

## Sell-side Briefing: Criteo Commerce Marketing Ecosystem September 14, 2017

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+++ presentation

Operator^ Good morning, and welcome to the Criteo Commerce Marketing Ecosystem Conference call. (Operator Instructions) Please note, this event is being recorded. I would now like to turn the conference over to Eric Eichmann, CEO. Please go ahead.

Eric Eichmann^ All right. Thank you very much and welcome, everyone, to our Commerce Marketing Ecosystem Call. Very excited to have you all here. Thanks for coming. I'll ask you, if you have phone, advise you just to put them on vibrate to make sure that they don't interrupt the call.

So today, just to set expectations, we're going to spend about an hour talking about the commerce marketing ecosystem. I'm hoping there's 3 things that you guys will get out of this. Number one is just to understand what it is, and so we'll go through description of different things that we can accomplish in commerce marketing, what it means, what that area is. Number two, what the opportunity is for Criteo and just in general at large. And number three, we'll hopefully give you a good sense for the unique opportunity we have as Criteo to capture sort of this area of commerce marketing.

We will not, today, go through any major announcements around product or management or anything like that. The intent is to get a better understanding so you guys can start thinking about what the opportunities for Criteo going forward.

So with that, let me just pass it on to Edouard, who's going to tell us mandatory statements..

Edouard Lassalle^ Yes, thanks, Eric. So we have a presentation slide, and I -- feel free to ask any questions to the last part of the meeting. You should (inaudible) interrupt on the presentation as well.

So before we start presentation, I'd like to remind that some of our discussion today will contain forward-looking statements. This may include information concerning a possible or assumed future results around business strategies, products and services, valued information and events of the competition, industry environment, potential growth and market opportunity. As always, these statements are subject to risk, uncertainties and assumptions. Actual results and the timing of certain events may differ materially from the results or timing predicted or implied by such forward-looking statements. Specifically, reported results should not be considered as an indication of future performance, and we do not undertake any obligation to update any forward-looking statements except as required by law.

With this, Eric?

Eric Eichmann^ Thank you, Edouard. Just quick introduction, I'm Eric Eichmann, CEO here at Criteo. With me and part of the presentation is Jonathan Opdyke. Jonathan is the founder of HookLogic. HookLogic, as you all know, is a company we acquired last year in November, that is a full part of Criteo's operations today. Jon, at Criteo, is President of our Brand Solutions group, which basically encompasses HookLogic. But as you'll see from our presentation, we'll also sort of, over time, include other offerings to Brands. Jon also leads for us Strategy and Corporate Development. And so we'll go through the presentation, both of us.

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Before I start and we go into the meat of the presentation, I thought I would just do a very short 2, 3 minutes on ITP, because I think it's on many people's minds. And I want to make sure I put it out there so it's out of the way, and we don't get bogged down in ITP, which is a recent and sort of very asked-about question.

ITP, as you know, is Intelligent Tracking Prevention, which is a feature that Apple is deploying in iOS 11, which limits the ability to track cookies on a Safari browser. Apple will announce iOS to come September 19, which is next week. But we've been able to see a first version of it. ITP is on desktop and mobile browser, and it's on by default. So it will create a challenge to the environment, in general, that relies on cookies, not just potentially us, but also other players.

We -- our position has always been that the important thing around cookies and data privacy is to provide control to the users. It's very important that the users have transparency and control over how they want to use their data and how privacy is sort of -- is part of their wishes as opposed to being something that device manufacturers impose on them.

Having said that, we have had many different disruptions in the environment over time. If you remember, ad blocking, mobile, and many other things that have happened and had a potential -- present a potential risk to Criteo. We've navigated those well. We have already today a number of solutions that we're working on, that we think will mitigate a significant portion of the ITP, in fact, certainly, with all direct publishers that we work with. And we'll continue to work with the different parties in the ecosystem from which we buy supply to implement new solutions to be able to do this.

Obviously, it's a risk. It also, as it did with ad blocking, presents potentially an opportunity. If we're able to sort of find solutions for this, we'll find ourselves in an environment that has less competition, because the other factors are generally slower to react in this ecosystem. But it's too early to tell. So we'll obviously update the market as to what we see with ITP when we talk about the quarterly results in October. So that's on ITP.

Edouard Lassalle^ More in November, in November.

Eric Eichmann^ November. Thank you.

Edouard Lassalle^ Early November.

Eric Eichmann^ Early November. All right. Thank you very much.

So with that, let me go into the meat of the discussion today. A couple of things. I thought it would be important first to sort of reiterate what our business looks like, because our core business is very stable, it's growing well and it has created a lot of the foundations for us to take on these new larger opportunities.

So just a quick reminder. Just a reminder of our core Retargeting business today. We have a very successful business. We work with many of the large leading brands on the e-commerce side, both on the travel and the e-tail sides. But we also work with very large brands today. As you know, we've been, in the last 4 years, almost quadrupling -- yes, more than quadrupling the number of clients that we've added to our platform, and we've done that.

And this is one of the things that makes us very different than most companies out there. Certainly, in what you would describe as ad tech, we've been able to maintain a retention rate of more than 90% and this over already 25 quarters, even before we were a public entity. So much so that

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people consider us much more of a channel, a sales channel, a cost of sales item than a discretionary marketing expense. So we're not subject to the normal sort of ups and downs of marketing. We're really very confident because we are a performance channel.

The second thing, is our revenues demonstrate -- or follow that curve, if you will. We've gotten great compounded annual growth over the last, get that, 4, 4.5 years of 47%. The growth continues to be very good, and we've been able to do that, obviously, while still sort of generating operating leverage. What you see here is when we went public, we were about 17%, 18% operating margin from an EBITDA basis, and we're now around 31%. What you see there in terms of the number for 2017 is the last 12 months, obviously, our margins are higher in Q4, when we have a higher number. So our expectation is that, that number continues to improve as we sort of give in, in terms of guidance.

