Research @ Citi Podcast, Episode 50: The Internet — Nothing's Going to be the Same

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Transcript:

Anne Malone (00:00)

Hi everyone. Welcome to the Research @ Citi podcast. I'm Anne Malone, the North America Head of Equity Research at Citi. With me on the podcast today is Ron Josey, our Internet Analyst here at Citi.

Today, we're going to have Ron provide his view on the potential effects of AI, major trends and developments to look for in the sector, and insights into what you can expect going forward. He's going to look into that crystal ball.

Welcome, Ron, and thanks for joining us.

Ronald Josey (00:22)

Thanks for having me. This is exciting.

Anne Malone (00:25)

So, AI is the new kid in town. What does that mean for traditional Internet?

Ronald Josey (00:29)

You know, we're figuring that out as we speak. And that's what makes this job and this role in this sector, in my opinion, one of the best out there. I firmly believe how we interact with the web today, either through the browser or through apps or tomorrow when glasses or whatever AI device comes up, is going to change completely.

And we're starting to see that already. That's what's the most fascinating part about this. Search engines are now answer engines, right? If you're not getting an answer almost immediately to your question, you take a pause. It's like, “Why don't I know the answer immediately?”

How we use and interact with the web today is going to change completely over the next couple of years. And as I think about the companies that built the internet sector today, that's Google, that's Meta, that's Amazon, we'll throw Reddit in there and Pinterest and Uber … the list goes on and on. Models are changing, and models are evolving. And some of those companies — the best companies — are evolving right with it. And that's what makes so much change and so much interest going on.

Anne Malone (01:29)

And each of those firms that you mentioned has taken a different path in their model. But considering the investment we've seen so far in AI, how do you prove that the investment's delivering? What are the metrics? I assume that is one of the big debates right now in your sector.

Ronald Josey (01:45)

I mean, yeah, that is the debate. There is an argument that if this is the next industrial revolution, quote unquote, or bigger than mobile transition of internet, but frankly, the internet, then I think it might be unfair to ask for the ROI two and a half years into it. That is a comment.

Anne Malone (02:04)

Sure. Fair enough, fair enough.

Ronald Josey (02:05)

That is something that's out there. That said, we're seeing the benefits today, or at least some of the returns today.

I think it's fascinating. Let's just take search as an example. After about two and a half years or so of OpenAI launching ChatGPT, that business now has about 700 million weekly active users. That's unbelievable in terms of the adoption and growth. To say it's mainstream is an understatement, right?

And that's been done underneath Google's nose to a certain extent. So, what has Google been doing? Google has launched Gemini. Google is working on improving Gemini for their core search business. You have a Gemini app, which is their assistant, but then core search is AI overview and AI mode. So, in other words, generative AI is becoming part of search more and more. So, search is becoming answers.

That's one example of what they're doing. And then, by the way, there's a whole ‘nother part of the internet world, which is the software as a service, the SaaS world, and Gemini is helping Google's cloud business really see revenue re-accelerate.

So I think you're starting to see the returns there, to your question on ROI.

If you're Meta for that matter, look, I think we're early days on what Meta is doing. We are spending a good amount of capex across the board, and I'm sure we'll get into it. But in terms of ROI, Meta is seeing revenue growth re-accelerate.

These are not small businesses and to be growing 20-plus percent quarter in, quarter out because of changes that they're making to their ranking recommendation engine? And it's not as if we get on Meta — or Instagram for that matter — and we open up our Reels and we say, “OK, we've got five minutes to just sort of decompress or

do whatever, learn about something." And after five minutes, you're up. No, it's I get on Reels, I see a bunch of videos on things I'm interested in, like skiing, for example. Next thing you know, it's about sailing and then it's windsurfing and then it's airplanes. And then the list goes on and on. And that five minutes goes into 15 to 20. Point being is this 15 to 20 from five is all about Meta's investments in their ranking and recommendation engines because of AI. And we're early days on that.

So great example, the ROI on Meta, you can actually touch revenue re-accelerating because engagement is growing. And then if you're Amazon, you go on shopping and they're doing a better job of merchandising. "Oh, you just bought a ball. Maybe you need a pump." Simple things like that, that make nothing but sense, but merchandising has always been something that Amazon can do a better job of. And now with tools like Rufus and others, you're getting there.

