanting and also needing, because of the nature of our stakeholder structure, to be opinionated and provide something that gives enough structure for makers. And I'm wondering, as we continue to make these subsystems more abstract, even in the face of needing to operationalize them at a bigger scale than ever, how do we think about balancing those two things, both in terms of creative direction, but also in terms of product management? And where does that take us in terms of what the system actually is?

Aneesha: That is the crux of Material's problems and it's very cool problems that we get to solve. The scale that we operate is massive. It is every Google app and ultimately most of those Google Apps serve billions of users. So it's billions of users. And we also have of course flagship devices. Pixel has not just a phone but also large screen devices, the Fold. We also have a watch and other form factors. And so yeah, the scale begets that we are very opinionated because it's hard for Android makers to then come up with opinions that scale for all of those apps, all of those devices. And then it's also hard to expect every Google app to stay fresh and meet their users' needs individually.

I think the way I think about how do we stay true to that intent but also meet the demands of customizability while being opinionated. With expressive, I think the way we tried to do that is we incubated the concepts first through this idea, this program that our lovely first party engagement team came up with called Material Labs. So we had all these concepts that we thought would serve all the variety of needs, but we needed to get real feedback. And the best way to do that is from our immediate customers, which are Google Apps. And that was very important for us to get feedback and understand how Google Apps might use these, but then where it didn't meet their demands, so where there was more customizability needed, where there was more flexibility needed.

And so I think one example of this is the T-shirt sizing that we offer now with Expressive, there are more small, medium, large, extra large, et cetera that we are now offering. And that resonated a lot in the lab and that was a good one to understand where we needed to offer more flexibility. And then it also informed what opinions were not really being customized and could just be the defaults. Yeah, that's kind of how I think about it.

Andy: You gave me a little bit of time to think about that there, Aneesha. I think it's really about that flexibility of expression that expressive can also mean quiet and it can also mean loud and can also mean a little bit of expression and a lot of expression. So for example, like loaders and spinners, you can take the basic one, it's very simple, circular or linear, or you can go expressive and it has more of the wiggle shape. And that gives you a choice, do I want to be quieter or do I want to be slightly louder? And again, they live on that sort of spectrum, though that's kind of like a binary choice, but they're both considered expressive. They're both slightly upgraded.

So I think it's really about that flexibility of the expression too. And that's for both at the maker level so the developers can decide, and then for the users. For example, the new theming offers a wider color gamut so that the user can choose and then also the developer can play that out in their experience.

Liam: I'm wondering if the scope of these kind of updates and changing these subsystems and offering so many different variations of components is actually changing how we think about the design system or the concept of design systems itself. I'm curious to hear your all's opinion on that.

Andy: Yes. I think that yes, of course, it does change that, especially at Google. I think in our history, all of us have experienced that at Google and maybe in our previous jobs is that as you add more complexity, more ideas, it gets even harder to manage. Material 1 was very, very strict. We didn't quite have the components to back it up. Now we have components to back it up and we have added complexity. So it's a bit of a chicken and egg, but again, we have powerful design ideas and powerful operating systems to be able to handle that.

And I think, yeah, I don't know, I'd love to hear other thoughts on this because I think it's twofold. It's what the platform provides and then it's what the creators bring to that platform, which is kind of exciting that people can bring their own expression using Material, but they're not gated by that kind of boring, cookie cutter design system, but then it still works. Everything we provide still works within the ecosystems of the platforms that people are using their devices in like Android.

Michael: I was going to add, I think the system itself does evolve with every iteration of Material Design. I think with

Material You in 2021, we saw dynamic color be introduced and this ability to break free a little bit of the siloed product experiences that absolutely every individual person would feel every time they opened up these products built with Material Design. And then suddenly with dynamic color, you can start to see things that feel a little bit more distinct, a little bit more individual. But that was really just the first step and I think even back then, design and research and we were still thinking about how can we push this further so instead of just individual personal experiences, we could start to have distinct product experiences?

And then in tandem with all of that, in terms of the big question being how can we evolve the design system to support the types of experiences that we want all Google products and all external products built with Material Design to be able to realize their vision, we were also working on the underlying subsystems that allow people to do that within the guardrails of good, beautiful design that is still accessible.

