



# KPMG Customer First Podcast Transcript

## Personalization

**Voiceover:** Welcome to the Customer First Podcast, from KPMG's Global Customer Center of Excellence. We work alongside the network of KPMG firms to help clients deliver profitable growth, by putting their customers at the heart of their business.

The Customer First Podcast brings you the latest thoughts and market examples from KPMG professionals and guests on how today's businesses are becoming more and more customer centric.

Today we're talking about personalization with host Amanda Hicks.

**Amanda:** Welcome to today's podcast. My name's Amanda Hicks and I'm the partner in charge of the Customer Brand and Marketing Advisory in KPMG Australia, and I'll be your host for today as we discuss personalization. The onset of Covid-19 and resulting worldwide lockdowns forced consumers online for their goods and services, with many organizations capitalizing on this move to e-commerce. The increasing availability of customer data meant businesses could create evermore personalized experiences with the end goal of generating greater customer loyalty.

However, utilizing the ever-growing amounts of customer data to deliver increased personalization comes with many challenges. Consumer opinion is often split over generational lines of what is creepy versus cool, with 31% of respondents to our 2021 Me, My Life, My Wallet research finding the idea that a company knows more about them than they do themselves as creepy, compared to the same percentage of millennials who find it cool.

In addition, consumers are becoming warier about the risks involved in sharing their data and the impact it has on their privacy, making it vital that companies define the customer benefits of that trade. At the same time, we're also seeing a shift into consumers buying into an organization rather than buying from one, and giving increasing weight to brand purpose and to reputation. This makes it even more important for companies to demonstrate their commitment to data protection. So, how can organizations find the right balance of offering increasingly personalized experiences without crossing a line for their customers?

Joining me today is Tom Lurtz, a partner for KPMG in Germany, and Paul Henninger, partner and head of Lighthouse, our center of excellence for data analytics and AI for KPMG in the UK.

Gentlemen, thank you for both joining me today. And I'm really excited to be talking to two of our key global experts about this topic. Because, to me, personalization is one of the most dynamic elements of customer experience, design and delivery today. I think so much is happening that's impacting on how we think about personalization. Firstly, we've got the ever-changing expectations of consumers, a global environment that really disrupted existing consumer behaviors to make people think differently about how they interact with brands. We've got, thirdly, that increasing wealth of customer data available to organizations. And, finally, we've got the rise of all these new technologies and it feels like organizations can really start to dream big about digital experiences and how they can be tailored to individual customer needs.


So, I thought tonight maybe we could start the discussion about personalization with technology. And how do you think companies can harness the power of AI and other emerging technologies to drive personalization? Tom, what would you say about this?

**Tom:** From my point of view, technology is definitely playing a key role and seeing what kind of development we had in the past, let's say, five years, is tremendous. What we do see is—let's call it hyper-personalization—organizations that are able to deliver a one-to-one connection to their customers and one-to-one connection actually means that they're able to interact proactively, but they can listen as well and understand what customers want.

And the variety of technology in the market is growing day by day and organizations just have to find the right way, which technology to use and, you mentioned it in the beginning, it is all about how the organizations are drawing the line, and this is a branding experience as well. So, how a brand wants to set up this kind of personalization. And it's, as well, a very important point in terms of the benefit for the customer. And that's the interplay which you have.

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**Amanda:** That's great. Paul, what about you? I mean, when you're thinking about emerging technologies, what are you seeing is exciting at the moment and in a way that companies can harness that power?

**Paul:** I think there's two types of things that companies can do with emerging technology to drive personalization. The first is putting the right thing in front of the customer so that they find what they want. And that's, to some extent, the combination of automation and presentation technologies, which have been around for a little while, that allow us to reconfigure let's say, a retail experience, to give an example on the fly, relatively straightforward in a kind of digital online shopping context where you can reconfigure the website based on what you know about the customer, but equally, increasingly true in a physical space where, for example, there's a very large, well-known fast food retailer that's using personalization in their menu technology to reconfigure literally what's presented in the menu based on what it knows about the customer that's standing or sitting in their car in front of them.

