



## **Criteo Investor and Analyst Day 2016**

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## Criteo Investor and Analyst Day 2016

Eric Eichmann

*Chief Executive Officer, Criteo*

### *Introduction*

Alright, I think we are going to start. Thanks for all coming to our 2016 Investor day. I am very excited to see a lot of familiar faces. I am very excited to tell you a little bit more about Criteo and our plans for the future. We will have or we have a great agenda for you guys and we have brought a number of people from the senior management team at Criteo. We have a great line-up and you will be able to hear from many people that you do not normally hear about. You normally hear from Benoit and me, and we are probably quite boring, so you will see how great of a team we have.

So just to introduce very quickly the team of Criteo that is here, you have me, the CEO. You also have Mollie Spilman, our Chief Revenue Officer; Tim Frankcom who leads Midmarket for us globally, out of London; Romain Niccoli who is not just a Chief Product Officer but also the co-founder of the business way back then in 2005 early. We have Patrick Wyatt. There you go, he is over there. He is our SVP of Product and takes care of all of our core product. Jason Lehmbek, flying in from LA, who leads our Search effort. We will talk a bit about Search. I know you guys have a lot of questions as we talk every quarter about Search, so we will go deeper in that; and of course we have Benoit with us.

What are we going to cover today? A couple of things. I will talk about where we are, how we have come a long way, and why we have been successful in the business we are in. However, more importantly, I will talk about the future, the opportunities that we have in front of us, how we are planning to go after them and what it means in terms of net market opportunity. We will talk about that in quite a bit of detail.

Then we have Rob Loewen from Microsoft, a client testimonial that we will play for you. It is a video. It is a good example of a global client that is using the full capabilities of Criteo and so it gives you a good sense for how clients feel about us.

Then we will go into the growth initiatives that we are working on now. Mollie will cover APAC, which is an area that has a lot of growth, but also the supply side where there is still plenty of opportunity as the ecosystem continues to change and people continue to spend more and more time online.

Tim will talk about midmarket and the potential that we have there. We have talked with many of you about the fact that we are still in the 15 percentage or thereabouts in terms of penetration in midmarket. There is lots of opportunity for us there and we are taking advantage of that.

We will talk about the engine. Romain will talk about that, all the things that we are doing to continue to drive that Revenue ex-TAC per client every quarter. A big initiative that is very important for us and our clients is cross-device. In particular, 40% of transactions today globally happen across devices. Patrick will talk about that.

We will talk about a new product that we will come out with probably in Q1 2017 that we call user graph as-a-service, and this is quite an exciting product that we will offer our advertisers. Finally, we will have a quick break and then Jason will come and talk about Search.

After talking about the growth initiatives, we will talk about how we are positioned competitively in the industry and what changes we see and how we compare to others in the industry. Then Benoit will give us a full financial update and then I will do a quick wrap up and we will have time for Q&A.

Before I move forward, I am going to give the word to Edouard so he can tell us about a quick legal disclaimer and also the procedures around how we do Q&As and all these things.

## **Disclaimer and Procedures**

Edouard Lassalle

*Head of Investor Relations, Criteo*

Yes, thanks, Eric. Good morning, everyone. Just a quick work on the Q&A process. We have 40 minutes at the back end of the conference. I am sure you have burning questions on each session, so we will make two, three minute-slots for each session for Q&A. Let us limit it to one, two questions in the interest of time. With that said, I am reading a nice little disclaimer.

Some of our discussions today will contain forward-looking statements. These may include information concerning our possible or assumed future results of operations, business strategies, financing plans, products or services, competitive position and effects of competition, industry environment, potential growth and market opportunities.

As always, these statements come with 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 adapt any forward-looking statement except as required by law. With this in mind, Eric, the floor is yours again.

## **Position and Strategy**

Eric Eichmann

*Chief Executive Officer, Criteo*

Alright. Thank you, Edouard. As Edouard said, as we go through the sections, we will have a very small period of time at the end of every session to take one or two specific questions but the bulk of the questions we will discuss at the end of the full presentation. Let me start talking about Criteo, our position and our strategy going forward.

I think it is important to think about the advertising world when you think about what we do at Criteo. Obviously, we are all about driving sales for the advertisers. More broadly, advertising is an industry that has not worked that well for that last 200 years. You still hear people saying, 'Well, I know that half of my advertising is working but I do not know which half,' which was a statement made in 1848 or something like that, and it is still very much the case.

### *What marketers want vs. what they get*

What advertisers really want versus what they get is still different. What advertisers want is really relevant advertising that talks to the people that they serve that advertising to. For it to speak to you, it has to be people-centric, it has to talk to my interest, it has to talk to what I will be sort of drawn by.

The second thing that they want is they want that advertising – they want to be able to say, 'Hey, when I have an ad that I am serving to somebody, I want to know how that ad is working. I want to know whether that is driving sales in three days, whether that is driving awareness.' What is it driving? You want those metrics to be real time.

The other thing that has been one of the key challenges in advertising, it was 50 years ago because you spend money on print and then you spent on TV and then you spent on at home but the interaction between

those was not clear. If you, as a consumer, went to – and by reading a magazine and then saw another ad, you did not know how many exposures you were getting, or whether that sort of continuum of experience worked well.

Well, it has become worse with all the devices that we have. What do the majority of advertisers still get? They still get a broad audience-based advertising when they determine segments. I want the 18 to 30-year-old females that are in this part of the country and so that targeting is not very relevant to many of the people that see those ads. Generally, they are not tied to business results. There is no clear tie between the ad that I make and what it drives in terms of business outcomes. The experience is becoming more and more disjointed.

*Three big trends are driving the transition towards marketers' needs*

There are a couple of trends in the marketplace that are helping drive the advertising world towards the left side, which is what advertisers want. Let us examine some of this. The first one, and you have seen this and we will have a quick chart in a second that will talk to this, is programmatic and data-rich buying with real-time metrics. Now you can buy, and it is becoming bigger and bigger, ads that come with information about who the buyer is. Not who specifically but what kind of information, what kind of interest that buyer has, and that has become a bigger and bigger trend, and so that creates more opportunities to serve personalized ads.

Another big trend, and you know it because you have probably three or four devices that you are carrying with you and your family members have many at home, is it is becoming more and more fragmented. If you ask marketers, that is one of their key concerns. They do not know how to track people. They want to create relevant experience but you cannot create a relevant experience if you do not know who is on the same device, and so that is creating an even stronger need for seamless campaigns across the consumer landscape.

The other thing that is very interesting is that you all carry your phone with you, I am sure you do, and carrying your phone with you has created a lot of mobile-first businesses. More importantly, a lot of the offline activities that we used to take as purely offline are becoming digitized and with that comes a lot of data associated with those activities that you are having offline. Then the ability also to start tracking more performance across channels that today you do not track. This is going to become a bigger and bigger trend over time. Let us go through each one of these in a bit more detail.

*Programmatic and data-rich buying drive personalized marketing at scale*

Now programmatic and data-rich buying has grown quite a bit and it continues to grow, so if you look at data-driven ad spending in the US, it has gone from \$83 billion in 2014 to more than double forecasted to 2019. When you ask advertisers, is it important for you to do people-based marketing that is relevant to that individual – so this is the famous, what used to be called, 15 years ago, one-to-one marketing; it is now people-based marketing – and real-time data to do that, is that important? 91% of marketers say it is very important.

*Multiple devices & environments lead to fragmented marketing experiences*

Another thing that is changing is the fact that the environment is becoming more fragmented. Not only do you have mobile versus desktop, you also have a lot of different devices. Even within those environments, you have different environments. When you take your mobile phone, you have a browser environment, you have an app environment, and then you have different operating systems. Believe it, like operating in Android and iOS is not always the same. For example, the IDs that you use to make sure you see what users are doing on those – or different IDs and you have two IDs and you have to create a different technology to match it.

One other development that is happening is that you also have different advertising environments, publisher environments, and so today if you want to connect to a lot of the native environments, you actually have to connect in a customized way. By that, you also get different type of information, you need to serve the ads differently, and so that is creating also more complexity. As more and more of offline activities are getting digitized, that is also creating a lot of fragmentation.

A good example of this, as you consumers see it, I do it all the time, I see products on my phone and I buy online or vice versa. 40% of transactions today globally are across devices. Then in addition to that, 94%, so that is very close to 100%, if you ask marketers, one of the most important issues that they have today is the ability to track – not to track but to link people across devices to create an experience that is relevant and seamless for them.

*Mobile ubiquity is digitizing offline activities*

Finally, you have seen this chart I am sure from other people. It is worth reminding ourselves that usage of mobile devices is increasing and time spent on mobile is going up. It is going up in every country that you have here. These are big important countries – US, UK, Canada and China. There are a lot of companies that are taking purely offline activities and some of them are mobile-first and thanks to mobile devices, are basically bringing those activities online.

That is creating a couple of opportunities. One is that much more data is coming, but then we are also starting to see ecosystems that are developing that are helping to close the loop for transactions that happen offline.

That is the environment we are living in. People are going to move towards what we believe is, all advertising will move towards people-centric, data-driven advertising that is going to be tied to performance metric. That is the business and that is the thing that we have been doing for a while. We create relevant, accountable and marketing or advertising that cuts across devices and environment.

*Our DNA has made us the independent leader in performance marketing*

One of the key questions we always ask ourselves is, 'What is it that we do or what is it in our DNA that has allowed us to be successful in this market?' We look at four key areas that we think are critical in terms of our DNA and that not only sort of shape the success we have had to date but will also shape the success that we will have in the future. It is important to understand these capabilities that we have and how they will help us going forward.

There are four capabilities that we talk about – technology, performance, focus on performance, creating solutions that are scalable solutions. We have many opportunities in our life at Criteo to sort of help a client on a particular issue that has some dollars or euros or yen associated with it but that created a solution that was customized to them and that was not at scale. We could not take [inaudible] and we have been very clear about not going in that direction.

Finally, I think in big part because the company was born in a market that was not as big as the world, the company very quickly went global and today we have a global scale that allows us to deploy solutions across the world.

Let me talk about these ones each in turn.

*We are a disruptive innovator and a pioneer*

Technology. Technology is an area where we are an innovator. Some of these things are obscure where we innovate, so they are not things that we go out and talk about in the press but they are very important. We are the first ones to create an Apple compliant solution to be able to track information about users on Apple devices. We are the first ones to have a notification to be a first party cookie provider on those devices. We

are also the first one to create a pooled asset to allow to get a notification on one publisher or advertiser to translate into other advertisers and publishers.

We have also been innovating on the engine. The engine is something that we talk about. We went from a click optimization to a conversion rate optimizer where we optimize on the conversion and then we evolved that engine, and we will talk a bit more about this. Romain will talk about this. We evolved that engine to be AOV or value optimizer where we have sort of started optimizing the value of the basket that consumers would be putting in the eCommerce side.

There are a number of things that we have done and this defines our company. We are constantly looking at ways to make things better.

*We have developed powerful machine learning technology*

We have also, and this is what, when people ask me, 'What do you do? What is your business?' and what we are best at in the world is taking an enormous amount of intent data, implicit intent data, because it is not like consumers tell you, 'Yeah, I want to buy this.' They do it by looking at different products and different interests. We are taking an enormous amount of data and we are able to translate that data into ads that people click on and then purchase from.

Today, those 600 terabytes of shopping intent that we analyze every day, 600 terabytes on 4 billion products, end up being \$60 million in sales that come out of the ads that we present to consumer. That represents about \$22 billion post-click sales for clients in the last 12 months.

I think this is very important because you will see and we will talk about competition. We do this better than anybody else in the world and this is all based on technology and it provides us a foundation to do things well beyond what we are doing today.

*Our engine solves highly complex problems in real time*

We solve very complex problems. This is a very easy, simple representation of what these complex problems are, but just to take you through it very quickly. For every user that we see, let us say a user comes up on CNN.com. CNN tells us, 'Hey, are you interested in this user?' We take for that user all the advertisers that apply. That user might have gone to five eCommerce sites or travel sites or classified sites. For every one of those sites, we calculate what is the best product recommendation for that user, what would be the best personalized creative and the combination of those two, plus a prediction that we do, we calculate what is the prediction value, what is the value that we will get from this user.

A user that has come on CNN.com might have a value of \$1 for one advertiser, \$3 for the other one, \$4 for the other one, \$7 for the other one and then \$2. We run an internal auction to figure out which one of those values is the highest one. One of them is going to be the highest one. Once we have that internal auction, we bid on the publisher platform. It could be on Facebook. It could be on CNN. It could be on our RTB platform. By the way, every platform has a different configuration and you need to have a different bid strategy. There is an engine that does this. Then once we have gotten the go ahead, yes, you won the ad or the space, serve the ad, we custom serve an ad. Of course, it is a custom ad because it is the creative setup for that person. However, every platform also has different elements that you need to pass to them.

This does not sound that complicated. It is actually quite complicated. But when you want to do all of these in less than 100 milliseconds and you want to have 600,000 RTBs – we do not do only RTBs, we also have direct publisher relationships, so this is probably about 50% of what we do. 600,000 RTBs bits per seconds, we do this whole thing 600,000 times per second and then we serve, once we bid, 27,000 ads per second. There is a whole infrastructure. We will talk a little bit about the infrastructure that is required to do this real time. You could say some of these might be not so difficult to do if you have three days to consider every

user and sort of compute everything. However, if you need to do this in milliseconds, you need to have a pretty robust technology backbone to be able to do it.

*We have built a massive data set*

Let us talk a little bit about the data set that we use that goes into this. An important element of data set is all the sales, but more importantly, all the intent activity that we see from users. Just to give you a sense for the size of this, we see about \$500 billion in consumer purchases on our clients' websites. That is an annual number which is bigger than Amazon and eBay combined. That is a very big number and it provides a lot of information. Also provides a lot of information across different categories.

Then in addition to that, we also see a lot of information coming from publishers that we serve ads on. We see 16,000 terabytes of data coming from 44 trillion publisher bid requests and 8 billion user engagement actions. User engagement actions are clicks, or something that the users did with the ads that we have served on them. These are all annual numbers. They are mind boggling numbers in terms of the data set.

*We have by far the largest independent R&D team in the industry*

Of course, all of this technology comes from people and we might not have the best-looking team but we certainly have the best minds in terms of using machine-learning technology or machine learning to drive sales from rich intent data sets. We have about 470 people in R&D and product. For 11 years, we have been focusing on machine learning that generates sales. It is very important to match those two. It is machine learning that generates sales from intent data. Not all machine learning is the same. For you to become good at something, it is not enough to just know machine learning. You have to evolve it and you have to be good at that.

Machine learning that generates sales is not the same machine learning that sort of allows a driverless car to safely roam around in the streets of San Francisco, so very important. This talent is based in Paris and about 30 miles from here in Palo Alto. We have two big hubs where we have this talent. It is not uncommon for us to fight for this talent with some of the big names out there, and we have a good track record of attracting the right people in the company.

*We are obsessed with technology leadership*

Hopefully, by now, you have gotten a sense that we are a technology company at heart and we are obsessed with technology leadership. Let me give you a couple of examples, other numbers that hopefully give you a sense for this.

One is we are always testing new ideas. In 2014, we did 25,000 offline tests. We improved significantly the platform and our ability to test even more ideas and so in 2015, we did 150,000, and just in the first half of this year, we have done 190,000 tests. We have talked about sort of continuously improving the algorithms. There is not one algorithm. There are several algorithms. Romain will talk a bit about that. We have constantly added new variables to the engine. We constantly test variables. A lot of them do not work, do not have any meaningful impact on the numbers and the performance we can drive, so they do not stick.

We do have to do quite a bit of customer integrations, in particular, in a world where there is a lot native advertising. Facebook is a prime example of it. However, we also work very closely with Google and do things with them that we do not do with other platforms, like Rubicon or Nexus. We have a whole area around creative that we are super excited about. We have made great progress there. Finally, we will talk about the cross-device graph. This is another and it is very important. Patrick will spend quite a bit of time on that.

*Our solution works seamlessly across the consumer journey*

Then the other thing that has been quite a bit of effort for us to make sure that our solution works across the board. It is not just important because it makes it easy for advertisers to work with us because we cover

everything but it is also very important because for you to be able to maximize the value of sales that you drive for an advertiser, if you are not optimizing across all platforms, by definition, you are sub-optimized. It is very, very important.

From a publisher ecosystem perspective, Google, Facebook, the open web, we could have plenty of examples here also with all the integrations we have done in China which are all custom integrations. It is a very different environment. We also cover a lot of different marketing channels and we have investments in new marketing channels like Search that we will talk about in a second. However, web, apps, social, native, we have an email product that is very unique that is not offered by anybody else. We cover all operating platforms and then obviously all devices.

*Privacy by design – trust is a core business principle*

Privacy. We have our privacy officer here with us, Estelle. She and her team are part of the product team. Privacy is something that is embedded into everything we do and any product before it actually is worked on, we have a privacy component attached to it. There are three big principles that we use on any product that we have related to privacy.

One is we want to make sure that there is no PII data. There is no, I can never say this, personally identifiable information, meaning that you can never take that information and say, 'Well, it is Benoit.' I know that a number, three, four or five, or whatever the idea is, has this information, they have looked at these products on this site but I never know it is Benoit, right? That is the first principle.

The second principle is that we provide transparency to users. If you see any of our ads, there is the little triangle up there, we are the first ones to create that and create transparency about why the ad is being served. If you click on that triangle and it is something that was served by Criteo, we will tell you, 'We are serving you these ads because you have seen these types of products and you might be interested in the product that we are serving to you.'

Finally, control. When you click on that little triangle, you can actually then go and excuse yourself or opt out, if you will, from that campaign or completely from Criteo. We were the first, by the way, to come up with ad choices and we were also the first to have a cookie notification on Safari that tell people, 'Hey, are you okay with Criteo being able to see your cookie as a first party cookie?' It was interesting because in Europe, it was easy to implement. In the US, it was completely new and it was harder for us to get advertisers to do this because there was a much higher standard of privacy awareness that the US was doing and I think part of our heritage being European makes the privacy sort of standard for us, a much higher one.

*The whole company is focused on measurable performance*

Alright. The second one is performance. The whole company is focused on performance. This has a number of benefits. We have very clear post-click attribution where you have to get engagement before we say that we actually generated the sale or influenced the sale. We continuously track those sales that help us optimize campaigns, see whether there are problems here or there. We have transparent performance indication that is available to our customers on a 24/7 basis. Then we have a CPC model. Then we have great client services teams that help clients get the most out of the spending they do with us.

Account strategy, we have a technical solution team that implements all the new things that we put forward for our clients. The creative services team that helps the clients make sure that their brand is well represented in the banners and in any ad that we present. A business intelligence team that is doing things like quarterly business reviews and doing analysis on how their spend is going. Then we also have a team that helps deploy a lot of the new products that we have.

It is interesting on this, at some point, I was interviewing a person from one of the large companies in advertising. I said, 'Why are you interested in Criteo?' I thought he was going to say, well, it is all about the

performance and the technology and though he acknowledged he was the one. He said, 'One of the things I find extraordinary about you guys is the level of service you provide to advertisers.' This is a big part of the asset. We do not talk a lot about it but it is a big part of why we have very retention rates.

*As a result, we drive increasing sales for clients*

This is the ultimate metric that we look at, is the ability for us to generate more post-click sales. If you look, we went public in 2013 and since then, we have been able to quadruple the amount of sales that we drive for our clients. For clients that have been live with us have also meant an increase in Rev ex-TAC, for us Revenue ex-TAC, that we have with those clients and we have driven in 2013 plus 35%, plus 40%, plus 52% in 2015 and this year, plus 32%. It is a big part of the model that we have.