A big part of this, of generating this EBITDA and sort of having the stability in the business and being able to do -- sort of generating this EBITDA, is the fact that we work directly with clients. And so 83% of our clients are direct relationships because they choose to do it direct. We also are very happy to work through third parties, through agencies. That is not just EBITDA. That is a sort of true indication of operating margin. But that EBITDA is converting into free cash flow in a very healthy way. And so if you look at the free cash flow of the company, we've had a very good conversion related to [one] being close to 50% conversion.

A big part of our model is also the fact that when we make improvements to our supply or to our technology, existing clients spend more money with us. And they spend more money automatically with us because we are a direct channel. A lot of the revenue ex-TAC comes from uncapped budgets. As long as we can meet certain cost of sale targets, they'll spend as much as they tend to get to that cost of sale. All right. So that's on the financial of the business. You guys know this. I think it's important to sort of put this in context.

Let's talk a little bit about retail and how things are changing, and again, you guys are very familiar with some of this. But obviously, in the past, what made retail great, there were 2 main things that you need to do or maybe 3. One is find great real estate when it came to having an off-line store, but in addition to that, have great merchandising and then have a particular experience, the value proposition that resonated with consumers, right? So you will add a high-end fashion or commodity or sort of large-scale retail, a la Walmart. That was -- those were the elements that made or sort of the elements under which people competed.

Well, this is changing rapidly, and we'll go into more detail on this. But success now depends on really knowing your customers and serving them intelligently, right? And knowing your customer comes from a new asset that is critical and that many people have called the new oil, and that is making sure that you have full data on your customers and that you understand it. Now, interestingly enough, having the data is not enough. You want to have data in a big way, on a mass scale, but you also want that data to be granular. So having what a customer purchased is sometimes not enough. What you want to know is what is all the intent information that comes before the customers made the purchase. Now those are things, obviously, that we see in our network on the side.

And then the other thing that's important and this -- this infrastructure has been built, in part, online, but hasn't yet -- off-line is making sure that you have real-time accessibility to that data, right? It's not necessarily structured the right way. It doesn't have the granularity. And so sometimes, having somebody tells you, I have 8 terabytes of shopper data, that doesn't mean anything unless it's structured properly and you can access it to take use.

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Having the data sitting in a database, even if it's real time, doesn't do anything for you if you cannot activate that data. Three important things are critical today there. One is making sure that you can use that data to predict what users will do next, so what they're interested in next. So having predictive technology is very important. And as you'll know more and more, and this is the case you're seeing in many technologies, this -- because there's huge amounts of data, machine learning and artificial intelligence are driving a lot of this, and over time, that becomes better and better.

The second thing you want to be able to do is to have an infrastructure to be able to dynamically optimize the proposition that you put in front of consumers. And that, obviously, requires -- you can do artificial intelligence in batches. That's not good enough. You want to grab the consumer the moment they're interested in something that you're going to present to them, not 3 days later.

And then finally, having reach at scale. This is the ability to reach consumers where they are at any moment to serve them. And this is something -- and you'll see and I'm going to pass the baton to Jon in a second, because we'll go into the details of all this. But this is something in the market that is happening already, something that some companies are doing very well and some companies are laggards in terms of understanding and sort of applying these principles. As you'll see, as Jon goes through this, it represent a significant opportunity for Criteo because everybody is now competing on this basis, and this is the basis of success. And most people don't have the ability to do this on the run.

So with that, let me pass it on to Jon, who's going to take us through the details of all this stuff.

Jonathan Opdyke^ So it's no secret that Amazon has the pole position in e-commerce. They have an incredible ecosystem building around their proposition, from the loyalty Prime to the massive selection that they've created in the marketplace, to the delivery infrastructure and logistics they've created, to the devices they've created. That's created a very large enterprise in Amazon. And when you compare that enterprise to other e-commerce sites of major retailers and other retailers in general, most of them look quite small in comparison. And that looks like a disadvantage until you start to look at the stores and recognize that the Walmarts of the world are still far bigger than Amazon, that the Best Buys and Macy's of the world still offer this great customer experience in their stores and a great selection, that you have loyalty programs at places like Tesco and membership at Costco and many, many different retailers that offer value propositions instead. Well, maybe not exactly the same as Prime, are still very, very valuable propositions.

However, a big change started to happen in the last few months and saw Amazon acquiring Whole Foods. And I think the first implication, that was a lot of grocery companies stock dropped. And I think it's not necessarily because of Whole Foods, because they're not that big. It's more because of what comes after Whole Foods. Does more categories join the Amazon universe? Do more countries join the Amazon universe? Because Whole Foods is really only U.S. and little in the U.K. But I would argue, if you really look at all of this, the one big challenge that most of these big retailers have against Amazon, while they can fight on a lot of these fronts, the one that has -- they have a lot of trouble fighting on is this front of data, and what Eric referred to as both data and the ability to act on it.

So when you consider data, you start to compare the data sets of what Amazon brings to the table. Amazon is dealing with very, very granular shopper data. They're looking at every product that someone looks at, every purchase they make, all the interactions across their ecosystem. And for most other retailers, the data is partial. So they're only seeing a part of the shopping experience. It's fragmented because they're in different channels, so it's an online channel, an off-line channel, an app channel maybe.

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A lot of it is not as structured and wasn't built to be structured, as what Amazon brought to the table, and so that creates some inherent disadvantages. One of those disadvantages is in mass personalization. So when you consider the computing power that AWS has brought and Amazon's full cloud infrastructure's brought to the table, they have big advantages in technology, in artificial intelligence, really the ability to process that data and determine what to show to each customer. Most retailers do have a disadvantage in this. And when you consider how difficult it is to attract this kind of talent and the wars of talent happening between large companies like Google, Facebook, Amazon and Criteo and others, this is a new battleground in technology, which is also a challenge.

