Facebook, Inc. (FB)
Second Quarter 2021 Results Conference Call
July 28th, 2021

Deborah Crawford, VP, Investor Relations

Thank you. Good afternoon and welcome to Facebook's second quarter earnings conference call. Joining me today to discuss our results are Mark Zuckerberg, CEO; Sheryl Sandberg, COO; and Dave Wehner, CFO.

Before we get started, I would like to take this opportunity to remind you that our remarks today will include forward-looking statements. Actual results may differ materially from those contemplated by these forward-looking statements.

Factors that could cause these results to differ materially are set forth in today's press release, and in our quarterly report on form 10-Q filed with the SEC. Any forward-looking statements that we make on this call are based on assumptions as of today and we undertake no obligation to update these statements as a result of new information or future events.

During this call we may present both GAAP and non-GAAP financial measures. A reconciliation of GAAP to non-GAAP measures is included in today's earnings press release. The press release and an accompanying investor presentation are available on our website at investor.fb.com.

And now, I'd like to turn the call over to Mark.

Mark Zuckerberg, CEO

Hi everyone. Thanks for joining us today. This was a good quarter for our products and business. There are now more than 3.5 billion people who actively use one or more of our services, and I'm excited about our product roadmaps ahead.

I want to start today by discussing some of the themes we're seeing in our major efforts around creators, commerce, and the next computing platform. Each of these areas is important and is going to unlock a lot of value on its own. But they're also building blocks for the future of the internet and the future vision for our company, and I'll discuss that as well.

First, let's talk about creators. We want our platforms to be the best place for millions of creators to earn a living. If we can do this, then our services will also have the best content across many different types of media -- from text and photos to audio, gaming, and video.

Video in particular is becoming the primary way that people use our products and express themselves. I know this is a theme we've been talking about for a few years now, but we've been executing on this for a while and video has steadily become more important in our products. Video now accounts for almost half of all time spent on Facebook. Reels is already the largest contributor to engagement growth on Instagram.

Across all forms of video, short form video like Reels is growing especially quickly. We're very focused on making it easy for anyone to create video, and then for those videos to be viewed across all of our different services, starting with Facebook and Instagram first. People like to watch videos recommended by our personalized algorithms, so this gives creators a good way to reach new people who don't follow them yet. This is also a good complement to our social feeds and it's an area where our progress in AI is going to make the experience a lot better in the coming months and years.

On-demand video, like in Facebook Watch, is also growing quickly and is now growing faster than other types of video or content in News Feed. We're building a number of new video monetization tools for creators so they can get compensated for making great content. For example, last year people sent more than $50 million of Stars to game stream creators going live on Facebook alone, and now we're expanding Stars so fans can send them to any creator during on-demand video as well.

I also want to call out live video for a moment. This is a smaller percent of overall video on our services, but it's some of the most unique content and it gives creators a way to build community and engage with their followers. We're also focused on developing monetization tools like Live Breaks for mid-roll ads and Live Shopping so creators can make a living and engage their communities more deeply in commerce with their content.

Overall, there's a lot more to do here, and as it becomes the majority of engagement across our services in the coming years, we're going to continue to focus on this.

We're also focused on other types of creators beyond video, and some of the most interesting emergent behavior we're seeing is creators using a lot of different types of content to engage their communities. We launched Live Audio Rooms this quarter as well as podcasts. We also launched Bulletin, our publishing and subscription service for writers, with features to help them find and grow their audiences, including integrations with Groups, Facebook Live and Live Audio Rooms.

To help grow the creator economy overall, we're going to keep our creator tools free to use through 2023, and we recently announced that we're investing $1 billion in creators across Facebook and Instagram. I'm optimistic that creators will get more opportunities to do the work they want, and that's going to lead to people hearing lots of new voices across our different services.

The second area that I want to talk about today is commerce. Our goal here is to create better experiences for people interacting with businesses, and to help businesses grow even more on our platforms. Our approach is to work our way down the stack and build world class services at every layer of commerce – starting from discovery at the top of the stack all the way down to payments. Just like we want to be the best place for millions of creators to make a living, we also want to be the best place for businesses to grow as well.

We started here by building world class ads tools to help businesses reach potential customers and help people discover new products and services that they might like. But what we've found is that when these ads link offsite, you often land on a webpage that's not personalized or not optimized or where you have to re-enter your payment information. That's not a good experience for people and it doesn't lead to the best results for businesses either. So our next phase here is focused on building out Shops, Marketplace, and business messaging in WhatsApp and Messenger to create more native commerce experiences across our apps.

There's a lot of work here to do to support all of the business tools natively that already exist for the web, but as we bring more of this online and enable more of this, it's going to create a superior consumer experience and it’s going to convert better for businesses. This is going to lead to more businesses investing in building out their presences across our services, and that will lead to even more diversity of products for people to discover and interact with. This is a long term strategy and it’s going to take a while before it's meaningful -- especially given the scale of our ads business already -- but I'm confident that it's the right long term bet and product direction.

As we work our way down the stack from discovery in ads to native commerce storefronts, we're also making progress on payments at the same time. WhatsApp payments are now available to everyone in Brazil as well as India. Lots of people are already using this as a simple and secure way to send money to friends. We're adding new payments features in Messenger in the US like QR codes. We also just announced that we're making Facebook Pay available outside our apps for the first time, which means you'll start seeing it as a checkout option on the web -- and especially in web views that you see within our apps after clicking on ads or other business content.

Commerce experiences are now accessible across most of our services and we have a full roadmap of deeper integrations that I’m excited about in the months ahead.