*Our large-scale infrastructure supports our performance*

Scale is important. Just to give you a sense for the scale, we have two stacks. We have a stack that keeps, and it is the largest Hadoop cluster in Europe, with 31,500 processing cores, 102 terabytes of total storage. I am told that that is about 20 times what Rubicon does and 4x what Spotify has, and then 26 terabytes of additional data. Apparently, that is 130 billion tweets every day that we ingest of data, to give you a sense for it.

This is the basis of our engine model. It is recomputed every hour. Then we have real-time stack that allows us to do all the things that I have talked about, that very complicated chart with 600,000 bids per second. Well, this real-time stack provides a complete end-to-end ad service solution. It is a hugely distributed data store where we can actually run these things and makes decisions in a few milliseconds, as we talked about. Getting this right is not easy. We fortunately have. It is one of the things that makes it very hard for any other player to get to the level.

*We have built large-scale networks*

We have built also very large-scale networks. We are the second largest global user network in terms of ads served, and as you know, we have 12,000 advertisers, eCommerce companies by and large, and 17,000 publishers we work with directly. We work directly with most of these folks, and that creates a very powerful scale and network effects.

*We have a truly global footprint*

We are a global company. We started in Paris in 2005, and just very quickly after we developed a solution that worked, we went to London in 2008. Today, we have 90 countries where we serve ads. Even in the middle of jungles, we serve ads if you are on your device. We have 31 offices in 19 countries. They are distributed about equally in terms of number of offices between the Americas, EMEA and Asia. We have a very diverse team at Criteo. We generally have people in market that are from that market that serve the advertisers from that market, so we have 77 nationalities, and that is why you will hear all kinds of funny accents coming from this team.

*One solution for global companies*

The other thing that is important for us is be able to serve large clients that have a need that is global, and so this is a good example. I do not think we discussed this and we do not talk about this a lot, but this is another area that gives us a competitive edge. That is the ability to drive advertising in more than one country. 35% – I actually did not know this number. 35% of the Revenue ex-TAC comes from advertisers that run campaigns in more than one country. You have some examples here, like Microsoft, that you will hear from in a second that runs campaigns in 51 countries with us. Advertisers that run multi-market countries are running them in five countries on average.

*So what is the road ahead?*

What is ahead? For us, we have a very strong core business. We still have plenty of room to grow that business, and then we are investing in new growth areas. You will see we believe we can build the world's performance marketing platform. We will tell you what that means. There are a number of offerings that we are going to bring. We intend to continue to serve the advertisers that we serve today. We think there are opportunities to serve other verticals, but we will talk about what is critical in terms of us being able to do this.

*We have powerful drivers of future growth for our core business*

First of all, let us talk about the core business. We continue to have plenty of success in terms of expanding our client base. Last quarter, we had a record number of net new clients that we added to database. There is plenty of growth to be had in the tier 1 area. There is also plenty of growth to be had in new markets.

Mollie will talk a bit about APAC in more detail, and Tim will talk about the midmarket where we have plenty of opportunity. We have more than 84%, 85% of penetration that we have yet to achieve there. As we improve the technology, we can continue to increase value for our clients. We will continue to enhance the core technology. Romain will talk a little bit about that. We will leverage the cross-device graph. We think that is a very important driver, in particular in a world, again, where 40% of the transactions are happening across devices. Patrick will talk about that. We can continue to broaden the inventory supply area, and Mollie will talk about that.

*And we continue to invest into new growth areas focused on performance*

Beyond that, we have new areas of growth. We have talked about some of these with you. When we look at new areas of growth, we think there are two key things that are making this possible.

First off, we want to make sure that the foundation of all products is a rich data set, very large data set that allows us on a real-time basis – and it has to be fresh data that allows us, on a real-time basis, to drive performance. That is why we are the best in the world. Remember, I had those – how many terabytes, 600 terabytes? I do not remember how many – but all those terabytes converted into sales on a real-time basis, that's what we do best than anybody else. It is very important that we have some basis on that. That is what part of our DNA is.

The second thing that is interesting now is as we have advertisers and publishers that become a very large network, the ability to pool assets from those advertisers to drive performance for them in ways that were not possible before are becoming very real. A good example is what we did to access Apple – with our Apple compliant solution. That was a pooled asset. We think there are other areas. One of those areas that I will talk about in a second is prospecting.

However, starting from the top here, we believe we can go into new marketing channels. We have gone into email and we are deploying that, but in addition to that, we believe that we can do Search. We have had an effort for about a year and a half on Search with quite a bit of resources, a lot of them located in LA from an acquisition that we did about a year and a half ago, DataPop, of which Jason was one of the founders. We will talk a bit more about that, but we think we have a good shot at potentially making a dent in this market.

Video and offline are opportunities. They are further out there, but they very much play to what we do best. Offline, being an area where you can get intent data from offline. We have a project doing a couple of tests today to see whether the intent data we get from you walking on the store and looking at products can help drive online sales. However, at some point, the ability to close the loop on offline sales will create an opportunity for us to drive and influence offline sales, not just online sales.

We can move in the customer lifecycle today. We use a lot of information about people visiting a site to drive them to reengage with a site, then drive sales. We believe that as we pool assets, we will be able to

use that information to drive new customers to sites. We also believe that we are in an interesting position for the eCommerce companies we work with to be able to drive app installs. People click on our ads. A lot of times, they click on our ads on mobile web browsers. If they click on one, the ability for a Saks Fifth Avenue or another company to ask that consumer, 'Would you like to download our app?' is something that we would like to test and see if there is some life in there.

Finally, for verticals, and a vertical that we have been quite excited about is the vertical of manufacturers. A lot of manufacturers sell through third parties. We serve those third parties by and large. They are selling products online. A lot of times, the products they sell are not products they produce. They are produced by manufacturers that have big marketing budgets that they would like more and more to be performance based. The ability to influence those sales for those manufacturers is something that we think could be exciting, in particular, again, with the ability to pool assets from the networks that we have on the advertiser side.

*We are building the world's performance marketing platform*

If you take these and you think about our global strategy, we are trying to build the world's – or we are building the world's performance marketing platform. We have a number of assets that we have today. We are doing, obviously, retargeting or remarketing. We are doing that on display. At large, these include social, native. We are also doing email. We are building a cross-device graph that is quite advanced, and this is a good business. We can grow this. But once you add app installs, prospecting in terms of the goals that we do, we are going upper funnel here. If you add some of the key components or marketing channels, like Search, video and offline, you are basically covering a huge part of the eCommerce or the advertiser interest, and we can add also manufacturers. We think we are in a very, very unique position to do this compared to anybody else in the ecosystem.

As you will see in a second, this represents a much larger opportunity than the one we are going after today. Let us talk about that now.

*We have a large opportunity ahead of us*

We have a big opportunity in front of us. I believe we have a \$25 billion net market opportunity, so that \$25 billion is measured in terms of Rev ex-TAC opportunity. The core opportunity that we have, we think is about \$10 billion. It has been growing. We will talk about how we got to that number in a second. We think there is about \$6 billion in shopping ads. This is just specifically to Retail in Search, in both shopping ads and text ads. Then there is about \$9 billion in acquisition marketing that could convert into a performance-based acquisition. This is the ability for advertisers to get new customers in. The total of those three is \$25 billion.

*Our core market opportunity is massive*

Let us talk about the core market opportunity. We start from the total, and we are doing a 2019 number, two years out. It sounded like a good timeframe to think about. There is about \$4,300 billion in eCommerce sales. Today, we drive anywhere between 8% and 9% on average of the sales of an advertiser we work with. We believe, with a lot of the enhancements that we are making to the product and a lot of the things that Patrick and Romain are going to talk about, we can reasonable get to 10% of those sales for the client in the current business today. If you take that and you assume, for uncapped budgets, that we get an 18x return for those clients – on average today, we get about a 15x, but we are using uncapped because we think it is a cleaner sample – and you continue to apply the 40% Rev ex-TAC margin, which, as you know, is an input into our model, you get to a \$10 billion Rev ex-TAC opportunity.

*A product for retail in Search can open a meaningful new opportunity*

Retail in Search, there is about \$126 billion forecasted to be spent on Search in 2019. Of that, about 30% is spent by Retail clients or e-Tail clients. E-tail, Retail. You will see, from Jason's presentation, we believe

that we could have an impact on client sales, that is at the same ROI drive, 20% to 40% more volume for those clients. Based on that value that we would add to the clients, we believe that we can capture anywhere between 10% and 20% of the ad spend on Search by those clients. If you take those numbers – so if you take \$126 billion, 30%, and 10% to 20%, you get to \$6 billion.

*New products in acquisition marketing can bring significant opportunity*

Finally, new products in acquisition marketing. One of the challenges here is there is not that many performance-oriented products that drive acquisition marketing on display. There is plenty of money being spent to acquire new customers, but there is not that much of that money that is tracked to clear metrics. The ad spend on display, excluding video, is about \$88 billion in 2019. We believe the share of acquisition marketing in display is about a quarter of that. If you apply a 40% Rev ex-TAC to that, we think there is a net market opportunity of \$9 billion.

*We have exciting additional opportunities*

We have not valued, in what I just showed you, the potential of what we think are more speculative or longer-term opportunities in video and offline. Each of these could be massive. I think in particular, offline, which today, still carries more than 80% of the sales that are being done worldwide in eCommerce, presents a massive opportunity. If you can close the loops and see the sales that happen offline, and you can start gathering information about what people do online, you can create ads that actually influence that a lot more.

*Our DNA, strategy and proven execution will make us win*

In closing, we believe we have a DNA that has helped us be successful today, but that will also help us build on the strategy we just talked about, which is building the world's performance marketing platform. We already have many elements of it that make it very powerful, but we will add to it by adding marketing channels, by going into different areas of the customer lifecycle so that moving up funnel, and by also adding verticals, all of that turbo charged by a cross-device graph that is very unique and we will talk about that.

If you look at the successful execution track record that we have, and you will get to see some of the people in management in the company, the senior leadership, I believe we have the best team in the industry, second to none. The best one by far. You will see that it is not just a great team, but it is very seasoned in what we do. We have grown the core business. If you look at the last 11 quarters, we have exceeded expectations since we went public and we plan to continue to do that. We think all of those elements will lead to sustainable success over time.

With that, I thought I would take you through Rob, who is our Microsoft contact who is in charge of direct response for the Microsoft store and he will tell you what he thinks of Criteo. Because it is easy enough for me to tell you that I think Criteo is great, it is much better if a client can tell you that.

[Video]

Alright. Very cool. Hopefully, you get a little bit of sense of what clients think of us. I am not sure he would be very happy to see that we showed his testimonial on an Apple computer, but it could be a new tablet.

With that, we are going to talk about growth initiatives and I am very happy to welcome Mollie Spilman who will talk to us about inventory and the opportunities in APAC. Mollie, please.

## Inventory Expansion

Mollie Spilman

*Chief Revenue Officer, Criteo*

Yes. Hello, everybody. Excited to have you guys all here. I am the Chief Revenue Officer at Criteo which means I run global supply, demand, and operations in the middle. First, I am going to talk to you a little bit about our approach to supply and inventory, and then I am going to give you snapshot on our APAC business and our ambitious plans for growth.

### *How inventory is accessed*

First, I thought it would be good to share with you how we kind of segment and look at the world of supply. The way we look at it at Criteo is kind of in three buckets. The first one, we would call Super Premium. Those are direct partnerships, premium supply that we work directly with publishers, we have custom integrations, we have very deep relationships with these publishers and we are getting what we would call first look access to the best users.

The second bucket would be premium inventory which primarily we get through exchanges but we have private preferred deals, or PMPs. These are private marketplaces that we access for the best inventory.

At the bottom would be more scale through what we call kind of standard supply which is through the global RTB exchanges or it might be local RTB exchanges.

### *Our publisher organization*

The way that I have organized my team is around those different segments. We have a team called Global Partnerships, and these guys work with the six or seven largest global platforms. We have teams that are assigned just to Google, just to AOL, just to Microsoft or Facebook. We manage their business on a day-to-day or even hour-by-hour basis to see how we are doing with them to spot problems, et cetera.

We also work really closely with these guys on alpha projects, beta projects, developing new projects together. A great example would be Facebook Dynamic Ads through our partnership and their respect for our technology, our unique approach to data and machine learning we developed in conjunction with them, their dynamic ads product which we now sell.

Then we have local teams. These are teams in the markets that work with the largest local publishers, so it might be Yahoo! Japan in Tokyo, it might be Weather Channel in the US or Orange in France. It is really important in terms of supply to be able to have those large local players because in countries like Italy or Singapore or China, the local inventory that just exist in those markets is very, very valuable and we know converts very well.

Then our last bucket is our midmarket team which goes after the long tail, torso and tail publishers. These are direct relationships that we have with these publishers. We primarily get first look and what we do not find value to bid on, we pass back to those publishers. However, we are a significant revenue source for these types of publishers.

Overall, our strategy in terms of supply is very specific. We are looking for the most diversified supply. We do not want to be dependent on one platform or one publisher, so diversification is really important. The second point would be access: the best access to the most valuable users. Those two things drive really the whole approach at Criteo, and what has helped us deliver the type of value we have so far.

### *Objectives for our publisher business*

The objective of our publisher business is pretty simple. We want to find the best users and all opportunities to access those users across all screens and devices. If we do that, we are able to deliver performance for

our advertisers, which means convergence, which means sales, which then means that we have more money to spend on those users and the best inventory. We are able to deliver healthy revenue, write significant checks to these publishers, and the whole process starts again. We are helping drive more value to the whole publisher ecosystem through the performance of our platform.

*The publisher environment is constantly evolving*

I have been in the digital industry since 1998 and so what we know is that change is constant in this digital world, and so you have to be a company that can be nimble and adapt to any change because change will happen.

There are two kinds of things happening in the last few months, or years. One is consumer behavior. People are spending more time on their mobile devices. People are spending more time on social platforms. People are moving between devices at a faster rate and in a more seamless way, as Eric talked about. People are jumping between these devices, and for a publisher, how do you monetize those different devices?

Then there are new opportunities for user control. Ad blocking and other ad choices, other ways that users have control of their digital experience, whether it is content related or advertising related.

At the same time, there is more technology advancements which are also going to happen, so native, which is, you could say, our non-IAB units. It is combining kind of content and advertising all together for what could be a better experience or a different experience, a curated experience for users. Programmatic is just more automation, different ways of automated buying, bidding, selling.

Header Bidding is something new that we have all heard about and that is yet again another technology advancement where programmatic bidders can essentially access premium inventory in the way they have not before, all driven by automation and technology.

As this world evolves, like I said, you have to be nimble and you have to adapt, and if you do not do those things, you will not have a flourishing business. Just a few examples of how Criteo adapts or how its business has always been in the right place with the right business model.

*We have always delivered user-friendly ads*

When we look at user-friendly ads and ad blocking, Criteo has always been promoting acceptable ad programs, investing in the right types of native, open tracking. We in fact have defined, helped the industry define protocols for retargeting.

For ad blocking, it has not affected our business in a negative way. In fact, if it is a good thing for users, it is a good thing for us because our ads are delivered based on user intent. As you heard from Eric, we are staunch believers in privacy, in user control, and so our business model, our technology, our expertise, everything has been orchestrated and built, as this company, in the right way, so that when something like ad blocking comes about, it does not impact our business in a negative way.

*What is header bidding?*

Similar to that, the new kind of rules of the road for Programmatic in terms of header bidding. What header bidding is, is basically an opportunity for programmatic buyers to bid on premium inventory. What does that mean for publishers? It means there are some more bidders, which is a great thing for them because they are able to make more money, increase their yields and they are less reliant on one particular monetization platform.

What does it mean for buyers or bidders? It means that there is more inventory for auction, which is actually a really good thing. However, what it means at the same time is it is more complex. The way that these header bidders work is that it is a much more complex ecosystem technology to have to navigate, and so,

like I said before, the kind of rules of the road, what you used before to bid is not necessarily going to work now to access those same users.

*Header bidding creates opportunities for a sophisticated technology player like us*

What Criteo believes is that, in the short term, there are changes in the auction dynamics. There are changes in the value ecosystem, and for particular segments of valuable users, prices perhaps have gone up and the whole process has become less efficient. What that means is bidders need to adjust and adapt to this new environment.

Criteo has already started to do that, so that might mean things like capping bids or being more selective on the platforms that we work with. It also means that because we are so based on data and technology, we already have particular technology advancements in the works, particularly to address header bidding. Romain is going to talk you through some of those areas. For us, we see this happening in the industry, we do not see it impacting us significantly, and what we think over time is that the market will rationalize, and those people who have adapted and have sophisticated machine learning and data sets, they will be able to get the fair value to reach those users once again. It will be normalized. Those bidders who do not have the technology and are not as sophisticated, perhaps will pay a higher price than the more sophisticated buyers.

The last thing I would say on this is, is where I started, which is Criteo has a unique position in the market in terms of being impacted by technology advancements or changes like header bidding. We have a diverse supply footprint. We are global. This is not a global phenomenon. It is primarily in the US. We have that supply footprint. We also have direct publisher deals. Those super premium deals, header bidding has not changed those relationships or those technology integrations that we have done.

Given our diversification, our access to premium supply, this has not been something that has kind of erupted in our world; it is just another advancement in the world of programmatic that you need to adjust to and, in the long term, to be honest, take advantage of.

*Our publisher focus for 2016/17 – Continue to grow our massive reach*

When we look at just the next year or two, how do we intend to grow our supply footprint? We look at three areas – mobile, social and native. The reason that we are so focused on these is this where consumers are spending their time. If consumers are spending their time there, that means that we are going to find valuable users that we can convert into buyers. Just quickly on these three areas.

*We are strong on mobile*

Mobile, we are already strong. Eric talked a little bit about it, but 53% of our Rev ex-TAC in Q2 came from mobile. That is not just mobile web, that is app and that is cross device. Our priorities moving forward will be to bring on more mobile exchanges and then particularly, work with direct publishers on getting more app supply especially in Asia where app is really huge and growing.

*We bring quality inventory at scale to advertisers through social*

Second would be social. We know consumers are spending more and more time on social platforms. We bring demand to those platforms, we bring programmatic approaches, we bring performance and scale. We already are working with some of the largest platforms – Facebook, Instagram, Kakao in Korea, and so our intention moving forward is to take the success we have had on those platforms and start to investigate working with other large global social platforms.

*We have strong assets to take advantage of native inventory*

Then the last area is native. When we look at our technology, our performance, how native converts our creative capabilities because native has so much to do with the dynamic nature of the placements, Criteo is uniquely suited to grow in this particular format. In fact, 20% of our Revenue ex-TAC is already native. Our

plan moving forward is to work with more third-party native companies like Taboola or Outbrain or TripleLift, but also continue to develop our own custom integrations directly with publishers, which we found success with already and plan to continue to move forward with.

As I said, diversification and access. When we look at our Rev ex-TAC, the way that we classify it is we look at 44% of our inventory is preferred access. That might mean a PMP. That might be a long-tail direct publisher, or those big publishers, or super premium publishers that we have some type of first look access. This is a huge driver of our business and something we push nonstop, and we will continue to do so, and with the unique demand that we bring, the scale that we bring, we get very receptive responses to these types of arrangements with publishers.

### *Summary*

In summary, we are really fortunate. Our business is fortunate that we have such a strong publisher business. We are able to deliver this value to publishers, and we are able to deliver value to our advertisers, and the two balance each other. We can help these publishers navigate a complex and always changing environment. We can focus on new consumer platforms like mobile, social and native where people are spending more and more time. How do we help these publishers monetize those new platforms? Then we can continue to work with some of the biggest publishers in the world and build those relationships and uncover uncharted territory in terms of monetization, and driving performance for our advertisers. That is look at our inventory.