So an example with dynamic color would be at first we were able to introduce ranges and tokens that allow you to realize the color across every Android product, basically. We were able to work on the underlying subsystem, including designing our own color space, HCT, that allowed us to create designs for those experiences more effectively, a whole suite of tooling around how color is both understood and implemented that we've shared both internally and externally, and

then released all kind of at the same time. I think expressive design is a similar kind of evolution that really just builds on the prior infrastructure, the plumbing of how we think about and how we build products. Just again, doing it from one iteration to the next and then ultimately doing it at Google's scale because we have to support a vast suite of product experiences.

Liam: Right. Okay, one thing that I want to grab onto, the fact that by opening up these systems to this degree, continuing on that path that we started setting with dynamic color, we're really intentionally engaging with users subjectivity through the design of the interface. We'd like to think, especially in designing interfaces in the tech world, they were going on something objective, but of course we're making an impact on the user's emotional landscape. We're coming to them, as you all said, where they are in their lives using these new capabilities of the system to create or evoke or augment a feeling. I'm really curious to get into how the research team handled that, how you started to engage with some of those subjective ideas, some of those feelings, how you learned about that to bring it all into the system.

Michael: I mean, it was a long conversation and involving a lot of work. I was looking back at some of the earliest expressive research we did, and it was in the winter of 2022 and then it's basically been pretty much nonstop since then. I think some of that earliest work was really

trying to understand what is the concept of expressive design. So going back to that first question that you asked, so it was really trying to, the first step, solidify the concept of what we mean when we say expressive design is like a proper noun. What is that thing? And to be able to describe it not just in terms of what the design is, but also tackling it from the perspective of how you want it to influence people. You want people to see expressive design and to be able to more immediately identify the affordances of that design.

And so just at the earliest stages, again, it was really solidifying that concept of expressive design as design that inspires an emotional response that's aligned with a particular pattern of use. So it's expression as usability, it's expression as accessibility, and ultimately it's expression as beauty for a purpose. And it was really trying to figure that out, to work directly with design, to work with Andy, to work with Christian, to work with product and try and really make sure that we can all start asking the same sets of questions. And then from there, that's when the research started and that's creating studies that allow us to evaluate UIs, to evaluate prototypes, to evaluate the specific design directions. But yeah, that's really where it began.

Liam: Yeah, I think it would be helpful though to maybe get a couple of examples of how you determine if an interface is having that kind of subjective impact on someone.

Michael: Absolutely. So in terms of a specific early thing, one of the things that we started to evaluate, and this is again back in we'll say mid 2023, was trying to figure out methodologically, how can we start to identify design's impact on emotional states? And back then we were using what was called the mannequin scale, which was something from the cog-psych research world that allows us to identify levels of arousal and then the valence of that arousal. So how excited you are or how bored you are is a level of arousal and then whether or not that's positive or negative.

And so we ended up doing these studies that allowed us to identify the desirability of experiences that elicited higher levels of excitement. And ultimately we were able to use that early, early work to understand that desirability of expressive designs, it's most effective when that excitement aligns with a journey. So an example might be when you're using a media product, there's particular types of expressive design that really resonate extremely well with people.

And then when you're in different types of experiences, whether it's Gmail, whether it's communications products, there are different takes on expressive design that allow us to dial in that level of desirability, considering or sensitive to the level of excitement that can work functionally in that context most effectively for people. So that was some of the earliest work.

As we started to refine the design, refine the concept, and refine the overall direction, we were able to basically create methods and infrastructure to evaluate designs extremely quickly. So it ended up starting with smaller scale surveys and studies where eventually we were able to start evaluating expressive experiences at scale, globally, looking at basically variations of design. So if you start from a baseline experience and then you say, "Okay, what if you just make it a little bit more expressive?" Versus, what if you really fully embrace the expressive guidelines as they were being created internally and expressive components as they existed? Versus, what if you just really said, "I'm going all in on this expressive experience?"

And then from a research perspective, we were able to identify the impact each of those gradations of expressivity would have on the desirability of a product experience, on the perceptions of the aesthetics of it, how modern it felt, how energetic, how aligned with your personal desires and values each of those experiences felt. And so there were a number of characteristics. Ultimately there was over 20 characteristics that we were evaluating between every single comparison with thousands and thousands of people around the world.

So we were able to do this starting from the early first passes where we were talking with people one-on-one, just really trying to get a sense of this concept, to really trying to refine a set of questions in partnership with

design and product, to refining a set of methods that allowed us to evaluate those questions at scale effectively in a way that is aligned with the requirements for Google. And then ultimately just, we built the machine to do the research, and then we just really zeroed in on what it meant to create very particular expressive experiences across Google products just across the board.

