Podcast

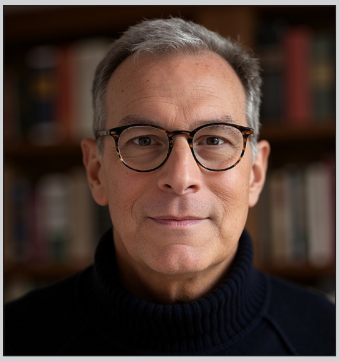
Customer first thinking.

# The Future of Customer Data Management

An Interview with Chris O'Hara, Global Product Marketing Lead, SAP Data and Analytics

**Chris O'Hara:**

Chris O'Hara leads the customer data solutions practice at SAP and is the co-author of Data Driven: Harnessing Data and AI to Reinvent Customer Engagement.



Back when mainframe computers ruled the world customer data at the individual level was kept under lock and key by the high priests of IT.

Marketers were usually given only limited access – sometimes no access at all. Computing time was just too precious to waste on non-operational uses of the data. Busy IT staff gave low priority to ad hoc queries or list pull requests coming from marketing. It was the Age of Big Iron - siloed data stores, large and very pricey Relational Database Management Systems (think Oracle) – monolithic legacy applications and systems designed to keep the lights on (think SAP).

IT resistance to marketer's pleas for data began to lessen by the early 1980s as the cost of computing began to drop. Database marketing suddenly became fashionable. And then CRM systems stormed the market in the 1990s (think Siebel), generating new sources of customer sales and service data. By the early 2000s SalesForce had proven that CRM could be served up as a cloud-based software service instead of a costly on-premise system. CRM became more affordable for a broader range of businesses. Now all kinds of personally identifiable customer data was available to marketers.

But it was the explosion of Big Data in the mid-2000s, spawned by the Internet, that began to throttle internal data management systems. Traditional data warehouses simply couldn't cope with the incoming deluge of web-based data in its many diverse forms. So a new form of database came along to deal with the problem: data lakes (later evolving into hybrid "data lakehouses") designed to serve as vast catch-all basin for raw data that could be directly queried by end users.

Yet even with all of these technology innovations, the goal of a "Single View of Customer" – "One Version of the Truth" – the so-called "360 degree" view – remained elusive, more an aspiration than a reality. Marketing had its own view of the data – Customer Service and Sales had their view – Finance and Operations had their view. Separate islands of customer information. Piecing together a common view – a unified customer profile – meant that data engineers had to work across different application siloes, extracting, cleaning, transforming, standardizing and loading the data into a single master database. Often those projects hit a wall due to the enormity of the task.

Just over a decade ago another technology came along to make the collection, integration and activation of customer data much easier. Called Customer Data Platforms (think Twilio Segment), they were initially pitched to businesses primarily as an enabler of omnichannel engagement where identity resolution and management is crucial. Soon CDPs won a preferred place in the data management firmament

of many companies, highly valued for its integration capabilities. At last, a single view of the customer!

Today there is growing recognition that a unified view of the customer, structured around first party data, is the key to competitiveness in an AI-driven Experience Economy. Even the C-Suite is starting to appreciate that a reliable, unified and dynamic profile of the customer, enriched with consent and preference data, is a strategic asset deserving of investment. A properly architected customer data foundation, many companies have finally realized, can in fact drive business growth, in part because it leads to a better customer experience.

So once again customer data management technology is evolving to support the need for real-time engagement and personalization as well as AI-orchestrated customer journeys. Rather than function primarily as a point solution, CDPs are being retooled to operate at the enterprise level – so-called "composable CDPs" - that sit astride the modern data warehouse ingesting data directly (think Snowflake). No more copying data from one database to another. The advantage to marketers: a customer data backbone that the entire company can rely upon. One that no longer has a sign on the door saying, "Marketers Keep Out".

At one time Chris O'Hara was one of those data-driven marketers knocking on the door of IT. Today he leads the charge at SAP to transform the marketing data infrastructure. He believes that in order to deliver a more personalized customer experience at scale, organizations will need to link supply management and demand creation. They can only do that, he argues, by creating a "data fabric architecture" that provides a seamless view of customer data across all sources and formats. Chris has spent most of his career as a pioneer on the front lines of customer data management, and is a recognized expert on data-driven marketing. He excels at demystifying the Byzantine subject of customer data management.

I started by asking Chris to give an overview of his career path, from onetime aspiring copywriter to data management expert.

CO **Chris O'Hara (CO):** I've been in AdTech and marketing tech for a really long time and probably, you know, I don't want to say too much about my age, but started in print, right? A very long time ago where you know, we were actually selling ad pages and then the Internet happened and we could sell banner ads and special web publications. And back when I was at Nielsen, you know, we had a department for digital, you know, E-media we called it. So it's totally separate from everything we were doing in print. So I really grew up with the Internet.

And in the very early days of banner advertising and sponsorships and then was in marketing, during the dot com boom where I remember trying to buy the homepage from Yahoo. And these guys came in and they wanted, you know, 2 million bucks because they were the front page of the Internet. And Google hadn't really taken off at the time, so always been in it, but didn't really get a lot of traction in my career. And so I got really deeply into the data topic. And I was kind of running a company that did like a programmatic marketplace for advertising. And we were going to have like publishers post their, you know, remnant inventory in a marketplace and let agencies come in and buy the inventory. And we thought we were really cool and slick. And then we built all this technology around it and third party data was something new. You could sort of append your audiences with all kinds of different third party data.

And then, you know, kind of really smart guys who knew the Internet a lot better than us came in, developed AppNexus[1] and it was Brian O'Kelley and all these guys from the really old days of DoubleClick, right, who came in and we looked at that and we said, oh my god. They built the thing we were trying to build, but we just didn't know how to build it.