The second thing that I think is critical, which is a different branch of technology, is making sure that the customer finds what they want. And that relies much more heavily on analytics and AI to look at the data that's available on a customer, on their shopping patterns, on even just stuff related to their visit, if you will, time of day, et cetera. And understanding based on those patterns what needs to be available at a given time, in a given place, with a certain interaction, which isn't necessarily about reconfiguring that retail experience. Let's take another fast food example: that may simply be ensuring that enough tuna mayo sandwiches are available at three o'clock on a Thursday, such that the people who are likely to want them have them available to them. So, those are the two branches of technology I think that are critical to delivering a personal experience.

**Amanda:** That's great. When you think about it, it just seems logical that organizations would leap into personalization and explore these new technologies. Do you have any words of advice for what they should be considering about avoiding, for example? What are the pitfalls that we need to watch out for?

**Paul:** I think one of the key pitfalls is one of the things that you talked about earlier, which is that 'creepiness' factor. Personalization can be a kind of glorious experience. If I'm walking into a shop, I find exactly what I need, I get out. Or, if I'm on a website, the trainers that are presented to me are exactly the type of trainers that I like. That can be wonderful. There are multiple experiences people can have though, where it might seem like we're trying to provide an experience that's exactly what the person is thinking about, where it crosses that line between kind of magical and intrusive or creepy. And I think that's something critical to avoid.

I think organizations can and need to take steps, in terms of looking at the types of data that they use and how they're using it, to measure the distance between the permission that a person might give to use their data and what we're trying to do with it to make sure that we don't cross that border into a creepy experience, which may have the opposite emotional reaction from a customer.

**Amanda:** It sort of feels like anti-personalization, doesn't it, moving to that creepiness? Tom, what are your thoughts on this?


**Tom:** To build on that I think there's one point which is very important as well, giving transparency about the data, which is actually collected, and which customers are sharing. Sometimes they don't know really what kind of data is shared, but if they do have the opportunity to check what they are giving away and then the most important one is let the customers know why they are sharing the data and these two things, heavily interlinked, are very important as well when moving into the area of personalization, because you can't personalize without sharing and knowing data about and information of your customers.

**Amanda:** We're obviously seeing as well more customer data emerging as we see more customers moving towards e-commerce, because that customer journey has changed as a result of the external environment. How can we see that shift to e-commerce being better used by organizations to meet customers where they are today? Tom, what do you think?

**Tom:** From my point of view the shift to e-commerce, which we do see in direct to consumer or direct to customer organizations, is just the first step. Because looking at the customer lifecycle, there are many stages and sales which is basically happening in e-commerce; it's just one step in there and getting the information and interacting with customers, being able to personalize the shopping experience as well as the product (because just remember there is a one-to-one relationship), means that you're able to collect and use this data in all the other stages of the lifecycle, starting with marketing, during usage of the product and so forth.

There are so many examples in the industries, and I personally do think e-commerce will change the type of products as well. And this is what we do see, for example, when we look into granola, for example. Granola, if you're an e-commerce store, you can perfectly mix as a consumer, what you personally like to have, and that's a person like product as well. It's not only the experience, it's the product. And this personalized product is not available obviously in a physical shop. Because from a distribution point of view, that won't be possible. And these things which are happening and then really guiding the customer through a whole lifecycle is the next step what is happening.

**Paul:** I think another way that e-commerce presents an opportunity for a wide range of companies is simply by increasing the frequency with which they interact with their customers. Physical retail is still very much alive, but the reality is that in a physical retail context, probably the type of shop that I go in most frequently in the course of a week would be a grocery store.