Andy: It reminds me, well, firstly, it's a shame that people can't see Michael's mannequin impression because that would be really good. So maybe we'll need to send out some pics of that.

Michael: There's a video that exists of this now, I'm sure.

Andy: And it reminds me a little bit of over the years, it's hard to research how people feel, what is the feeling you get when you're looking at something? So I think that's what was kind of cool about the collaboration between research and design is what is important for our experiences and how do you measure that? It was something that we used to ask, do we know if people like this? Do we know why they like it or why they don't like it? Does it look good to them? Does the experience reflect their values? That's something that's really, really hard to research.

At the end of the day, we're all trying to help here. We're trying to help you do something. And again, we're early days on this stuff where actually the desirability

and also functionality can be one person's desire and one person's undesire. Some people like minimal design, some people like maximal design. So I think it's again, striking a balance and maybe offering that as a choice.

Liam: I'm really curious because I know from experience that design and product all work really closely with the research team, and Michael brought it up as well. And he also brought up how these tests revealed something about the different types of expressions that might work in different contexts. And I'm curious how these findings from research might've fed back into either the creative direction or the ultimate product itself.

Aneesha: The product story is impossible to create without research, like what Andy was saying about it's very new that we're measuring how a design makes a user feel. That is super, super valuable for me as a product manager because in order to sell this not just to Google Apps of like, "Hey, you should use this new design, you should apply it in this way," but also to senior leadership across the company, it is very, very valuable to crafting the product story of how expressive design is going to drive the ultimate business outcome for Google.

And so then we have to tie our research, Material's research on desirability and how expressive drives desirability to what Android cares about. For example, the perception of what makes a user think that the

Pixel is a premium device, and then what makes a user of Google Maps more likely to use Google Maps versus another app. And so that likeliness of switching or that intent to use or the intent to buy, it's so, so hard to craft that product story and that metric story to each of the different stakeholders that I just talked about and the different business outcomes they each care about without the research that Michael just explained.

Andy: I was trying to think of an example of how it related to color. I think I'm particularly passionate about color and the color system we've created. And it came to reminding myself about M3 Material You, and when we looked at them across the board, we noticed that they were actually quite soft. There was no juicy theme, there was nothing that had a good amount of vibrance and enough of that hue shift between the surfaces. So really that was one of the problems we wanted to solve was bringing that expression to the color system.

And we actually learned a lot from creating the color system for our third party developers. So one of the things we wanted to do was to make sure that colors were still juicy, still vibrant. So we learned a lot through that process. And then for expressive material, we really wanted to bring that theme to users and creators alike. So there is that vibrance, that chroma that really feels quality.

That's the thing that people like premium experiences, but for me it's really about the quality of color. So

rather than everything being soft, if you want soft, then you have a theme for that, but if you want something with a little bit more quality, a little bit more kind of shine to it, that's where we really wanted to dial that up. And then the same on the other side of the scale where softness, quietness of color, you wanted to bring that nuance in there so you could really have that kind of really soft feelings.

Liam: Something is really sticking in my head, which is like we talk about expressive design as something that gives a product the capability to evoke a certain emotional experience. But also to Michael's earlier point about the kind of that works well for a media app or a communications app or something like that, you're also at some points trying to match the user's energy or match their emotional state or find what works well for them in that moment.

And tying it together with this color story where some of the most compelling expressive mocks that I saw during the exploration phase were the ones that really had an edge. And I'm wondering, is there a world in which you can also express things that are difficult or challenging in an interface? I'm really fascinated by the concept that we are acknowledging and intentionally engaging with emotions in design besides delight. And I want to know if that has come into the thinking and how you all feel about that.

Michael:

I can take a stab at it in terms of just a couple different examples where I might expect product or want product experiences to be able to foster a specific type of emotion. Delight is one thing where it's great for a bumper sticker, it's not exactly what you would want in your Gmail experience. I think there's existing things like focus mode that people can opt into. And I think expressive design to support focus is something that we could start to lean into. It's the same principles in terms of starting with the user, trying to identify the factors that either contribute to or remove from your ability to focus, and then leaning into those as the affordances of that experience.