So during that time, knowing a lot about technology and meeting a lot of other companies, I started writing for a publication called Ad Exchanger, which was starting to become popular as programmatic media grew up. And I had a data, uh, driven thinking column that, and I just post like stuff I was thinking about all related to like data and data management. For some weird reason it became a really popular column and people would like be like, oh, are you Chris O'Hara, the guy who writes this thing? And I'd be like, wow, like, yeah.

And it got a big readership and , you know, I caught on with that and it caught the eye of a guy named Tom Chavez who was founding a company called Krux[2]. And that was a data management platform. And it became really popular with big publishers like the Wall Street Journal and the New York Times. And he was like, we're selling all these publishers, but we think there's a marketing use case for these data management, uh, platforms. What do you think? Do you want to run this part of the business? And I was like, sure.

We didn't really have any customers. I think, Kellogg's was our first one. We got really lucky with timing and we figured out a really cool use case for Kellogg's. And essentially Kellogg's had always suspected that they were getting ripped off, right? Losing a ton of money. Like, they were doing well online, right, with their banner advertising, but they just had a suspicion that they weren't being as efficient as they could.

So we put all these tags on their site, tracked all their advertising, and of course, based on our publisher, like, we had billions of hooks on the Internet, right, billions of profiles built up. And when we looked our data up, we're finding out at the end of the month, Kellogg's was serving 400 to 500 ads every month to the same people. And then when we really dug in and we clicked into the campaigns, we were like, any exposure after about 12 ads is wasted. No one cares. They get banner blind. They don't even see the ad anymore.

And we went to Kellogg's and we said, you know what, if we just suppress every single person who's seen 12 ads already, you probably save $20 million a year. And they were like, holy crap, that sounds good. And it worked. And we actually hired their head of marketing, this guy, Jon Suarez-Davis[3], JSD, who's kind of a sort of semi famous guy right now. He and I went around the country with our sales team and we literally convinced every big CPG company to buy this Krux, this data management platform.

And then it was off to the races. Salesforce bought our company for $800 million. And then at Salesforce, I ran data and analytics for them. And, you know, we acquired five or six companies at the time, really cool stuff. We built a CDP. I wrote a book about CDPs with your friend Marty[4], who I know you've interviewed before. And then, I got a phone call from SAP, which I really didn't know too much about, but they had a marketing arm, the CX arm, and they had built a CDP and they wanted me to come run marketing for that. And I've been there for about three years. Interesting story there, but I'll stop there because I've been speaking for a while. (11.39)

SS **Stephen Shaw (SS):** Well, that's all right, go ahead. Now you have me on the edge of the seat wondering what that story is.

CO So the situation in Salesforce, just to back up, was we had this really cool data management platform and Salesforce knew a lot about known customers in email. Like, they did email marketing like nobody's business. I think when they bought Exact Target 10 years before we got acquired, it was a billion dollar acquisition. And one of the bigger ones in AdTech at the time, or marketing tech.

So they knew everything literally about the email consumer. But once someone didn't open an email or click on something, they didn't know anything. And they were like, what are these cookies? And how do we identify customers who we don't know their email address? And the notion by acquiring our technology was that they could have a 360 degree view, like what the person was doing, you know, in their known domain space. And then also through our technology who the person was online. Were they a Minnesota mom? Were they, you know, a travel intender? Were they automobile buying intender? Were they a suburban dad, whatever, you know, young kid, teacher? And we had that data and by putting those things together there could be a more complete marketing platform.

And then we, you know, acquired stuff at Salesforce and other technologies like Evergage, real time interaction management, Datarama, marketing analytics. But always, we had all this really interesting data and data management sitting in Marketing Cloud, which wasn't really Salesforce's business. Like they invented the CRM, right? That was their core business, right? They invented, in the cloud, I was like, why the hell do we have all this intelligence around data in the marketing? Why wouldn't it also be in CRM? And that became a long conversation about data management in general. And eventually just as I was leaving, we were thinking about what they're calling data cloud. So horizontal data layer sitting underneath everything, CRM, Tableau, Mulesoft being a part of it, whatever. A service cloud obviously, right? Managing everything and understanding everything about that consumer or account. And then the intelligence living there rather in the application layer.

So when I came into SAP, I looked around and I said, geez, you know, SAP is really similar. Like, we built ERP, right, similar to CRM. That's our core business. Why do we have this really cool data management technology in CX to power email and commerce and CRM, our own CRM. That's really dumb. My boss at the time got it and I knew I had to move my team and our CEO at the time,

our CMO at the time, Julie White was great to me and she put me under this guy, Dan Yu in the main part of the business, data and analytics. So we were building also a data layer to support this idea of having one database to rule them all, one area of intelligence. And we were building what we now call and know of as a data fabric. So in our case, ERP is the center of the universe. We know the account, we know supply chain data, we know pricing data. People use us for finance, for hiring, for HR intelligence, for... (15.06)

SS To run their business, really.

CO …run their whole enterprise. So more of a B2B feeling. But we should have underlying all these separate siloed applications like a beautiful data fabric that stitches everything together, that semantically unifies data, understands what it means. We should build a knowledge graph under that that connects all these different sockets of attributes together and knows how they relate to each other. And that ultimately, when AI really becomes of age and there's this thing called agentic interactions…

SS Agentic AI, yeah,

CO …that will give these agents someone to talk to so they can be really effective. Now we're not there yet, but now we've migrated early versions of what we're doing, which we call Datasphere[4], into a fully blown data cloud offering which we'd recently announced. So I'm really excited and, and the efforts we did with CDP will come in as foundational parts of that service. It'll live on its own as an application of course. But we're really trying to tie everything together and give our customers really super strong data intelligence layer that relates all these things together.

And then what we want to do for the first time as a big company is really open up our, what's been sort of a walled garden, and we know that our customers use best of breed applications. So how do we safely integrate SAP's data, which is really world class, and let our customers use that data and intelligence layer in everything they do?