The third area I want to talk about is building the next computing platform. We’re continuing to invest heavily in building technology and products to deliver a full sense of presence. This is going to be critical for unlocking the next generation of social internet services.

Quest 2 in particular continues doing well, and it keeps getting better monthly as we release regular software updates, including most recently our Passthrough API so developers can start building mixed reality experiences on Quest. The range of content and experiences that we’re seeing keeps broadening as well to the point where there are a lot of popular virtual reality experiences beyond games at this point. The most popular apps on Quest are social, which fits our original thesis here that virtual reality will be a social platform and that's why we're so focused on building it. But we're also seeing compelling use cases in other forms of entertainment, as well as work, creativity, and fitness.

Looking ahead here, the next product release will be the launch of our first smart glasses from Ray-Ban in partnership with Essilor Luxottica. The glasses have their iconic form factor, and they let you do some pretty neat things. I'm excited to get these into people's hands and to continue to make progress on the journey towards full augmented reality glasses in the future.

Now, the areas that I've discussed today -- creators, commerce, and the next computing platform -- they’re each important priorities for us and they’re each going to unlock a lot of value on their own. But together, these efforts are also part of a much larger goal: to help build the metaverse. I'll be sharing a lot more about this in the months ahead, so I wanted to discuss this now so you can see the future we're working towards and how our major initiatives across the company are going to map to that.

So what is the metaverse? It's a virtual environment where you can be present with people in digital spaces. You can kind of think about this as an embodied internet that you're inside of rather than just looking at. We believe that this is going to be the successor to the mobile internet.

You're going to be able to access the metaverse from all different devices in different levels of fidelity -- from apps on phones and PCs to immersive virtual and augmented reality devices. Within the metaverse, you're going to be able to hang out, play games with friends, work, create, and more. You're basically going to be able to do everything that you can on the internet today as well as some things that don't make sense on the internet today, like dancing.

The defining quality of the metaverse is presence – which is this feeling that you're really there with another person or in another place. Creation, avatars and digital objects will be central to how we express ourselves, and this is going to lead to entirely new experiences and economic opportunities.

I think that overall this is one of the most exciting projects that we're going to get to work on in our lifetimes. But it's going to take a lot of work, and no company is going to be able to build this all by themselves. Part of what I've learned over the last five years is that we can't just focus on building great experiences -- we also need to make sure we're helping to build ecosystems so millions of other people can participate in the upside and opportunity of what we're all creating. There will need to be new protocols and standards, new devices, new chips, new software -- from rendering engines to payment systems and everything in between. In order for the metaverse to fulfill its potential, we believe that it should be built in a way that is open for everyone to participate. I expect this is going to create a lot of value for many companies up and down the stack, but it's also going to require significant investment over many years.

I see our focus here as a continuation of our work to build technology that brings people together. In many ways, the metaverse is the ultimate expression of social technology. Some of the experiences I've dreamed of building since well before I started Facebook are only starting to become possible now. If you look at the investments we've made over the years, you can see this vision gradually starting to come into focus, and you can see why we're so excited about it.

In addition to being the next generation of the internet, the metaverse is also going to be the next chapter for us as a company. In the coming years, I expect people will transition from seeing us primarily as a social media company to seeing us as a metaverse company. There's a lot that we need to do to get there, and there will be many exciting milestones along the way, including some we'll share in the months ahead. But in the meantime, I just want to take a moment to thank everyone in our community, all of our partners and employees, and everyone who has supported us so far. I continue to be grateful to be on this journey with all of you.

And now, here's Sheryl.

Sheryl Sandberg, COO

Hi everyone. Thanks Mark. I hope you're all safe and healthy.

This was a strong quarter for our business. Our total revenue for Q2 was $29.1B, which is a 56% year-over-year increase. We've seen strong growth in all regions and across most verticals. Our strongest verticals are those that have performed well throughout the pandemic, including E-commerce, Retail and CPG. And we're also seeing continued recovery in others, like travel, that were hit hard by Covid.

Our performance continues to be driven by the ongoing digital transformation, which has accelerated during the pandemic, and our long-term investments in tools and products to help businesses make the shift online.

Not long ago it was much harder and much more expensive for businesses to create a digital presence, take orders online, and reach customers remotely. Our tools and products make these things easier and more accessible. Businesses and creators can set up Pages, Profiles and Shops on Facebook and Instagram. They can engage with customers directly in Groups, or through Messenger and WhatsApp. And they can tell their stories in creative ways with Reels, Stories, or by going Live on Facebook and Instagram.

With personalized ads they can easily reach the people most likely to be interested in their products or services for just a few dollars. This has helped so many businesses – especially small businesses – find success when reaching people in person has been much harder.

A great example is The Pizza Cupcake, a family-owned baking business in New York City. They've been selling at pop-up shops since 2018. But when Covid hit, pop-up locations shut down and catering events cancelled. So in March last year they became an E-commerce business. In Q3, they tested their first Facebook ad campaigns in the New York/Tri-State area, and by the following quarter ramped up their budget to sell across 28 states. They've since made three new hires and plan to start shipping nationwide this year, so they've expanded production, which has also led to jobs being created at fulfillment centers in Maryland, Florida, Arizona, and California.

We're constantly working to improve the effectiveness of our ad products to help businesses like The Pizza Cupcake reach customers and get a great return on their investment. We're doing this through investments in machine learning, and monetization of newer surfaces like Stories and Reels.