I think at a product level, expressive design really represents our ability to do that, again, within those product pillars. I think the evolution of this will turn into what it means to do that at a personal level. At some point, being able to identify or to be able to create experiences that are more aligned not just for a media player experience, but for my particular take on it or needs within a media player experience. And I think basically in the same way where expressive design was this natural progression, this natural evolution of Material You, I feel like that this is the way we can continue to push forward to create things that are uniquely, again, not necessarily delightful but comfortable, that are uniquely helpful for whatever version of help you may need as an individual.

Whether or not it's in terms of accessibility or if it's in terms of focus, or if it's in terms of context, either long term or short term, our ability to create the infrastructure for the design of product experiences that supports that level of variability is pushing in that direction. That's not a big lofty, unattainable goal. I think that increasingly that's real and this is what we're trying to do.

Andy: I think it's like the tools are available for people to create that, and that whole speaking to that flexibility that if you wanted to create an experience that's quiet, serene, but still accessible, that's available. If you wanted to create an app that's bombastic and crazy and you just wanted to create something that has all the shapes and all the sizes, you can do that. You can mix it up. And I think looking at our own internal apps, we're actually trying to evoke that flexibility again, like Michael said earlier, was for that context.

So the media player, maybe the buttons can be slightly bigger because we know that when you're on the move, you listen to music. Same with on Wear on different devices, we actually really put more expression into the Wear OS because we know that that's a device that it's a simple interface, but if you've just got four boring squares on the circle, it doesn't feel right. It doesn't feel nice. So again, if you're creating an experience, Material can have that expression, whether it's quiet or whether it's loud or it's mixed based on whatever your experience is asking for.

Liam: Bringing expressive design from a concept into what we've just recently released is a huge process and I want to go a layer deeper on the tactics of that, and I want to start in the creative phase. I know that at least internally, every iteration of Material, we see this kind of divergent and convergent pattern starting to happen. And I think personally we have a really interesting way of going divergent through things like the undirected sprint. I want to get into how that works, how we open up space for people to really follow their ideas and then how that comes into a solidified concept.

Andy: This is my favorite part of the podcast I think is where we get to talk about this stuff that we never show. Maybe we will show some of our process one day. I think that when you do a big release, Material 3 was a long road. So it's really, M3 Expressive is still based in Material 3. So the design team, the intent of the release is still there, but there was an appetite to go further. We had a lot of what I like to call lasagna because we know lasagna is always better the second time. So we drew a lot of really exciting work for Material 3 that didn't quite make it. So the whole design team is still excited about those ideas that they worked on through the years of Material 3's creation.

So really how we started was let's start drawing. That's kind of how our team is structured. It's a lot of people who can draw good and a lot of people who can think and do motion design in incredible ways and UX

engineers that can bring that to life in an interactive way. So really the process, you mentioned the undirected sprint, that's something we do as a yearly thing in our own team where we're literally undirected. It's, “here's a blank slide deck, put in your ideas that you want to create for the next years ahead.” And those become like thousand page slide decks. I'm sure people listening have done this before in design sprints. We don't really do the classic design sprint that you might think that Google do. It's literally go draw and come and talk about it at the end of the day and get excited about it because again, the appetite was strong because of that lasagna.

And really the slide deck was called the Vault of Expressive Design, and hopefully we can share that one day. But it's just really awesome ideas and we called it the vault because it's a big collection of treasure and I think it's kind of fun. I think part of our process was fun, and I think that's reflective in Material Expressive. And fun doesn't have to be super expressive either. It can just be quiet and calm. So yeah, thank you for the question because it's part of the exciting part of our job.

Liam: I'm a big believer that you can tell how someone felt when they made something, when you see it from a painting to code. So that really resonates. I want to know, or I guess I want to ask on behalf of the listeners, what's in the vault? What's the lasagna that we've put away this time that you're really hungry for? If you can

share a couple things. I've seen what's in the vault, but the listener wants to know.

Andy: I think gradient's probably in the vault. I think gradients are definitely in the vault. So M3 is very flat design, but I think the future is going to be less flat.

Liam: If I may. I think something that stands out to me in the vault, and we can cut this if it's top secret, but something I really like to see in there is that through it all, there still seems to be some serious engagement on the part of our designers with the materiality of design.