So that's been my journey and it's been really, I mean it's a little geeky but it's been super exciting. You know, I found even though I'm getting further and further away from AdTech and marketing, everything I learned is highly applicable, you know, because everything we're doing ultimately results in a consumer or a person like you and me creating data, interacting with data, and being the endpoint of all that activity, all that intelligence.

SS Your value, certainly in terms of your published work is really piercing or demystifying, should I say, the data world and explaining how it connects to the broader, not just marketing, but the broader customer experience. And we're going to dive into some of these subjects as we, as we go through the conversation. So just before we do that though, because I want to, you've said a lot that puts, that is right on the frontier of where we are today and I want to unpack that as we go through this conversation for the more casual observer, if you will. And, you know, marketers, whilst they use data, not just don't really understand it, but they're not that interested…

CO Yeah.

SS …and it's so critical going forward, as we all know. So, so we're going to come back to that. I do just want to close out a bit of a conversation about AdTech because there's two things that have happened recently. And I want your perspective because again, your roots are in that industry. And one is obviously Google's retreat from phasing out cookies. And does that suggest that we're not looking at a cookieless future as everybody's been concerned about? And the second part of this question is Mark Zuckerberg's comments recently announcing effectively a jihad on the ad industry, declaring that Meta is going to deliver an AI-based turnkey ad solution that basically eliminates all the intermediaries, which sounds like a massive land grab. So between those two events, just recent events, what's your perspective on the future of the digital ad business? And does that put even more emphasis on the importance of first party data? (18.49)

CO Yeah, so it's an interesting question and a long time ago I was writing an article on, you know, something that we started to call the AdTech tax, right? So you take a dollar, a marketer starts with, like, a Kellogg's, or a Pandora, or you know, Keurig, whoever, Campbell's. And then by the time that that dollar gets to you or me seeing uh, an ad digitally, it's been devalued to about $0.20 because you got a lot of third party data in there. And then you got an ad server and a publisher ad server and a marketer ad server and you got an analytics fee and a delivery fee and god knows what else. And it really gets diluted.

You know, first of all, I'll say this, I never really was a big believer in the digital ad ecosystem and AdTech was largely, I'd say 90% forever about banner ads. And they're really not good ads, they're terrible, the creative's terrible, you can't convey a message. As Kellogg's discovered, people very quickly get banner blinds. They're reading an article, they don't like pop ups, they don't really like the format of the ads. Rich media got a little interesting where things would like, get bigger and turn into a TV thing.

So I really think the future of that part of AdTech is dead. And obviously we've seen a lot of focus on CTV and all different kinds of connected TV. And I think frankly I was just reading something about maybe Samsung or was it the trade desk doing a partnership with MasterCard. So we want to close the loop on attribution. We want to know, is this stuff really working? Is it effective? And that was the land of Comscore and Nielsen for many years. Like you put so much money into traditional cross channel media and Nielsen could tell you, well, for every dollar you spent, you got X in return. Very janky and not very a trustworthy model, that marketers relied on. But it was something.

But now if you think about it, I can digitally target a household or even at the individual level through my TV, whether that's through an ad serving service or Samsung itself who's like, honestly, let's be honest, they're watching and listening to the household all the time with their little $700 TV. And then if I happen to be partnered with MasterCard and then maybe add AMEX down the road, I could certainly relate half or more of my attribution to an online purchase that I could track. Then I'm really, in business, like, if I'm a marketer, I know exactly how much I would spend, I know effectiveness, I know how I would plan that and we'd be off to the races.

So that's where I think it's going. I think it's a super interesting world we live in, but I think we have to, you know, go beyond the scammy, kind of not very value accretive world of old school AdTech and get into a world in which creative comes first. And let's be honest, like, the emotional impact of a really good TV ads like, it's peanut butter and chocolate, like we still remember that 30 years later. How do we programatize that, get it to scale and then give someone the ability to measure it? That's where we have to go.

So whether Google denies the cookieless future or whether Zuckerberg unleashes AI to control at least the advertising you might be able to see on Instagram and Facebook. You know, those two places are both walled gardens and those two places are very, very dependent, except for Google, who owns YouTube, on traditional banner advertising. So I don't care about them. I mean, I care about them as a really valuable partner, but I don't worry so much that they'll dominate the future of AdTech as we know it. But they'll be big important channels and we have to decide as marketers. You know, I know I'm being taken advantage of a little, but I don't care because it kind of works. And you know, that's got to be my attitude, right?

**SS** Yeah. Follow the money and the money will shift out of those approaches, of channels, if you will, into more productive areas, as you're alluding to. And so let's … let's go there because, you know, a lot of what you've said at the start of this conversation is fairly profound in terms of the future of not just marketing, but business. So let's start at, you know, the highest altitude here possible. In your experience, in your understanding of the marketplace right now, have companies arrived finally at the point where they see customer data as a strategic asset? Does every company now need a customer data strategy? Indeed, a data strategy to begin with. And if so, what does that even say? What does that spell out for the organization?

**CO** Yeah, no, that's a really profound and interesting question. I think the answer is, yeah, obviously, as I was just saying, like, you look at you and me, first and foremost, we're consumers, right? We pay a mortgage. We have a bank account. We have a car. You need a new car every ten years. You got to send our kids to school. We got to eat. So, you know, all day long, we're consuming something. And every single company in the world sells to people. You know, whether you're Volkswagen or your big, you know, B2B software company, some dude or woman is writing a check for your stuff. So it's a people based system. The world is people based.

So, the notion that we can ignore customer data is absurd because the whole world can't operate without the customer. The customer is the atom, right? It's the atomic level of information in our enterprise, right? And then you have the customer, and then you ladder that up to an account, and the account is full of individual customers, which are important. And then, you know, you ladder that up at the organization level and you have different layers of which you're trying to create an impact as a marketer.