Now for Amazon, they have a lot of owned and operated property, and Amazon is a -- has a massive amount of ability to buy media and reach more customers and connect with customers, even through things like Prime Video and the various capabilities they've built, devices like Echo. Most other retailers don't have this reach. They can't touch the customer nearly as often because they don't have devices that they own. They don't have the ecosystem around them to reach customers through.

And then funding. So brands have always played a big role in retail, whether it'd be co-op advertising or various forms of promotion within stores. Amazon's been able to translate some of this online, but maybe not as much yet as the off-line world has. Most retailers depend heavily on brand promotion in the off-line world. And online is still an early, early area, and that is an area that the business I founded, HookLogic, started to pioneer in.

So the big question, and this is our firm belief, is that Criteo can help level this playing field. When you consider Amazon, Amazon has about \$300 billion in online sales, when you factor in the marketplace sales. This isn't the revenue number that they project to the public. This is probably the likely amount of transactional sales on Amazon sites. But then if you compare that to the data that Criteo tracks in our ecosystems, so we actually are -- to run our software, run our program, we have to have tags throughout the e-commerce cycles, so we see all the transactions and all the e-commerce sites in which we operate. That adds up to about \$550 billion in online sales across all of our clients.

Now we talked, and Eric talked about, some of those challenges of accessing data. And data in the off-line environment is one of the harder areas to access simply because of the way that clients have structured it. Investments, though, have been happening and more and more retailers do have the ability to make that data accessible to online channels. And so if you consider -- when you add up all the retailers and companies that Criteo works with, we're talking about trillions in omni-channel sales with a potential to onboard into our platform. And Amazon, so far, that adds about \$20 billion from Whole Foods. But right now, I think this is the core advantage that I think a lot of the off-line world does still hold, but right now, they're unable to activate it in all the ways possible.

So our vision is to build the highest performing and open commerce marketing ecosystem that connect shoppers to the things they need and love. We see e-commerce marketing quickly emerging as the next big digital marketing category after search and social. So when you think about search, you have some pretty big players in search. You have Google, Bing, Baidu; social, obviously, Facebook, Tencent, Twitter, Snapchat.

But this next category is actually, surprisingly, quite big already. If you look at the Alibaba business, for example, Alibaba is largely powered by a media business. The Taobao site realize less in listing fees and more in (inaudible). And the Amazon Media Group is growing into a very big opportunity inside of Amazon, and we see it, frankly, as one of the biggest challenges (inaudible) on Facebook in the digital media world.

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So we see ourselves firmly planted in commerce. And so interesting things about commerce, commerce is not limited to digital. Search and social are more naturally digital-native, whereas commerce touches from physical to digital very closely. It's centered on inspiring people to buy things. That's a different goal. Search is about finding things, and social is about connecting people. Commerce is about inspiring purchase. And it's measured by performance, driving directly sales and profits through purchases. So it's a different medium, and it's growing. And I think it's a major category, and Criteo, frankly, has always been in this category. It's just not how we necessarily described it.

Our original technology was a product recommendation engine for retail built to be used on retailer sites, but that was transformed into an off-site program in Criteo Dynamic Retargeting. So if you've seen Criteo ads, they generally contain a product recommendation, a prediction of what product you may be interested in purchasing. This has primarily been applied to online commerce because the logic was built for commerce. And so there, our largest verticals are retail, travel and classified, which are very commerce-centric verticals. Now we're expanding upon that concept to include a data cooperative, which we'll talk about a bit, and really try to make this an omni-retailer solution and as well as expanding to include off-line data for a full omni-channel solution. So we've been almost entirely digital to date, and we can expand that to -- that clearly, millions of dollars of commerce that expand beyond digital world.

So talking about our data asset. It starts with the commerce data. So we partner with over 15,000 retailers and commerce sites, and that, as I mentioned, is \$550 billion in annual online sales. That means we touch about 1.2 billion shoppers, and we're able to reach of them across of the Internet on thousands of direct publishers as well as exchanges. And that still enables mass personalization. Our ads get 4x the engagement of almost any other form of advertising online because of the high engagement and high predictability we have with people purchasing things. And that leads to about \$27 billion in post click sales, so sales driven by our ads.

Now with the addition of HookLogic, we were able to add brand funding into that equation. So brands are a key funder. And the HookLogic business was built first on monetization of retailer property, so enabling them to act as publishers and make money off of brand advertising. But that's a -- not a far leap for us to say that, that also is able to fund advertising. So that as traffic is driven to e-commerce sites, brands can actually help to pay for driving that traffic to e-commerce sites, which presents an advantage for the sites and an advantage for Criteo.

So we talked -- I talked briefly about the idea of a data collective and how we're approaching that. What we see inside Criteo is one of the world's largest data sets on shoppers. That data set can really be described with 3 trusted data collectives, some that are built and some that we're building.

First one is identity. It's truly important to understand that somebody is the same person across devices, across browsers, online and off-line, because you can't market to them and you can't measure them if you don't know that. And you can't store data enough to know them, if you don't know that. Not saying -- and I'm not saying personally identifiable data, but repeatedly recognize non-personalized data. Interest. What shoppers and buyers are interested in? What are the kinds of products they like that they've purchased before, that they've shopped before? And measurement, being able to tie all of this back to sales, both for retailers and, critically, for brands that have often lack that form of measurement and had to rely on proxy measurements to date.