Notwithstanding Amazon's investments in AWS, we think they'll spend about 80-plus billion dollars in infrastructure capex this year. This is Amazon for AWS. AWS will start to re-accelerate here sooner or later. And I think there's a few proof points already.

And then the last one, as I wrap this up, Anne, is on the efficiency side. So, all these examples were on the growth side, but more and more companies that we speak with are talking about 30%, 40% of code being automatically generated, or call-center contacts are going up.

Automated call-center contacts are going up as people are more satisfied in the results. And so you're seeing a time where we have real opportunity to drive top-line growth while improving overall efficiency and margins.

And that's really special, particularly as we get into the level of capex that's required and then the ROI and everything else. So, there's some proof points right there.

Anne Malone (05:23)

Only comment I'll make there is, I wish I only did 15 to 20 minutes of scrolling. I'm far worse.

So you threw out some numbers and dollar numbers that are mind-boggling. The amount of capex that we're seeing that's growing, where are those investments going? And anytime you can mention a dollar amount would be useful.

Ronald Josey (05:41)

Just off the cuff in this year, if you just look at infrastructure capex spend — in other words, not necessarily the retail side of Amazon but the AWS side — we think Amazon, Meta, Google combined will spend about $240-ish billion. That number is going on our numbers close to $450, upwards, maybe $500 billion in 2029.

And these are gigantic numbers for gigantic companies, but it tells you the opportunity that's up there. And so where are we investing? A lot of the investment is in

two worlds. It's the infrastructure — it's buying the chips, it's buying the racks, it's making sure everything's cooling and all that stuff. That's the vast majority, but then it's also building out the data centers.

And you've had Meta come out and talk about a data center they're building that's the size of Manhattan. And these data centers, not only are they not small, they require a lot of energy, like one Gigawatt up to five-plus Gigawatts as needed. And so, the vast majority is on the infrastructure, which are the chips, the tools, the data, the actual machines. And then of course there's a good amount spent on data centers, the actual buildings, but by and large, it's the infrastructure spend where these dollars are going, because that's the differentiator.

And as I maybe answer too much in this question here, it's fascinating to see Google invest in their own chips called TPUs and Amazon investing in their own chips called Inferentia and Trainium. And then Meta is even building their own chips called MTIA. So there's a lot going on here as infrastructure, as spend just goes up — and the importance of infrastructure because you need that compute.

Anne Malone (07:20)

I don't think that should surprise us, right? There's always opportunity for vertical integration, right? Anytime there's a revolution or an evolution.

So we're spending a lot. We're starting to see in various ways the growth, the savings. So how does AI evolve from here again? And how does it sit in the world of internet?

Ronald Josey (07:39)

We're spending a lot for sure. We're seeing that engagement go up. The average person on Instagram, by the way, is around 50-ish minutes a day. And TikTok is upwards of 70 to 80 minutes a day. There's a lot of time, right?

Anne Malone (07:52)

There goes society. There you go.

Ronald Josey (07:56)

Yeah. A lot of cats. We've emerged beyond cat videos. Now it's at least videos that we want to see, right? Or at least for the algorithm.

But so we talked about engagement. We talked about the investments in capex. And now I think it's a fair comment that let's think about monetization. And the internet runs on engagement first.

The ex-CEO of Google a long time ago, guy named Eric Schmidt, would always say URL: Ubiquity First, Revenue Later. And that's what's happening here, right? Let's get

the engagement going. Let's drive greater convenience on users. And when you see that, eyeballs follow, advertisers follow eyeballs.

And so, on the monetization side, the future of advertising is changing as we speak. Not only are more advertisers attracted to and diverting more spend to performance-based networks, that's social.

That has always been search. You could argue search has been the best business ever created. You're looking for a new pair of shoes and you type that into Google and you get ads for shoes, right?

But the future of advertising is going to performance networks. I'd highlight that social — and social, that's Meta, but also Reddit and Pinterest and TikTok and others, Snap — that's also search, and increasingly a new, newer format that's CTV or Connected TV, Connected television.