One of my favorite stories, and we developed this at Krux from a conversation I had with this guy Mike. And Mike was the CIO of Keurig Green Mountain. And we were in there to meet them, and obviously we're trying to sell them, like, some software. He opened up the meeting, a very interesting and cool guy, and he said, look, I got a question for you. We're thinking about putting a $12 chip in our coffee machines. You know, it's rather expensive. We sell about 100 million of these things a year. What kind of data could we collect from these machines? And how valuable would it be for us? Because we're in the business of data collection.

I was like, holy crap, that's a really fucking cool question. I want to answer that. And we started thinking about it. I was like, well, tell me what you're thinking about. And he's like, well, a lot of these things are in hotel rooms and people are kind of putting in a third party cup from Starbucks or Folgers, and we don't really sell those cups, those K-cups. But I kind of want to scan and see what brand these people are using when they're not at home. Then I want to find out if they like them or not. And I want to see when they're drinking and how many cups they brew a day. And then I want to give them the ability to reorder those cups just from the machine if I know they're running out. And maybe I want to put a video screen on top of the coffee machine and sell ads because I have 200 million Keurig machines out in hotel rooms. And what if I made you watch a 15 second ad before you put your coffee in and you got the coffee for free. But now I have the largest out of home television advertising network.

And I was like, Mike, you're really smart. Like, we never thought of anything like that. But then I started to think about, wow, you know, this guy has such a close connection with customers, but he sells most of his cups at a supermarket and really his customers like Wegmans or Kroger, and he has no idea who these people are, used to drink his coffee and what kind of coffee they drink and when they drink it. And this might be the bridge to get him that information. So even though he was this big and this powerful and had this much product in market, he really didn't know anything about his customers, right? And that goes for a lot of people.

I have another friend, Dave Smith, who used to run ads at Pandora. Maybe he still does. I haven't checked in a while. But they knew everything about what people listen to based on your playlist. They knew if you had kids in the house, how long you listened, everything about your musical taste, build the perfect playlist, knew your age, your gender, what kind of mobile phone you're on, where you were based on geo tracking other stuff from your phone, what you like to do, but they had no idea, like when you were going to take a vacation, or if you were looking at a new car, or if you needed insurance, or how much money you made, or what you did for a living.

So they were really totally blind, biggest mobile ad application in the world, maybe, and knew everything about your mobile identity, but nothing about who you were as a person. So in every one of those cases, the idea that you could ignore trying at least to get this sort of 360 view of a customer is absurd because that's really what you need to know to operationalize your business and move forward. Not just in marketing, in general. (28.39)

**SS** Well, so I was just going to say that. So what you seem to be suggesting here is that the business case of customer data as a strategic asset is really grounded in how this is going to drive growth for the business. Is that fair to say?

**CO** Yeah. What are the assets I have as a company? One is whatever crap is in my warehouse that has a physical value. There are some, my stock, right? And the future value of my company as expressed in the market or private market. But then there's really my audience or my customers. And they have a very distinct value as their own kind of asset. I would argue it's maybe the most important asset because without your customers, you cannot survive as a business, goes ignored and we put their data in all kinds of different applications and we leave it there and we don't connect it and, you know, we leave it for individual units of the business to use, right?

And it never comes together holistically so that we can steer our business and say, okay, as the CFO, like, I'll give you a great example. So we're going to go and announce something really strategic with a big marketing company. And for the first time ever, we're going to put SAP supply chain data with the big marketing company's demand data. And it's going to resolve in this beautiful dashboard which the use case for it is fairly simple. Like a marketing customer who does their email on this marketing platform may have 50 different campaigns running for 50 different, say shirts or pairs of jeans or whatever. And they're getting them out there

and customers are reacting and they're clicking on stuff and they're buying stuff in e-commerce, different sizes, colours, and they're getting all this demand data and yet, they have no idea what's in the warehouse, what's being produced, what's in the supply chain, can they deliver it? They're just going nuts and they're creating all this demand.

And on the flip side, at SAP, we understand all the raw materials, costs and the prices and what's available in the warehouse, when it could get somewhere, but we don't have the demand data. Should we buy more cotton. Should we produce more of the red jeans or the blue jeans? What should we do? How do I plan for this? And that world has never come together at scale. So what's interesting about what we're talking about right now, is by taking those two very distinct and forever siloed data assets and plugging them together, all of a sudden you're giving the enterprise a data point and an insight upon which to steer the business. Buy more materials, plan for more revenue, change the forecast, let the public market know what might happen. You may beat or miss your number, all things which are almost impossible to get at today. But there is the possibility that through this sort of data fabric approach we could get it.

**SS** I think you call it ERP to CRM...

**CO** Correct.

**SS** …fusing that into a pipeline. I'm going to come back to that because although it sounds like a technical conversation, it is a game changer. Just again, go back to the executive myopia that the CEO doesn't have that broader customer first vision and isn't able to anchor any kind of investment strategy and data to outcomes. With respect to the roadblocks that lie in the way, there are many and we know them. And you and I, having been in this business as long as we have, know them firsthand, fragmented data, data silos, poor data quality. We could go on and on and on. I mean the industry is trying to address them almost like one by one, but what else beyond that? And we know those are long standing, persistent issues, but what else stands in the way of, of the laggards from really adopting customer data as a mantra to say, you know, build it and they will come. What else is standing in the way of an organization putting some money into this and making sure it happens?

**CO** Yeah, well, a couple of things I think. One is governance and security. So, you wouldn't be surprised to know at SAP we have a lot of sort of big finance companies who really like, prefer to keep their data on premise and not put it in the public cloud. And although there's so many benefits, also public sector like, government will do similar things. So, as we pursue this innovation and we feel like this industry is moving very, very quickly, and all the things we read about are focused on like what's happening in the cloud. There's still a reality out there that there's many, many, many companies that have very slow to adopt the newer technology, right? So we have to be aware of that and their fear is justified because they're reading all the time about data being hacked and customer data being exposed and financial liability for that happening, and those are really real fears. So, I think there's a comfort level we haven't arrived at fully as a business that has given everyone the confidence to move forward. I think we're getting there, for sure.