Andy: We've not talked a lot about motion, so I definitely want to plug the new motion physics system. That was something that was in the vault and now is making its prime time. And I think even how that becomes more powerful for developers and users alike, that you can dial up your motion. And I think things like color in motion, how you're using vibrance and tone in interesting ways, I would say that's in our system at the moment, but it's not really part of the motion system. So I think that would be something that's exciting to play on in the future.

Liam: That's a good teaser, I think.

Andy: Yeah.

Liam: I want to hear from Aneesha next on how do you grapple with the vault as a product manager? I think

from the outside, if I can remember, before I joined Google, I thought working on the design team at Google must be so luxurious because I bet that they just come up with the system and work really hard on it, and then it just happens. But now that I'm here, I have to say, I think it's worth getting into for the listeners what our stakeholder structure actually looks like and how complicated it really is, especially when you're dealing with an idea as big as M3 Expressive.

Aneesha: It was also a mystery for me. I had a similar perception before working in Material. So while Andy dreams up the vault and has all his designers draw, I think, I don't remember if it was called the Vault, it was called something else like Juice something.

Andy: The Juice Lab.

Aneesha: The Juice Lab.

Andy: We're giving people all of our excellent [inaudible 00:41:30]. The Juice Lab is a chat room, and I think that was the evolution of the vault, which is about the M3 Expressive.

Aneesha: So that was happening, right? That's happening in the background, but I don't get to draw and you don't want me to draw anyway. I get to show up in the end when the share-outs happen and get inspired. And then my job is to figure out what the value prop is to Google's users and figure out how to make that convincing to all

our stakeholders. And so I think of my stakeholders for Material as both our own leadership as well as leadership across Google and then Google App teams, and then obviously our end users when we start figuring out the go-to market.

So the first step is to get buy-in on expressive design, not just in our org, but also with our partner teams. So luckily what happened is that while Andy was doing all the undirected sprints, the Wear team actually came to us and asked, how might we show up more unified across the watch and mobile? And that was great. That was such a good opportunity because this team was asking to partner with us. And so we actually, I think at that point the design sprints started combining. And so then when we started doing this watch and mobile sprint and then also then later on Android large screens, it all combined.

And I remember I think summer of '23, maybe even summer of '22, it's all a blur, we were all in Mountain View, like Sunnyvale, San Jose area. We were all sprinting with all the form factors, Wear, Android, and Material, and that's when the vision started coming together for me. And from a product perspective, that's when the charter started being written. Me and the other PMs started collaborating on what's the actual business value of this? What are we seeing here that would actually be a good story to sell not only to our leadership, but also senior leadership across Google.

And it was a pretty straightforward story, but I think there was a lot of sauce at the beginning and where we were getting lost in the sauce. But then once the research started being not only done, but also the results started coming out and it was easy to tie the metrics to, okay, this is how desirability drives premium. This is how desirability drives intent to buy, intent to switch. That's when I think the buy-in became a bit straightforward. And then in parallel, we also made a roadshow deck to Google Apps of this is what it will individually offer for your users. There was a different deck for every single app essentially. The Workspace apps, luckily it's one suite, but like Michael said before, you don't want Gmail to be bombastic. You probably want to just get your work done on Gmail versus maybe on photos, you want it to be more emotional for you. And then also the Workspace apps and photos or dialer context, even those kinds of apps have very different motivations for their end users, different business outcomes and goals that they're trying to drive.

And so when we show up to these roadshows and pitch to their product managers, their designers, their engineers, we really have to tie expressiveness and the value of expressive to their individual business goals. And so it's very individualized pitches, differentiated pitches. And yeah, that's what takes one, two, sometimes three years. That's why it takes so much time. And then obviously we have to build the thing and we have to also convince, especially engineering across all these app teams that this isn't going to be

disruptive, that this will be easy to adopt, that this will be performant, that this will be supported in all the different frameworks that they need. So yeah, that's the behind the scenes, I guess, of how to make this real.

Liam: That's great. It really shows the scale of this effort and why it's such a big deal to launch this. I think hopefully we are all as a team exhaling now that this has come out, but not for too long. I want to know from each of you because we're really lucky to have all three of your perspectives on the show at once today. So I want to go back to the question about how we're thinking about design systems these days and what we're thinking about the next days. It's a topic that a lot of people are thinking about right now, a lot of people in my audience. And I know that they would love to hear from each of you where you think we are all headed together.