In all of this, we're planning for the long-term. Mark talked about some of the key elements of our strategy going forward, so I'll focus on the strategy for the ads business. If you think about the journey we've been on over the past decade or so, we started with desktop ads on the right hand side of people's feeds, then consumers shifted to mobile, and we put ads in News Feed. Then quarter after quarter, year after year, as we've created great new consumer products – like Stories or Reels – we've found the right ways for advertisers to reach consumers within these products. And we're constantly working to make our ads deliver more for businesses, and be more relevant for people.

To support the growth of our ads business over the next 10 years, it's going to take a similar effort. We need to build on our success by developing innovative new products and discovery experiences, while giving everyone more control over their personal information. To build the next era of personalized experiences, we're focused on product innovations in four areas:

The first is discovery. We want to keep making our apps the best places to discover products and businesses you'll love. For example, we're testing a new experience in News Feed where you can tap to browse content from businesses on topics like beauty, fitness, or clothing. And we're using context to make smarter recommendations about which ads to show, so if you're watching a travel video, we could show ads for hotels and flights.

The second area is commerce, which Mark touched on a moment ago. We're building a modern commerce system across ads, community tools, messaging, Shops and payments. It's all about creating a personalized, seamless customer journey, where it's easier to discover a product, buy it, pay for it, and have it delivered to your doorstep.

The third area is privacy-enhancing technologies. We know businesses are experiencing challenges because of platform changes. We want to make sure they can continue getting great results through privacy-safe personalized ads long into the future. So we're collaborating across the industry to develop new technologies to help minimize the amount of personal information we process, while still allowing us to show relevant ads and measure their effectiveness.

The fourth is building tools that help businesses beyond marketing. We want to help solve all kinds of business needs, whether it's customer relationship management, business messaging tools, or hiring through Facebook Jobs. We're helping people run their business across our apps easily with Facebook Business Suite. We're making it easier to message customers across our apps from a single interface. And we're expanding our Messenger API for Instagram as customers increasingly rely on messaging instead of phone calls.

The digital transformation is a long-term trend that isn't going away. By focusing on innovation in these four areas, we will continue to help businesses of all sizes make the shift online and reach customers with privacy-safe personalized advertising.

As ever, I'm grateful to all the businesses who work with us. And I continue to be amazed by our teams all over the world. Throughout this period we've been really lucky to have so many brilliant people working hard to keep people connected, and help businesses survive and thrive online.

Now, over to Dave.

Dave Wehner, CFO

Thanks Sheryl and good afternoon everyone.

We delivered strong results in the second quarter as our services continue to help millions of businesses reach customers around the world.

Let's begin with our community metrics.

We estimate that approximately 2.8 billion people used at least one of our services on a daily basis in June, and that approximately 3.5 billion people used at least one on a monthly basis. Our global community continued to grow even as we lapped elevated user growth in the second quarter of last year related to the pandemic.

Facebook daily active users reached 1.91 billion, up 7% or 123 million compared to last year. DAUs represented approximately 66% of the 2.90 billion monthly active users in June. MAUs grew by 194 million or 7% compared to last year.

Turning to the financials.

All comparisons are on a year-over-year basis unless otherwise noted.

Q2 total revenue was $29.1 billion, up 56% or 50% on a constant currency basis. We benefited from a currency tailwind and had foreign exchange rates remained constant with Q2 of last year, total revenue would have been $982 million lower. On a two-year basis, Q2 total revenue growth decelerated to 72% from 74% in the first quarter.

Q2 ad revenue was $28.6 billion, up 56% or 51% on a constant currency basis.

The macroeconomic environment for online advertising remains very strong. As Sheryl noted, the growth in advertising revenue was largely driven by verticals that have performed well during the pandemic, such as online commerce and consumer packaged goods. In addition, we saw improved growth trends in verticals that were particularly challenged during the pandemic, such as travel, entertainment and media.

On a user geography basis, ad revenue growth accelerated in all regions as we lapped the second quarter of last year, which was the period hit hardest by the pandemic. Growth was strongest in Rest of World at 86%. Europe, Asia-Pacific, and the US & Canada grew 63%, 56%, and 48%, respectively. Europe, Asia-Pacific and Rest of World all benefited from currency tailwinds.

In Q2, the total number of ad impressions served across our services increased 6% and the average price per ad increased 47%.

Impression growth was driven primarily by developing markets, especially in Asia-Pacific, while pricing growth benefited from broad-based strength in advertiser demand. Recall that in the second quarter of 2020, the effects of the pandemic contributed to elevated impressions and depressed prices, which we are now lapping.

Other revenue was $497 million, up 36%. Other revenue growth continues to be driven by Quest 2 sales, though the rate of growth slowed in the second quarter as we entered a seasonally slower sales period. We also recorded a revenue adjustment for returns related to the Quest 2 foam facial interface recall.

Turning now to expenses.

Q2 total expenses were $16.7 billion, up 31% compared to last year. In terms of the specific line items:

Cost of revenue increased 41%, driven primarily by consumer hardware costs, payments to partners, and core infrastructure investments.

R&D increased 37%, driven primarily by hiring to support our core products and consumer hardware efforts.

Marketing & Sales increased 15%, mainly driven by hiring and marketing spend.

Lastly, G&A expenses increased 23%, driven mostly by employee-related costs and legal expenses.

We added over 2,700 net new hires in Q2, primarily in technical functions. We ended the quarter with over 63,400 full-time employees, up 21% compared to last year.

Second quarter operating income was $12.4 billion, representing a 43% operating margin. Our tax rate was 17%. Net income was $10.4 billion or $3.61 per share.

Capital expenditures including capital leases were $4.7 billion, driven by investments in data centers, servers, network infrastructure and office facilities.

Free cash flow was $8.5 billion. We repurchased $7.1 billion of our Class A common stock in the second quarter and we ended the quarter with $64.1 billion in cash and marketable securities.