You know, the second thing I would point to is we have a tendency to sell technical solutions in this business and not focus on outcomes and ROI. So when I think about like, what made us successful at Krux and what made us successful at Salesforce and how we're winning at SAP, there's always when we can relate something to an outcome and tell a customer story, and make it real. I just think software sellers, especially MarTech and AdTech, don't do a terrific job at that. But you have to be able to sit down with a CFO or CEO and say, listen, you know, I increased overall revenue here by 0.7%. And that could mean nothing for a pop shoe store down the corner, but for Volkswagen, you know, could be a lot of money.

So you have to come with very credible things, but you also have to show people how it's done. And also I think what this industry suffers for is a software company comes in and sells a very intriguing, powerful solution, but then points to their friend Accenture or another big GSSP and says, okay, well here's your partner. It will only take, you know, $10 million and five years to deploy this, so don't worry. So we have to also be very cognizant that people want to own, maintain and deploy these things more easily than they have in the past. We can't over complicate the solution. And we have to be aware of product truth. Like, we want to be able to not lean too forward over our skis and sell what's available

off the back of the truck today and not over promise and under deliver, which I think is another very common thing. Software companies in our space shoot themselves in the foot. (35.59)

SS No kidding. The 90s were all about CRM projects, bloated CRM projects, collapsing under their own weight.

CO Yeah.

SS So what you're addressing to some extent are cultural issues, language barriers, clearly the, you know, the inability of internal champions to sell the vision, the outcome for sure. Who should be in charge or leading the charge, let me put it that way, of customer data strategy? Now, is that the chief data officer, if one exists, is it the CIO? Is it, it's not going to be the CMO, but is it the CXO, perhaps? Who should take ownership, be the champion, be the advocate, make the business case, convince the CEO that it's not just a pretty dashboard he's getting. Convince the CFO that it's not just a financial sinkhole. Say there's a 10 times, 100 times payoff to this if we invest right and progressively build to this. What is the answer to that question?

CO Yeah, that's a really good question. And I think like, we're struggling this, with this at Salesforce for sure where … we sold in Marketing Cloud, anyway, I sold to the CMO, right? We're always talking about this idea of a customer 360 Salesforce-wide. And I was always like, there is no 31-360. Like there's a very specific marketing 360 which is important to the CMO. But like the CRO has their own right? And that's specific to CRM and what the data he needs to see or she needs to see. And I think there are multiple versions of a 360 and they're all very important.

Now, I see that even, even more intensely at SAP, right? Because, always our primary persona, right, is the CIO. They own the technology, they're responsible for it, they have the budget, even if they don't initiate the buy. Like, you know, like with CDP is, even though this category is kind of dying out, CMO would also always initiate and say, I need a CDP. Someone wrote a great article in Ad Exchanger and now I think I need a CDP and I don't know what I'm going to do with it, but I'm going to spin up the acquisition process. We're going to have 10,000 meetings and I want to buy one, okay.

But ultimately the CIO had to come in at the end and approve it because he's got other systems. He's got to marry this together. There's governance, security, blah, blah, blah. And do the thing. Now at SAP, CIOs again, still our major character in this drama. But, you know, the head of like, human capital management, who runs the workforce and wants intelligence around that, they own their own 360. And they definitely have way different thoughts around what will drive success in their application space. But that's okay.

And where we have to start to think about, and there's two pieces to this is, one example I'll give is at Salesforce we had something called, Journey Builder, and it was the evolution of email, where now you could build this customer journey and you can manage it. And there was workflow and there was AI that would tell you how you could change a journey from one thing to the next, and it was brilliant. But all the intelligence lived in the endpoint application, not in the data platform. That was silly. Like, why are we building all the smarts into this application? That's stupid.

And we're still like that as a business. Now we're starting to transform and say, okay, there's this data infrastructure. It contains all the data attributes, it's got a knowledge graph underneath it. Maybe it's built on a vector database. It's super smart, right? It connects all these things together. That's where my, I could build the journey there. That's where I want to start. So I would say to the SAP customer, now, for HR intelligence, your knowledge base sits underneath in our business data cloud. And we're going to bring the intelligence to the application rather than vice versa. And that's true for HR, that's true for, you know, purchasing, where we have Ariba. That's true for travel with Concur. That's true broadly for finance, and ERP supply chain, what have you. And that's a really important mind shift because, you know, like, let's, let's be super honest: Salesforce built through acquisition. They pioneered CRM, they acquired a lot of other things. The things they acquired weren't really meant to be stitched together, right? Like Slack, still not fully integrated. SAP pioneered ERP 50 years ago, built wonderful things adjacent to ERP over the years or acquired them. But those things, you know, weren't naturally just going to plug in like Lego to the core application.

So now we have the opportunity with this business fabric and this approach of a data layer to do those things. But let's let the intelligence live underneath and let's let the applications access that. But now here's part two. Now we're in a world where all the biggest software companies are like,

holy cow, this AI is really crazy. Like, and I don't know if you've seen this on the Internet, but there's an agent for one company talking to an agent for another company. And they start talking like, hi, I'm the agent for, you know, duck call center[5]. And I want to know if you have this in your inventory. And then the other guy's like, well, let me check my inventory. And then they discover they're both AI agents and they're like, they're talking to each other in machine speaking, like, oh my god. It's robots.

But that's exactly what's going to happen, right? AI is talking to AI agents are talking to agents, but to whom are they talking? They're talking to these data clouds and they're discovering with the available data under there what they know about each other. And the first question they ask, or they say start with, here's what I want to know. Do you have this information? Then the other agent says let me check if I can work with you. And also if I can, if I do have the information and then there's maybe a handshake, maybe there isn't. But if there's a handshake, a lot of really interesting things happen underneath and a lot of stuff gets done very, very quickly.