## **APAC Growth**

Mollie Spilman

*Chief Revenue Officer, Criteo*

Now, I am going to switch to the demand side of my job and talk a little bit about APAC. For those of you who do not know, APAC is huge. In the next two years it will make up over 60% of all the eCommerce sales in the world. It is just phenomenal to see what will happen and what has already happened. In addition, this is a mobile-first market, there are some markets where nobody had a PC or desktop computer. It went straight to the mobile device, and so they are mobile first, or mobile only in some cases. What is even better is that we already have a strong position. We are working with some of the largest advertisers in the world, some of the largest publishers in the world in APAC. We have over 200 employees already on the ground in Asia Pacific.

We have eight offices, we have an office in India, we have one in Singapore, Australia, we have two in China, Beijing and Shanghai, two in Japan, Tokyo and Osaka, and an office in Korea. We are already up and running in doing amazing things.

Our biggest market right now is Japan; it makes up 66% of our Asia Pac business. We have a strong brand; we have an exclusive relationship with Yahoo! Japan. We have two offices. We do not really have a significant competitor, and we have a really strong team.

Our ambition is to grow the other regions as well as grow Japan, but we want to grow other regions that we think have large opportunities.

### *We have a proven blueprint to open new markets*

What we have done in the rest of the world is follow our blueprint. The first one is we open up RTB networks, so we go to the big exchanges to get inventory. Then we look at our clients that we have, that are global clients. Eric showed you a slide of all the clients that we have that operate in more than one country. We get them into the region, then we go local on the demand and the supply side. When we look at, taking

that blueprint, and going into these new markets, that is going to be our approach, and we are already having success in that area.

*Our priorities for Tier 1 in Asia-Pacific for 2016/17*

The three focus areas for the Q4 of this year in 2017 are Southeast Asia, India and China, which are all mobile-first market, so it is critical that we have such a strong mobile position at Criteo.

What is interesting is, when you look at global smartphone penetration of the type five markets in the world, three are in Asia. I am going to give you a couple of seconds on each market, to tell you what our priorities are, and why we are excited about that market.

*Southeast Asia*

First we will start at Southeast Asia. There are strong economies, the population is growing, they are very much mobile first, there are lots of opportunities for eCommerce. eCommerce is just starting to really take off, so we are very excited about this region. There is also a lot of venture money coming into this region for those very reasons. We helped a company called Matahari Mall launch in Indonesia. Given the strength of our technology, we helped them launch their business, and they saw, for example, 160% month-on-month sales growth. They could see their results and it helped them build their business on a performance basis. This is just one example of many big clients we work with in Southeast Asia.

Our plan going forward is to focus on app. That is getting more app inventory, that is launching more app campaigns and then focus geographically on three very key markets; Indonesia, Taiwan and Vietnam.

*India*

Now, we will talk about India, which is another huge market. It is projected to be the second largest eCommerce market in the world in the next two years. Amazon, as you probably heard, has made huge investments. There are very big local brands that you need to be on the ground to sign, and they are very open to Western companies and foreign companies coming in, and adding value to their digital ecosystem.

We took the same approach for the blueprint we have done around the world to India and actually we started in 2014 from Singapore. We already had activated local RTB networks, we sold in big clients that we had signed in Singapore. We sent people from Singapore to India to do sales calls, and go back and forth. We built a team in Singapore to support India. Then in May of this year, we opened our subsidiary in India in Gurgaon. Now, we have a team of people in Gurgaon supporting that local business. We see lots of opportunities there. The plan going forward for next year is just to accelerate those local clients, get more app campaigns going, and get more local supply, mobile web app and desktop.

*China*

The last market I want to talk about is China. China is a very, very specific market, and the blueprint that we have used for the rest of the globe does not necessarily apply exactly in the same way to China. Some of the opportunities – it is a huge market, huge population, mobile first. There are 25,000 midmarket advertisers that we could go after in our view. There is not as much tech sophistication on a local basis, so we think we can add a lot to the performance that those players are looking for. There are just tons of opportunity and excitement.

At the same time, the challenges are really big too. It is a culture that is not built on trust, and so you have to be on the ground, you have to be in the face of these advertisers and publishers. They do not trust Western companies, and so you have to develop that relationship, you have to try to speak in the performance terms that they speak in, which are not necessarily the same ways that we talk about performance on the advertiser side or the publisher side in the rest of the world.

We are working through that. We have actually made really great success. We now have an office in Beijing and Shanghai. We have a new MD, who we have hired who is based in Beijing. I have just hired a new head of Executive Managing Director of all of the APAC. She just started 1<sup>st</sup> August and actually, she ran search at Alibaba, so she knows the China market very, very well, and I think she can help us to break some of the ground where we feel like we have been slower to get uptake.

We have activated the ten largest RTB networks. We are balancing our efforts between our local business and our export business, but we have seen the export business really grow and take off as you can see. Then we opened up our Mainland China data center, which has seen our support of our traffic just be able to accelerate, so that was necessary to be able to be successful in this market.

When we look forward to Q4 in 2017, we are focused on four basic things; our export business, our local regional business, apps developing new product in particular just for China, in the apps market we have been successful in, and then midmarket, we just hired an MD to run our China midmarket business, so we are just getting going there. We have a lot of expectations for that.

When we look at APAC, it is our fastest growing market now. We think it could be the largest market opportunity that we have at Criteo moving forward, and we are really excited to kind of realize our aspirations and dreams for this market going forward.

## Q&A

**Eric Eichmann:** Thank you Mollie. Do you have any particular questions about this section? Otherwise, we will move on. We will have plenty, plenty of time. Yes.

**Speaker:** On the header bidding topic, those were really good set of slides and you had like the inventory cost ramp up phase and then the curve down. Where are we on that? As we look at just general change in technology in this space and you hear the stories of a couple of brothers in Ukraine being able to bid – build a bidder that is competitive with a company of your size. Like is there really a competitive advantage that Criteo has as the industry evolves as it has recently?

**Eric Eichmann:** Thank you for that question. I have not heard about the Ukrainian brothers. Yeah, it is the first time I hear. A couple of things about header bidding, right? One of the advantages that is an immediate advantage is you get access to more inventory. Because basically, inventory that in the past you have to be in the stack for that publisher you get access to, so that is an immediate advantage. We think that is a good one for us.

There are some adaptive periods, so what is happening now is, yes, for some users, the prices have gone up, but it is not like there was not a supply-demand equilibrium before. It is just a new technology. Supply and demand have not changed. CNN has the same pages, they have the same users that are coming to their site and the advertisers have the same money that they wanted to spend. They just found themselves in the situation now, where there is technology that is for different reasons. Some of them that are not good reasons, just temporary things that are making them pay more.

We believe that that is going to change, that it is going to go back to the supply-demand balance that was similar to what was before. However, we think that, in going back to that, the people that will be most favored are the people that are most sophisticated in terms of performance and can use large data sets to figure out what is the right bid should be.

Romain will talk a little bit about this, so you get some color as to why we think this is the case and we will give you one example of a technology or a way we can implement the technology that will get us there. We think that once everything is said and done, we will end up in a place where we will probably get a premium,

meaning we will pay less, than unsophisticated buyers. That might be even a better position than the position we are in today.

How long does that last? It is hard to know, but I would sort of want to say it is about a couple of quarters before sort of things stabilize again. However, it is a new technology. Remember that supply and demand have not changed. It is like there is no like – it is not like CNN is getting like thousands more people coming to the site because they implement in header bidding and it is not like Procter & Gamble and Ford, suddenly said, 'Hey, I got more money, I want to pay more money to the publishers.' That was not the case. We think this is going to come back to a more reasonable sort of demand and supply balance.

**Speaker:** I appreciate the color of mobile. I guess I would just appreciate more detail on the specifics of [inaudible] both Criteo and the publishers [inaudible].

**Eric Eichmann:** Benoit, I do not know if we have – I do not think we have provided, we do not divide the business between mobile and desktop, and how we think about it. All of these campaigns run seamlessly across the two. What we have done in the past is provided some color, which I think is a good proxy for performance, but we have provided some color as to what click throughs and conversions would look like and it depends on which mobile environment you are looking at.

If you are looking at a mobile browser environment, generally, you will get similar clicks or somehow above clicks because the action of the units are actually sometimes better. They take more of your experience in the page but you get lower conversion rates. The net effect of those two is about the same – maybe a little bit lower. The price associated with what we buy on mobile is not different, so I would not necessarily see a dramatic change.

To finish off, and I will take your follow-on question, if you are talking apps, apps are actually quite efficient at conversion. Some of the apps, if they have a good app environment, convert two or three times as well as the desktop environment. The economics in an app environment potentially look better because the conversion is better. Again, we do not divide up between mobile app and we do not look at those as lines of business. We serve advertisers, eCommerce companies and they spend with us and we serve them across any device, any environment where the users are.

**Speaker:** That is alright [?] and maybe just even more specific. I guess what are the costs to acquire users on mobile device versus desktop device [inaudible] attribution brought out from your customers' perspective of like kind of mobile device versus desktop device?

**Eric Eichmann:** The question for those of you that couldn't hear it is what is the cost of acquiring a user on a mobile device versus desktop? What is the attribution difference between the two?

**Speaker:** Like from your customers' profile when a user buys something from the customer and they are going from desktop and mobile, from the attribution perspective, is it possible to see that from the mobile side?

**Eric Eichmann:** I think the challenge – so for first off, to your first question on the cost of user, the cost of user is not as relevant a metric for us, what is relevant is how valuable the user is and whether we are able to acquire it or not. Sometimes, you have a cost of user or a cost of an ad for a particular user that might be a tenth of cent, and it is a terrible ad to run because they are never going to convert and you might have a \$10 ad space that could be terrific. That is not as important for us. Rev ex-TAC is a better indication of whether it is working because it gives you a sense for whether you are finding the valuable users and you are able to serve them ads.

On an attribution perspective, I think the real challenge is not looking at the channel of desktop versus the channel of mobile. The real challenge is the cross-fertilization that is happening between the two and that is where advertisers are having the biggest issue. It is the ability to see that you served an ad on a desktop

and the person then ended up converting in the tram or in the bus on their mobile device. Making sure that you have that attribution when you do not have the user graph to match them is a big issue and it is one of the biggest issues that they have. The more this becomes a fragment in the market, the more difficult it is. It used to be much easier because in the past we did not have this environment or if you had the environment, the users will still consider them separately. If you served an ad on the desktop, you mostly likely ended up with a transaction on the desktop and so you could follow that through.

The biggest issue is not user sort of mobile versus desktop. It is really the cross-activity that happens between them. I will take one last question and then we will continue on. You will have time to ask questions at the end. Sorry.

**Speaker:** Thanks, guys. Since header bidding is putting upward pressure on pricing for any buyer – it does not matter who you are – are you seeing any of your advertising clients either lower their ROI hurdle or raise their CPC bids in response?

**Eric Eichmann:** No, I think what would happen is, people have an ROI that is their ROI. The mechanics or the effects are such that if we have a user that is more expensive and the advertiser cannot afford it, then we do not buy that user. The effects are really in volume. They keep their CPCs. The conversions are not changing.

If they get a click for ten cents and that click converts the same way that it converted in the past, and then they get the same ROI. They just get a lower volume in it. Just to be clear, on the short-term, we think this is sort of a low single-digits type of issue. Again, we think that in a couple of quarters, it is hard to predict exactly the time that we will be able to see a situation that is very different.

We have already started deploying technology that allows us to bid directly into header bidders. That gives us two things instead of having like in the past we might be connected to four RTBs that now are all bidding at the same time. We would get four requests without knowing what the context is of those requests. We are now having a header bidder or a technology that connects directly to the header bidder and gives us the context of what is happening. As you will see from Romain's example, not too long from now, you see how that can play to our advantage.

Alright, so with that, let us move on. Let me introduce Tim Frankcom, who leads our midmarket globally out of London. Thank you very much.

## **Midmarket: Opportunity, Productivity & Scale**

Tim Frankcom

*Executive Vice President of Global Midmarket Business, Criteo*

Thank you very much, Eric. Okay. Hello, everyone, nice to see you. My name is Tim Frankcom. I run our Global Midmarket business, and I would just like to take you through how the business is operating.

Firstly, when we started the midmarket business six years ago, a decision was taken really to have a team focus on the largest opportunities in every single geography, and then have another team initially focus on the midmarket opportunities. We started with just Europe and then that has rapidly spread to other markets across the world.

*How does it work?*

How does it work? Firstly, what you should know is the Tier 1 team is focused on field service. They are in the local market. They are focused on high value and lower volume, so they are typically in the top 100 or

the comScore top 100 other large opportunities in the country. They have the longer sales cycles, and I offer those advertisers a white glove service.

How about midmarket?

How about midmarket? It is inside sales. What that means is we do predominantly phone-based activity. We have a higher volume and lower value advertisers in terms of what they spend with Criteo. We talked about volume and value a lot within Criteo. It is important actually that the team have both volume and some value, so what we do is we typically ask the team to focus above 40,000 unit users. It is a guideline for them. This is not a long tail play. This is about going after the torso of the market. These advertisers have shorter sales cycle, so the team were able to attract these advertisers to work with them, work with us over the phone, via messenger. They will be emailing them as well. We are able to get things live relatively quickly. Certainly, quicker than Tier 1.

We also have introduced a high degree of automation. I am going to talk to you a little bit about what that means as well. Different from the local Tier 1 teams, we have regional hubs. I will explain a little bit about that as well. Midmarket consists of thousands of advertisers. Some of them are well-known, thousands of them you may not have heard of. Obviously, within these selection, there will be some that you have heard of and some that you have not.

*What our advertisers are saying about us?*

What are our advertisers saying about us? Here is one case study, we see a 210% increase in retargeting site traffic and a 775% uplift in retargeting sales as well by working with Criteo.

We talk about the opportunity, but how big is that opportunity? We believe that there around 55,000 advertisers that we can work with. Despite the fact that we have been doing this now in excess of six years in the EMEA region, initially when we started in Europe, our penetration is still only around 25%. There are a lot of advertisers, particularly, retail, travel and classified advertisers, which we have not even really got. We got to go and get those.

In the Americas, which consist of obviously the US, Canada, LatAm as well and Brazil, our penetration is even lower, it is only 16%. The opportunity in the United States is huge. The opportunity elsewhere in places like Brazil, also is very substantial for Criteo.

Moving on to APAC, which is a real focus for us and Mollie has just explained, the 2% penetration is really integral to the fact that we have only just started operating in midmarket in there. Two years ago, we opened up our office for midmarket in Japan and Australia as an example. The opportunity is very, very real. Globally, we think, we are only around 15% penetrated. The opportunity in terms of the number of advertisers we can work with is very large.

*Hub strategy*

I know that Benoit and Eric told you about a hub strategy. What does that actually mean? We started an office back in London for EMEA. That has now moved in to Barcelona. We have a very large office in Barcelona, and we do all of our EMEA activities from Barcelona with the exception of the team based in Moscow. The reason we have a team based in Moscow is for local regulations.

Into the Americas, we have a sizable team in Boston and another sizable team in Brazil, also in São Paulo, again for local regulation purposes. Our hubs are in Boston and Barcelona for those two regions. However, when we moved to the APAC region, obviously, a very, very large region, we do have one hub in Singapore which services our SEA territories which services Australia.

We have also made the decision to set up three local satellite offices. The first two, in Seoul and in Tokyo, offer purposes of hiring. We did not believe we could find the numbers of people that we need who speak those local languages in Singapore. We made the decision to open up our midmarket team in Seoul and in

Tokyo for those two respective countries. Thirdly, as Mollie said, we have opened up our midmarket team in Shanghai for many different reasons. However, I do think it will be easier to do business there than it would be if we did it outside of China.

#### *What do we sell?*

So, what do we sell? I think it is really important to understand that actually we are not selling a light product. We are not selling Criteo light. Again, a decision was made six years ago that we would not do that. Actually, clients buy on return on investments targets. They benefit entirely from the full power of the Criteo engine. Whatever we are able to offer them in terms of on the Tier 1 side, we offer them the same on the MMS side – the midmarket side, as well, so the complete service, whether it is cross device or extended browser solutions as well, they get everything.

As a result, 75% of the midmarket clients uncapped their budget with us because they see Criteo as a cost of sales. Really, really cool. Since our IPO, the spend for midmarket clients has actually doubled.

#### *Our Revenue ex-TAC*

I love this slide and I really want to take a couple of minutes to talk you through it. This is just how our revenue or Revenue ex-TAC is split. This is actually Q1 and Q2. What you can see in this is how the Revenue ex-TAC is generated.

If we just take the furthest line here, on the right-hand side, you will see that actually the Revenue ex-TAC is generated from clients that we signed back in 2010 or before. From 2011 and before – 2012 and before – 2013 and before – 2014 and before – 2015 and before – and into 2016 new business.

The two takeaways from this is – the strata, I call it the rock, the midmarket sales rock – the point there is that because of the high retention rates, we are able to build on that and every year we sign new business. We got two things going on. One, the high retention rates and secondly, new business layering on all the time which is what gives us the steep curve there.

#### *Midmarket is a capacity-driven model*

In terms of our capacity-driven model, obviously, we talked a lot about hiring a midmarket. We need to hire many people. We have been doing that since I started here but it has been really accelerating, and we wish to continue the hiring process that we started. This is in terms of the number of clients we work with. Obviously, as we add more people, more sales people, we are acquiring more clients all the time. You can see that in this curve here as well. Also, through a match of internal tiering, we received accounts from the Tier 1 team as well, over the course of the year.

#### *We continue to scale and automate our Midmarket processes*

What about automation? If you are acquiring these advertisers, in order to integrate them and make them part of our ecosystem and make them an advertiser of ours, we need to not just hire people, we also need to invest in technology automation. We started doing that a couple of years ago.

The first module we built, and this our system could integrate, we actually focused initially on website tags. Every advertiser has to insert tags on their pages, otherwise, we cannot work with them. We have actually devised a module that enables them to log in, copy and paste their tags across their website and it has real-time testing, which is an advancement, something that we were never able to offer before. Very, very good. Very, very key to actually accelerating the integration of clients. We are actually launching clients faster as a result of actually having this facility.

We then developed a feed module. Again, it is very, very important that we actually have an advertiser who can log on, upload their feed and get real-time testing of that feed. Does the feed work? If not, these are the things that you need to do in order to make it work. We have done and that has launched this year as well.

We are currently in the final stages of developing our creative module where an advertiser, again, can log in as part of their process, see the banners that we have created, the dynamic creative that we have built for them and approve that. It is super cool. If they wish to make changes to it, they can, but it will also give them an update on the expected impact on their performance of their campaign by deselecting certain elements. It is very, very cool.

The final module that we will look to build and develop is our e-registration and payment module. The electronic IO will be part of that. Then, an advertiser will also be able to insert either their credit card details or their SEPA details, the direct debit in Europe, and effectively pay post payment as well. Super cool.

As a result of automation but also the increase in hiring that has taken place over time, you can see a number of client integrations and you can see it really increase. You can see the peak, obviously, around Q4, the little hump there, as a result of advertisers all wanting to go live in the peak period of the year for them. The Revenue ex-TAC is exactly the same. This is the Revenue ex-TAC from new midmarket clients per quarter, and again you can see the huge seasonality peak in Q4.

#### *Conclusion*

My conclusion. Three things I would like to leave you with. One, it remains a huge opportunity for Criteo. Two, our multichannel approach further enhances that opportunity. We have got display, we have got email, we have got search, which Jason is going to talk to you about.

Thirdly, the continued investment in automation drives improved productivity and scale as well, enabling us to cover more parts of the globe and launch more advertisers, and more advertisers faster than we have done previously. That is it. Thank you very much.

**Speaker:** Thank you. Very good.

**Eric Eichmann:** Do you have any questions for Tim?

**Speaker:** Are there any learnings [inaudible] are there any learnings –

**Eric Eichmann:** Still does not work.

**Speaker:** Are there any learnings specific to the midmarket that you get actually put back into Tier 1 market? Particularly I am thinking about things like the automation of integration. It sounds like something that you could maybe wrap your Tier 1 [inaudible].