And more importantly, as you think about where these dollars are going, the creative side has been the hardest part. Advertising back in the day was you would spend all this money on creating an ad, making it look beautiful, and maybe it doesn't speak to you. It speaks to the other half of the population, right?

And so creative is being built in an automated way, where we're no longer in ABC-type test mode where advertisers can say, let me see if this ad jingle resonates with you, Anne, or resonates with another person. Let's try a thousand different versions of this. And we can do this because it's all automated.

So, back to your question on monetization and where do we go from an AI perspective, AI is enabling the advertisers to basically go to market with thousands of different ad creatives, see what sticks per person. And then that's going to drive, call it better return on ad spend, because ideally that person is incented to buy, right? So that's on the ad side on monetization.

Anne Malone (10:01)

I don't know if that's exciting or creepy. There's a close debate there. And I guess no different that you could see this in any sector — that iterative, that ability to speed things up. That's drug discovery, that's clinical trials, right? You could probably take any sector that you know and turn it into how much faster and smarter we can be with this. And probably we won't figure out for a long time everything that we can do with it.

Ronald Josey (10:22)

And I missed two key words in my answer of creative being automated. It's now more personalized, which might be your comment on a little bit scary. And it's personalized, way more targeted. And I'll give you a third buzzword: It's measured.

We can measure the effectiveness of every single one of these ads. That measurement is just becoming better and better and better across all these platforms. That's what

drives an advertiser's adoption of certain platforms, right? And we call it the return on ad spend or ROAS because of the personalization, the targeting, and then the measurement on the back end to prove out the value here.

Anne Malone (10:56)

That's great. That's a great collection of terms to think about. So we're kind of wandering through this topic. On the device side, what happens with devices and all of this?

Ronald Josey (11:06)

Well, we started a conversation on how we interact with the web is likely to change dramatically over the next five or so years. I think we're starting to see that today, i.e. 2025 and more so in ‘26.

Right now, the vast majority of time spent on internet is via your mobile device, full stop, right? Of course, we still use browsers and desktops, etc., but mobile is where internet is being used today. But what's fascinating is AI is going to change that.

We've been using the Ray-Ban Meta glasses all summer long. We love them. And you don't have to fumble to pick up your phone out of your pocket. If you're riding on a bike, you can just say, “Hey Meta, what am I looking at?” Or, “Where am I going?” Or, “What time it is?” And it just sort of works.

You saw some news earlier this week: I think Apple came out with new AirPods that have automatic translation built in. And so, on the device side, maybe what you see is an evolution to a more on-person device that's less obstructive to you stopping what you're doing to pick up your phone and interrupt the conversation. And if these devices can be more helpful to you with a “look aside” technology or a heads-up display, like many of us have in our cars today, then that's interesting.

OpenAI came out and they bought a device company this past summer, I believe, or in May. And it's unclear what that device is, but the bottom line is an always-on internet is something us internet geeks have been waiting for forever. The phone has been the closest part of that. And now assuming battery power lasts for these devices and the glasses, then it really is always-on.

And think about it this way: Say you're going on a bike ride or whatever, and then you miss a road, or you got a text message, you can't pull up your phone, you're going to talk to maybe your glasses. And if there's a heads-up, you can sort of see. That's a use case that doesn't really exist today. And getting back to the premise of what internet is, which is engagement first or ubiquity first, revenue later, if engagement is growing, that's good for time spent. Obviously, that's good for monetization and the list goes on and on. So I think these new devices are evolving to be always-on and on our person as well.

One quick stat, sorry to drag on here, but I think about a billion people wear seeing eyeglasses today. Most people wear sunglasses. So, if it's just the folks who wear glasses to see every day, that's interesting as Google and Meta and Snap all come out with their own glasses and I'm sure Apple would as well. But then on the sunglass side, transition lenses are becoming inside-outside.

Anne Malone (13:34)

What's the statistic? I think the average human right now has an attention span that is shorter than that of a goldfish. Imagine us all wearing sunglasses that are internet always-on. That's going to be interesting, right?

Ronald Josey (13:49)

Let's hope we can improve that. At the very least, we'll be looking at someone in their eyes and be distracted as opposed to a phone in the middle.