Now they will come up with three different answers to the same problem, which is kind of what we're experiencing today. So rationalizing those conversations is going to be difficult. But that's the future. So let's imagine this future. Are we going to need salesmen to type stuff into a CRM system in this world? Are, how many call center agents are we going to need in this world, right? Like, what does that look like? So am I going to be, you know, a middle manager at a software company who writes really interesting slides in this world, right?

We don't know the answer to those questions I'm afraid. Maybe we suspect that we won't be as needed. So we have to build for that future of mind. And what the differentiator is and what powers this future is the underlying data layer obviously. So that's where the battle is. That's the next 10 years in software. And that's going to manifest in many, many different super interesting ways. We might not like them, but that's what the future we're looking at.

**SS** The implications for marketers are a little scary given some of the prognostications I've heard, you know.

**CO** I've spent years trying to sell marketing automation and marketing planning systems to ad agencies. And after a few years I started to realize, these guys don't want to be efficient in media planning. They're taking a lot of smart 23 year olds, they're paying them $9 an hour and they're billing them out $25 an hour. And the longer it takes them to build a media plan, the more money they're making. And I'm coming in there saying I can eliminate, you know, half of your media planners with this really cool technology. Well guess what? No one wants what you're selling, that kind of is where we are right now. (44.37)

**SS** Well, and we could go on a tangent here, because that's a whole podcast in and of itself, for sure. I do want to, I mean, you've thrown out some terms that the audience is not going to be that familiar with - data fabric, obviously one of them. I do want to come back to that because the data layer attached to a knowledge layer is crucial, and you've been alluding to that through this whole conversation. But there's two other aspects to this. You've referenced CDPs being a dying category, and I think what you really mean, there's an evolution going on there and I do want to dig into that. So that's where I'll go next.

But first you make the point that building a modern, this is your words, "modern data management infrastructure begins and ends with mastering customer identity." And you wonder why identity and authentication management still doesn't have really a seat at the table, as you put it. I know you have a very strong perspective on identity resolution and so crucial to everything else, right. Obviously, having that SVOC. How should companies approach this idea of identity management? Identity graph, et cetera? What if that's at the heart of this, of all of this? What should the approach to it be by companies?

**CO** Yeah, so that was like, kind of what we were working on at Krux, because you know, there are a lot of different pieces of individual identity that constituted a profile, right? And we used to have this really cool depiction on the left side. There's data in. And you had 50 different ways of identifying Chris O'Hara, right? There's several dozen cookies. There's a mobile ID. Apple has a very special Safari ID they associate with. There's your Chrome ID. There's, you know, all kinds of signals from all kinds of places. Your laptop has an ID. What if you have a tablet, that also has an ID? Your car has an individual ID.

So millions of these things, the Internet of Things, and all of these things have to be put together into one persistent profile of Chris O'Hara, such that, and here's where

Kellogg's comes in again. Like, if you're marketing to me on my mobile device and my laptop and you have no idea that I'm the same person, again, I'm getting overexposed to your messaging and you think I'm two different people. And you're budgeting now, you've doubled your marketing budget because you just can't figure out that I'm the same guy on my phone as I am on my laptop and my tablet or whatever, right?

So that's number one. So the idea that you have to this persistent ID and have a source of truth around Chris O'Hara is super important because then you can evolve that idea over time. You could track behaviour, you could see where I go on mobile devices, you know what the weather is, where I am. You can make decisions based on that. But then on the data out part, right, so you want to reach me. So say you've figured out the puzzle of Chris O'Hara, now you want to reach me wherever I am. Well, each individual endpoint or platform has their own idea. So Pandora has theirs, New York Times has theirs, the Journal, the trade desk on and on and on, right? There's probably hundreds of them. So now if I'm this platform and I say Chris O'Hara's ID number 123 and I want to send him to New York Times, the New York Times is ID number P104X. So P104X has to equal Chris O'Hara 123. And then the match is made very, very complicated. So without some of that infrastructure you cannot be an effective marketer and you cannot do effective analytics and you will never ever get to attribution because you think you have 25 Chris O'Hara's and 25 other platforms say you have now 50.

So that problem has to be solved. And when I came into SAP, I also helped manage a company called Gigya, who did a great job putting first party data together in a very similar way and helping people log in and create their identity and dealt with first party identity resolution really well. So there's the notion of getting the digital version of Chris together with the PII based version where, you know, my email and my phone number and my physical address and putting that together and then also being able to actually give me some ability to manage that with permissions. Well, I don't want your SMS messages, I don't want you to call my phone. Can you send me an email? Sure. Do you, do I want my banner ads personalized? Why not?

So that's governance and without that you lose the trust of the customer. So you need the ability to provide that as well. Now, every company thinks of this as a last order assignment, but it really is a first order of business because one, safety, security, governance, intelligence, right? And two, consumer trust, which without you can't do anything. So I don't know where to go with this. But I do, I agree with you wholeheartedly that this often becomes one of the last things we look at as a business and we need to really respect. (50.14)

**SS** Why is that? Chris, it's logical to make it the first order of business to have an accurate, unified customer profile that you can trust in and that the customer can trust in. I don't understand that part. Like, why wouldn't it be a priority?

**CO** Well, I think it's a huge technical challenge to do really well. And secondly, I think it's very expensive. And thirdly, I think we got used to a very like uh, lackadaisical set of regulatory or a regulatory environment that doesn't really care that much. And we've seen all kinds of big companies break these rules and just get a little slap on the wrist for doing so. And we look at that and say okay, maybe I don't have to care that much, right? And that's really horrible. And then we perpetuated that ourselves as an industry and AdTech and we're living with the consequences of that. And one of the consequences of that is we've built these big walled gardens as places where we feel we can actually get to a real consumer more easily than the open Internet. And we really don't trust the open Internet that much. And we shouldn't.