**Tim Frankcom:** I think that is actually something Mollie and I have been talking about, and actually there is a demand for them to use it [?] so certain parts of the integration process are – I am back. I am sorry. Certain parts of the integration process are self-service, so the tagging on the page. There is no reason why a Tier 1 advertiser would not benefit from the use of that, there are countries in the world that actually – have actually been specifically driving to this.

So yes, automation and the use of the integration platform by Tier 1 is something we are actively looking at right now. Absolutely.

**Eric Eichmann:** I think the idea was always given how big the opportunities in midmarket, and it is so much bigger, as what I have said, for advertisers, the idea was always let us make sure the product – the integrated product – the integration – the integrate product works for midmarket but there is no question in a lot of this applies to Tier 1. It is just the focus has been, let us make it work for midmarket first.

**Tim Frankcom:** I think also the volume, just in terms of the volume of advertisers we are integrating, that is why the platform is so beneficial to us.

**Eric Eichmann:** Right. Other questions? Yes? Charles, please. If that works. Yeah, that works.

**Speaker:** Okay. Thanks. Just two very quick questions. You have said in the past that you are quite confident the financial benefits of addressing those clients was pretty good. Is that something you can confirm and how do you see that changing versus maybe a couple of years ago? Maybe also very quickly, you know, it is a huge opportunity, is there a point where you think the market is bigger than, you know, first tier clients? I mean, just to give us a view on –

**Tim Frankcom:** Sorry, the second question?

**Speaker:** Do you think that midmarket could actually be bigger than your I would say, first tier client at some stage or just an idea about that.

**Tim Frankcom:** The first question, I will let Benoit address it, and you – I think you have a whole presentation about it.

**Benoit Fouillard:** For the first question, I will ask you to be just patient because this is one of the items that I am going to cover in my financial update. We will give you some view as a teaser on the unit economics, which are quite favorable. Yeah.

**Eric Eichmann:** Yeah. I think for the second question, that is fine. I have this. I mean, if you look at the 65,000 advertisers that we are trying to address.

**Eric Eichmann:** Fifty-five.

**Tim Frankcom:** Fifty-five.

**Eric Eichmann:** Or 65 including Tier 1. Very good. It is very likely that midmarket could be a significant portion. Today, midmarket is about 25% of the Revenue ex-TAC. Whether it can be more than 50%, I do not know. It can certainly expand well beyond the 25% that is today. Any other questions? Let us take two more questions. Yes, please.

**Speaker:** Hi, I just was hoping you could address the cost of sort of addressing each of those markets. You showed sort of the underpenetrated nature of each of those markets but just across each of those markets, what are the, say, the incremental cost of reaching those APAC midmarket clients relative to the US?

**Eric Eichmann:** I think, of course, whenever we start in the market, initially, there is, you know, we have more cost if you look at it from a sort of calendar or sort of like time perspective because we are making an investment and the revenue is not flowing in immediately. Benoit will talk a little bit about midmarket versus Tier 1 and he will talk also about how midmarket has evolved and how young it is and what kind of profitability levels we find. I think we will address that question in more detail with real numbers when we get to Benoit's section.

There is another question. Doug, yeah. Then that is the last question we will take on midmarket and we will move on to the next subject.

**Speaker:** Thanks. I was just going to ask about the hiring environment in midmarket, so I think you guys made some comments just on the last call that you would like to be able to add people faster and can you comment on that?

**Tim Frankcom:** Sure. I will tackle it region by region. Every region has their different environments, but what we have tried to do is we have increased the numbers of local recruiters that we have actually got as part of the team, so direct recruiters. We have also used some agencies to support that and we have also put in place an RPO, so effectively sourcing companies that we can use in each of those regions, to increase the volume of candidates that we can actually interview.

We set an incredibly high bar, we have a very, very stringent interview process involving just for sales rep, there is like a math test and multiple rounds of interviews. We want to do that and we want to continue with

that process, certainly making – keeping it stringent. Certainly because when we have not, if for example, if we take on people who do not have the same level of background, you tend to find the results are not quite as impressive. What we attempted to do is widen the base as much as we can, increase the amount of support that we are getting from external and internal recruiters to try and increase the volume of candidates that we see.

**Eric Eichmann:** Yeah, and Doug, to your question, I think if you look geographically, and recruiting in midmarket, we have probably had lately more success in Barcelona. I mean, if you think about the big hubs today are in Barcelona and Boston, Barcelona has continued to increase its market presence and the capacity of people that we bring in.

I think we have had more difficulties in Boston, whether it is related to the fact that the US economy is doing better and people have more opportunities, I do not know. But, we are certainly addressing that, but it has been – I think it has been a little bit lower than our internal expectations. It is still growing well but it is not as fast as we expected it, so we are taking corrective action to drive those numbers higher.

Alright. So with that, thank you, Tim.

**Tim Frankcom:** Thank you.

**Eric Eichmann:** Next subject, we are going to dive into product and to talk about core innovation around the engine, we have Romain Niccoli, chief product officer & co-founder. Romain, please.

## Engine Innovation

Romain Niccoli

*Chief Product Officer, Criteo*

Hello, everyone. In this session I would like to tell you how we continue to innovate our engine. First, let us try to qualify what the engine is. You have seen this slide from Eric before. The engine is actually a set of algorithm; it is not just one magic formula. It is a set of algorithm to handle the full chain from collecting the data to serving the ad in real time and predicting the right value for this ad.

It is not like the Coca-Cola formula that like this is great finding that was, the one who discovered they just kept in a box, it is actually a set of algorithm that change over time, that gets improved over time a lot. We think there is a lot of room to improve it further.

As a matter of fact, if we look in the past, some significant releases we have done, we have been able to improve the performance of the system very significantly. Some of the projects that you can see on this slide include the Conversion Optimization, it was a 20% uplift in Revenue ex-TAC for Criteo but also in value for advertisers.

In 2014, we went one step further and optimize the actual amount of sales and it was 8% uplift, and the first generation of dynamic creative optimization which is optimizing the way they have to look and not just the product within the ad brought a 10% uplift.

*Some examples of significant releases in our Engine roadmap for 2016/2017*

These are examples and it is not the full uplift we got for this year, but these are significant examples of medial releases that changed the game for us. Today we think we are not at the end of the road. We are not at 99.9% of the potential and we have only the fine-tuning left. We think we can continue to have these medial breakthroughs for a long time to come.

Here I like to tell you, but, four examples, it is not everything we do, but it is four significant examples of how in different ways we can continue to improve the engine.

#### *Customer Targets*

The first one being customer target. If we take a step back, you have listened to the testimonial from Microsoft and the interesting piece in this testimonial was the fact that Criteo campaigns are always on. It is not just campaigns you do one time and then you stop. The reason for this is that Criteo campaigns is not a cost center, it is actually a profit center. Every dollar invested in marketing with Criteo is supposed to bring more than one dollar in gross margin on the products that are being sold for this campaign.

#### *We constantly tune our Engine to meet advertisers' objectives*

The objective of the advertiser is to maximize the gross margin they derive from the campaigns with Criteo.

That means that our incentive at Criteo is to align all these targets and then maximize the gross margin that we can generate for them, so that in return they have an incentive to spend more with us and increase the business with Criteo.

#### *Click optimization*

Along the years, we try to set up a system so that we get closer to the end goal of the advertisers, so if we look at what happened over time, we started with click optimization, that was the first generation of the engine. We optimize for clicks.

Because we actually selected the right products in the ad, we ended up having a conversion rate that was actually pretty good but we did not optimize directly for this conversion rate, we actually optimize for clicks.

#### *Conversion optimization*

However, not all clicks are born equal, right? Some of them have a higher likelihood to convert and transform into a sale while other clicks actually have a lower likelihood. It actually makes sense for us when we buy traffic, not to pay the same price for all these clicks, and actually they are a different price, depending on the likelihood of conversion.

This was what we did with the conversion optimization, actually buying at a different price by rating by the conversion rate and you have seen the uplift that this generated.

#### *Revenue optimization*

The next step was actually to go one step further and say, 'Okay, it is great to predict that this ad is going to convert into a sale, but this sale could be a \$10 sale or maybe it could be a \$200 sale,' and so I am not going to make the same amount of margin and revenues on these two different cases, so not only I should predict the likelihood to actually convert into a sale but I should predict the amount of the sale as well, and that is what we did with predicting the average order value, the size of the shopping cart, to optimize directly for the amount of sales.

#### *Growth margin optimization*

What is the next step? We want to go one step further and optimize not only for the sales alone but for the growth margin amount because for – in the product catalogue for advertisers, not all products carry the same gross margin, right? Their objectives in terms of how much they want to spend in marketing cost for different product categories can be different, right?

That means our engine needs to learn how to actually optimize for the gross margin and not for the sales amount. That is the natural next step.

*Further optimization*

It is not even the end of the road because in the future we can actually go even further in terms of optimization and not look just at short-term sales but maybe take into account the lifetime value for the user and optimize directly for that, right? That is for the future.

Right now what we are going to be doing in the short term is the gross margin optimization.

That is what the engine actually optimizes. Another aspect that it is interesting to look at is how advertiser actually enter their ROI target in our system.

Today, mostly, we still charge the cost per click. How can you actually enter your cost per click while we optimize for conversions?

Well, what that means is actually while Criteo optimizes for advertisers, they then optimize Criteo's Rev ex-TAC in the short term. We maximize the long term value for the advertiser, so we buy at a different price display that is going to click and convert at a very high likelihood and another display that would generate a click that converts at a lower likelihood, right, even though we get paid the same amount by the advertiser because it is a cost per click. We do not actually optimize for Criteo value in the short term, we optimize for the advertiser's value.

We think it is the right thing to do because if we do that, the average conversion rate for the advertiser is going to increase and so in return, they will raise their cost per click and in the long run, everybody wins.

What we are trying to do here is aligning incentives in the short term and the long term by allowing our customers to enter directly a cost-of-sale target in the system and so rather than entering the cost per click and trying to monitor on a day-to-day basis where the conversions are, and changing this cost per click to adjust to the conversion rates, they will directly enter a cost-of-sale target in our system so that we can optimize directly for what they want and meaning that the value for Criteo and the value for advertisers are aligned in the short term as well.

We believe that on top of aligning incentives, this also is going to improve performance. Why? Because if you actually adjust your cost per click on a day-to-day basis, you have to follow seasonality, conversion rate is different in sales period and other periods, and you have to follow the performance and adjust your cost per click. But nothing is going to beat an algorithm that can adjust every single second and rather than trying to pull the lever on a day-to-day basis.

Overall, this will generate additional performance for advertisers and more Rev ex-TAC for Criteo.

The next logical step, I talk about gross margin versus sales, will be to optimize – allow advertisers to enter directly a gross margin target and not just a revenue target in terms of profitability.

The cost-of-sale target is actually how much you are willing to pay in terms of marketing cost to generate a certain amount of sales. Here we are talking about trying to specify to Criteo how much you are willing to pay in marketing cost to generate a certain amount of margin.

The way we want to do is, we let them enter these targets in the catalogue feed, at the product level so they could specify, if they want to, a different target for every single product in that catalogue.

That is where we actually close the loop and optimize and enter our target directly for the gross margin and not just for the sales amount. It is additional performance for the same reasons that we bring additional performance, we have a cost-of-sale target, we have directly gross margin target. That is focused on our targets.

*Universal catalogue*

Let us look at another example that is actually quite different about the universal catalogue.

What is the universal catalogue? You have seen from Eric's presentation that we actually see 4 billion products aggregated from all of our customers' catalogue feeds.

Today, the way it looks like, is this catalogue on the left. Catalogues for our product, for us, are mostly IDs and we actually look at user's behavior on these products but that's just IDs. We actually use the product titles, images and so on to display in banners. However, so far, we did not use that information that much to actually compute recommendations or to learn the value of a particular display.

What we are going to do this, our universal catalogues, is actually feeding all the missing fields in the catalogue feed for each of our customers. It could be the color, it could be the brand, it could be the size, depending on the kind of customer, these are going to be different fields. We are going to use machine learning to actually infer where the values are for these different fields from the information that is already in the product catalogue. For example, you can actually guess the brand from the product name or the product description.

Many of this information is actually contained in the field but not in a structured fashion. We are going to transform this into structured data and a field that we can clearly identify including data that was provided but was not at a very high quality and data that was completely missing. That is the first step. It is actually enriching the catalogue with this additional data.

*Building one universal catalogue across all other customers*

The second step is actually building one universal catalogue across all other customers. Actually, recognizing that a particular product SKU is the same in different product catalogues from different customers, so that what it is. Overall, we see more products than on Amazon and Alibaba. That is a pretty large data set.

*Universal catalogue is a new powerful asset for Criteo*

What are we going to do with that once we have been able to build these universal catalogues? What that means is that we understand the products at a much more granular level. They are not just IDs but now, they have attributes, they have color, they have brands, they have sizes and so on. This would allow us to understand consumer intent in a different way, not just in terms of they like this product idea. I do not know what this is, but probably I should display this in the end. However, I am going to be able to understand longer-term interest for users and that is particularly interesting to be able to compute different kind of product recommendations in our banners on top of the behavioral targeting that we do, but also by understanding the long-term intent, we can go into prospecting direction.

When you do retargeting, it is very important to have a very granular intent because what is important for you in that particular time is different and less important in two months. If I am interested in a particular camera, I am interested in a particular model today, in three months' time, the new models are one the market and I might be interested in a different product. However, if I understand that this product ID is actually a camera that has a large zoom, then I understand the actual intent from the consumer on the longer period and I understand he is interested in a camera in general. That information is actually valuable for a longer time and you can use it for prospecting.

By understanding the product relationships between the advertiser, we can leverage cross advertiser data to go into prospecting. This is actually quite helpful for Search as well and this will be provided in the Search presentation and how we actually use the product feed. However, most products in shopping actually do not generate a single sale, right? Understanding the value of the long tail in the catalogue feed, by understanding the links between their product is the key to billing a bidder. They can actually do a good job on all their products in the catalogue and not just on the head of the catalogue.

### *Kinetic Design*

Let us talk for a second about kinetic design. Kinetic design is the name of our latest generation of creative engine. Until 2015, we have already optimized the way our ads are rendered because it is not just about selecting the right products in the end. If you pick the right products but you do a bad job at actually presenting the information to the user depending on where the – on which publisher the ad is displayed or at the environment, you actually destroy the value, right, so right products but you do not see them. It was already important from the start to optimize the way the ad looks, and that is what we have done.

#### *2015*

Until 2015, this was based on templates. You had a number of different templates. The way the templates were specified was at the pixel level and it was rigid combinations. You could optimize elements within the template. That was already your first step in generating good value for us.

#### *2016*

In 2016, we have changed the way we render banners and rather than defining our ads and banners at the pixel level, we now just define the elements in the banner and we can arrange them in any kind of size and format, so which allowed us to actually adapt to much more different ad sizes. In China, for example, the ad format is actually quite different from the rest of the world. He has to redo the work, all the different new sizes, it is a huge amount of work operationally and you cannot cover them all. With the platform that we developed in 2016, we can generate any kind of ad and actually run that ad in a nice looking way without having to specify in the pixel level.

### *Kinetic Design will bring many opportunities to optimize performance*

The next step, which is kinetic design, is leveraging this capability to generate for any size and plug in the optimization engine into that so that we can actually optimize the layout and generate an infinite number of ads and optimize for which one is going to be the best and get rid of the templates all together.

If you look at an example of what this means, you can see on the left, two example of templates that we had before. You have certain combinations of how many products you see without the horizontal or vertical, prices, call to action, how big the image is and so on. These are two templates. What the engine can do is generate automatically an infinite number of all your combinations. The one on the right is actually one of these combinations but it is actually one among like hundreds and thousands and actually an infinite amount. The engine knows how to actually rebuild the layouts that is a cross-over of the first two and combine the elements in a different way.

Why is it just one among like an infinite number of combinations? Because, now, the engine knows also that it can change the size of the picture and maybe use this one, then increase a bit even more or maybe use all the space for the picture and you have an infinite number of combinations here. The engine will try them all and find the best possible combination for that particular placement at a particular time for a particular user.

In the end, to summarize, we can now have an infinite number of banners with an infinite number of ways they can build and the way they can look like. This means more performance because we can find the best combination on a particular publisher for a particular user that we did not have before. Also, it brings more diversity as we look more different than before because you have more combinations. We have seen and we have tested before that more diversity, in itself, brings more performance because when you see always the same formats, there is some kind of fatigue to the format itself, right? It is always the same. They look the same. Now, if you see much more combinations, this fatigue effect is actually limited and you generate more performance.

Also, operationally, it is a scalable solution to something that was fundamentally manual. When we interact with the advertisers to make sure they are okay with the different components of the ads, they used to have to validate all the templates. When we increased the number of templates and combinations that initial creative optimizer, it was kind of a cumbersome process of having to go check with the advertiser all these combinations were okay.

Now, we would specify some kind of rules and constraints, kind of different colors in a comfortable way. They can now feel that they are okay to display in the banner and we generate an infinite number of combinations but it is way less things to check with the advertiser. They actually – operational process interacting between the creative teams and our advertiser is simplified. It means the operations are actually quicker. Not just more performance but operational leverage as well.

#### *Smart Header Bidding*

There were a lot of questions on header bidding before, so I would like to come back on what we call smarter bidding for header bidding and what that could look like. To do that, I would like to go inside an auction and see what happens at the auction level. Let us assume that it is one RTB auction, real-time bidding auction, that comes to us and we need to decide what we are going to bid for this placement. We actually computed that the value for this display is \$1.5 CPM. That is our prediction engine that computed this. It is the maximum price we should be willing to pay. Any price above this is going to be generating a loss. We want to buy this display and we want to pay the minimum possible price to actually get this display.

The number case is what happens before header bidding. In a world where it is mostly second price auctions, meaning that you have different bidders. In this case, we have three bidders. I have Criteo and I have two other random bidders. Every bidder is going to enter their bid and the maximum bid wins because it is an auction and the price that is actually being paid for this display is the second maximum price in the auction. In that case, it is \$0.9. That was the bid of bidder X. The clearing price 0.9.

What happens with header bidding, is now this – the net effect of header bidding is that the auction is actually moving more from a second price dynamic to a first price dynamic. Meaning, that it is still the highest bid that wins but now, the actual clearing price is the bid that you end up and not the second bid in the auction. That means, for Criteo, that if we say that we bid \$1.5, we actually pay \$1.5 rather than the 0.9 before. That is why the inventory cost is actually rising because of the shift to second price auction to first price auction.

We think that all bidders will actually adapt to this. Because, as Eric pointed out before, the inventory is still worth the same amount. Your ROI targets are still the same and so you cannot justify to pay a higher price for every single display that you do. A simple correction that could happen and 33% number this year is actually for illustration, so do not take this at face value for what is going to happen in the market. Just to illustrate, everybody is going to lower their bids, right, because now, you need to make sure your average [inaudible] price remains reasonable. Every bidder will decrease all their bids. Assuming everybody decreases by 33%, this is what the auction looks like. Criteo now bids \$1 and all the other bids have been decreased by 33% as everybody else. It is still a first price auction. Criteo bids \$1 and pays \$1. We can already see why the inventory price is going to stabilize and then go down because everybody is going to bid lower but we still pay more than before.

#### *Smart bidding*

Now you know what is actually smart bidding in this category, in this situation? For Criteo, it means trying to figure out what will happen in the auction and predict the second price in the auction. Predicting what bidder X, which is the second bidder, is going to bid. Because if we know that bidder X is going to bid \$0.6, then our interest is actually to bid just above this price. It is at 0.61 to be just above this price. If we can do that, if we can predict the second price in the auction, now, the clearing price becomes 0.61. In theory, the

inventory cost for us could be even lower than it was before if we are better at this game than everybody else is, right? When we said this technology premium and the inventory price, this is what that means. Players that can predict accurately the second price, they will actually do a better job and they will pay the right price for the inventory.