In terms of our sustainability efforts, we remain focused on achieving our goal to reach net zero emissions for our entire value chain in 2030. In June we released our second annual Sustainability report which details our work towards achieving our objectives.

Turning now to the outlook.

Similar to the second quarter, we expect that advertising revenue growth will be driven primarily by year-over-year advertising price increases during the rest of 2021.

In the third and fourth quarters of 2021, we expect year-over-year total revenue growth rates to decelerate significantly on a sequential basis as we lap periods of increasingly strong growth. When viewing growth on a two-year basis to exclude the impacts from lapping the Covid recovery, we expect year-over-two-year total revenue growth rates to decelerate modestly in the second half compared to the second quarter rate.

We continue to expect increased ad targeting headwinds in 2021 from regulatory and platform changes, notably the recent iOS updates, which we expect to have a more significant impact in the third quarter compared to the second quarter.

As noted in recent earnings calls, we continue to monitor developments regarding the viability of transatlantic data transfers and their potential impact on our European operations.

Turning now to expenses.

We expect 2021 total expenses to be in the range of $70-73 billion, unchanged from our prior outlook. The year-over-year growth in expenses is driven primarily by investments in technical and product talent, infrastructure, and consumer hardware-related costs. Our expense outlook reflects our commitment to invest ahead of the compelling long-term growth opportunities we see across our product portfolio.

We expect 2021 capital expenditures to be in the range of $19-21 billion, unchanged from our prior estimate. Our capital expenditures are driven primarily by our investments in data centers, servers, network infrastructure, and office facilities.

We expect our full-year 2021 tax rate to be in the high-teens.

In closing, we are pleased with the strong performance of our business and remain committed to innovating on behalf of the people and businesses who use our services around the world.

With that, France, let’s open up the call for questions.

Operator: Thank you. We will now open the line for a question and answer session. To ask a question, press one followed by the four on your touchtone phone. Please pick up your handset before asking your question to ensure clarity. If you are streaming today's call, please mute your computer speakers. Our first question is from the line of Brian Nowak with Morgan Stanley. Please go ahead, sir.

Brian Nowak: Thank for taking my questions. I have two, the first one on shopping and sort of all the Instagram and Facebook shopping efforts. You've been sort of at this for over a year now. And Mark, I thought your comments about it's going to take a while before it's meaningful tonight were somewhat meaningful.

Talk to us about sort of what are one or two of the key execution areas you really need to overcome to make the shopping opportunity really be larger for the company over the next few years?

And then secondly, on the creator economy, there's a lot of different platforms with reach and algorithms sort of attacking this creator economy. Maybe just help us better understand a little bit the way you intend to really compete for creators to bring more exclusive content to your platform. Thanks.

Mark Zuckerberg: Sure. I think I can probably take both of those. On commerce, I think the main thing to keep in mind is just the ads business is so large that it's going to take a long time before anything that we do with commerce is going to be particularly meaningful at scale.

But I think overall, the strategy is really to work our way down the funnel from discovery and all the things that we're already world-class at with ads to making it so that those ads increasingly point to Shops across our different services.

In order to do that, each layer of the funnel that we're working on, we want to be world class on its own, which means that basically, there's this whole long tail of functionality that businesses have come to expect on the web and from other tools, and we need to make sure that that's available for Shops and business messaging and all the tools, whether we do that through partnerships with other e-commerce companies or building it up ourselves.

So it's -- we're seeing meaningful improvements every quarter in this in terms of how effective these are. There are already a pretty meaningful number of merchants and people who are using Shops, and we expect this to compound over the coming years.

But I just think in terms of the scale of the ads business that we're starting at, I just think realistically, we shouldn't expect that this is going to be a meaningful driver of our business or profitability in the near term. It's just going to take a while for that compounding to become meaningful numbers.

But I think the strategy is the right one. It's creating a better product experience for people. When you click on an ad or when you engage with a business, it's just going to be much better to do that natively, whether you're in Instagram or Facebook or WhatsApp or whatever you're using, than go to a website that doesn't have your payment information and it isn't personalized. So I think we're on the right path here, and we're focused on compounding this as quickly as we can.

I guess, for the second question on the creator economy, I mean, yes, there are a number of different companies that are focused on this. I'd say there are a couple of things here that are interesting properties of this.

One is that if you're a creator and you're trying to get your content out there and you're trying to make a living, you want to be in all these different platforms. So I think a lot of what we're trying to do is it's not necessarily the case that people are going to be on one platform versus another.

We just want to make it so that the creators have their best content here and that we can help them make a living better than other platforms. And we think that if we do, we'll have an advantage on content over the long term. But it's not like we fundamentally have to win creators over from another place.

Our monetization tools, I think, are a pretty big advantage that we bring to the table. Our advertising is world-class. So the ability to basically help creators make more money from the work that they're already doing, I think it's something that we should really be able to bring those set of tools to the table.

We also have a lot of distribution that -- and ability to -- for people to find their communities and help personalize recommendations to help connect people with the people who are going to be interested in their content.

So that is -- that's some of what we're seeing and why a lot of creators are excited about the work that we're doing.

And over the long term, I think if we're able to make it so that millions of creators are able to make a living across our platforms, I think that that's just going to mean that there's going to be a long-term breadth and healthy set of content across the systems that I think is going to be increasingly important, especially as video becomes more important on our platforms, like what we're seeing both with Watch and Reels now.

David Wehner: And France, we can go ahead and take the next question.

Operator: Our next question is from Justin Post with Bank of America. Please go ahead.