And then, in a pure physical shopping context, I might go one and a half times on average per week. That's acutely a problem for other types of industries, such as, let's say, the insurance industry broadly, where I might only interact with my insurance company twice a year. And what the online experience creates the opportunity for is more interactions: if you can provide a service or provide a set of products, et cetera, that customers either want the purchase or are interested in interacting with and each of those interactions are a learning opportunity.

The way personalization fundamentally works is not 'I'm going to gather every piece of information on you and the entire universe and figure out exactly what you're going to want at any given moment of the day for the next 10 years.' There's an element of test and learn in the sense that 'I do know something about you. I can provide you with some options, see how you react. If you're interested in an element of it, that's a piece of information that you've given me in the context of that commercial relationship I have with you and I can use that to reconfigure things by 5% for the next time you interact. And if I've pushed it in the right direction, I can learn about that. If I pushed in the wrong direction, and you're getting more cold, I can learn in that regard.'

So, I think one of the simple things that online commerce allows us to do is to simply interact with customers more frequently and increase the number of opportunities we have for them to share information one way or another about what they're interested in, what they want, what they're thinking about.

**Amanda:** And, I guess that means that it gives a chance for brands to form a deeper relationship potentially, over time, if they have that chance to test and learn, doesn't it? And to experiment and really find what it engages the consumer in the long-run and then form that deeper relationship.

**Paul:** That's right. And it also raises the question of what type of emotional connection are we trying to achieve with personalization? There's a lot of personalization technology. There's off-the-shelf algorithms you can provide, bang a bunch of shopping data into it and create a recommendation algorithm. Most of the large cloud platforms come with a plug-in that allows you to do a recommendation engine. And the challenge with recommendation engines isn't so much whether you can implement them successfully, but what's the outcome that you're trying to drive? What is the nature of that emotional connection?

If you think about one example of emotional connection, which doesn't sound that emotional, is the concept of customer lifetime value. Where customer lifetime value is, literally, take a multi-year customer relationship, you kind of project the likelihood that the customer is going to purchase a number of things, and you look at the value of that. But the interesting thing about that is you're looking at a multi-year interaction, whereas a lot of personalization that we'll be much more familiar with in terms of social media, it's not that it's not designed to create a multi-year experience, but mostly it's just trying to keep you there clicking on things. And that keeping you there clicking on things gets you in the territory of a trade-off where you may try to keep that person in the short-term, but may cross the line, like I said, from a creepiness factor point of view, that might compromise your longer-term relationships.


So, I think it's really critical to think about 'what is the emotional connection we're trying to achieve?' Does it have to do with the moment that we're in right now with that customer? Does it have to do with providing a quality of information and service over a longer period of time, such that we establish trust over time? It's not that there's a direct trade-off necessarily between those two things but they aren't always explicitly the same outcome, particularly when we start to think about how we tell the technology what we're trying to do in that regard.

**Amanda:** It really sounds like what you're saying is that technology, it's obviously the basis these days for forming amazing personalized experiences, but you need to know what you're using it for in order to drive effective use of it. And I think the other thing I'm hearing, which is of course really important, is that personalization, it's not just about understanding the technologies is it?

I think if we think about great personalized experiences, it's about those brands that manage to unite technology in the digital world, but also with that really deep understanding of their customers and how to invest in customer behaviors. When you think of that, what would you say is the value for brands in investing in customer behaviors, and brands creating great personalized experiences that have great psychological impact?

**Tom:** From my point of view, I think personalization reduces our perception of an information overload. So, whenever I'm receiving a message, where it comes from, and it's tailored to my needs, I am a little bit more open to listen further and to look further and to understand. And, so, it seems to have a higher relevance for me.

And I'm, as a customer, I'm attracted by the message. And it's going beyond the name of an email just saying, 'Hi, Tom, do you want to buy something?' It's definitely more than that today. It's all about context and content and understanding. I said this before, but I think this- we can't mention it enough because it's really an understanding of the benefit for the customer. And this requires just one thing: really listen to what your customers are saying as much as possible. And that's what Paul said a minute ago as well. Sometimes it's a trial and error, just going one step forward. Maybe going two steps back and understand how the customer is reacting to the interaction. How can, for example, personalization, knowing about the needs and the preferences about the customer and in the physical retail, how can that help?