Now, it is a hard challenge, trying to figure out exactly whether those are going to bid in advance and you do not know until the auction happens. However, if we look at what is required to do that is very similar to what we already do. We have the right data sets to actually do this machine-learning job. It is what happened in previous auctions and also the intent data that we collect from our advertisers. Then it is the same kind of machine-learning techniques with a different model with different inputs to actually predict the second price. We think that Criteo is well-equipped to do that actually and can do that better than others.

In a way, we do some of it already because even in today's world or before header bidding, it is never a pure second price auction. We have to do some of it. However, higher bidding makes it even more important because of the major shift from second price to first price. That was my fourth example.

#### *Conclusion*

[Inaudible] as a conclusion, so this, for example. However, there are many other things that we can do in the long run to continue improving performance. If we think about it, our display to conversion ratio, is less than 0.05%. That is the ratio of displays that we do that actually lead to a sale. We would like this ratio to be well if possible, right? We would like every display to actually generate a sale. You can see that there is a lot of room for improvement, going from 0.05% to actually a 100%. That is one aspect.

We could also go from optimizing short-term sales which is what our advertisers measure today to optimizing for a lifetime value, which means also that the advertisers have to change the way they do attribution when they look at value and we can, as they do that, follow and improve the way we optimize our campaigns. Also, we continue to add a lot of variables in our models. I talked a lot about that. However, the new key variables that we will continue to add year after year. For example, in this mobile world today, if we want to bridge the gap between online and offline, online and physical stores, then location is a pretty important variable that we can leverage a lot.

Across all of these, we have large scale effects because the bigger the data sets for the same algorithm, the better the performance. The bigger you are, then the better the results. On top of this, then you also improve your algorithms. What we do for display actually applies a lot through the other channels and we will see how for the – for Search, for example, we leverage the tools we had for display to build the bidder for Search. What we do in one channel actually can be reused for the other ones.

That concludes the innovation side.

### **Q&A**

**Eric Eichmann:** Thank you. Any questions for Romain? Alright. We will take you first and then we will go to Charles.

**Speaker:** I think as you optimize around the lifecycle of a consumer, that is a length for your data slice you are looking at. I think you guys have said 85% of your data is less than three days old. Once you get past that, that data gets stale, it is not as leverageable or useful. As you start to optimize around the lifecycle of a consumer, do you start to get more leverage on the older kind of cohorts of data if you want to think about it like that?

**Eric Eichmann:** I would say, first of all, we have data that goes well beyond three days and some of it useful for certain information. Truly, recency, of course, is one element that is important, but we do have a lot of data. I do think that when you are talking about lifetime value of a customer or understanding what

they spend over time – I know, from a past business I used to run, that it was the third time that you got somebody to spend money on your platform that made the difference in terms of getting that customer to spend a lot. There was a lot of churn before them.

Understanding those variables makes a big difference, because basically, you know that those three first sales are much more valuable than the ones that come afterwards. That is just one example in one particular environment. If you can get those three sales and the advertiser is willing to and understands that they should be paying more for those three sales and that you should be paying less for that, that is a huge improvement to the optimization that you do to your customer – lifetime value of customers you acquire.

I think it is this type – those types of dynamics that you would expect we would take advantage of. You have to have a large data set that goes well beyond three days, of course, and we do, to be able to take advantage of that. However, today, we do not do lifetime value calculations. We do – we generate a click and a sale, and that is what goes into it. We do not look at that same customer over a certain lifetime. I do not know if you want to add anything to that.

**Romain Niccoli:** One thing to add is – so that is also not ready for the [inaudible] the initial performance today. In a way, we actually adapt to the way of the initial performance, and we do the right along with them. However, it is still a bit early for this.

**Eric Eichmann:** I think it is also another area of potential values. A lot of advertisers – sophisticated advertisers booking, or people like that have a clear idea of cohorts, and what is the lifetime value, and what is the value of a particular conversion of a particular time. Most advertisers do not have that. With the visibility we have in the system, we can bring, actually, the advertiser information and make it well-known, and even imply what kind of customer lifetime value and start optimizing all these elements without the advertiser having to have a team of 40 analysts looking at this stuff.

That is an opportunity that is further out, but it is certainly very much in line with the performance marketing platform we are trying to build. There was another question, Charles, yes?

**Speaker:** Thanks. Actually, two very quick questions from me. The universal catalogue looks really exciting. What does it imply in terms of the asymmetry of information between your clients? Because some of them have, of course, very big and detailed catalogues. Some of those, maybe not. What does it mean when you – if one day, you try to merge them together? Any implication here?

**Eric Eichmann:** One of the things that we have done and we have done with what you used to call internal EBS, which is the Apple compliance solution, is go to advertiser and say – and we generally – these things are opt-in programs. We do not use data of advertisers for pooled assets without their permission. However, we go to them and we say, 'Okay, well, this is the new program. This is the benefit that you get. Do you want to participate?'

When we did this in particular for cross device, we had some advertisers that said, 'I am the big part of the pool. I do not want to participate because I am helping everybody else.' What we are finding out is that at most, in certain economies, the biggest advertisers make up, at most, 5% of the asset pool. They have significant benefits from this and there is – thanks to other companies in the ecosystem, the idea of pooled assets is something actually that is much more accepted because other advertising companies are doing it. However, more importantly, also because they are having – they are feeling the heat from very large eCommerce companies, a la Amazon and Alibaba, that have these assets. They are seeing for them to be at the same level, pooling assets is the way to go.

We are an independent company. That is one of the benefits that we get. They are not providing their information to a large company, so that helps us in doing this. I have to say, initially, we are all very nervous. When we talk about some of these things internally, in particular because we have been very focused on – we only use your data for your benefits, when we talk about pooled assets, we are always

very nervous. We do not think the advertisers will accept it. However, as we have introduced new products that have pooled assets, people have been very open to it. We have had very few people say, 'No, we are not interested.' Most people say, 'Yes. I would love to be able to do what Amazon does at scale by working with everybody else but Amazon.'

**Speaker:** A very quick one. Trying to predict the second best bidder looks obviously quite smart but quite difficult. Who do you think are the other players that can do this? Because obviously, we are not going to be the only one to think this way.

**Eric Eichmann:** Why not?

**Speaker :** Not after today, anyway.

**Eric Eichmann:** That is a big assertion.

**Romain Niccoli:** Like I said, the issue they are trying to solve is very similar to the other issues we are tackling in terms of predicting click through rate, predicting conversion rates and also predicting the second price. The data we are going to use is very similar to the data we use for these other issues. So far, we managed to be the best at solving these issues and all the other issues I was talking about, so there is no reason it cannot be the same thing for this particular one.

**Eric Eichmann:** There is no guarantee, but we are in a very good position to do it. Alright, thank you very much. We have one last presentation before you guys can all take a break. Thank you Romain. That presentation is from Patrick. Patrick will talk about the cross-device graph and user graph as-a-service, a new exciting offering.

## Cross-Device Graph

Patrick Wyatt

*SVP Product*

Thank you, Eric. Good morning, everyone. I am Patrick, and I lead our core product management team. We are talking about cross device and I think it is worth starting by explaining what the cross-device challenge is and what we mean when we talk about the cross-device user graph.

### *What is the Cross-Device Graph?*

We all have now a crazy number of devices. I have seven, last count, and I am sure most of you have the same number at home. The cross-device challenge is; how do we stitch together the signals we get from each of these devices into one profile that represents one real human being? To visualize this, think about each of these dots on the graph and then the signal we get from one device. Think about the clusters of dots linked together up in a profile that we form by making these linkages between devices, and that cluster represents one single person's device set. When we talk about the user graph, that is what we mean.

How do you make your linkages? The way we do it, which we think is the best way, is use explicit use of login information to make those matches. We collect, from most of our advertisers, their CRM IDs in anonymized form, and we use that to connect together two devices. If you use a user login on two devices, it actually makes that match because we know that the two cookies are the same. At no point do we have any PII in this process. It is all anonymized.

This is not the only way to build a cross-device graph, of course. But by using deterministic matching by the exact pairings of cookies, thanks to login data – we assume we have the best quality of graph, comparable to what Google and Facebook can build based upon their own user data. That is how we build a graph and what it means.

*Why is the cross-device graph so valuable for marketers?*

Now let us talk a bit about what the graph is useful for and why it is valuable for marketers. To do that, I think it is worth thinking back about five years when things were simpler, to when the device users used browser products. The device they used to go and consume media and see ads, and the device they used to ultimately transact for products, it is all the same one. Things at that point are very simple for marketers.

Fast forward to now, and it is much more complicated. What we see is the share of shopping intent, the browsing behavior is split now pretty equally between desktop and mobile, about half-half. The share of media time spent, where people are consuming media and seeing ads is now much more skewed towards mobile, but finally for the share of transactions, where people are actually buying stuff, still remains predominantly on desktop.

What this means is that as a marketer, if you have not got the cross-device view, you cannot make – effectively transition to mobile because you cannot find your users to show them ads. When you show them ads, you cannot track the impact of those ads on conversion effectively if you do not know where they are happening. That is why the cross-device view is now key to most CMOs, and given that, is a central part of their job.

*We are in a unique position to build one of the most powerful cross-device graphs for eCommerce*

Why do we think we are in a unique position to provide this cross-device graph? I think there is three main reasons. One is that we have a deep integration with advertisers. We have integration with over 12,000 advertisers, which represent, as Eric said, about \$500 billion of eCommerce globally. They are passing us this login data, which is the raw material, if you like, for our graph.

That itself is not enough. What you also have to have is strong machine-learning assets that allow you to crunch it all together and build this massive real-time network. It is a problem which at Criteo we can love because we have natural scale effects. The nature of the graph is that as you increase data points in the graph, it gets stronger in a non-linear way. Every extra match makes the graph extra strong. That is why we think that the graph problem, and cross-device in general, is a problem which will be solved, in the end, only by a small number of companies who have both strong data-collection abilities and strong machine-learning skills to build that graph together. That is all about why the marketing wants this and how we are going to build it.

*Our cross-device graph can bring additional benefits*

Let us talk about the benefits to Criteo in the cross-device graph. There are three main benefits and they reflect the market benefits, too. One is that by having a strong cross-device graph, we can find users on more devices, and hence show them more ads, and have more volume overall.

The next is that by tracking back the sales that happen on all devices, we can demonstrate higher ROI to our customers, and over time, get higher bids on our platform and more revenue. The final one is by having a profile of a user that is bound to interactions across mobile and desktop and all places they are, we can enrich that profile and serve better quality ads which are more relevant and high performant. The cross-device graph is really key for Criteo and for advertisers to make transitions to mobile effectively.

There are two extra benefits of cross-device graph I want to mention quickly. Because of our approach to doing this, which is leveraging CRM IDs, again, in anonymized form, we have this unique insight now into our client's businesses. Think about CRM ID as being the unique key they have inside their organization to refer to their customers. Since we have now that massive graph of that ID, we can delve into new things with it. The two here are things we will be working in the coming quarters.

*Onboarding offline sales*

One is onboarding offline sales, typically through loyalty cards. By linking the CRM ID we have to this transaction happening offline, that led to enrich our prediction, and also to get more credit for online sales.

*Allowing customers to execute complex marketing scenarios*

Second one is allowing customers to execute complex marketing scenarios where they can push messages to users they have in their CRM, thanks to linkages made between an online profile and their CRM databases.

These two opportunities will only be available because we have chosen to build the graph in the way we have, in a strong deterministic way, the exact matches.

*Where are we today?*

Where are we today? On this path to building the perfect graph, how far are we? It is hard to put the exact number on it, but I think we are about halfway there. Two-thirds of our clients pass us now anonymized CRM data in the tags. About half of the overall sales we generate on our network come from users we matched on more than one device.

*We are engaged in several opportunities to expand our cross-device graph*

Our job now, having built a graph of great quality, is to expand its size. We have three approaches to this. One is to purchase those linkages from third parties, publishers who might have their own login data. The next is to build what is called probabilistic matching. This is a way of inferring a match when you have not got an exact one. We see it as a way to top up if you like our exact match graph in those cases we cannot find a linkage. Because we have such a strong basis of exact matches, we think our probabilistic models will be very accurate in this context because they are trained to have a very strong truth set. The last way, which we will talk about more in a second is building a co-op program to exchange IDs with our partners and increase incentive for them to share back data with us.

*What are other large players doing?*

Now, of course, we are not the only players in the market that have strong assets in the cross-device space. The two we bring to mind here, of course, are Google and Facebook. You have both very large, high-quality deterministic graphs. I think it is worth spending a moment to think about how they are positioned versus Criteo and how that affects our approach to market.

For both Google and Facebook, their approach to market, I think, comes from their market position, but also from some constraints they have inherited from their consumer business. This means that their approach to cross-device is necessarily a closed approach in many ways. They provide the cross-device tools inside their own platforms, to their own customers, but in a way which is quite limited and quite restricted to their own tools. What this means for marketers is that those cross-device graphs are proprietary and are compatible with their own tools. It means that they have limited insight into what is going on. They cannot see the granular components in that graph, and so there are questions around trust and transparency. Finally, it means that the environments now are fragmented, so if you have your cross-device environment inside Google, your cross-device environments in Facebook, you cannot match the two together, and so you lack that full customer view across the full range.

It is in that context that we think about our approach to cross device. We think how we can differentiate ourselves there. What I am about to talk to you about, I think, is something that is quite unique, and actually quite differentiated in the marketplace, which we are announcing today.

*In early 2017, we plan to offer User graph as-a-service*

In 2017, we plan to offer the user graph as-a-service. What this means is, as an advertiser, as you pass to us your ID, we will pass you back, at a granular user level, the consolidated Criteo user ID that were built

from all the interactions of our network. We will pass this back to you so you can use it in your own tools for attribution, for measurement, perhaps for other purposes too like site personalization and given that key, if you like, to the user ID identity, that stretches across all their users, not just the ones working with Criteo.

We will pass them the full Criteo-device graph. We will offer this as a free service to advertisers, but there are three main benefits for Criteo from doing this and we will go through each of these three quickly. We are doing this in order to increase sales that are attributed to Criteo. We are doing this in order to improve the scale of our cross-device graph and we are doing it to deepen our relationship with advertisers.

The first benefit, and in many ways, the primary one for us. For most of our clients, those tools they have right now are not cross-device compatible. They can track sales based upon cookies, based upon sessions on one device. What this means is that they cannot see what we can see. They cannot see transactions happening across devices. We think they are probably in the order of 30% to 40% more sales they are not seeing because they have not got this cross-device view. By giving them the user graph as-a-service, we can feed into their own tools, this ID, so they can see what is going on, and ultimately, by building that trust and transparency, they can give us credit for those sales. By giving us credit for those sales, our performance increases, and over time, they should increase our CPCs in our network.

We are seeing only the first signs of this. We run this in the beta program now for the last few months. Now, these two customers here have both seen big increases in the number of users that they can track on their own sites thanks to our cross-device ID. They are seeing roughly double the number of tracked users compared to their own login information by making use of our network of cross-device IDs.

*Improve our cross-device graph by sharing more data*

The second key benefit here is to improve the scale of our graph. This is really a classic network player. What we are building is a co-op. We are saying, 'You share with us your ID and we will share you back the benefits of the full network.' By doing that, you enhance the power of the graph incrementally, make it more attractive, and increase incentives for clients to share more data with us.

The third and final benefit, in some ways, is even more profound. If I think about advertisers, as Eric said, they are now competing with giants. In the most part, that is Amazon. It is the companies that have strong internal networks, massive scale effects inside their own businesses. For our clients, what they need is a third party platform, a technology platform, who can provide them with the benefits of a broader network. That unleveraged scale affects across everything that we are doing across all our client base.

For us, that means building products and services that share and expose that network to our clients. For user graph as-a-service, in many ways, the first step for us on that journey is the first example of a product we are going build that allows our clients the benefit and the strength of our network and deepen, over time, those relationships.

We have spoken a lot about cross-device. I would like to take away two things from this session. The first is that cross-device is already a key asset for Criteo. It opens up lots of new business opportunities for us, but it is also an asset which has strong intrinsic, internal network effects, which makes it both powerful and defensible. The second thing is that the cross-device approach we have, I think, is quite differentiated in the marketplace versus the other large players. By opening up our graph to all participants in the marketplace, we are then to benefit from the strength of our network and be stronger over time with us. Thank you very much.

**Eric Eichmann:** Thank you, Patrick. We are five minutes late. We have a break –

**Patrick Wyatt:** Sorry, Eric.

**Eric Eichmann:** No, that is okay. It is probably me. We have a break coming for 15 minutes before we go into Search. What I would suggest is because we have a break, if you have questions, why do not you approach us and ask those questions? We will start at 10.35. Thank you.

## Introduction

Eric Eichmann

*Chief Executive Officer, Criteo*

Hi, guys. I think we are going to restart. We are going to talk about Search, so as soon as you guys are sitting, we will start this. Search has been a great journey for us. To talk about that journey and where we are today, we have Jason Lehmbeck. Jason came to us from an acquisition we did a year and half ago, DataPop, a company that was already doing quite a bit on Search. With that asset and another asset, plus researchers from Criteo, we have been pushing this product forward. Jason, please.

## Bringing Criteo's Performance to Search Engine Marketing

Jason Lehmbeck

*GM Search, Criteo*

*Search has been THE performance marketing channel for the past 15 years*

Great. I am excited to talk about bringing Criteo's performance platform to the Search marketing environment. As Eric mentioned, I came from DataPop. I have been in the Search market for the past 15 years. Even for me, sometimes, I have to remember that Search is still the largest digital ad channel for marketers, garnering over 43% this year of digital ad spend.

Despite the lack of headlines related to Search innovation, the last five years in search-engine technology, we have seen a number of big innovations that have changed the dynamic for Search marketers, whether it is the introduction of user targeting – the ability to target users within a search-engine environment – or more dramatically, especially for retailers, the introduction of a shopping format by Google and other players, Bing, and international players as well. The shopping format, or as we refer to it, Product Listing Ads, has generated huge growth opportunity for Search marketers across these various engines. Just in Q2 alone, 43% increase in advertising spend in that channel, as well as 74% increase in clicks and leading to big growth on the sales side for retailers.

*Search spending of retailers is ready for disruption*

This is the biggest performance marketing channel, highly dynamic despite the lack of headlines on the engine side. But we believe, as we have looked at the marketplace and started to test our solutions in the marketplace, that the marketing-technology side of Search has not kept up with the opportunity and is ripe for disruption. First and foremost, for retailers especially, but for marketers everywhere in Search, the complexity of Search marketing has exploded in the last several years. Given these new formats, given the ability to target both at a product level and a keyword level and the ability to target at a user level, this complexity for marketers has not been matched on the Search-marketing technology side from the incumbent players in terms of helping them unlock the full potential of this channel.

The incumbent SEM or Search-marketing technology players are stuck in the old way of optimizing Search, really focused on workflow automation and analytical reactive bidding rather than delivering a comprehensive and scalable predictive approach to tapping into the Search environment, which leaves us in a fragmented market. There is no clear leader from a Search-tech marketing perspective. We believe that sets Criteo up well to disrupt the marketplace.

### *Why Search for Criteo?*

At its basic level, we think that taking a machine-driven approach focused on performance, I can unlock outside sales opportunities for our marketers, for our 12,000 marketers, versus the traditional approach. There are three key areas, three big changes that have happened in Search where the market is, in essence, coming to Criteo.

First is the Product Listing Ads element that I have mentioned. If you look back at our presentations through the course of the day, and you talk about 1 billion active shoppers, 4 billion products and the ability that Criteo brings to that and bringing those two things together to unlock this new ad format in Search, it is a big opportunity for us.