Justin Post: Great, thanks for taking my question. Maybe one for Dave and one for Mark. First on the DAUs, you're kind of back where you were in Q1 last year for U.S. and Europe. How do you feel about how reopening is affecting activity and penetration levels today - where can they go from here? And then, Mark, really appreciate all the commentary on meta universe. I think some companies would build in private. I appreciate the thoughts around that.

Maybe first, what's kind of the business model on a very high level? And second, what kind of disclosures could we see on expenses around AR/VR? It looks like maybe up to 20% of job openings are Oculus. So it looks like the investments already started. I was wondering if you might be able to -- how you're thinking about giving us updates around that?

David Wehner: Yes. Thanks, Justin. On the DAU front, we are seeing those trends being impacted by COVID. That's especially noticeable in some of the larger markets where we have high levels of penetration like North America and Europe.

And I'd say in North America, given our high level of penetration, we do expect sort of MAU and DAU levels to sort of bounce around from quarter-to-quarter given kind of how significantly penetrated we are in that market.

And then in Europe, we're seeing a combination of seasonal slowness as well as COVID-related softness when we saw restrictions ease. Obviously, with Delta, we might see other trends. It's hard to predict how that's going to play out in this cycle. But that's kind of the best read on it that I can give you at this point.

Mark Zuckerberg: Sure. And on the Metaverse point, what we're primarily focused on here before I get into the business model, our basic playbook as a company is build products that get to scale, especially social products. It's important the people you want to interact with are there.

We're going to focus on having hundreds of millions of people use the metaverse and the new platforms that we're building before we really turn this into what I expect to be a very important and big part of the business.

But overall, and I think that there's -- as we embark on this next chapter, ads are going to continue being an important part of the strategy across the social media parts of what we do, and it will probably be a meaningful part of the metaverse too.

I think commerce is going to be increasingly important, which is why we're -- one of the reasons why we're focused on this across our current apps and the current economy. But I think digital goods and creators are just going to be huge, right, in terms of people expressing themselves through their avatars, through digital clothing, through digital goods, the apps that they have, that they bring with them from place to place.

A lot of the metaverse experience is going to be around being able to teleport from one experience to another. So being able to basically have your digital goods and your inventory and bring them from place to place, that's going to be a big investment that people make.

And our focus for now is really on helping to develop the community, helping to develop the number of people, and grow the number of people who can be in these metaverse experiences and can experience some of these next computing platforms like virtual and augmented reality.

And that's, I think, what you should expect us to focus on for the next period. But over the long term, I think that there's going to be a very big digital economy around this. And that's what we're primarily going to be shooting for.

Our business model isn't going to primarily be around trying to sell devices at a large premium or anything like that because our mission is around serving as many people as possible. So we want to make everything that we do as affordable as possible, so as many people as possible can get into it and then compounds the size of the digital economy inside it.

So that's kind of at a high level how I'm thinking about this. And I'm happy to talk about this more as we continue to evolve the investment. And Dave can speak about the expenses and disclosures and all that.

But I will note that I appreciate the ingenuity and cleverness of looking to our job descriptions just to see where we're investing. This is a big focus, as I called out in my comments at the beginning.

David Wehner: Yes. And Justin, I mean, obviously, from a capital allocation perspective, our overall focus is on growth. And we've repeatedly called out that as it relates to our investments in innovation, FRL is a big focus area for us and a major investment driver in our expense outlook.

So we have mentioned that we're investing billions of dollars annually, and we expect to invest in this area for the foreseeable future. As we make progress towards building this next computing platform, there's a lot of hard work that needs to be done, but it is a big focus, but we haven't provided any more granularity on it. OK, France, you can go ahead and go to the next question please.

Operator: Our next question is from Doug Anmuth with JPMorgan. Please go ahead with your question.

Douglas Anmuth: Thanks for the questions. I'm going to go with two for Dave. Just first on the mix of slower impression growth and then with price as the driver here for the year, is there anything else that we should be thinking about beyond the comps from last year? And how do you think about expanding surfaces to create more ad inventory going forward?

And then secondly, just curious if your view on ATT has changed over the past three months at all? And if you could comment at all just early on, on some of your mitigation efforts and what you're seeing there. Thanks.

David Wehner: Yes. Sure, Doug. In terms of impression growth, we had called out last quarter that we would expect for the remainder of 2021 for pricing to be a bigger driver of growth. So -- and mentioned at that time, there were a few factors driving it.

The biggest factor is lapping the COVID engagement that we saw that was particularly pronounced in North America where we saw more engagement related to the lockdowns and higher impression growth last year. So that is one of the big factors.

The other factor that we're seeing is just shift towards video, both for our products and other products. And that's just generally a big trend in the market, and that tends to have lower impressions per the amount of engagement than things like News Feed. So kind of both those things are factors, but the COVID factor is the one that I would call out.

And when you think about how we're expanding services to create more ad inventory, I would say that we've got a number of impression growth opportunities. We've seen growing impression contributions from new surfaces like Instagram Explore, broadly within video, Marketplace. And then when we look forward, I think Reels is a really significant future opportunity. We've only just really begun to make ads available globally on Reels.

So when you kind of look at all of these different surfaces, we think there are a lot of good growth opportunities. They're still small in absolute size compared to things like Feed and Stories, but big opportunities for growth.

In terms of your question on ATT, so the impact from the ATT changes has really generally been in line with our expectation. We're obviously benefiting as others are from a very strong macro environment for advertising.

But look, this has been very challenging for advertisers to navigate, and we're working with them to help them navigate these changes. And we've introduced solutions to help them do that through approaches like our aggregated events management API, which is aggregated data for targeting and measurement.