**SS** Yeah. So I want to talk about CDPs. You co-wrote a book on it. You alluded earlier to the categories changing but it for a lot for many companies over the last five, six years, whatever that time period is, it has been the go to solution for single view of customer. Now we're going to move into the sort of technical area - they're changing. The integration function is moving to the warehouse level and I think the term's composable CDPs. You can maybe correct me on that. Or it's at the engagement level where it's in a customer facing platform. So I think of a platform called like Klaviyo, which is a B2C CRM platform which ties that data to the application quite closely. And then, you talk about though enterprise CDPs and being the only way to go. So help me understand, the audience understand, the differences of those three things and where it's really going to end up.

**CO** Yeah, I mean like, I don't know when I wrote the book, was it two years ago, three years ago, but it was such a burgeoning…

**SS** 2019.

CO Oh wow. Okay. That was wild. I mean back when I wrote that with Marty, burgeoning category, tons of money being thrown at it. It was the next DMP. Everyone had to have one. And we went from uh, you know, a, a dozen really interesting companies to 175 offerings. And my friend David Raab, who runs the CDP Institute …

SS I interviewed David as well. Yeah, nice guy.

CO Now some can accuse David of, of you know, perhaps intentionally having a broad kind of definition of CDP to drive, you know, his Institute. I don't blame him for that. But, like it or not, I'd say, you know, it's probably correct that there was 175 companies that were doing some sort of CDP-esque functionality. And he coined the term CDP and helped create this category. And now fast forward to today and we all thought this was the place to be, right? These big exits were going to happen. And one exit happened. I think it was Segment, or something. And then recently we've seen really, really high quality, fantastic companies have very, very low value as it's two companies you've never heard of for pennies on the dollar. Super disappointing. Like a very weird Gardner MQ come out around CDP, which a lot of people were confused by then. They're sort of changing their way of thinking about CDP. A lot of people going around saying the category is kind of dead.

And one thing you alluded to is very true. I think everyone thought for a little while that when you look at these big enterprise architectures, or marchitectures, everyone thought there'd be a box with the CDP in the middle and that was your data store, your process, your centralized point. And that became very untrue. As you said, I think people went right back to data warehouse, right back to the old school. I was very skeptical of that too until I moved to SAP and I saw the power of some of these data warehousing applications and how truly important, you know, ours, Snowflake, Databricks, right, all of that, some of what Google cloud platform's doing and of course some of the hyperscalers, but really truly like old school data warehouse capabilities obviously being brought to the cloud and scaled, are really what people want.

So CDP lost half its appeal because, it's not important for that. I can put all my data in Databricks and CDP becomes interesting for orchestration and for activation, and, you know, managing very specifically this profile I've developed but for very specific things. Now at SAP we could have built it very specifically for ERP or Salesforce could build theirs very specifically for their Marketing Cloud, or Oracle could build one for healthcare, that's interesting.

But is CDP, this overarching data fabric or data layer that can power at the enterprise level all of my applications? I think, you know, the idea of composable started with that thought. But most CDP is kind of narrowly focused in on marketing orchestration. And now, I don't know, it's kind of hard to like, differentiate yourself when you're building customer journeys and you're managing a profile and maybe you have more activation partners than someone else, but, you know, very expensive proposition for making email better. And I felt like when you really dug in and you looked at the use cases, most marketers are like, I'm going to optimize my email by 20%. And that's like, I don't know, really horrible use case for a very expensive piece of data technology to me. (56.38)

SS Yeah, well, I guess people kind of viewed it for marketers anyway as a fast track to having a unified customer profile in the absence of something, right? Because as you said earlier, the point applications don't really provide that, they're giving their own sort of pocket of data, if you will. So, but I'm just, I want to understand the data fabric part because I read the term a lot, I still confess I don't fully understand it. Can you just provide sort of a, a simpleton's - Simpleton being me - definition of what that really means?

CO Yeah, I mean it's not that complex or complicated. I don't think. It's the primary problem we're trying to address with the data fabric is really around how data comes together and how it expresses itself in other applications.

So if you think about it like the primary problem we're trying to solve with the data fabric is that, say I have the word customer, right? Customer means one thing in CRM, but I have another application where customer is expressed differently, and the fields are sort of different. And one, it may be capital C U S T and the other one, it may be full nordic Customer, and the other one would be small, you know, lowercase customer. So the way data technology is looking at this stuff, there are different fields and there are different ways I express this notion of customer, of price, of SKU, of product, of organization, of partner. And until we sort of semantically organize that data and give them one model, canonical model to come together, that data will never be able to talk to each other and build what we kind of consider this data fabric, right?

And the second part of the data fabric isn't just the semantic organization of the data fields and how we call them. But it's the metadata attached to these fields. What does this mean? Why is this data important? How is it used? Who uses it? For what purpose? And so there's a lot of actual metadata around that actual data that is super important.

And then the third thing is when we think about a data fabric is how do you relate those individual attributes we have captured together and how do the edges fit together, how do they relate? And that's what we think of as a knowledge graph. So a technology that organizes all these different data attributes, puts them together and figures out are they related, are they important, what is their meaning? And so it's a variety of different things that come together to have this layer of data that's actually got some intelligence within it.

So that goes beyond just the profile and managing it and knowing that Chris O'Hara is uh, a software guy and a travel intender, and a father of three, and lives in the zip code, and has this income. It's how I interact with all the attributes that surround me. How they relate to other profiles, how they relate to different applications in the application space, how they relate to non-human entities like things in the IT world. So it's a bit more complex. That's really the approach.