Second, remarketing lists. For the first time, Google and others have brought the ability to deliver people-centric targeting for marketers and naturally, given our 11 years of deep R&D investment in people-centric marketing, we think we are set up for success in delivering outside sales for our marketers.

Finally, the Search landscape though, starting before programmatic, has been somewhat delayed in bringing real programmatic, high-sophistication capabilities to marketers in a bidding environment in Search. However, over the last two or three years, Search has started to catch up. There are programmatic abilities from a targeting perspective, from a speed perspective that Search marketers have available to them. However, again, we believe the landscape of the legacy players cannot match that the way that Criteo does and as we have talked about through the course of today, our leadership in programmatic sets us up well, I believe, for the Search opportunity.

### *Our value proposition in Search*

This gets us to our core value prop. In Search, we believe we are bringing a new approach – performance-driven machine learning – that will deliver better performance, significant lift in sales and a constant target for Search with a sophisticated end-to-end automated technology. We are live today with a beta solution and Google Shopping by combining the Criteo platform with the technology and talent acquired through the acquisitions of both AdQuantic and DataPop.

### *The Criteo beta solution for Search in Retail*

We start with this beta in the same way we start in retargeting and email and the other solutions we have talked about. First, with the product catalogue. Leveraging Criteo's infrastructure and intelligence, that 600 terabytes of daily shopping intent, we optimize the product catalogue feed and then hand that over to the Criteo platform. The Criteo platform unlocks outside-sales lift for these marketers and Google Shopping in three key areas.

First, advanced remarketing capabilities, so leveraging our deep intelligence around 1 billion consumers a month, or shoppers a month. We can deliver unparalleled lift in terms of people-centric targeting in Search through advanced remarketing. Second, the ability to leverage the universal product catalogue that Romain mentioned and our underlying infrastructure on matching the right shopper to the product. We deliver responsive campaigns that are automated and optimized based on performance. Finally, leveraging our deep history in RTB, we bring predictive bidding capabilities to these marketers that tap into the full potential of the complexity of the targeting landscape that is now available on all the search engines, across products, users and devices.

### *The Search market requires a new approach*

As I alluded to earlier, we believe this new approach is required to deliver maximized sales for marketers in these channels. The key vectors that we look at and we think will give us a differentiated position in the marketplace are a heavy focus on delivering performance for marketers and doing that in a machine-driven way, of leveraging all the machine-learning capabilities that Criteo brings to bear.

The key segments that we see will be our competition or the SaaS players, the workflow automation tool automators like Marin, Adobe, Kenshoo and DoubleClick. Their legacy approach to Search has been more of a rules-based analytics approach and really focusing on automating operations rather than automating towards performance. Some of these players are starting to bring machine learning to their solutions. However, that machine learning is not as focused on delivering performance, it cannot leverage the 12,000 advertisers that we have with deep exposure in the retail space and really tapping into that shopping-intent data that we have that nobody else has in the marketplace.

On the other side, you have specialized agencies focused on retail and Search, as well as in-house teams. They bring more of a performance orientation to their Search campaigns but they do not have access to the type of machine-learning capabilities that Criteo can bring to the marketplace.

*We are confident we can build a win-win relationship with Google in Search*

Furthermore, we are confident we can build win-win relationship with Google in our early conversations with them on the Search side, leveraging the deep relationship we already have with them on the display side, as Mollie alluded to. We believe, and they believe, that we can bring incremental spend based on our approach into the Search marketplace. We are establishing ourselves as the independent players, so we bring that demand across 12,000 advertisers into the Search marketplace.

Last but not the least, both Google and others, in their feedback to us, have said that what we are bringing to the table is a new and innovative approach and they are excited to embrace us as a partner to unlock this big potential in Search.

*We are validating all of our features with extensive A/B testing*

As I mentioned, we are live in beta. We are doing extensive A/B testing like we have done throughout the history of Criteo, focused on our ability to deliver systematic performance lift at scale. We are testing that across all of our key differentiation points – predictive models, remarketing and the responsive campaigns. This beta is live with 30 sophisticated Search marketers both in the US and France. Across those marketers, we have seen outsized gains and sales at a consistent target of cost of sale. The feedback from marketers on the key things that we care about – systematic lift and a business model that can sustain and enable us to continue to invest in the market – the marketer feedback has been phenomenal. We have high client satisfaction, our retention rates even on our beta products are 90-plus-percent, which we think is a great early indicator. These are with brands that are both Tier 1, so some of the largest marketers in Search, as well as midmarket.

*Customer Success Story*

I have got two case studies I want to walk you through really quickly, but out of these 30, we already have 8 retailers that have expressed interest and given us a commitment to do a performance-based case study that we can publish, which is another good indicator.

*Camping World*

The first is Camping World, a midmarket retailer here in the US, one of the largest online brands for camping equipment. They were using an in-house team to optimize their Google Shopping campaigns, had a sophisticated approach. Google Shopping, even before launching with us, is one of their largest sales channels. When we launched with them, we were able to drive an increase of 223% sales at the same ROAS.

*BrandAlley*

The second example is a Tier 1 player for us in the French marketplace, BrandAlley. Prior to engaging with us, they were using a sophisticated performance agency, leveraging one of the leading tools in the marketplace in Europe. We did a head-to-head test with them. This was an exciting outcome for us. We just

concluded it with BrandAlley, this head-to-head test, a couple of weeks ago and we were able to beat a very mature shopping campaign with a leading Search agency in this market by driving both increase in sales and an increase on the return on investment.

#### *Our near-term plan for Search*

Just really quickly, our near-term plan is to further validate the ability to drive systematic performance lift in this beta product and then make a decision on the product rollout in Q4.

#### *Search offers a \$6bn opportunity*

We believe this Product Listing Ads application is just the first step in the Search platform. As Eric alluded to earlier, we think this is a \$6 billion opportunity for Criteo just in retail. We split that as we have analyzed the opportunity, it is roughly about \$4.5 billion for our first application for Product Listing Ads, looking at not just Google but leveraging our global relationships with players like Baidu, Bing and Microsoft, in particular, and Naver and Yandex. This format, we think, is only just getting started as you go international, so there is a big opportunity there.

The second step along the way is Text Ads. Just in Retail, we think there is another \$1.5 billion opportunity there. If you look back to Romain's timeline of innovation, we are just on the first chapter in terms of engine innovations that we think we can bring to Search. Across all the applications we build in Search, we feel like there is a lot of upside in front of us on the engine side and going beyond Retail to categories like Travel.

#### *Summary*

In summary, we think there is a new opportunity that the market is demanding to deliver relevant, accountable and seamless marketing in Search. It is a natural extension of what Criteo does with machine learning, taking shopper data, product data and having the richest intent capabilities to drive performance through that machine learning capability. In summary, it offers a massive opportunity for Criteo and for our marketers. We think we can drive significant lift for our marketers in this most important channel for them across 12,000-plus marketers over the years to come.

## **Q&A**

**Eric Eichmann:** Cool. Thank you, Jason. Any questions on Search you might have now for Jason? Yes, please.

**Speaker:** It sounds like you have seen very good success in the case studies here but you are not ready to make a no-go decision about Search. Frankly, that would come in the fourth quarter. I am just curious how quick a launch could be beyond that decision, and then just how we should think about maybe kind of what the take rate in this new product could be relative to the core product.

**Eric Eichmann:** Yes. I think we are not quite ready to provide a detailed forecast on the Search business because we have not even decided to go in. I do think that you have to understand that it is a completely new product. It is a disruptive product. I think even if we put the best minds, and we will, to it, it will be hard to get a clear indication. I think we will discover a lot as if and when we go to market. The idea is if we decide to go ahead early sometime in Q1, Q2 2017, we will have commercial activity to drive the Search product. I think we need more proof points from the market to feel very confident that this is a good decision and that is what we are trying to continue to get information on in Q4.

**Jason Lehmbeck:** The market feedback has been phenomenal, I think, and the early data points are strong. I came in from DataPop but I was at DoubleClick, and Yahoo, and Overture and one of the things that has got me energized about this opportunity at Criteo is the focus on before you go to market, make sure you can deliver systematic lift across thousands and thousands of marketers. That is the focus, making sure that we deliver and have the final check off on those over the next couple of months.

**Benoit Fouilland:** I would like to address your question on the take rate. Obviously, it is still early. But what we have shared a bit earlier in the presentation is from the early result we see in terms of uplift that we can drive across a relatively large set of advertisers already, we feel that based on that type of uplift, we should look at the take rate between 10% and 20%. Now, of course, there is still more to know as we will go into more details on the detailed commercial model as to how the accounting will take place but that is the type of range we are looking at.

**Speaker:** That 6 million TAM that you [inaudible] that assumes the 10%, 20%?

**Jason Lehmbeck:** Yes, that does, yes.

**Benoit Fouilland:** Yes, absolutely.

**Eric Eichmann:** I think obviously the take rate will depend on how provable the value is that we add to advertisers but it is quite a big departure from the tools that exist in the market today.

**Speaker:** I was just going to follow up on the take rate. The 10 and 20s, you have the tools guys with low single digits and then you have like fully-managed agency at probably somewhere in that range. Then you mentioned Google seems very upbeat and receptive to this. Are they receptive to that 10 and 20? We have not seen the solution yet, so between completely self-serviced tool versus fully-managed, where do you sit?

**Jason Lehmbeck:** Yes. I think this is a key point. If you think about what we are offering, we are offering a fully automated approach. From a customer experience perspective, we look more like an agency because we handle the whole solution for them in an automated way. However, from a performance perspective, we outpace both, the tools and the agencies combined. We have already seen this feedback from the marketers in the test, that gives us that confidence of the 10% to 20% range. I think that is the key piece there.

**Eric Eichmann:** Other questions? Last one, please.

**Speaker:** Just on the point about [inaudible] what you are seeing so far in retention rates and ROAS?

**Eric Eichmann:** Look, we would not be launching in Q4. We have talked about making a decision in Q4. I think we just need to feel a bit more confident about some of the results. However, all in all, what you are hearing from the team is we have had great results to date, we just want to confirm a couple of things. We cannot say for sure that we are going to launch but we can say that we feel quite good about the results today.

## Competitive Positioning

Eric Eichmann

*Chief Executive Officer, Criteo*

Alright, keep that question for the question-and-answer session. Thank you very much, Jason. It is very exciting. What I wanted to talk to you guys about is competitive position for us in the market, how things have changed or not for us.

### *Key success factors of our business*

Maybe to start that, it is important to recognize that what has made us successful is that we have very relevant ads. Those ads are tied to performance results. Performance is still the key parameter by which people decide to work with us or others. We will talk a little bit about these head-to-head tests that happen from time to time with our advertisers. Importantly, it is becoming critical for the advertisers to make sure that you can actually have a solution that cuts across different publisher environments, different device environments, et cetera. Over time, it is also becoming very important that you can reach publishers across all markets.

*Our core assets are increasingly hard to replicate*

It is becoming harder and harder, and I repeat this often, we saw this in 2014, when we significantly enhanced our technology, significantly enhanced our access to publishers where it become very hard to compete.

*We have created self-reinforcing competitive moats*

We talk about three competitive moats that we have. We spent quite a bit of time on the technology moat. Hopefully, you believe now that we are a technology company. We believe very strongly we are the best at converting these terabytes of data into billions of sales. That continues to be the case and we continue to invest heavily in making sure that that edge continues to be there.

There are clear network effects that we are getting. I will mention one quickly, but the fact that we have 12,000 advertisers makes it more likely that when we see a user, we will have an option, several ads that we could serve on behalf of several advertisers. By definition, if you can do that versus just one, you have a lot more value that you can present to the advertiser and to the publisher.

Finally, we have been working very hard in connecting with Facebook, in creating solutions that cut across different environments and having a full performance product set. It is very important to be able to optimize and maximize those values.

*Our unmatched technology leadership and expertise drive performance*

Let me talk a little bit about the core technology. I am not going to go into these deeply because you have seen it, except for saying that the chart and the graph here just demonstrate how well we have done in terms of continuously improving the technology. This is basically Revenue ex-TAC from existing live clients. We have been able to increase these over time.

Think of this as same store sales for physical stores. You see, this is a hard thing to do continuously, but the lever here is technology and, to a certain extent, publisher relationships that we keep on expanding. That will continue.

*Liquidity and scale continue to fuel our network effects*

We also have very strong network effects, and I will take you quickly through this. As we work with more advertisers and more publishers, we get more granular data, that granular data helps us drive more sales for clients. When we drive more sales for clients, we drive higher ROIs, which makes it much easier for us to bring new clients into the platform. When we bring new clients into a platform, we create more liquidity. Again, for a particular user, we get more opportunities to serve ads, and that gives us higher revenue that we can then spend on publishers, which allows us to pay more for publisher inventory, which allows us to get more publishers, and that in turn gives us more data.

We have seen this over and over again. We saw in 2014 a lot of players selling themselves or sort of refocusing their business in other areas because it became very hard to compete. I believe that a big part of that was network effects that we saw at that time.

*Our solution works seamlessly across the consumer journey*

I have talked about this. Our solution works across publisher ecosystems, marketing channels, platforms and devices.

*Performance marketing technology landscape*

Alright, so let us talk a little bit about our competitive landscape, going from what we would call the most competitive players to the least competitive.

### *Direct competition*

We talk about direct competition, people that offer retargeting services that use data sets from the advertisers to produce sales. The ones that we consider to be the most competitive are the ones that have the stricter definition of what a sale is. They attribute sale only when there is user engagement. Getting a click is not easy. Unless we get a click, we do not say that we can attribute sales. A lot of these companies use the same principle. It is on a post-click attribution basis.

Google Remarketing, we will talk more specifically about Google. They have a remarketing solution, does that. Sociomantic, this is a company that was acquired by Tesco in the UK. It uses the same. TellApart in the US, uses the same generally, except for Google Remarketing. To a certain extent, Sociomantic, they are not global players, they are quite local and we see some of them in different markets – myThings in France, Nextper is in France, too. What is the UK one? Struck, for example, they are a small company.

Then there are other companies that also do retargeting but use other metrics. Conversant is a good example of it. They use also offline metrics to look at performance. AdRoll uses a combination of post click and post view, sometimes there are no clear metrics. Facebook also uses a combination of metrics, and sometimes uses mechanisms to sort of estimate what sales on other devices could be.

### *Indirect competition*

In addition to that, we are also seeing some indirect competition. Indirect competition is really grabbing some of the marketers' attention. What these guys offer are mostly marketing automation tools, so you have people that are concentrating on display, like MediaMath, that come to the marketers and say, 'Let us help you manage your data and you can make the decisions.' A lot of their pitch is about control.

On a performance basis, and you will see, we will show them in a matrix that shows where we believe they are in terms of performance. That is not their pitch. Their pitch is control. Advertisers, you need to take control of your marketing environment, we will help you take control, we have tools to help you. There are people that are focused on display and you see MediaMath, Accuen, Turn, Xaxis, which is a division of WPP. However, you also have marketing automation suites that are being created by the Oracles, the Adobes, the SAPs of the world. Their intent is really to automate the activities of the marketing department and their focus is not performance.

### *Ecosystem influencers*

Then, of course, you also have influencers in the ecosystem, large publishers like Facebook, Yahoo, Tencent, Google would be ones that would have an influence but obviously big eCommerce companies can have an influence, too. The biggest influence is it makes it harder for the clients we serve, for example, in the US clients that compete against Amazon. However, it also gives us an edge because they realize that it is important to have scale, and scale is something that we can bring them because we pool assets from all these clients.

The performance and machine-learned approach of solutions vary across the board

Talking specifically about the things that we consider to be very important in terms of judging a competition. One of the most important ones, if not the most important one and one of the ones that we believe has held that high retention rate is performance. We look at competitors on the performance axis and we also look at the competitors in the machine-learning axis.

Why do we think the machine learning axis is important? We believe strongly that over time, all advertising or most advertising will be done based on data, on rich data sets and it is going to be very personalized. There is no way that you can use a rules-based engine to determine that. You have to use machine learning to be able to do one-to-one advertising. If you do not have capability and have not built capability around this, specifically for the intent of driving sales from rich data sets, it becomes very, very hard.

What happens is a lot of the people that are not high on these axes end up focusing more on automation, and that is what you see here. Companies like SAP, Adobe, Oracle are building marketing automation tools and marketing sets but they are generally compelling for advertisers who are not very focused on performance, or advertisers that want to have more control.

You also have the MediaMath in that respect. They are a bit higher in terms of performance when we talk about remarketing. Then when you go further out here, were probably the ones where we see higher performance is the companies like Google that offer higher performance. However, obviously, they all have competing products.

Some of these work on different segments of the market. For example, AdRoll is more inclined to be in the lower end of the torso, plus the tail of customers, and so we do not see them as often. I think when we see them, we see them because there is head-to-head that is being asked. Generally, what happens is the competition in this marketplace is determined or is sorted out not by the best presentation. It is generally sorted out but in some cases, by relationships, and people that have strong relationships are people like Conversant. Sometimes our goal is to get the advertiser, when Conversant is in one of the clients, to test us. The head-to-head tests are clear indicators of how well we are doing from a competitive perspective.

*We win 90% of our head-to-head tests based on performance*

Let me talk a little bit about the head-to-head tests that we have run. I think this is a sample of the last 12 months of head-to-head tests that we have run. These are 43 head-to-head tests. We have won 90% of them. We have lost 10% of them. When we lose them, sometimes it is because of lower performance, half of them, and sometimes it is because the attribution methods are different. They are post-view attribution or there is an element of offline that is being included in it.

These are results that have held quite well over time, and so we feel quite good about this. This is probably the biggest indicator, this is what sort of gets everybody in the company excited is when there is a head-to-head test, what is happening. If there is anything that looks like we are not performing at the level that we would be expecting, the whole company mobilizes to figure out what it is and figure out why that would be the case.

However, this is a clear indication of a market, where performance wins, we win most of the time. When we do not win, we look at it in detail and we generally feel quite good about those cases in terms of those not worrisome aspects, it might be because of different ways that the clients are looking at it, it might be because they are also considering the creative, et cetera.

*Criteo is the exclusive remarketing partner*

I made a statement earlier that when you are trying to maximize sales and your advertising spend, it is very, very important that you actually use one person that has the wherewithal to do it. This is data that we look at for I think all of our clients and we look at how many clicks are generated potentially from other partners. 75% of the people we work with, we work with on an exclusive basis, which confirms very clearly that once you have a partner that works well, that has the best technology and that is covering all the environments that you can cover, it is best to just work with that partner.

Not that we would not be challenged in some of these clients with head-to-head tests, but once the advertiser or the eCommerce company has done a head-to-head test and they have seen the clear winner, it is not worth for them to continue to do the head-to-head test. They just focus on one of them, and generally, it is us. In most cases, they work with us exclusively, so we are quite proud of this statistic.

*Our strong and consistent client retention ultimately proves our value*

All of that has led to an impressive statistic that if there is one statistic that the street had to look at that makes us different than anybody in the ecosystem, particularly in the broader ad tech ecosystem, I would

say it is the orange line. We are an orange line. It is the orange line that shows you that we have had 90% retention rate for the last 20 quarters. There are not that many companies I can think of – probably one, Google, that has had that in Search, but there are not that many companies that have this type of behavior.

This clearly proves the point that Rob from Microsoft was saying that we are not always-on spend, we are much more of a sales channel, a cost-of-sale item than in marketing discretionary item. This is also why we do not have to work with agencies. We do not mind working with agencies but the relationship we have is directly with the client. The majority, more than three-fourths of the relationships we have and the people we work with are the clients directly.

When the clients want us to work with the agencies, we work with the agencies, but because we are quite straightforward spend and there is a very clear understanding of the value we deliver, there is no need necessarily for an intermediary. That makes a big difference, too, with a lot of the people that you see in the ecosystem. What is most impressive about this number is we have gone from 2,000 advertisers to 12,000 advertisers and we have been able to keep these number of retention. If there is nothing else that you remember, just remember this one.