Now when we talk about the data collective, data collectives are built on principles. It has to be set up right in order for people to want to participate and to get the value out of it. Some of our principles are open. We have to have a 2-way exchange of data. So we'll give back data for what we take in. Then it's to here, it's absolutely essential that data is secure, privacy is secure, that we keep up with the latest in privacy regulations and respect the data of our customers, that it's

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transparent that we are clear on how data is being used. Now when you think about Criteo, Criteo has always been an actual very siloed company in data, and we have always been clear that that's what we're -- we're not enabling somebody else to retarget off of your data. But as we expand our model, we need to be clear also when and how the data will be used, and there needs to be fairness. Value needs to be gained and that value -- receive the value that you're contributing. So if someone feels that they're contributing more than they're getting, they don't want to be part of the collective. This needs to be -- these principles need to hold that kind of collective to date -- together. Unfortunately, we already have great examples of collectives that have been built within the company.

So we've talked about identity previously. And our identity graph enables us to match cross-device, same device, online and off-line users so that we can both serve ads relevantly to customers and measure what happens even if they cross devices. So in our identity graph, 75% of our commerce clients participate. That's over 10,000 partners. They're contributing CRM IDs that are -- that enable us to create matches across devices on different cookies and profiles and different ID formats throughout the Internet. That's given us global coverage across those 2 billion IDs, and it's already one of the best identity graphs. So when we onboard data to our network and buy media against that data, we have a similar match rate to Google and Facebook, which are built on the fact that they have the customer using their applications on different devices. And in fact, because of our collective, we can mimic that same effect. This also creates a bridge between online and off-line. The idea that there's an off-line identity information stored in a CRM database of a retailer or any kind of commerce company is one thing. The ability to connect that data to online profiles is another, and that is critical to being able to do any form of omni-channel solution. This is already available and heavily in use by our solutions.

The next one is new, and this is a different approach and a new approach that we're taking to how we look at data across retailers and across products. So if you consider how Criteo works, we take in a data feed of all of the products and catalogs of all of our clients in order to create our personalized ads. So we have a gigantic catalog that contains many, many products. We're able to store \$550 billion in online sales. When we consider all the interactions, so all the searches and all the e-commerce sites, all of the product pages people view, all of the different interactions they have throughout those pages, we store about 21 billion interactions in the past year.

The key is connecting them and connecting them in ways that add value. So the first thing is unifying that data through universal catalog, being able to understand what products are across retailers. Are they the same branded product? Are they in the same category? And then to another level, what attributes do those products have? Is it a red product? Is it a blue product? Is it an expensive product? Now the key to this data, this is the -- a core data set to be able to predict action, to be able to understand what customers may want so that you can show them something that entices or inspires them to purchase. The key to this data collective is applications that inspire purchase and building underlying infrastructure like the universal catalog and our core databases to be able to access and process and create inferences from this data. These are -- there are number of applications that we are reaching beta phase in that we see great promise in, leveraging the fact that all retailers together can create much more complete data sets. We'll talk a little bit about some more tangible examples in a bit.

The third area is measurement and, particularly, brand measurement, which is a -- this is a key challenge. When you consider brands like -- take an example of a brand like Hasbro. Hasbro sells toys. They're selling them across sites from Walmart to Target, to Kohl's, to Toys "R" Us and many others. They don't have a view of a point of sale. They're not a direct e-commerce player. And so they depend in all their retailers for this data. But in fact, retailers don't openly share a set of data in terms of what ads connect and what interactions connect to actual sales. What we've been able to

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do and what the sponsored products model is able to do was provide an incentive to retailers to share that data in this format.

So what we're able to do is -- let's say, a user clicks on a Transformers product on Target. We can actually see that they buy that Transformers product on Target. We can see that they bought a different Transformers product on Target. If they leave target.com and go to Target Mobile, we can see that they buy that Transformers product on Target Mobile. If they leave and go to Toys "R" Us, we can see that they buy that same Transformers product on Toys "R" Us. As we begin to add off-line sales attribution, we can begin to see that they went to one of those stores and bought that Transformers product.

As we achieve this, this is equatable to the holy grail of brand advertising, that you can actually measure the effects of your advertising across the different channels that people purchase. This has typically been done through very large panels and very large studies that take months to happen. What we're talking about is a deterministic approach, matching, through identity, the same user as they shop across sites and across channels to be able to see a sale. We have about 100 retailers participating today via Sponsored Products, and we're building more applications that should accelerate the amount of participation in this program as they will entice retailers to want to share this data.

So what does the shopper graph and all those data collectives mean for this business? Well, the business really started in conversion. When you think about Dynamic Retargeting, it's a reactive technology. It reacts to somebody making an in-market action. So somebody visiting a product page on a retailer, that triggers Criteo technology, we begin buying media, and recommending products to that customer. We rely on that stimulus. What that does is it takes up a user that was X likely to convert and makes them X plus Y more likely to convert. Similarly, Sponsored Products was reactive. It reacts to that moment that somebody goes and searches for a product on an e-commerce site, and we'll serve Sponsored Products to that customer base on that query. Predictive Search has some of those attributes as well because we're talking about Google searches, a reactive -- a reaction to the search that's happening on Google.

Well, when you consider data collective and an approach where you can know the shopper better, that provides the opportunity to predict and predict what someone may do next. So when you consider that, you get into things like customer acquisition, so finding new customers that weren't already visiting a website and driving them to a website. And some of the key areas that we're talking about there, Predictive Search has elements of that through our user targeting. But also, we're creating more Audience Targeting capabilities for brands and Prospecting capabilities that predict which customers across our shopper graph may be a candidate to buy on another site.

Similarly, you get into the challenge of convincing one's own customers to buy. So reengagement of some -- of a customer. Where today, we rely primarily on that stimulus signal, now, we look at the past purchase behavior and start to consider that what can we do to stimulate someone's next customer. So some of the features that we're talking about there are an Audience Match capability, so that we can onboard a client's best customers and target them with new offers, as well as more Audience Targeting capabilities built into our own platform based on the data that we see.