You will have to try this out and you will have to try it out in a digital world as well, because it is all about this particular line, which you shouldn't cross and I think we are all owning that point that we need to be in a kind of relationship which is building, and it's building a relationship between the customer and an organization. And it's the same with friends as well: you're building a relationship and you need to share information for them.

**Paul:** Yeah, I think it's a good point. And I think a big part of the emotional relationship can happen around bridging the gap between the products that a company offers an/or services in the sort of moment and possibly moment of need that a customer is in. If you think about that, let's say, in a banking context, banking products are arranged around things that sound like banking products. I can get a loan, I can get a credit card, I can get a current account. Whereas most consumer interactions with a financial institution like that, in a retail context, have to deal with what they're trying to do in the course of their day or their week or their life: 'I'm going to dinner, I need some cash. I don't need a loan for the dinner, unless I'm going to do an extremely extravagant dinner! I need some type of current account feature.' 'I've just moved to, you know, a new house and I've got spruce up the kitchen.' 'I've got to fix a leak that I didn't know existed.' That puts me in the neighborhood of a set of needs that are quite different. And that's one thing we're seeing, for example, in the banking industry, is that personalization technologies are different than you might see in an online retail context.

It's not just about which of the 10 million or 100 million SKUs does this person want, but what can I understand about their external life that has nothing to do with the banking product that allows me to recognize that they're trying to pay a phone bill or that it's Friday and they might want some spending money or that something much longer-term is happening in their lives. They've just got a new job or they've just moved house, et cetera, and reconfiguring the banking products into something that people recognize from their day-to-day life, but still fundamentally a banking product or service.

**Amanda:** Really interesting to understand now of course just the level of nuance that we can take in redesigning products and services around both the individual customer and their demographics, but also their needs and their behaviors. And I guess that we're getting to this idea about emotional connections and making customers feel engaged and loyal.

We've probably touched a bit on it already, but how do you think that companies really can create emotional connections in this new world where we've got such a reduction in physical interactions, which I suspect will embed in the future to quite a large extent? And I guess I'm especially interested in this question given that our recent research does show that quite a sizeable proportion of consumers, around 29%, still feel that talking to a human is very important, even within their digital experience of an organization. So, how do we get these emotional connections and that people feel?


**Tom:** Emotional connections are built on, let's say, a relationship and an understanding of the needs. And the very question is how to build this relationship to understand the need of the customer and, in the end, there is a mix of physical and digital, as well as automated interactions which will be highly important in the future.

And I think this mix will be highly individual for each and every company, because they can differentiate with that and they can let their customers know, 'I know you're in a hurry and you have an issue with the rental car because the fuel amount is too high' or whatever it is. And maybe when I'm dialing in the in the evening, I don't want to talk to someone, I just want to place the problem. And I want to get rid of this task on my desk. And then I want the rental car company to take care of that. And I don't need to talk with someone and if it's late at night I don't expect someone to be awake for me placing this demand. And, so, understanding the context and understanding the situation is highly important for that. And sometimes it's even cheaper, it's easier and the customer is happier with a completely automated interaction.

But, in some situations, when something big happens, maybe I want to speak to some or maybe I'd want to see that person from one of the branches of the car rental company, and I want someone to talk to me and 'I want you to understand whatever happened'. And this understanding is so important. From my point of view, this will be a differentiator for companies, but there is no strategy like saying, 'Okay, the ideal mix in the industry for that product, for that customer in segment is exactly like this.' No, every company has to define it and get it into their culture as well, how they mix and how they share the kind of interaction. And then they will actually get something like an emotional bonding to that customer.