#### *How we compare with direct post-click competitors*

Alright, so how do we compare ourselves against direct post-click competitors? On performance, you saw the graph on the head-to-heads, that is the best indication that we have on how well we do. We do well on those two. We also have a full offering. Companies like Sociomantic are just focused on RTB platforms, they do not have direct connections to publishers, they do not have a full offering around all sectors. TellApart, in addition to RTBs, also works closely with Twitter. Why? Because they are owned by Twitter. However, other than that, they really do not have a full offering in terms of reach. We are able to have very deep relationships with Facebook. We are able to have very deep relationships with Google. We are able to have very deep relationships with many players in the ecosystem, in addition to the 17,000 publishers that we work with. Most of these companies have not developed a publisher side business we have.

We were really forced to do. When the company started, there was no programmatic. There were no RTB platforms and so we created those RTB or the programmatic relationship with publishers at the beginning.

#### *Google – The typical coopetition relationship*

We do have a strong relationship with Google. I do not know if it is typical but it is a coopetition type relationship with Google. We have been extremely happy with Google. We are one of the largest buyers in their RTB platform, AdX, we have had a long-standing relationship. Google is a very technical company; we are a very technical company. When they pull out new products, we often are the first ones that are testing those products. We are often the guys that find some of the bugs in the products, and so we work with them very closely.

They do have a competing product. That competing product that they have had now for six years does not – we deliver better performance in most situations than they do. They do have a couple of elements that makes it harder also for them in addition to the focus on this technology that we have. One is they do not have access the way we do to companies like Facebook or Microsoft because of other strategic implications for them. The clients that we work with, in general, though I would not say this is the parameter that makes them work with us or others, but they are just generally more comfortable with sharing data with a better party like us than with the big companies.

#### *Facebook – A custom integration and mutually beneficial partnership*

Google is one example. We feel very comfortable with the relationship we have with them. Then the other one is Facebook. Facebook, we have had a very strong relationship with them for the last four years. We integrated with FBX quickly. We developed a very good business with them. We have been working now for two years on a custom integration with DPA. We have more than 6,000 customers on Facebook and we

have had a very strong relationship in terms of creating the mechanisms that allow our engine to work on Facebook.

The way that Facebook looks at us is that “you guys have developed an incredible asset to bring eCommerce companies that are spending on an ROI perspective to our platform. Without your engine, they would not spend on our platform.” As long as we continue to add value in that ecosystem, and we feel quite comfortable that we will, we will be in good standing.

They have a direct response product. Their performance is not as good in most circumstances versus ours. They also do not have access from their perspective, and this goes back to marketers choosing generally to work with one provider of services, not several providers, but they do not have access to the relationships and the publisher relationships we have outside and their attribution is not as focused on post-click attribution. They do have some other elements associated with it.

*We increasingly complement the marketing automation software space*

Talking about the marketing-automation software space, these guys, as I said, are focused on automation, not performance. Because of it, they do bring a lot of media buying capabilities, but what is happening now with CMOs, are asking for more and more performance. Also, as the environment becomes harder in terms of accessing information, in terms of connecting to people like Facebook, it is becoming harder. They are asking for more ROI, and so it is becoming harder for them to do this. Their emphasis is really on enterprise software emphasis where they are trying to help people automate the departments and the activities and not really the performance. Over time, we think we are a good complement to their offering, in the sense that they should plug us in for the activities related to performance and report back on how we perform for those advertisers.

*Our competitive position is strong and sustainable*

In summary, we believe our competitive position is strong. Still the big driver of how people decide who to work with is performance, and we have the best performance. As long as we have that, we will be in a good position. We are also in an environment that is becoming broader and what is harder to access particular publisher ecosystems, we are a great intermediary to do that. We have great relationships with Facebook, we have great relationships with Google, we have relationships with Tencent and other players in the Chinese environment. We are in a great position to do that and we think it is harder for people that are publishers and are competing against some of these other publishers to get access at the same level that we do.

As we build a performance marketing product that has elements, especially we heard about Search, you also heard a little bit about prospecting, but as we fill in, we will have more and more opportunities to cross-fertilize and cross-optimize against all these opportunities. We will become more and more meaningful to advertisers. We feel quite good about not just our current position but how our activities that we are undertaking now will reinforce that position.

That is it for the competitive positioning. Any questions now on this? Alright, so no more question, I will pass it on to Benoit.

## **Financial Update**

Benoit Fouilland

*Chief Financial Officer, Criteo*

Great. Thank you. Very happy to be, after this long series of presentation, the last one that you will hear today. I am very happy to give you an update on what makes the strengths of our financial model. When we talk about financial performance, we have to look back, obviously, at how did we do since we went public.

*We have had a solid track record since IPO*

We must say that we had a pretty solid record since the IPO in terms of consistency of execution from a revenue growth standpoint, with a combination of very rapid growth in excess of 50% over the period from 2012 to the last 12 months ending of June in terms of Revenue ex-TAC growth, but combined with an expanding profitability as Adjusted EBITDA has been growing very rapidly during the same period.

*Our model is differentiated, efficient and scalable*

This track record of delivery on consistency in execution is clearly setting us apart within the world of ad tech, and it demonstrates how differentiated, efficient and scalable is our model. There are four key dimensions that best illustrate the strength and the differentiation of our model. I would go through each one of them.

The first dimension is that our model, by essence, and Eric did mention it earlier, is a direct model. It is a direct model that drives elastic demand. The second dimension is that our model offers sustainable and stable gross margin levels. The third dimension which is the one on which I will spend the most time today, is that our model is profitable and it offers significant operating leverage. We have already shown that operating leverage but there is more to come in our model. The fourth dimension, our model is highly capital efficient and cash generative. Let us start by the first dimension.

*Our business model has unique attributes*

Our business model has pretty unique attributes. There are four powerful metrics that I will invite you to look at. The first one is the metrics of net client additions. We have been adding in a very consistent manner an inflow of new clients every single quarter since we went public. In the last 12 months, we have been adding in excess of 800 net new clients every quarter, so there is no doubt that our model is highly attractive to eCommerce companies.

Our model is, by essence, a direct model and we are integrated with all of our clients and we do not need any intermediary to deliver value to those clients. Yet, I mean, we are happy to work with agencies, as it was mentioned before, if our clients want us to work with agencies, and there are certain parts of the world where we do so. We have a direct model.

We are very proud of our client retention rate that was talked about in details before. 90% plus over now 20 quarters and always-on spending patterns from our clients, combined with a high retention rate means recurring revenue. We have a very sticky financial model.

As our pure performance model creates a strong incentive, we talked a lot about that earlier as well, for our clients to spend more with us so that they get access to more volume of sales at their targeted ROI, we have a strong incentive to have our clients moving to uncapped budgets. That is the reason why you have seen, ever since the IPO, more than three-quarters of our Revenue ex-TAC have been generated from uncapped budget. All of those attributes are creating very powerful differentiators in performance marketing.

*We drive consistent increase in client spend*

Our model is driving a consistent increase in client spend. There is a very strong incentive for our clients to spend more. If we look at the spending pattern by client cohort, which is a very interesting indicator on how clients are increasing their spend over time, we see a very consistent pattern. If you look at the cohort starting from Q1 2010 up to the most recent quarters, we see a very consistent pattern. What does that pattern do to our revenue? It drives increasing Revenue ex-TAC from existing clients. We have seen that this is one of the powerful drivers of growth for the company. You know that we are reporting every quarter

the growth from existing clients, 20% on the same store sales basis was what we posted in Q2, in the last quarter reported.

*Our model is highly replicable across all markets*

Not only our model drives additional spending, but it is very replicable across markets. I think we have seen, now that we are operating with presence on the ground in 19 markets, and if you look at some of the largest markets where we have entered, you see that we have a very high replicability across markets of our model.

*We optimize our margin to create sustainable value across the ecosystem*

Let us look now at the second dimension of the differentiation and strength of our model. Our model offers stable and sustainable gross margin levels. We optimize our margin. We have a very high level of control of our margin which is a very, I would say, specific attribute of our business model. We directly control our levels of margin. We do optimize our margin to create sustainable value across the ecosystem.

What is our strategic objective? It is to maximize liquidity and scale on our platform in order to drive long-term benefits for all of the stakeholders in the chain. Maximize the value for advertisers and publishers but also maximize network effect and fortify the competitive positioning of Criteo. We set the margin at the optimal level in each market, so we have a very precise margin-management model internally. Where we set the margin at the optimal levels, that ultimately maximizes the absolute Revenue ex-TAC opportunity for Criteo.

What we observed ever since the IPO is that we had a very consistent margin profile. Rather on the top, on the upper part of the corridor that we had indicated at the time of the IPO, 39% to 41%, and as you can see, we have been rather around 40%, 41% very consistently.

*We generate significant profitability while investing*

Third dimension of differentiation and strength of our financial model, the financial model is profitable. We have been profitable very early. We have been profitable and we are profitable while managing the company in an investment mode. Looking at our non-GAAP indicator, which is a core indicator of profitability for us, Adjusted EBITDA, the Adjusted EBITDA margin has been increasing since 2012, nearly doubling from mid-single digit to 11.5% over the last 12 months ending June. This is during a period where we were at the same time quadrupling our non-GAAP OpEx basis, so clearly expanding profitability while massively investing for growth.

However, not only is this visible on a non-GAAP basis, there are very companies in the space that are profitable, even less companies that are profitable on a GAAP basis. If you look at the GAAP operating margin, you see a very similar spectacular pattern from 3% in 2012 or around 3% of GAAP operating margin, to 6% in the most recent period.

*We have significant drivers of operating leverage*

We have significant drivers of operating leverage in our model and they are powered by a combination of factors – always-on spending, uncapped budget and a set of powerful levers that enable to drive additional spend from our customer at limited incremental cost.

The first one is technology innovation. Obviously, we have talked a lot about technology innovation today, but as we bring technology innovation in our platform, we create more performance in the platform and we create an incentive then for our clients to spend more in order to get more volume at their targeted ROI.

Same when we bring some more supply sources, it creates an opportunity also to reach more users, creates more performance in our platform, which drives spending at very limited incremental cost, if any.

### *Upselling*

Upselling new product to existing clients is also one of the drivers, as well as opening new channels.

### *Operating excellence and productivity*

We have a powerful lever of operation excellence and we are pursuing – and I am going to spend more time today on what are we pursuing internally – to drive ultimately operating leverage.

Just a couple of examples that have been mentioned earlier, so I would be relatively quick.

### *Technology and new supply are powerful levers*

Technology and new supply are powerful levers of operating leverage. We have seen those examples in Romain's presentation. As we have introduced new technology innovation, we always measure on an A/B test basis being part of that technology innovation at the time it is introduced.

We have seen over time when we implemented this major change in our engine, optimizing on conversion rather than on click through rate only, we drove a 20% uplift. When we had the first dynamic creative optimization, which was introduced, we drove a 10% uplift. Revenue optimization which is another evolution in our engine optimization, been driving 8% uplift at the time of the introduction. And the most recent RTB integration improvement, also has been driving a direct uplift of 6%.

Technology is driving additional revenue and these are powerful factor of operating leverage.

### *Supply*

Supply, we have got also examples there from Yahoo!. Yahoo! Japan which had a major uplift at the time we introduced that relationship as well as more recently as we developed native, we also have been driving direct uplift.

Technology and supplies are powerful levers.

### *Productivity*

Productivity is also driving operating leverage and we have a new story of increase of productivity, continuous increase of productivity by market. What we are looking at here is the Tier 1 Revenue ex-TAC, so over the sales and account management headcount. It is a productivity of Tier 1 sales and account management and we see a very consistent pattern of increase of productivity across markets. Productivity is a powerful lever as well.

### *Profitable growth and P&L accountability*

We also are driving internally a culture of profitable growth and P&L accountability across our region. We run our sales operation globally – under the responsibility of Mollie – by region, where in each region, an executive VP is in charge of the Tier 1 business in that region and we have an executive VP you have heard of today who in charge of midmarket across the globe.

Each of those executives are made accountable on a P&L. This P&L is going down to a direct operating contribution level where in that P&L is included, obviously, the Revenue ex-TAC that is directly driven by this region or this unit and the direct OpEx under their responsibility. Which allows us to drive a strong accountability for profitability and for operating leverage across the business.

One of the aspects that we talked about profitability being tracked across midmarket and Tier 1 through the framework I have just introduced to you. What we wanted to share with you today is a bit more information about the midmarket unit economics.

*Midmarket unit economics*

The midmarket unit economics are very favorable. If we look at the data on a per client basis over the last 12 months to Q2 2016, what we observe is that Revenue ex-TAC per client of a midmarket customer is on average, three to four times lower than the average of a Tier 1 customer by account.

What we observed as well is a direct OpEx per client is significantly lower for the midmarket clients, as we have a very light model and very scalable model. Why the business has not scaled fully, we are still very early in the penetration as you have heard it from Tim. We are observing that the direct operating contribution margin per client is in fact already pretty close. We are only at 3 percentage point below the direct operating contribution margin of a Tier 1 client.

What we observed as well is that midmarket profitability is fast approaching Tier 1 levels if you look at it by region, so it is very interesting looking at EMEA. EMEA is region where we introduced midmarket earlier. We started as early as six years ago when we established our first team in London.

You can see that the EMEA midmarket direct operating contribution margin is in fact pretty much reaching the Tier 1 direct operating contribution margin. Not yet there, but very close to it.

If we look at the Americas where we started four years ago, we have a very similar picture where the Americas' direct contribution for midmarket is approaching quickly the Tier 1 contribution.

Interestingly, in Asia where we started – and the business is just nascent in Asia – you see that it is a differential. The differential between the two is relatively small.

What this indicates to us and that we have shared with you already in the past is that we feel confident with the type of profitability that we can already post today in midmarket while we are very early in the penetration with a benefit of automation and scale, this business as very favorable profitability.

*Further source of leverage beyond sales and operation*

We have further source of leverage beyond sales and operation that we just talked about. We have also source of operating leverage in G&A. And in G&A, we have adopted organization on processes that are suited to extract productivity out of the structure.

We have a central hub model to deliver standardization and productivity benefits in G&A. We rely heavily on global shared services that we apply for across accounting and financial reporting. We have very focused corporate center of excellence in things like treasury, tax, or SEC reporting and we have a tight policy management around procurement and travel.

Besides the central hub structure, we have a strong business partnership organization that drives accountability and that delivers value-added services across various functions and regions.

We are also leveraging technology in order to drive automation and productivity. We have very early, before going public, we have implemented SAP as a single ERP backbone for finance and we are leveraging now this investment; we have been leveraging this investment for several years.

On the top of this core backbone investment, we have invested in technology based on SaaS, the most standard SaaS solution worthy for global HR management, Salesforce, that we have implemented recently for global sales. Concur to drive expense reporting. We are also investing significantly in the integrate infrastructure that we have discussed around midmarket, that is going to drive direct benefit for G&A in the way we are going to support this number of customers that midmarket is bringing to us.

*Headed toward our long-term adjusted EBITDA margin target*

Combining all of those sources of leverage, we are headed towards our long-term Adjusted EBITDA margin target. If you remember, we had shared this model at the time of the IPO. We had expressed this model at

that point as a percentage of revenue. Based on your feedback and in order to facilitate the monitoring of the model going forward, what we have decided is to express it now as a percentage of Revenue ex-TAC.

While at the time of the IPO in 2013 we were at an Adjusted EBITDA margin measure as a percentage of Revenue ex-TAC of around 17%, we have gained over the last three years 11 percentage points of operating leverage.

Where is this operating leverage coming from? No surprise, we just discussed it. It came primarily from sales and operations where we had more than 6 percentage points of gain in sales and operations and more than 2 percentage points that came from G&A.

We feel confident for the Criteo core business that we are on track to go towards our long-term margin target of 38% to 42% Adjusted EBITDA margin measure to Revenue ex-TAC which is the same as the 15% to 17% that you are very familiar with of revenues.

#### *Robust operating cash flow generation*

Fourth dimension of strengths and differentiation of our financial model, we have a robust operating cash flow generation. The combination of our profitability and the fact that we have an attractive and sound working capital profile, you have to keep in mind that why the company has been growing globally, we have maintained DSOs in the mid-50s. This is one of the benefits of working directly with clients, with DPO of around mid-60s. That gives us a pretty attractive working capital profile.

Combining profitability at the Adjusted EBITDA level and an attractive working capital profile gives us a very good average conversion – Adjusted EBITDA conversion into operating cash flow. We have been on average converting at more than 90% our EBITDA in operating cash flows.

#### *Robust operating cash flow generation enables continuous investment*

What does our operating cash flow generation enable us to do? It enables us to invest in developing and growing new initiatives and new products so that they scale fast, they generate profit that turn into cash that enable us to reinvest. That is what we call the smart investing virtues cycle.

You can see that we have been able to fund for significant program in capital expenditure. We have been, over the last 12 months, our CapEx have been around \$75 million and we have been funding our CapEx over time on generating cumulatively significant Free Cash Flow, which is pretty unique in our industry.

#### *Financial structure offers significant flexibility*

Our financial structure is offering a lot of flexibility. Because we have a very strong balance sheet, with now a balance sheet in excess of 900 million of total assets, we have a significant cash pile coming from obviously from what we raised at the time of the IPO and all of this cumulative Free Cash Flow that has been generating since. Our total cash at the end of June was close to \$380 million. We have virtually no debt, \$9 million of debt at the end of June.

On the top of that very strong balance sheet and cash position, we have additional flexibility. As you know, we have a committed financing that we signed in September last year that enable us to access €250 million, in euros or in dollars, within 72 hours. That gives us a lot of flexibility at very attractive conditions.

We also have secured from our shareholders' authorization to raise up to \$750 million or the equivalent of \$750 million of additional equity. We have a lot of flexibility to seize opportunities.

#### *Capital allocation is both dynamic and disciplined*

Our capital allocation has been traditionally both dynamic and very disciplined.

### *CapEx*

We have significant investment yearly in CapEx. Our business runs pretty much on a 5% of revenue or 12.5% of Revenue ex-TAC run rate of CapEx. With an investment, which is focused primarily on data centers so hosting equipment as well for 80% and the rest being essentially internal IT systems and facilities improvement.

### *M&A*

Second aspect of our capital allocation, M&A. So far, we have been focused only on tuck-in acquisitions, which where we are looking at adjacent technology, product or key talents. These has been the drivers or our M&A so far.

### *Very active M&A process*

We have a very active M&A process. Looking at since the first acquisition that we did in 2013, we have been screening pretty much 500 distinct companies and we have a very clear process and systematic and focused approach to follow this opportunity within the funnel. Out of 500 opportunities, we have engaged in deeper discussion with close to 100 of them and then we conducted diligence on a subset of that to ultimately acquire five companies. All of those were the tuck-in acquisitions that I was talking about, driven by technology.

Just a couple of example to remind you. AD-X Tracking was the initial acquisition that helped us bootstrapping our effort to have the full mobile solutions, so helping us on the tracking of mobile application.

Tedemis was an acquisition that enabled us to open a new channel for targeted email.

Data Pop. We just heard about, so Data Pop, with recommendation technology and talent has enabled us to launch all of the effort around our Search effort.

More recently, MonsieurDrive is a small acquisition we did in France, that is going to help us tracking sales in CPG.

We have a very systematic and focused approach. We have a structured strategy and an M&A dedicated team. We have got the leader of the team at the back of the room today. We have also a cross-functional integration team in place in order to integrate fast the acquisition that we make.

### *Our use of cash supports our strategic ambitions*

We definitely have a lot of financial flexibility in order to support our strategic ambitions. We have a track record of acquiring complementary assets that we have leveraged in order to bootstrap our efforts to enter into new product and new businesses. All of that with a clear rationale, which is to accelerate the execution of our vision of building the World's Performance Marketing Platform.