So in building a deeper understanding of the shopper, I'll give an example of this. So if you think about a typical online clothing retailer, they may have seen one purchase recently in the past year, say. They bought one pair of jeans 2 months ago for \$100. That's the data set they have on which to target that customer. So what's the choice? Well, I think jeans customers buy shirts. I think jeans -- I think this person bought jeans, let me see if I can sell him another pair of jeans. But if you consider the interest graph and the approach that we're taking, we may be able to see for that customer that they've made 27 online purchases across 14 online stores. They bought 95 products

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from 24 different brands and \$5,000 in value. Now as that collective becomes available, that data is effectively, not directly, but effectively available to that retailer on which to target. So now they have a much better basis on which to predict what that customer may want. You build on that and bring in off-line data. So for that single retailer, maybe that person went into the store and also bought a pair of shoes for \$300. But across many, many off-line stores, we may be able to see that they've had 75 off-line purchases across more stores, more products that add up to a very large value.

So now you're building a very, very distinct view of that customer. Are we selling direct data between retailers? No, that's not the goal. The goal is to develop interest and a profile that makes it easier to understand a customer and, therefore, easier to target them with relevant offers. So this person is likely a woman. They're a frequent online shopper. They buy at full price. They have strong affinity to 15 brands. They prefer high-end products. They buy clothing every month. They have 3 favorite colors, 2 favorite styles. So that retailer that sold them the jeans can now actually send them an ad of a color of product that that person may like, of a brand they may like and of style they may like, much more effective recommendation. And that talks to the data that is a challenge, that Amazon, as seeing the amount of online purchases that they are, they are able to glean that today and that they have the data science to glean that. Most retailers can't -- don't have enough data and don't have enough data science to glean all of that information. And of course, the identity graph is absolutely necessary to tie that entity together because most of those purchases happen across different places with different cookies and different profiles.

So what kind of solution does this make possible? So if you take a profile customer, of people who recently purchased on a given retailer's website, so this is post purchase, not the action -- not the pre-purchase action that retargeting typically works off of post purchase. Based on those people that buy at a given website, we use the interest graph to create lookalike shoppers. People that are -- have similar attributes, similar interests, similar likes and dislikes to the people that bought on that website, but people that have never actually shopped on that website. And then use that knowledge to deploy automated campaigns to acquire those shoppers and bring new customers to that retailer. This is not that dissimilar from what you see Facebook doing and also Amazon doing in creating and collect cohorts of profiles. We have a data set that makes it possible to do that.

There's also the understanding of a brand's customers. So if you consider that Criteo sees sales interactions across over 15,000 retailers, brands sell across retailers, as I mentioned in that Hasbro example. So when you actually -- some of the data that -- when we -- when I joined the company, we started studying and looking at is how does this data actually look? Well, you look at a brand like Samsung, 800 retailers across Criteo's client base sell Samsung. That means -- and similarly, 700-plus retailers sell Nike. So that means, in effect, we have a virtual CRM of these brands' data. Most of these brands' sales are happening across other retailers, but they can't see the detail of those sales. They can't see who is buying. That data is hidden behind the retailers. Now the retailers keep it hidden for certain reasons because that's their customers. They view that as their customer. However, if you're able to unlock that data and make it accessible to the brands, the brands can then add immense value to the retailers, both in monetization and in helping them to drive traffic and marketing -- market to customers.

So an example of what this makes possible is brand buyer reengagement, and this is just one use case. So looking across the interest graph to find all customers who have demonstrated loyalty to a given brand's products, call it Nike, across hundreds of retailers. Now deploy automated campaigns to up-sell those customers to a new product line. So let's say Nike's coming out with a new shoe, and we've just found all of their prior shoe buyers that have affinity to that type of shoe. We're able to do that. Instead of it being a retailer by retailer program, we're able to do it across a global network of retailers, all in one fell swoop, driving traffic to the retailers and creating an optimization model that is based on real sales. So now we can tell Nike that we sold your new products, and we

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sold them at this ROI deterministically. Add off-line to that and that equation changes dramatically as well.

So our goal is to cover the whole shopper journey for retailers and brands. And when we think about some of the products, we already have Dynamic Retargeting, Predictive Search and Sponsored Products. Some of the new beta that we're working on in Prospecting and Audience Targeting in -- for brands as well as the Audience Match product and our capability to onboard data into our ecosystem. We're also working on off-line products, our omni-channel products, such as Store-to-web Retargeting. So somebody who bought in the store, what will they buy next online and can we convince them to make a follow-up purchase online. These are just some straightforward use cases, but I think you can see from some of the data that I presented before, we have an opportunity from our massive data set, from our key assets to create many solutions. And that's where I think the real power of this proposition is, is that we're creating an asset base and an ecosystem on which solution -- more and more solutions and more and more use cases can and will be created.

So in summary, our pooled asset approach unleashes the value of collaboration and the power of data. With so many targets in this ecosystem operating in a subscale way, we believe it's a ripe opportunity for collaboration. The more we enhance identity and shopper data through the collective, the more powerful our solutions become; the larger the artificial intelligence training sets become, the more data on which solutions can be built. And we continue to invest heavily in our world-class technology that has always been a major advantage of Criteo and why Criteo has been so successful and why we are the preeminent retargeting company and why we're becoming the preeminent commerce market company. And this is only the beginning of the Criteo commerce marketing ecosystem.

Thank you.

Eric Eichmann^ All right. Thank you, John. So we have another -- about 15 minutes to take your questions. Yes?

+++ q-and-a

Sarah Simon, Berenberg^ In terms of the off-line data that you can onboard, what is that? I mean, there's obviously Tesco loyalty program shops. But can you bring credit card data in? I mean, how deep is the off-line shops that you can tap in online?