Obviously, we're doing a lot of work on using machine learning and AI to help rank ads and make them more valuable. But overall, we do think there are opportunities to continue to improve our capabilities through investment in areas like machine learning and AI to make ads more effective.

And if we can get advertisers to get the same number of conversions from fewer ads, that's great. That works for them, and it creates more value for the ads for us. OK, France, we can go to the next question.

Operator: Our next question is from Mark Mahaney with Evercore ISI. Please go ahead.

Mark Mahaney: Okay. Two questions, please. Back on the metaverse investments, Dave, will you take a swing at that question about how much expense associated with building out the metaverse that investors should expect? We came up with our own crude numbers of maybe $5 billion a year. Are we anywhere ballpark close on that?

And then given the rise in pricing, just to address the issue, I know you've done it in the past, the extent to which that's had a material impact on ROI for marketers. I know it's an auction-based system.

But as prices rise, is there -- should -- is there any reason to be concerned about whether there will be some marketers that would be priced out because of that and create less optimal outcomes for your platform? Thanks a lot.

David Wehner: Yes. Sure, Mark. And I can certainly hit this with Justin's earlier question. We haven't given a specific breakout on what we're investing in FRL. It's obviously a significant investment. We've categorized it as billions and so your number is billions. So it's consistent with us saying billions. But beyond that, we don't have any more specificity to give, but it is certainly a significant investment.

And I would say that is inclusive, obviously, of all of the efforts we're making across FRL, not just the metaverse. And then on pricing and ROI, Sheryl, you might be able to give some color on that as well. You're muted, Sheryl. Hang on a second.

Sheryl Sandberg: Sorry. On pricing and ROI, the beauty of an auction is that people can see the prices they're paying. They're able to measure the results and then bid appropriately.

As people get more specific, more personalized, more targeted in what they're doing, even if prices are rising, they can find buys within the system network for them. And the good news is that's good pressure in the system because it makes the ads more relevant for the people who are seeing them.

Once you are really incentivized within an auction to find the thing that is returning for you, that's actually almost always the thing that is the most relevant for people who are seeing the ads. And I think that's been a good system and good pressure within the system going forward.

We're certainly seeing our large brand advertisers continue to spend and get better at using personalization in our ad formats. And we're seeing small advertisers be able to compete very effectively. It doesn't mean that rising prices aren't an issue sometimes, but I think, overall, this is where the auction system serves us well and most importantly, serves consumers well.

Mark Mahaney: Okay, thank you.

David Wehner: Great, France, we go to the next question please.

Operator: Our next question is from Youssef Squali with Truist. Please go ahead.

Youssef Squali: Great, thank you. Two questions, please. First, for Mark, maybe going back to the metaverse vision, how much of the building blocks that you need to basically build this future is within your control versus maybe pieces that other areas need to build?

I'm thinking particularly around the hardware side because just listening to you, it seems like this is more of a communal thing that many, many, many people, many parties, even maybe some walled gardens would need to kind of open up to embrace this. Just wondering how you kind of look at that.

And then maybe Dave or maybe Sheryl, I want to go back to the impact of iOS 14.5 on targeting in general, but maybe DR in particular. We heard from several marketers throughout the quarter that they had pulled back, not just on Facebook, but really across the board on some ad formats like app-install ads because of ATT. I was wondering if you can maybe speak to DR versus brand.

Mark Zuckerberg: I can start off with the metaverse question. I do think that this is going to be a macro wave overall that a lot of companies are going to be able to ride and benefit from.

So whether that's companies like NVIDIA that are building a lot of the graphics chips that are going to be really important for a lot of the content that I think is going to be increasingly graphically intense, that's certainly - building those kind of graphics chips is not a thing that we're intending to get into. So we're certainly counting on companies like that in the industry to kind of continue improving and compounding overall.

But on the hardware side, I would say that we have a pretty big program on building virtual and augmented reality devices. And I mean sure, a lot of people are still going to be using phones and computers for a long time.

But I think when it gets to what are the devices that are going to deliver the deepest sense of presence and that are going to be increasingly important over the next decade, we're certainly investing in that because we want to make sure that those develop in a way that's in line with the vision of these platforms helping people to interact with each other and socialize.

And that means prioritizing certain feature development or certain sensors in the devices and we want to make sure that we can help push that in a direction that will help lead these to become a very social platform.

So overall, I do think this is going to be a big space. The point that I was making is that I think there are going to be a lot of winners and this is going to be not something that one company builds alone, but I think it is going to be a whole ecosystem that needs to develop.

But we're certainly making a lot of the key investments that we need to make in the foundational technology to be able to deliver the parts that we want to.

David Wehner: Youssef, why don't I start off on it and then as Sheryl wants to add any color, she can jump in and add that. So in terms of Facebook ads performing well in both direct response and brand this quarter, we continue to see solid growth across both direct response and brand.

And direct response continues to be the bulk of our business and the primary driver of growth, but we did see a nice rebound consistent with others in the market of brand spend back on platform. And brand obviously took a big hit on a year-ago basis - really saw a bigger pullback in brand. And so brand came back more strongly than DR.

But DR is still doing quite well. We're seeing a lot of the categories that led during the pandemic continue to do well, and those are all highly DR-centric verticals like commerce. So continuing to see good performance there.

Sheryl Sandberg: The only thing I'll add is that increasingly, the brand/DR distinction is less and less traditional. Large brand advertisers that have done brand advertising for a very long time are increasingly learning to do direct response ads and use our different formats and use our different measurement tools.

So even the categories that people are used to thinking about, I think it's more the buy than the advertiser. As our largest brand advertisers, I think many of them are becoming increasingly proficient and effective in what would traditionally be considered DR advertising.