Michael: I mean, it's a really good question and it's one of the things that we've been talking a lot about lately. Right now, there are so many things that are changing in the design world, and basically so many things changing in terms of how we understand how we design and how we build product experiences from AI tooling and gen AI and innovation in that space.

From a Material perspective, what we want to be able to do is to make sure that we can, from a product creation standpoint, utilize the best possible, the best-in-class tooling available at any given moment in time. From a broader perspective, it's also making sure

that we're not just building products better, we're not just using the evolution of technology and AI to build products better, but we're actually evolving the nature of those products themselves.

Part of that is going to be design innovation that allows us to really understand the beating heart that is at the center of these product experiences. Part of it is going to be allowing for individual variation that allows us to more effectively create experiences that are comfortable not just at a product level, but again at a personal level, regardless of your context, your ability to make sure that we can create things that actually work for you.

And I think just moving forward, the design system is going to evolve to allow us to do that more effectively, more easily. So it's not just utilizing Material Design as a force multiplier to be able to create products more quickly. It's to use Material Design to create experiences, human experiences that are ultimately more aligned with what people want. If you start to reframe the nature behind these product experiences and say, "If anything was possible, what would you do?" This is the question we get to ask ourselves now, which is if anything was possible because it's increasingly becoming possible, we got to do those things, which is exciting.

Aneesha: So I'm actually right now writing the strategy and vision for where we go next. That's what I spent almost every

day now in the last few weeks and probably for the next few weeks. And for me, what's front and center is that Material is Compose's default design system. That responsibility is something I take very seriously, something our whole team takes very seriously, especially as expressive gets rolled out. For the last year, the go-to-market has been very one-P focused because we're trying to land expressive design in Google's experiences. But we are announcing it at I/O, and we do want feedback from all Android developers, not just Google developers.

And so I'm going to be looking at that feedback and our team will be too, because we are trying to offer more flexibility. We're trying to meet developer demands better. But I think, like Andy said before, we're never finished. What ends up going to market is only a small part of the original vision. And so for me, Material being Compose's default design system means we get a chance to keep living up to that promise. And a lot of the vocal feedback that we've always had from the Android developer community is more customization support.

And then also when we ask Android developers to optimize their apps for all the different form factors, a lot of the pain points that we hear are that it's very costly to do that. So we want Material to offer more opinions for adaptive that scale to multiple form factors. And so that's kind of where my head is at, is how might we make Material more customizable, more

adaptive by default, scale the adaptive support that we have. And then piggybacking on what Michael was saying, which is how might we make Material more useful in AI assisted development?

There's of course, the generative UI use cases of UI is being generated at runtime. And so then if Material is what's fed into the different models, how might Material become more useful as model input? Maybe we need to make more variants, become more opinionated. But then also that when it's picked up and then a developer customizes it, maybe we need to become more flexible in that respect.

And then from an adoption and migration perspective, a lot of pain points that we hear both from first party and third party developers is that it's hard to keep up with all the design updates, even if they take two to three years to come out. So we want to see how AI could help drive that migration to be easier, to be faster. And so yeah, that's kind of where my head is at.

Andy: Okay, well, what do I add? Okay. I think for me, the future of design systems is not boring. I think it's filled with complexity, which is exciting that the actual design system itself is underpinned with complexity. And that means that it's easier for developers to do something they want to do rather than building it themselves. So I think that's exciting that there's complexity that you can use to your benefit and your user's benefit.

So I think easier to adopt is something that we've been really working hard on. Components make that easier. And I think hopefully the experience in the end is simpler and more joyful. And I think that the future of design systems is hyper personal, hyper customization, customizable, sorry, and also fonts. Fonts are cool. Aneesha and I love fonts and really trying ...

Liam: Type designer here and type is interface.

Andy: Yeah, type designer. Liam's a type designer. I know Michael likes viewing distance, and we've done a lot of research on that in the past together. But really I think typography is cool, so I'm excited to push on that harder. And what else could I say? Just across devices, that's the other part of this, that design systems used to be very narrow, and being able to be modular about your experience across devices, I think is the future for sure.

Liam: Well, thank you Andy, Aneesha, Michael for being on design Notes with me today, for talking about M3 Expressive, for helping to represent the really dozens of folks on the team whose perspectives and talents have made this vision real. Thank you.

Aneesha: Thank you so much, Liam.

Michael: Thank you, Liam.

Andy: Thank you. Cheers, Liam.

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