**Paul:** I think another way that companies can approach it in addition to that is through data-driven product design. Fundamentally, what personalization is about is that when a customer shows up, whether online or in person, you want them to see a little bit of themselves in that experience and what a company has got on offer. And one way to do that is all the techniques we've talked about. Another way is to use the data that you can collect on customer interactions to think about what is the next product we should be offering?

One of the sort of pioneers of data-driven product design is the online gaming and gambling industry, where they'll have hundreds of games running and that allows them to mine the interactions with those games to identify pockets of consumers that don't have a game that's there for them.



It might be a group of people that seem to interact or like the game on their commute, who might have a certain demographic signature, who seem to like bright colors, who, you know, like the game for short periods of time, but frequently, and what the online gaming industry figured out, is you could take that data and take a test-and-learn approach not to just the rules of the existing games they had, but to launch entirely new games.

Now, of course, in a gaming context you can turn out products as quickly as you want, which is different than, let's say, a financial institution or even with fast fashion, a clothing retailer. But I think that's a critical element to take into account: that on the one hand personalization can occur on the fly in an interaction with customer, but it can also occur over a slightly longer period of time, such that that same data we get on the interactions with customers can be built in increasingly at a rapid pace to 'How should we be tweaking a product? How should we be launching new products? How do we even retire products in order to either address a pocket of customers that share certain preferences or, to recognize that a type of customer we thought existed from our expert experience from years ago possibly doesn't exist in the same form today.'

**Amanda:** That's fantastic and really insightful. From my perspective, too, I think about how brands and companies can create emotional connections and we can do so much through data and that almost covert understanding of consumer behaviors, but I don't think brands today should also forget about the more overt ways that they can still create personal connections in a digital environment.

Now, we certainly saw through that start of Covid that increase in customer communities created by brands, which in these days are used for co-creation and discussion sessions that I think create that interaction with a brand that feels still very human and creates that sort of emotional connection.

I also saw that good old social media still played such a strong part in how brands presented to consumers a very human touch and human face, at a point when they had to quickly pivot to digitization and the types of communications that went through social channels were often much more transparent and honest as they're giving a face to brands that hadn't been seen before, as they admitted to customers that they were struggling as well with what was happening. And I think being able to interact with customers in a much more meaningful way using those channels and then also leveraging their data is a really powerful way to be both overtly and covertly connecting and creating engagement for the long-term, as you said, not a short-term, potentially for a really long-term relationship.


I guess we're seeing that sort of move to digitization and to e-commerce. I mean, do you think that this kind of shift to e-commerce and brands having to shop in e-commerce more and more is fundamentally going to change the relationship between customers and brands?

**Paul:** I think it does fundamentally change it and I'll touch on one of the ways and come back to something we talked about earlier that it can change it negatively. And I think it's important to take into account that creepiness factor. On some level, the use of a lot of this advanced technology that we're talking about replaces, as you just suggested, the experience we all used to have in the old days.

Let's take the banking example again. We use today complicated analytical models to predict the likelihood that someone's going to default on a loan to determine whether we should loan to them at all. And then we have personalization engines that we might be running to try to figure out what's the right product for them. In the old days, that happened when someone walked into a banking branch in the town that they lived in and the credit check was, Sally walks in and the clerk sitting on the other side of the desk from them knows Sally's aunt and grandfather and has been to the farm and all that, and says, 'I think Sally's got a decent chance that starting up her wool business [or whatever] because of all I know about her family' and then that's the credit decision. And the technology has to replace that.

The challenge is, when someone's not sat across from you, you potentially know quite a lot about them, but there's things that you don't know. And to take a couple of examples of when we get these creepy interactions, one from 10 years ago, which was fairly well popularized, where a very successful and quite sensitive large kind of physical retailer at the time collected a bunch of information on a set of products that a young woman was buying—I think she had bought something like zinc tablets and cocoa butter and a rug or something like that—and figured out that there was a very high likelihood that she was pregnant and started sending coupons for baby stuff to her house. And the problem that they had was that her parents didn't know she was pregnant and that created quite a negative, emotional experience for everybody involved. And that was 10 years ago. There's an entire lifetime of technology that's happened since then. Another element to that, and again, extending the sort of example around pregnancy, with all the information that we might know, let's say, from a social media platform, we might know that at a certain point in time someone was pregnant.