David Wehner: France you can go ahead and go to the next question please.

Operator: Our next question is from Ross Sandler with Barclays. Please go ahead.

Ross Sandler: Hey, just one question for Mark or Dave, I guess, a follow-up on the creator economy topic. So YouTube pays $0.50 on every dollar to the creator, about $15 billion or so this year. So I guess, Dave, what's the view on the financial model and how that might change as you guys lean in, in this area?

I know that influencers are getting paid maybe not directly by Facebook today, but by other folks to post things on Facebook. So I guess in the new world, are we looking at lower margins and are there things that might offset that like higher engagement?

And then is the creator content going to be on just the new surfaces like Reels? Or is it likely to proliferate everywhere, including like the News Feeds on Blue and Instagram? Thanks a lot.

David Wehner: Yes, Ross, I can take that. I think it's a question of definition as well. I mean we already like, YouTube, pay a lot out to the creative industry more broadly as opposed to specific individual creators. So for instance, we pay to -- on the music licensing front, we do a fair amount of that. There's significant payments we make there above and beyond what we're talking about with the $1 billion commitment to creators that Mark outlined.

This is obviously something that is part of the cost structure, but it's something that we've long had in our outlook. So I don't think it's a meaningful change in the business model or outlook, but it is something that we're committed to helping people continue to build vibrant communities and businesses on our platform just like we have with advertising. France, you can go ahead and go to the next question please. Thank you.

Operator: Our next question is from Mark Shmulik with Alliance Bernstein. Please go ahead.

Mark Shmulik: Yes, thanks for taking my questions. A couple for Sheryl or Dave. The first on Reels ads, a lot of talk around kind of the upgrade cycle to video. Any color you can share around the engagement, traction, or effectiveness of kind of video ads on that type of a platform?

And secondly, with 1.2 million stores now on Shops, specifically those selling on Facebook, are there any learnings or noticeable differences in the effectiveness of the ads - of their advertising or conversion rates? Thank you.

Sheryl Sandberg: I can start by talking about Reels ads. Our process has been, as I talked about, we roll out consumer products and then we find the right ad format, so that businesses can take those opportunities as well. And I think that's what we're seeing.

We now have Reels ads available to advertisers in almost all markets where Reels is live. It's a pretty similar format to Stories. It's full screen and in between Reels, up to 30 seconds.

We think it's a pretty natural fit in Reels. It's a really great discovery surface. And we're seeing engagement and effectiveness parallel some of our other products. And we're really pleased with that. It's still early, but we think this has a lot of potential. Do you want me to take the second question?

David Wehner: Either way, Sheryl. I can take it if you want.

Sheryl Sandberg: Go ahead. Yes.

David Wehner: Yes. So Mark, on the second question, we're obviously very focused on making sure that our ads are effective, and we've got good conversion rates for our advertising partners. So part of what we're doing there, and Mark talked about this in the Q1 call, is making sure that the ad units optimize for whichever experience is converting the best.

So if you've got a store, a shop on Facebook or Instagram, is that converting better or is your own web store converting better. And then that allows us to also just get better at making our Shops more effective.

And so we want to do what's best for the advertiser and also continue to make our online and our own Shops more effective. So no specific numbers to share there, but we're continuing to work to make our Shops convert better. France, we can go ahead and go to the next question please.

Operator: Our next question is from Brent Thill with Jefferies. Please go ahead.

Brent Thill: Thanks. Dave, just the modest deceleration to your two-year stack, there are a lot of investor questions. Do you mean more two or three points of decel? Or is it more five to seven? Any more granularity you can add to what that modest decel looks like would be extremely helpful. Thank you.

David Wehner: Thanks, Brent. We didn't provide specific guidance on it. We obviously saw a deceleration from Q1 to Q2 from 74% to 72%. And we expect modest deceleration in the second half of the year, but we haven't put a specific number on that. France, you can go ahead and go to the next question.

Operator: Our next question is from John Blackledge with Cowen. Please go ahead.

John Blackledge: Great, thanks. Two questions. On the iOS changes, any color on the opt-in rates for Facebook and Instagram? Are they kind of in line, better or worse than your expectations at this point?

And then on OpEx at the midpoint of the guide implies 39% growth in second half versus 28% in first half. Just any color on key drivers of the accelerating OpEx growth in the back half of the year? Thank you.

David Wehner: Yes. Yes. Thanks, John. On the iOS changes, really very much in line with expectations on things like opt-in rates. So I would say, overall, the impact has been in line with our expectations. So, not a huge surprise there.

We're not fully rolled out with those changes, but Q3 will have had the impact more or less of those being fully rolled out.

And then in terms of the OpEx guide, yes, we do expect accelerating expense growth in the back half of 2021, and we're going to see that in areas like consumer marketing. So some of the non-headcount-related spend, we expect to accelerate in the back half of the year. So that's the expectation on that front.

France, we can go to the next question please.

Operator: Our next question is from Colin Sebastian with Baird. Please go ahead.

Colin Sebastian: Great, thanks. Good afternoon, everyone. Maybe a couple of higher-level questions, really coming out of F8 Refresh. First off, can you talk about the integration of messaging across the family of apps and how the opening of messaging APIs is adding functionality to apps and if this is contributing incrementally to more business activity through messaging?

And then with advanced AI and machine learning now seemingly table stakes for most platform companies, Mark, I'm just kind of curious if this is still a significant competitive advantage for you, in your view?

And based on what you heard at F8, I wonder how important a product like PyTorch is in terms of moving faster in new product development, things like that.