Eric Eichmann^ What's most interesting, I think, is the CRM data, which normally is tied to loyalty because credit card information is not always very detailed in terms of the SKU level. What we want is as granular data sets as we can get, and that generally comes from the CRM data. And so CRM data off-line has the person, the purchases that they've made, which means you can extract attributes from those purchases. Some of them bought shoes, they bought Nike, athletic running shoes that are blue from credit card data, even though -- it's a level above in terms of granularity. So the main target for us is to take the CRM data. Do you add anything to that?

Jonathan Opdyke^ Yes. I think it's just a matter of what data keys each retailer stores against the data set, and we're working with multiple -- data keys are most robust as e-mail, but we also can work with other data sets as well.

Unidentified Analyst^ Are you able to get the point-of-sale data on that? Is it coming through real time?

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Jonathan Opdyke^ More nightly than real time, but we're getting it regularly enough to run models on.

Eric Eichmann^ Normally -- I mean, one of the challenges in getting the data is setting up the infrastructure with the retailers because they all have different CRM infrastructure. But we can ingest the data very quickly, so as long as we set the right sort of parameters to do the transfers. With some retailers, we're adjusting data every 24 hours from their CRM.

Unidentified Analyst^ Are you running in -- when you go out and catch a brand, are you running into large, incumbent players that perhaps don't have all the bells and whistles and scope that you're offering, but it takes a while to free the brand to that incumbent? And then how do you sort of think about share, market share?

Jonathan Opdyke^ So I think in the early days when we started HookLogic, it was primarily incumbency against Google. We chose to focus on search budgets because the search budgets have some similarities in performance. But it wasn't a terribly hard sale because most brands were not seeing a close loop on those sales. They were just driving to a static e-commerce site. Today, actually, we see our primary competition for brands as being Amazon, simply because Amazon has the same kind of data set, the same kind of approach and some of the same technologies. What we haven't moved toward yet is pure branding. That's not been our cup of tea. Our approach has been models that build on a closed loop approach so that we're driving performance for the brand. That keeps our market share focused on the performance side, the sales side, the actual commerce conversion side. But I've always viewed it that the bottom of the funnel makes possible the top of the funnel, whereas it's much harder to come down from the top to the bottom. And so we're starting from that point of measurability. And as more and more becomes measurable, more and more media becomes addressable.

Eric Eichmann^ Let's say the other thing is if you take it from the providers of infrastructure to off-line retailers to sort of have their CRM, [so we maintain the manage]. They generally don't bring the capability of structuring the data in a way that is useful and then accessing that data on a real time basis. So we generally -- that's why we end up sort of -- when you ask questions to Jon, it's really Google and companies like that, that could have -- and really Amazon, that can bring this to brands. But when you come and talk about retailers having this capability, there's really no other company that's approaching them at this stage. And that requires us obviously to work with the different CRM systems and, over time, sort of establish ways to connect to the CRM systems. But those CRM systems providers don't have solutions that are anywhere close to what we're proposing.

Unidentified Analyst^ How does the retailers and brands get comfortable that sharing all this data is going to help them more than helping others?

Jonathan Opdyke^ Yes. So I think in creating these methods that we've created, we're able to be pretty transparent about what portion of data people are contributing. And I think our general philosophy is no one should be contributing more than 15%. And when you consider things like our identity graph, it's -- I think it's all less than 1%, just because of the sheer volume of the data in the cooperative now. So that means that no one is unfairly contributing without getting benefit. Now in certain categories, there can be category leaders, and we have to work on the right limitations with those to make sure that we're not essentially just making their data set available to everybody else. But that's stuff that we're going to be transparent and conscious of as opposed to forceful. Everything is voluntary. But the ultimate driver is performance. If people see a market rise in sales as a result of participation, that's sticky. And that's what we've seen with the creation of the Sponsored Products model and what we see with the identity graph.

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Eric Eichmann^ And -- so there's one thing is just them feeling comfortable about their contribution to the cooperative being sort of limited, if you will, in the overall. But the other thing is the fair exchange. So we activate this data through applications. We don't just take the data and tell Target, "Here's the Walmart data." That would never work, of course. So the idea is they're part of a cooperative and then they get something in exchange. And so we have a couple of products where that exchange is very clear, right, so Dynamic Retargeting. And we use their data only for themselves, but they get performance out of sharing the data with us and allowing us to see it.

Sponsored Products, they get advertising dollars coming into their sites by sharing the data and allowing the measurement to go to the brands, right? So we -- there's always -- and if you think about some of the other things, like acquisition, they share the data to be able to acquire customers that otherwise would not come. And one of the things that I think has changed, in particular with the acquisition of Whole Foods by Amazon, is that retailers have become much more aware of the challenge that Amazon creates. And they realize that having a data set that's large is very important to succeed and having a company that can help them activate and structure that data set is something that's very important to succeed. And that's something that they generally don't have the capability of doing or is very hard to do. It's hard to sort of get an engineer that will otherwise go to Google or Facebook to come to work for a retailer. We can do that, but it's very hard for them to do it. And we represent an independent party. We don't have 3 other sort of forces pulling us like Facebook or Google could have. So I think we're perceived as a much more sort of safe, neutral company to work with.

Unidentified Analyst^ Maybe there's a process of matching the off-line data with the online data that you have. And in terms of all the data you're getting from the retailers, has that already been structured on your end? Or is there more to do there?