But as, you know, just because you're pregnant today, doesn't mean you're still pregnant a few weeks from now because of bad things that can happen or the baby's born. So, there's a time element that we need to keep track of; with all these very rapid interactions things can change quickly. And, so, it's important to understand a couple of things. One is, just because we're given the authorization by a customer to use their data for one thing, we need to be very sensitive about what is it we're using it for now and the distance between the permission that's given and the usage of that data can be longer than we think.



Either just because it seems quite adjacent in terms of how we're using it, like in terms of coupons for baby supplies, the potential distance because of information we don't know about that person could be enormous and it could be unacceptable.

So, I think that's one of the key things to keep in mind, is that, with all the promise of this stuff, we need to be really sensitive and even quite systematic about measuring, for example, the distance between what the customer has allowed us their data to do and what we're doing with it today. And that extends beyond the sort of cartoonish examples, using my blood type to figure out what type of drink I might want for dinner or something like that.

**Amanda:** Yeah, it does seem that this kind of creepy versus cool, I know that sometimes it sits within that generational issue. We know that there are some segments of consumers that are probably more concerned about how their data's being used than others, but there actually is quite a nuanced argument as you said. It's not just about certain types of people think it's great and other people don't, to have data to drive personalization. It's also about how that data is being used, for what reason, and for the timing as well. But to get to personalization we've obviously got to persuade customers to actually share that information and given we get the sense that quite a few people are still reluctant, what are your recommendations for how we could get companies or organizations to get customers to share their data?

**Tom:** There's this one point and we always have to look: what is actually the job we need to do for our customers? And I think every company has to think about that. And as this methodology and jobs to be done, which is really helpful in that finding out what the leads are and how data, how information and how customers sharing these pieces can help increase the experience of the product, of the interaction.

And I would go to your point and I would say in the end data sharing is not creepy at all if there is a clear benefit for me. And if the organization is able to tell me why they're using this data, I'm happy to share the data. And if a car manufacturer tells me, 'I have to see where you're going, how fast you're going, because I really want to ensure that you will be going safe from A to B and this is very important for you', I'm saying 'Yes, please do that because it's my life and it's important for me.' But it's my decision. But whenever I'm asking, I'm getting exactly the reply, which is true. And that's, again, about the relationship. A relationship between a brand and the customer will be built on trust. And I think this trust is very important and you can increase the trust when you understand the job you have to do for your customer and you're performing very well doing it. And that's the kind of circle you're going through. And then the statement that 'nothing is creepy if the benefit is clear for me' becomes very true.


**Paul:** Yeah, I think Tom raises a good point, which is, one of the things that the types of technology we have available to us today allows us to do is simply ask the customer on a more regular basis. Just to give a personal example, having come through what we've all come through with the pandemic the last year, I've taken quite a lot of walks and at a certain point I got a new smartwatch, which I started to notice would ask me when I was out on the walk if it wanted me to turn on the exercise tracking app basically on the watch. And so I had the opportunity to say, 'no, I don't want you to do that' because... I don't know why I wouldn't, but... or it's to say 'yes' and it's just adding that step of asking the customer what they need help with. As opposed to potentially taking advantage of the customer in a way that they may see us literally taking advantage with a negative connotation to say, 'I know you're on a walk. I've activated the following seven things, and here's your sort of print out'. That could be quite a different customer experience.

So, with all of the modes that we have to interact, whether it's in person, whether it's through a periodic email or physical mail or push notification, or whether it's via the increasing number of devices that we have, that we lug around with, I think there's a massive opportunity for brands to pick the right moment to simply ask the customer if they need help with something.