Mark Zuckerberg: Sure. I can take both of those. So in terms of messaging, we're working on cross-app communication between them, business messaging APIs. I mean a lot of this is very much -- the business messaging, I think, is going to be an important part of commerce and helping people interact with businesses in a way that is natural to them.

The cross-app communication in terms of helping people reach people wherever they are, it kind of fits into this vision that we have for the future of people being able to easily teleport between experiences that I think is going to be increasingly important as we move towards the metaverse.

People are going to need messaging services, that's going to continue to be a core way that people communicate. People are going to want to reach the people they care about no matter what service they're on and be able to move between these.

So when I talk about kind of interoperability and moving more there in the future, we're trying to get our core experiences today aligned with that as well. The other thing I'd say on messaging is -the connect - to the business today is that click-to-messaging ads are one of the parts of the ad business that is growing quickly and doing quite well.

And part of that is because even if we're not charging a lot directly for the messaging APIs for businesses that if the interactions between people and businesses end up helping businesses convert better and drive more sales, then businesses are naturally going to want to pay to have their ads point towards that rather than other services that we may not control or that may be a worse experience. So that's on the messaging side.

On the AI side, I think this is a really good question. It's probably something that doesn't come up as much on these earnings calls and it probably should for how important of a driver of the progress in AI is for our overall results.

One of the things that I've observed in just running the business over the last couple of years is there's a lot of focus on kind of different headwinds that we may face, whether it's from other platforms or regulation or different things.

But one of the areas that I think has routinely outperformed our expectations is progress on AI. And we don't have a single product, which is like an AI product that's sort of the embodiment of all the AI work.

That's not something that we've done yet. But we basically -- we have a very large investment in AI and we build out this platform that then all of our products use.

So when we make foundational improvements, it makes ranking better in News Feed and in Reels and ads and it makes our spam detection and our integrity systems more effective at identifying stuff, everything just gets better. And this has really been one of the big tailwinds or waves that we've been riding.

And just from what I can see technologically on the horizon, it really doesn't seem like this is going to be slowing down anytime soon. And I don't think that this is a Facebook-specific thing.

I think that this is probably across the whole industry or maybe even across the whole economy more broadly. But I do think that the progress that's being made at the fundamental levels with AI is driving a lot of progress and is one of the important macro effects that we're seeing.

For PyTorch specifically, I mean it certainly helps that the framework that we use to develop our AI work is one that's embraced by the community. So a lot of times when we go to spin up a new project, there will already have been some team that contributed an open-source library to it, and that makes it easy.

So I think that there certainly are dividends that we get from having developed or helped develop PyTorch to become an increasing standard, especially among researchers and it's certainly an area that we're going to focus on investing more in. I think that the core AI platform is just an important part of the progress that we're seeing overall.

David Wehner: And France, I think we have time for one last question.

Operator: Very good. Then our last question will be from the line of Michael Nathanson with MoffettNathanson. Please go ahead.

Michael Nathanson: Great, thanks. One for Sheryl and one for Dave. Sheryl, in the past I have asked this question, but now we're seeing it. So post-pandemic, there's been a real weakness in TV impressions.

And those TV dollars are going, it looks like, to AVOD and YouTube. So can you talk a bit about your vision for video and how they may sync with the opportunity to maybe grab some of those TV dollars? Would you expand the definition of creators to include premium video content or sports?

And then for you, Dave, following up on Doug's question, can you talk a bit -- I know it's early about the learnings from your aggregated event measurement -- what has been the impact on things like signal loss, ROI, or spending from those who've used it in the early days?

Sheryl Sandberg: I can talk about video ads. So we're seeing very strong growth in video monetization across Watch, Feed, Reels. And we think we're continually getting better at monetizing video, but they are still monetizing at lower rates versus Feed Stories, but we have a lot here. We have 2 billion people watching in-stream ad eligible videos per month.

Mobile-first video is increasing, meaning even brand advertisers are getting better at doing mobile-first video. And certainly, we think advertisers are looking for the best place to reach audiences, and we compare very favorably across the board.

I'll share a really, I think, cool recent example. Walmart, a very large advertiser, engaged Ree Drummond, who's the Pioneer Woman cooking show host, to host their first live shopping event.

And the event was to launch her Walmart exclusive line of home and fashion products. And they used a mix of our personal ads to drive awareness to a live shopping event and then reengaged viewers after the purchase, and they had really great results across the board.

They ran part of that live as video ads and resulted in thousands of engagements, a lot of – a lot of engagement with people and sales.

And so, I think that's a good example of our products like Live, combined with the use of video on our platform, combined with people taking an opportunity for video ads, and putting it all together in ways I think will compete very favorably with other formats like TV.

David Wehner: And Michael, I'll take the second question. I don't have specific data to share, but I mean just contextually, the work that we're doing with the aggregated events management API as part of the broader work that we're doing to rebuild meaningful elements of our ad tech so that our system can continue to perform while having access to less data in the future.

And it really dovetails into some of the work that Mark was talking about with machine learning and AI because that's going to be an important part of being able to make better use of less data. And so again, why having access to the ML and AI capabilities that we have with Facebook is going to be so important to the future and maintaining and growing the efficacy of ads.

So I think broadly, we're pleased with the progress we're making on this. It is disruptive for advertisers to have to go through the process of also learning how to retool. So I don't want to lessen the impact this is having on our advertisers. I think it is a challenging period for them, and we're trying to help them work through it as effectively as we can.

So with that, I think we are done. So thank you, everybody, for joining us on the call today, and hope everybody stays safe.

Operator: And this concludes today's conference call. Thank you for joining us. You may now disconnect your lines.