So if you, a data cloud or a proper data cloud should uh, operate in that fashion and build that really rich fabric around all of your data such that it can relate to one another. And I always thought when we were in the CDP business I was like why does the main thing always have to be - we talked about this before - a human being. But I want to have maybe a profile around a car and that's the key profile. And the car has multiple drivers and the car has technology on board and I want to know what's playing on the radio and how far each driver drives the car and how full the oil is. And that's really interesting. So I could build, you know, that could be in my data fabric. And I relate that automobile to the driver, to where it's been. And that may be really interesting for a Volkswagen or Mercedes Benz to know those things but, those data sets aren't connected today, at meaningful scale. (1.01)

**SS** In the industrial space I think of John Deere really thinking of itself as a data company now because it has that ability, sensor, IOT data to collect all kinds of information about the usage and then to deliver extra value to the customer as a result of that, so it's interesting …

**CO** We work with a tractor company and this tractor company knows they had a problem with some of their units and they knew when it was hot outside for a prolonged period of time and the machine ran for too long, a part would give up. So instead of letting that happen, that IOT on board the tractor would send the data up to the main computer and we discovered when that tractor was going to break. And two days before it broke they'd send the field team out to the farm and they'd fix it. The farm would be like, what are you doing here? And they're like well your tractor's going to break in two days. We thought we'd prevent that. That's what a data fabric can do, right? That's interesting.

**SS** And that's, that's the customer experience. But the hourglasses run out. I hardly can believe it. Just seems like we started this conversation, and we could probably continue it for two more hours. I have so many other questions, but I do want to end with uh, a prediction because we kind of started with that to some extent as you were talking about agent to agent swapping of information, automation of everything.

But let's go back to marketing for a second. Just what's your prediction? So in terms of customer data management and the future of marketing, how does that come together? You talk about to some extent bringing ERP and CRM together so that you get real time personalization or real time experiences by bringing those two data sets, fusing them and enabling it through pipelining. I think that's your term that you use. But just take, I know three years is almost impossible to think about today given all that's happened with AI in two years. But stretch your thinking a little bit. Certainly SAP must be thinking about this. But three years from now what's that future look like?

**CO** Yeah, I think it's really interesting. I think it's, we start to be more on the cusp of that agentic future and I think people settle in on who their data cloud is going to be and how they're provisioning their own enterprise wide data fabric, which should by the way be inclusive of ERP, CRM and

marketing I think. But there'll be one data layer to rule them all for individual companies.

But then we'll see from a marketing perspective, very similar thing to what Zuck's talking about I think, which is, you know, agents will kind of deploy really interesting multi-channel experiences to customers automatically with AI and your data cloud will be hooked up to many, many different endpoints, right? And agencies will be a lot less important. Individual walled garden platforms will be less important. The way you connect with these data clouds will be very important because they'll ultimately have the data that decides where those marketing dollars are invested in. And hopefully when we think of - going again back to the first part of our conversation - attribution, we may live in a world where we actually see if those dollars spent were spent wisely because there's some closed loop around how consumers reacted to our messages. But I don't think we'll be there yet. I think it'll take another seven years after that, but those start to coalesce.

**SS** A lot's happened, just as I said in the last couple of years and have people wondering about the future. But this is. Who knew data could be so much fun to talk about. But, you're a terrific writer on this subject, you're very clear and if anybody can explain this stuff, you can. Do you have a next book inside yourself brewing at this point? And I use the term brewing because didn't you also write books about the beer craft and beer marketing at one point as well?

**CO** Man, I'm hoping I can focus on another food book coming up, but I have nothing in the works. But we're working on some of these ideas at SAP. I won't be writing them but, my colleague has some interesting work coming out. Maybe in book form that discusses what I just talked about with these agentic future idea. And, you know, if you know of anyone who needs like biography Stephen, maybe I can write something about you. You gotta call me. I'm an, I'm a writer for hire.

**SS** Yeah. And yeah, as I say, you're a great writer.

**CO** So Marty asked me to write something again with him. That'd be good.

**SS** Yeah, I would think two of you would. He's, he's been quite prolific lately too. He's co-authored a few books since you last collaborated.

**CO** But he hasn't asked me. Well, he said he's going to think of something I can write with him. That would be, that would be fun, because he's a fun guy.

**SS** Well, that would be something to look forward to. Thank you Chris so much for the time you gave me today. This was extremely educational - and I had sort of fallen out of touch a little bit with the data side of things in the last little while and in trying to do some catch up and immersion reading, I'm just blown away by the progress that's been made and also the level of thinking around this now, so it's quite a departure. I started my career in, well, in the database marketing field in the mid-80s. Can you imagine? So, and I have stories to tell about those days, so it's fascinating to see what's going on today. So thank you so much for shedding some light on it. Really appreciate the time.

**CO** Cool. Thank you Stephen.

That concludes my interview with Chris O'Hara. As we learned we are finally seeing a convergence of interest by all parts of the business, not just marketers, around creating a trustworthy customer data foundation that can serve as a "single version of the truth". Today CEOs want more than just impressive looking dashboards – they want to know that the vast amount of data being collected is being put to productive use. At the same time, Marketers and CX Managers are yearning for a more unified view of the customer to enhance and personalize interactions in real-time across multiple channels and touchpoints. In the past any efforts at customer data integration were stymied by poor data quality – by the intricacies of identity resolution – by the number of disconnected data siloes – by competing IT priorities - but more than anything, by a lukewarm commitment to the idea of a unified customer view. Nowadays those roadblocks are mostly swept aside, partly due to advancements in data management technology, but also by the corporate urgency to deploy AI-driven software that is highly dependent on complete and accurate data. So customer data is now being seen, at long last, as both a strategic asset and an enabler of marketing success.

[1] AppNexus was a cloud-based software platform for programmatic online advertising, later sold to Microsoft and rebranded Xandr.

[2] KRUX was a data management platform (DMP) that was later acquired by Salesforce.

[3] Jon Suarez-Davis (jsd) is Chief Commercial Officer for super{set} which is a startup studio based in San Francisco that founds and builds data-driven software companies.

[4] SAP Datasphere is a data fabric solution that helps businesses connect and manage all their data assets.

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