**Amanda:** It really just suggests that it's another form of dialogue with customers, isn't it? That it just is increasing a sense of transparency, which, at the end of the day, leads to a sense of trust and reputation, which as you both said is actually core to getting this sort of data sharing going. So, I don't think brands should be afraid of leaning into asking for permission, should they?

**Paul:** If you take the insurance example, I think it would be incredibly valuable for an insurance company to be in a dialogue with their customers or with prospective customers about what's going on in their lives. I personally don't always know exactly when I need insurance and for what, but I tend to only interact with my insurance company once I've concluded that I need a specific type of policy or a change to a policy or whatever. And that probably, for my own sake as a consumer, doesn't happen often enough. So, ideally, you do want to think about it as exactly that, as a dialogue, and then the trick is, to some extent—whether you're an insurer or a bank or whether you make socks or whatever—'What do I think would be a useful conversation to have from the point of view of the customer and how can I engage them in that?' Partly enabled by technology, but, as we've said, partly just enabled by thinking about the customer relationship in a slightly different way than we have if you go back, certainly, 20 years or so.

**Amanda:** And that's the key, isn't it? That really, at the end of the day, personalization is driving a different type of customer relationship. And getting back to my original point, I think it's a really exciting time for consumers and brands to interact in really increasingly sophisticated ways of mutual benefit to both.



I guess that's the ideal aim. So, as we look ahead to that future, and just to close it out, I was thinking for both of you, what would be your most important piece of advice to organizations as they look into this future of your amazing digitized experiences, with great personalization, but of course, with their fears that they might also be alienating customers if they get it wrong? What would you be saying to these organizations?

**Tom:** I think there is one point, which is very important. Personalization can be in two dimensions. It can be the product, which is personalized and through the usage of the product having increased interaction, maybe digital. We can see this in many industries that the physical product is getting connectivity and then you start interacting with the brands and relieving data. And, on the other end, it's the interaction over the lifecycle as well. It is really going into sales and marketing and how do you understand the lifecycle and how do you build a relationship, a long-lasting relationship, which is always very important?

Maybe not every step in this relationship and interaction is all about selling something. It's really delivering value. And, so, building these two dimensions—meaning the product experience as well as the interaction experience—and how data is shared to become more post-personalized in those two dimensions.

I think there is one thing we all need to do: think from the customer point of view. Always think from the customer point of view, then this will be something which is really giving a benefit and customers will trust in that product.

**Paul:** I agree with that. And if I had to add to that I would say one piece of advice, whether you're a data scientist working at one of these companies or a brand manager or a CFO, I suppose, is one of the most important things we need to remember to do is, while we rely on this personalization, introduce things that are outside of that.

There's a concept in data science (or a type of algorithm, really) called a perturbation model. A perturbation model is where you create an event or use an event-based data set to alter the outcome of a model. And one of the most important things, I think, is not just to rely on the fact that we are in a position and increasingly will be where when anybody walks into the shop, we know why they're there, but to introduce something that is a little bit counter to that. It might still be driven by data—what we know about customers, what we know about what's going on in the world—but to introduce those perturbations and to see what happens. And it can be a great way to make sure that our recommendation engine continues to work.

There was a thing a few years ago—a little bit apocryphal but still kind of true—about recommendation engines converging on themselves because they recommend stuff and we take it and they recommend it again and you just end up listening to the same country song over and over again. It's not exactly what really happened, but it is important to introduce new things and those new things can come from the minds of the experts that we have thinking about where the future is headed that we've always had as much as it can come from data. But I think that's as important as trying to think clearly about the emotional relationship we want, trying to present surprising things and seeing what information that produces and how people react.

**Amanda:** That's great. Thank you both so much for the discussion. It's been truly insightful and really great to think about the future. And I hope you both have a lovely evening.

**Paul:** Thank you

**Tom:** Thank you!