Jonathan Opdyke^ Yes. So as a good example of that, let's say in the retailer CRM, they've stored e-mail addresses as a key of their CRM data. And they have a POS system that has structured product data that these are the baskets and products in those baskets that that retailer has stored with that loyalty ID and e-mail address. When they sent -- when they provide us a hashed version of that e-mail address with that data, we can then match that hashed e-mail to a large -- that large graph of other hashed e-mails that share that same -- that are that same value. So then we can connect that value. Hashing is a way to get rid of the PII element of it, so we can't actually contact that person. And what that does is it enables us to then match that to this cookie on this device, this IDFA on this app, this cookie on this other device, this cookie on this other browser because we've seen that hashed e-mail address across all those different places. And so then when we onboard that data, we can then connect it to all the stored data about that user, but also to wherever we see that user across the Internet. And so that's a -- that's the matching process. And your second question was the...

Unidentified Analyst^ Just all the data you're getting from the retailers, has that been fully structured?

Jonathan Opdyke^ Yes. So retailers aren't always the most structured, but that's where we come into building this universal catalog approach, that when we onboard data, we want it to be structured and moved into a core structure. So even if a retailer hands us one taxonomy structure, we then reevaluate that structure to match the universal structure so that this product -- while this retailer calls this product category X and this retailer calls this product category Y and this retailer names this brand this and this retailer names this brand that, we actually put that into a single framework that we can then make inferences from. And then when we work with that individual retailer, we can still move back to their framework as needed, but we have a single framework in the core data set. Now we're still working on building and improving our universal catalog. There's versions of it, but we're continuing to make it better and better. In fact, the only -- the companies in

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the world that have those sorts of universal catalogs really are Amazon because of the marketplace. They have to match the products and categories, and Google because of what they've been doing with Google Shopping. So we see that as a core asset that we need and are building as quickly as possible.

Eric Eichmann^ I would say the other thing on Match, we have 3 immediate applications through -- that we're bringing to market on a beta basis. One is the ability for a retailer off-line or online to take their CRM and say, "I want to cut it these 3 different ways and I want to go and have messages to this audience." We match and run those campaigns for them. Another one is what we talked about, which is the Store-to-web Retargeting. This is the -- using the off-line data, converting that into online identities and using the data to drive off-line visitors to the online shoppers. And the third one, which is an area that we talk about, is the ability to measure the impact of online campaigns into off-line store sales, right? That's not as immediate. But if you're able to see an online identity that was sort of targeted certain ads and that person sort of clicked on it, if you're then able to identify that person at the store and seeing that they bought a product that was related to what they were shown, that you can -- that starts to change the way that a marketer starts looking at how much they're spending online and whether that's having an impact that's broader than what they do online. And I think that what has limited the ability for them to do that is the fact there hasn't been a deterministic way to do that. It's been done through studies, which are okay, but they don't base their -- then their funding of marketing on the studies. They have a deterministic way to see that an online ad drove an off-line ad that will most likely be for them to invest more in online because they have the full effect of the ad.

Unidentified Analyst^ Can you talk about the derivative benefit in -- so with the legacy business and retargeting, if you then know in-store behavior, you could effectively stop retargeting that same ad, the use of that might have been a waste in historical and the present? I mean, is it a double benefit to -- it actually improves the...

Eric Eichmann^ Yes. I mean, I don't know how much of that is happening. But yes, you're right. So if we know that somebody clicked on one of our ads that was sort of enticing that person to buy sort of blue running shoes and that person ended up buying them in the store because they wanted to try them on, that information would run back to our engine and then we wouldn't continue to serve ads for that product.

Jonathan Opdyke^ Yes. Similarly, in the siloed approach today, if someone searched and bought blue running shoes on one site, but also searched blue running shoes on the other site, in the silos, we wouldn't actually connect that. As we cross the silos, we can connect that and stop showing the ad across retailers.

Unidentified Analyst^ You mean -- do you have a guess as to what amount is wasted through that?

Eric Eichmann^ No, we don't.

Jonathan Opdyke^ I'm not sure that it's lost, but...

Lloyd Walmsley, Deutsche Bank^ What is the kind of like sales cycle of convincing a retailer to share his data? And like what is the kind of plan in terms of going online?

Eric Eichmann^ So I -- so from my experience, I've gone and talked to a couple of CMOs. And the description of what we're talking about is very compelling, and it turned quickly into how quickly can we do this and what are the applications that you can activate against this data set. In a lot of cases, I think when -- it's great to get your experience, Jon, too, but in a lot of cases, I think it's slowed down by kind of [data] issues filled with some legacy CRM systems and with all the

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challenges that they might have in terms of how they're sort of revamping their site or spending their technology resources to do other things. So I think the pitch, if you will, of this commerce marketing ecosystem being part of a cooperative that gives them the benefit of scale and technology that they don't have against them is very compelling. And I think maybe the larger player, right, the Walmarts of the world are a bit more careful because they have so much data and they sort of want to go much deeper into what does this mean with my data and how much am I contributing. But in general, as you think about -- what you would think about being very large players off-line and even markets of the world, they're very sort of open and ready to invest in this. I don't know if you've got...

Jonathan Opdyke^ Yes. And we've been running some beta testing with smaller collectives. And we -- I think if we had gone and taken this proposition to market 3 years ago, people would be -- would have had a very different reaction. But frankly, we had almost no nos to the test of essentially prospecting customers across sites. There's such a need for more acquisition and, frankly, such a dependency on a couple of key platforms for that acquisition that people want more solutions.

Eric Eichmann^ I think people realize that Amazon is not just a force, but once they acquire a customer, they are able to keep them within their ecosystem and breaking that hole to making sure that the customers end up being in the retailer's ecosystem or in a broad open ecosystem is one of the things that pushes them to be okay with this proposition.

Matthew Thornton, SunTrust^ Maybe following up on Lloyd's question, how far are you into evangelizing this or C-level conversations with the top retailers and top brands? And to kind of how far off are we to getting to a point where this is starting to impact the business and starting to resonate?