With the financial flexibilities that we have, we can seize opportunities that are larger than the tuck-in acquisitions that we have been executing so far.

### *Summary*

In summary, we are driving Criteo forward in the best interest of our shareholders. We manage the company for growth, while investing in the business. We are heading towards our long-term Adjusted EBITDA margin target for our core business of 40% expressed as a percentage of Revenue ex-TAC.

We offer a pretty unique combination of growth and expanding profitability and cash generation. We allocate capital dynamically and with the right level of discipline. We have the financial profile to support our vision.

That is what I wanted to cover as a financial update.

## Conclusion

Eric Eichmann

*Chief Executive Officer, Criteo*

Thank you very much, Benoit. I think we have a quick wrap up for me. I just want to remind you about the things that we have covered. We are of course very confident about the future of Criteo. I talked about the big opportunity and net market opportunity of \$25 billion. Hopefully, you have seen the plan that we have. We have talked about creating and building the World's Performance Marketing Platform. We have seen a number of exciting products that we are working on like user graph as-a-service, the Search products that we have seen. We have talked a lot about the opportunity around continuing to improve our core technology.

Hopefully, you have seen that we have significant runway in terms of increasing the number of clients that we bring on board, not just in the midmarket but in general, in Tier 1 and in markets like APAC, in Middle East and Africa and Latin America. We feel quite good about the plan.

Hopefully, what you have seen also, not just from the 11 quarters of consistently exceeding expectations but from the financial presentation that Benoit just gave you, we have very successful track record of execution and so we are very excited to go forward with this.

With that, we came to the end of the presentation. We have some time for Q&A now, so go ahead. I think we have allocated until noon or there about for Q&A. Questions please and if we can grab the microphone here.

## Q&A

**Eric Eichmann:** Apparently, when you grab the microphone, do not touch the button because that –

**Speaker:** Yes.

**Eric Eichmann:** It works without touching anything.

**Speaker:** Yes, thank you. I had a quick question on the use of cash. You have clearly a fair amount of cash on the balance sheet, you are Free Cash Flow positive. I assume that the return on that cash is not really high.

**Benoit Fouilland:** In today's market, yes?

**Speaker :** Right. My question really is, are there alternate uses of cash as opposed to kind of hoarding it for a potential acquisition by returning it to shareholders given on the flipside of that that you have a potentially very low cost of debt if you do come across a larger acquisition that you could just fund that way and like your thoughts on that. Thank you.

**Benoit Fouilland:** Yes, absolutely. Absolutely. Clearly cash is kept in order to have full flexibility to seize an opportunity for acquisition. Very clearly, you are absolutely right, we are in a situation where we are Free Cash Flow positive on a yearly basis.

However, at this point, we value the strategy flexibility of being able to seize an opportunity immediately as a great flexibility and a great asset for the company. The intention at this moment is that to keep the cash for the use in acquisition and there is no use of cash in terms of returning through share buyback or the mechanism at this point.

**Eric Eichmann:** I think also I would add to Benoit, it is still early in development of the overall ecosystem. We believe the trend towards people-centric marketing based on rich data assets is going to continue. Even

if there might not be an opportunity today to buy a company, we think there is going to be plenty of opportunities in the future to use that cash for acquisitions.

Alright, other questions? Yeah, back there. Thank you.

**Speaker:** Alright. It sounds like you are relatively full service operation. Do any vendors sell tools or do customers otherwise have the ability to do this themselves and insource using their own customer data?

**Eric Eichmann:** You mean like the full service that we provide? No. The straight answer is no. I am looking at Patrick to see if any of these tools – see, if you exclude performance as a metric and you want to do sort of the service on all the platforms that we do, even not to perform in our level, I do not think there is an equivalent.

**Patrick Wyatt:** I think no client is able to build their own full retargeting stack.

**Eric Eichmann:** Yeah. Nobody has built their own full retargeting stack. Obviously even if one built it, then you have the additional sort of hurdle of getting to performance levels which is ultimately what people do by [inaudible].

**Speaker:** If I look at your 2015 and 2016 numbers, operating expense numbers, very close to \$100 million increase each year, \$95 and this year expected to be about \$105. Thinking about 2017, is that the right way to think about of around \$100 million increase in your operating expenses?

**Benoit Fouillard:** I think we have not guided on 2017 at this point. We will do that together with the Q4 result. Clearly, we are running the company for growth, but with a clear objective of Adjusted EBITDA margin expansion. That will apply also for 2017.

**Speaker:** In simple words, can we just assume that the productivity will continue? That means expenses will grow much lower rate than the revenue growth?

**Benoit Fouillard:** I think in sharing our confidence to be able to track to our long-term operating margin model or Adjusted EBITDA margin model, I think we confirm clearly that for the core business of Criteo, we have an intention to continue to show leverage year after year.

**Speaker:** Thank you.

**Eric Eichmann:** Yes, please.

**Speaker:** Hi, thanks. Thanks so much for all the detail today and it was a very impressive expansive market opportunity that you presented. I am just wondering if you could comment at all on what we should take from that in terms of a revenue opportunity. Maybe specific to the Asia opportunity, it is clearly from an eCommerce perspective, incredibly large. Is there anything structural about it that would prevent it from being a tremendous revenue opportunity for you as well going forward?

**Eric Eichmann:** It is a great question. I think if you look at APAC, our presence in Japan is very strong or developing presence in Southeast Asia is very strong. I think the key question for APAC to see how big of a revenue driver it could be for us is China. China is a very, very large eCommerce market. I do believe it is the largest one already today and it is supposed to be in three to four years, supposed to be twice the size of the next five economies in terms of eCommerce. It is a very large opportunity.

Mollie mentioned, I think we find China to be a great opportunity. We have done a number of things in China to make sure we overcome obstacles that we see as we go along. One of the key things that we need to do is create and have a data center inside China. We had a data center originally in Hong Kong and that created performance issues. Now, we have data centers that has everything transferred to it in Shanghai. We feel quite good about the product being able to do well in China.

However, and this is one of the things that is the challenges, we have had also to build all the pipes if you will and all the connections in China with players. You cannot connect to Facebook or Google and get access to a lot of inventory. In China, you have to connect with Tencent and Alibaba, Baidu, et cetera, et cetera and so we have done that.

Now, I think a lot of the work that is remaining is making sure that we educate the market on our offer. There is no real equivalent and that will take some time. I think if you – different example, but initially when we came in the US, it was not about the connection but it was about getting the market to be educated on our offer and to consider our offer as being a performance offer and measure it the right way. It took some time.

We still feel China is a great opportunity, but because of the obstacles and the challenges especially with China, we are being very cautious about it. Yeah.

Yes, please.

**Speaker:** You had a great customer retention rate, but then they churn, what are the top two or three reason they do churn?

**Eric Eichmann:** Two things to consider. One, when the highest churn that we have in the first couple of months or maybe in the first three months in the first quarter. In a lot of cases, it is either the setup was not put in properly or when we have customers that do not have a rich product portfolio or enough data being generated by their sites our product does not perform as well and so we might have missed some expectations.

A lot of it happens at the beginning. If you take the bulk of the people we lose would happen then. I do not know, Tim, if you would have any comments about churn reasons.

**Tim Frankcom:** I think you touched on it, but –

**Eric Eichmann:** Because obviously if you take the sheer number of customers that churn because the majority of our customers are now in midmarket, a lot of them would come out of midmarket.

**Tim Frankcom:** Yeah. I think that you touched on it, but it is probably around the product portfolio. For example, if a campaign was set up with a retailer or a vendor who did not have a product feed, a feed of products, it does not take advantage of the full Criteo engine and that can also drive a higher rate of churn. Does that make sense?

**Speaker:** Thank you.

**Eric Eichmann:** Yeah. Go ahead. Sorry.

**Speaker:** One comment you had made was that one option that the marketing technology vendors like Adobe could do, if they could plug-in your technology into their stack and get more performance metrics, why do not they do so if your technology would be useful for them? Not Adobe perhaps, but just in general on the marketing technology vendors you had mentioned, should plug-in your technology in their stack.

**Eric Eichmann:** Well that is a good question for them. I think, is it a critical part of what they are trying to automate today? Probably not as critical. Would we think that over time we would be a great plug-in for them to have in how they report particularly given sort of our position in the marketplace? Yes. I would ask them why it has not been a big priority.

It has not been for us either because we work with plenty of customers around the world, and that has not come up as a big requirement. If it were to come up as a big requirement where people say, 'We use Adobe's automation suite and we would like to be able to see the data through that automation suite,' it

would raise up for us as a priority to go and talk to these players, but it has not been. It is possible that in the future, it could be. Yeah. Questions?

**Speaker:** I understand that roughly 75% of your engagements are direct client scenarios.

**Eric Eichmann:** Yes.

**Speaker:** Curious how frequently global systems integrators or IT strategy firms like Accenture, IBM, etc., are getting involved, if not from a business transformation initiative as far as digital, maybe from a digital marketing services standpoint where they are encroaching on traditional agency -

**Eric Eichmann:** I have never heard of one of the IT integrators being part of any decision. Normally, it is the marketing department deciding these things as part of their advertising spend or their channel spend. I have not seen. So, zero. Yeah. Never. No. Can you pass it on to – thank you.

**Speaker:** Benoit, on the chart on the evolution, midmarket versus Tier 1 in the little bubbles. If you look forward, maybe in five, ten years down the road, do you expect bid markets ever to exceed Tier 1 as the productivity improves, or are there things you can do around commission rates, etc., to increase the productivity?

**Benoit Fouillard:** It is obviously difficult to project, but there are key levels within midmarket to continue to increase productivity. As Tim explained to you, we are just investing in significant platform with Integrate, the benefit of that platform have not full yet into the productivity and into the profitability.

As we scale, there is significant additional scale that will come in this business, there should be also additional scale benefits. I think there are ingredients to see clearly midmarket profitability at a direct operating contribution level, getting to the Tier 1 level. Can, with volume and further scale, can it go beyond it? It is something which is not out of question, but it is a bit early to confirm at this point.

**Speaker:** Hi. You gave some great detail on your relationship with Facebook and Google. Do you mind commenting on your relationship with Amazon?

**Eric Eichmann:** We work with a number of subsidiaries of Amazon and we offer them our services. We would love to work with Amazon. We think we could add a lot of value. We do not with them today. They do have their own remarketing solution, yeah.

**Speaker:** I just have a quick question on the Instagram inventory. When you guys first rolled out Facebook's mobile inventory, I remember the ROI being a little bit lower than the rest of your ads.

**Eric Eichmann:** ROI, can you repeat that?

**Speaker:** The ROI on the Facebook mobile was initially a little lower than what you guys were seeing on your – the rest of your ads. Are you guys –

**Eric Eichmann:** Good – the first assumption, I do not know if you want to answer. Maybe you can get that -

**Patrick Wyatt:** We manage all our buyers to an ROI goals, so all our networks run the same ROI goal. Any difference in the performance reflected in volume in the end, not in ROI. That make sense?

**Eric Eichmann:** To – on Instagram, one of the key questions here – of course, the next question is how much volume. I would say Instagram is about a tenth of what Facebook is. Whatever the proxy is for two properties is probably what we would expect over time.

**Patrick Wyatt:** We index to Instagram the same way Facebook indexes to Instagram, more or less. Yeah.

**Eric Eichmann:** Other questions? Yeah?

**Speaker:** A quick one on header bidding. All the comments earlier sounded like there was a small, single-digit volume impact on there. Not that different from past technology changes that you have faced. Can you

walk through the moving parts of how when volume gets affected that flows through the model, particularly as we start to look toward the seasonally strong fourth quarter? What offsets do you have against something in volume -?

**Eric Eichmann:** Now, I think, so the dynamics of how it works, and you saw from the example that Romain gave, is sometimes, we are buying impressions that we are paying more for. That gives us less flexibility to buy other ones. It gets affected in terms of the impressions that we are able to buy over time, and that has an effect on volume, right? We, again, do not think it is significant and we think that, as I said earlier, it would take a couple quarters to get back to what we think would be a better indication of supply and demand, which really has not changed because of header bidding.

**Benoit Fouillard:** What I would add as well, especially in the context of we have Q4 in front of us is that header bidding is affecting primarily one geography and it is only on certain platforms. We have a very broad mix of supply and if we cannot achieve the same volumes on certain sources of supply, we have the ability to shift, obviously, towards other sources of supply. We have these great relationships – ecosystem of direct relationship with publishers. That is something pretty unique to us.

**Eric Eichmann:** Another thing we are doing is we are deploying a technology that allows us to connect directly through the header bidders as opposed to connecting through the platforms that then connect to the header bidders. By doing that, we will get access to more inventory and we will also be able to get the information about what is happening in the bids. However, also, if we buy directly from that mechanism, we do not have to pay the platforms fees, so that is one of the benefits of going direct, too.

**Speaker:** Sticking on header bidding for a second, there was a slide up there that you said that you would think that it is a near-term impact on price, but our pricing for the overall industry is going to decline over time. Just wondering why do you think that, because when I think about it, game theory would suggest that collectively, yes, everyone should say, 'Let us bid less over time.' However, there is a huge incentive to cheat, and so why would everyone collectively –

**Eric Eichmann:** Sorry, what is the huge incentive to cheat? In what sense?

**Speaker:** To win the impression.

**Eric Eichmann:** Yeah, but over time, let us take it advertiser by advertiser, right? I am Ford and I spend so much money online, and in the past, I used to pay \$5 CPM, and suddenly, header bidder and new technology makes me pay \$7 or \$8. I am getting, whatever that is, I am getting less impressions for the same money. That is not what Ford was willing to buy. They start experimenting and they start paying less. Remember, it is not like this is an ecosystem where everything is sold out. It is not quite from it, right? A lot of it is not sold out, right? From that perspective, the expectation is that over time, it will happen. It will probably happen from the smartest bidders first. They all start figuring out the dynamics, so they start figuring it out, hey, how can you predict the next price in the auctions so that you can get closer to it.

However, why would you, in a supply-demand equilibrium that you had before with the change of technology, why would that dramatically change, that supply-demand equilibrium? People are paying so much for so many impressions. If they can pay – if they pay more for those impressions, there is going to be less money available. It is not like they are increasing the money. There is going to be more impression that are now going to go unsold. I do not necessarily think it is a game theory issue as people do not buy – they buy – in particular, the big buyers buy through agencies and they buy on media plans. They do not buy like cost on a real-time basis.

I am not sure that those dynamics – how long it is going to take, I think, is the true question. How long is it going to take to get that to be flushed out and to get back to an equilibrium point? It is hard to predict. Yeah?

**Speaker:** Just one more, back to the Facebook topic. You guys said 6,000 marketers are buying on Facebook through the Criteo engine. Have you seen, I think, Retail DPA has been out for a year and travel for six months or so. Have you seen any of the Tier 1s choose to go directly to Facebook instead of working with you? Can you talk about that [inaudible]?

**Eric Eichmann:** Yeah. There are some Tier 1s that work directly with Facebook. I think one of the challenges for us is to be able to see all the sales that are generated from the Facebook platform, that is something that we have been working with Facebook on. Conceptually for us and for them, there is an agreement around being able to see all the sales. It is in their benefit. It is in our benefits. It is in the advertiser's benefit to see all those sales.

There are other products that advertisers choose to work with Facebook on, like custom audiences and other things. In certain cases, those advertisers are working through social teams and not necessarily the performance teams. I think over time, that will be clarified, but sometimes that is what happens. The social team was working on Facebook before and they are the ones that work on Facebook. We do not always get those people to switch to us.

**Speaker:** Hi. How many of your customers use last-click attribution versus some sort of multi-factor attribution and how does that compare to your attribution models? Pursuant to that, how does the cross-device between mobile and desktop attribution work?

**Eric Eichmann:** That is a great question. Not too long ago, we ran a survey of our customers to understand what they use. You would be surprised how many people still use last-click attribution because they are using Google Analytics, and that is the default. A large part of our customer base still uses some sort of click measure analytics. The more sophisticated ones will use a multi-attribution level. I do not know what percentage, but I would say less than a quarter of them use that.

Interestingly enough, even though it does not account for all scenarios and it is obviously not perfect, a click attribution is actually not a bad proxy because you have to generate engagement, and generating engagement in particular in this place is quite hard. If you generate true engagement, people get to click on your ad, that is a real signal of interest, and that you have been able to drive somebody to be interested in what you are proposing to them.

I think it will survive. Attribution is an area that will change, but interestingly enough, there is no – if you get ten experts on attribution in a room, they will not agree on many things. They probably will agree to on one or two things. This is a constantly evolving area.

Now, to your question on a multi-device attribution, I think that is a key challenge for the industry, given that there are so many transactions happening cross device. That is becoming, I think, one of the bigger challenges. Talking about what the multiple attribution is has become, in my opinion, less important than being able to capture sales across devices. That is why we put so much emphasis on the user graph and being able to provide this as a service to advertisers. That is why it is so well-received because it is one of the biggest issues they have.

**Speaker:** How does your attribution model work?

**Eric Eichmann:** On the way we report to clients, it is a post-click, 30-day attribution. If somebody clicks on an ad and then we can see them buying something within 30 days – that is what our attribution model is.

**Speaker:** No more?

**Eric Eichmann:** Yes?

**Speaker:** Last one.

**Eric Eichmann:** I think we will take one other one after this one and then we are good to go.

**Speaker:** Yeah, just coming back to Search for a second there. Wondering, in your case studies, if you have seen a big difference in the outperformance for a Tier 1 relative to a midmarket, I will come back with a second one actually.

**Eric Eichmann:** Why do not we get Jason maybe to answer that question.

**Jason Lehmbeck:** The question was difference in performance, Tier 1 [inaudible]. In the 30 plus advertisers we are working with, we have 15 Tier 1 and the rest are midmarket. We have seen similar performance lift across both segments.

**Speaker:** Just on the [inaudible] have you guys sized with the TAM with the ones [inaudible] advertisers?

**Eric Eichmann:** Have we – so the question is, have we sized the TAM for search our existing advertisers? The data we use was for Search for Retail. The question is how many – that is a good question. For existing advertisers, how many do we represent?

The TAM is really going after all the retailers, right? Because we – that is part of the TAM in our current business. However, sizing it up against the current ones that we serve, we have not done. It is meaningful in the sense that we work with a lot of them.

**Speaker:** That sounds like a very interesting conversation. You are already [inaudible].

**Eric Eichmann:** Yeah. It is generally the easier conversation, but it is interesting because we bring a very disruptive solution to Search, one that a lot of people are struggling with. I would say it is an easy conversation because the sales teams would be upset with me.

**Jason Lehmbeck:** It is early data, but actually, Camping World started on Search with Criteo. I think to the broader opportunity, their story can help us on both sides, actually.

**Eric Eichmann:** Last question. No questions? Great.

**Benoit Fouilland:** Last one. Last one.

**Eric Eichmann:** One last question. Yes?

**Speaker:** With a pretty robust innovation pipeline, I was curious because you showed some of the charts with relative performance impacts. Do you have a sense of where we should expect the larger impacts from the innovation pipeline in terms of the ones that you have sketched out?

**Eric Eichmann:** I think this is always a difficult question for us because we – I will tell you, from the ones that we have shown in the past, some of them, we never expected to be that good. CRO was a complete surprise of how well it went. We had other features that we thought were going to do well and did not do anything. It is hard for us. We invest only in ideas that we think are going to have a significant impact. Ideas like user graph, we think, could have a significant impact. Ideas like the cost of sale, we think, can have a significant impact, but putting numbers against it is hard.

Obviously, the new product we are going after, Search, and some of the other things have a significant TAM. If successful, they probably will have a significant impact. As independent products, they would probably have more impact than a particular feature in the core business. However, specific numbers, we really do not have at this stage.

**Speaker:** Thank you.

**Eric Eichmann:** Alright. Thank you very much.

[END OF TRANSCRIPT]