Eric Eichmann^ I think -- for sure, what's happening is from our sort of retargeting business, which by now is a channel, so it's managed by sort of the senior manager in the marketing department, when we talk about the whole pitch, that gets us to the CMO. I think we're at the early stages of evangelizing this. We're also careful not to -- because the thought is there, the data is there, the -- it's clear that we have number of applications, but we don't have all the applications to, after the pitch, fully prove, like look, you're getting it tomorrow. All these benefits are ready. So we started with a number of PR events. The Wall Street Journal covered us a couple of months back. And I think we're just at the first stages of sort of introducing this to the market. But we want to be careful that we do it in tandem with also applications that have meaningful impact for the retailers.

Matthew Thornton, SunTrust^ Endorsements along the way if you get some blue chip to kind of sign on endorsement...

Eric Eichmann^ Yes. We love the concept. We love use cases and then be able to show them off. And I think we have already found that are sort of willing to talk about this in a broader way.

Brian Fitzgerald, Jefferies^ One of the benefits for -- maybe for Amazon in this collective data is they can -- not only can they drive sales, they have a very granular mosaic who you are, but they can also inform their demand models and optimize their logistic functions. To what extent are -- because you said retailers are historically kind of tightfisted with this data, maybe brands or maybe with retailers, to what extent are they saying, "Hey, not only are -- it's great that you're driving ROI and I've seen my advertisement is working to drive these sales," are they asking for data back so I can optimize my logistics functions, I can build finer, granular demand models so I optimize that by the fence?

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Jonathan Opdyke^ I mean, our vision for the model is quite open. Not open to the fact that you get back and, like the example, Walmart's not going to get back Target's data. But the ability to take broader inferences out of the data, learn more about the data, I think that's -- I think it -- what it does is it creates a platform on which Criteo can either offer solutions or connect with other solutions to build more and better solutions out of the data. The challenge is having the data and having the data set in order to do that. And the more applications we have -- and that's why we call it an ecosystem is that we want to be able to create a full application ecosystem around that intersect, around these assets so that we're providing as broad a benefit as possible to our partners and, therefore, as sticky as possible.

Eric Eichmann^ We'll take a couple of more questions.

Sarah Simon, Berenberg^ Of the off-line (inaudible) whatever it was, how much of that do you think has captured and usable CRM? I mean -- because obviously, if I go to a store and I buy something and they don't know anything about me. I've just [stolen] a credit card and that's it. So what proportion, broadly?

Eric Eichmann^ So it depends on the retailers, and then I'll leave it up to Jon to see if he has an estimate. But like some retailers are 100%. So when you look at Costco, you get 100%. Some retailers have low CRM data because they don't capture it. Drug stores have like almost 90%. It's meaningful enough that it makes a big difference. I wouldn't sort of wonder to say what it is on average across retailers. Do you have that?

Jonathan Opdyke^ Yes, I don't have an average. I think it's -- it varies wildly by retailer, as Eric said. I think the other aspect to it is there's -- it starts with CRM, because those are the most known users with the most data. But there are key data points, like credit cards and/or as more people pay with devices and whatnot, that there are connectivity points that maybe the credit card -- the data from the credit card companies, but not that valuable to the data, from credit card matching to online profile can be made valuable so that -- it may not be someone in the CRM system, but it's somebody who used a credit card (inaudible) identity match to the online profile. So there are more ways to do it, but the lowest hanging fruit is the CRM.

Edouard Lassalle^ Maybe last question.

Larry Berlin, FirstAnalysis^ As a baseball rookie, are you having a hard time to barge in to all the different collectives? Because (inaudible) companies seems like -- you always say, you got the best collective and we've got a lot of brands and retailers. How do you differentiate between one and the other? What's the competitive advantage of one versus the other?

Eric Eichmann^ So I think it comes to sort of what's the granularity of the data and what's the granularity of the data. So I would start with the fact that we have 16,000 retailers we -- or e-commerce companies we work with, where we see all the data. So we see from anybody hitting the front page to seeing any product page to then doing conversion. And so that's as granular as you can get. So online, I think we talked about the \$550 billion. That's information we see today in terms of purchase, but we also see all the information that comes before the purchase. And so that's one element is how much data and how granular. And then the ability or the -- the ability to sort of activate that data is critical, right? So to do that, you have to have it in an infrastructure that allows you to do that. And obviously, you have to have the technology to activate it, the predictive technology and the mass scale to activate it. I think what you see a lot is that people have a cooperative of very stale data. So they'll capture data from the last 3 months from retailers in physical stores, and they might not have identity around it. They can't sort of match. They might have a collective of -- I have all these data of 10 retailers, but they might not be able to match the different users. So I would say -- I would sort of say that it's quite unique what we have. I can't think

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of anybody that has the level of -- I mean, except for Amazon for their ecosystem, I don't think there's -- and maybe Google for Shopping, but they don't capture a lot of the data, the intent data that happens on site. They capture a lot of the search data that happens on their site. I don't think there's an equivalent to us.

Jonathan Opdyke^ No.

Eric Eichmann^ Certainly, not online and off-line I just don't see anybody that has the usefulness. There -- maybe somebody has similar data for their own purposes, Catalina Marketing, that they have -- they capture the data and they serve coupons and they sort of have kind of -- manage the CRM data, but they only capture purchase data. They don't care for any intent data.

Jonathan Opdyke^ Yes. I think -- I can't stress enough Eric's first point, that it's hard to create new data sets. This is an existing data set that we're asking for permission to use. So it's all there already, and it's all structured. And we're adding new layers of structure to it, and then really, it's about permission.

Eric Eichmann^ All right. Well, thank you very much. Thanks for coming.

Jonathan Opdyke^ Thank you.

Operator^ The conference has now concluded. Thank you for attending today's presentation. You may now disconnect.