Anne Malone (13:54)

So we'll be hiding our distraction. Good. I like how you found the upside to that. If I think through all of the areas in your coverage that touches upon, another one that comes up is travel. What about travel? It seems like a natural, right?

Ronald Josey (14:09)

Yeah. I mean, it's actually phenomenal in terms of what GenAI is doing there. There's a lot going on within travel. So, you're looking to book — you have three days to go to Italy, as an example. And the ability to type in a natural-language way … most natural-language search engines will throw ChatGPT out there as one, but also Google does too, a Gemini.

What to do in three days? Where should I stay? Or, “I'm looking for a hotel that's four-star, five-star with a pool that's on the Spanish Steps, but I'm only there for one night. I need to go down to, or up to Florence.” I think travel is one of the verticals that is probably the most forward-facing in terms of the adoption curve of generative AI. And it's actually fascinating.

We did a survey of internet users, which is all of us, and asked about search trends. “What do you use Google for?” was one of the questions we asked. People responded with commercial queries — I’m looking to buy something, or I’m looking for whatever. Another, the number two use case, was on travel. Number three use case was on research. then you headed into local and restaurants — the list goes on.

But just remember number one was commercial. Number two was travel. When we asked ChatGPT users, “What do you use ChatGPT or generative AI systems for?” the number one answer was for research. So not necessarily commercial. Number two is travel.

So, it's a natural experience to say, I'm thinking about doing this, or where should I go, or once I go there what should I do? And so take that aside — and by the way, travel is probably a top two, maybe top five, advertising vertical on Google.

And so, you have Booking, you have Expedia, you have Airbnb, and of course, every other airline and hotel spending gobs of advertising dollars to make that booking, because every booking you don't make on their service is gone forever, right? And so there's a great question on what is the existential threat to travel if everything goes through these assistants?

Anne Malone (16:03)

But wow, is it disruptive, right? I mean, really . . .

Ronald Josey (16:05)

Or. . . could be at the same time, most every hotel in the world is on Booking.

And one of the things why Google never really got into travel is every time someone books travel, invariably something happens. Either you cancel your reservations, you're going to arrive later, you need customer service, you need X, Y and Z.

And so, I think the OTAs are built for that, more so than call it the answer engines that are out there. And so, travel is … we'll see where this goes longer-term, but it's certainly a very natural use case for these generative AI assistants.

Anne Malone (16:33)

OK. I'm going to pick my last one wisely just because we're running out of time. How about autonomous vehicles? Because that's right in your wheelhouse too with Google, right?

Ronald Josey (16:43)

With Google being the owner of Waymo. We cover Uber as well. I don't know, Anne, have you been in an AV before? Have you tried a Waymo?

Anne Malone (16:51)

Not brave enough. No.

Ronald Josey (16:52)

It's a phenomenal run.

Anne Malone (16:54)

I'm old-school, Ron.

Ronald Josey (16:55)

I'll tell you what: Once you go into one of those and you get comfortable, next thing you know, the music's playing with what you want to hear, the temperature is there and you're reading your emails.

But I think the answer is, we are in a spot where it's working. There are full-on proof points. San Francisco is a great example. Uber is partnering with Waymo in Atlanta, as well as in Austin. And the demand has been off the charts. I think Uber is talking about greater utilization.

And we know that Tesla launched their Robotaxi in certain cities. And so, I feel as if the number one gating factor here is not necessarily the regulatory, believe it or not, or the technology. It's the manufacturing.

And so, how quickly can these cars come off the assembly lines that have whatever the technology is, either Waymo Driver 6, which might be based on LiDAR, or whatever it is? I think what you're going to see is just greater investments in the manufacturing line to get these cars out.

Why do we need the cars? Because the demand is there. And so maybe over the next several years, I think you're going to have a good amount of competitors, or offerings, per city. And if you do that, someone like an Uber that has about 170-plus million monthly active customers on their platform — they call them “Mapsies” — they are in a better spot because they can aggregate the demand.

And we all know if you have this great technology but you have no front engine to drive adoption, that's a lot of cost that goes down. And so then you're like, “I need to spend on customer acquisition.” And that's arguably one of the largest costs once you go live, right?

And so, this is something where we think quite a bit about the technology and where we're going. And then we think Uber is in a pretty good spot here as we think longer-term of where this goes.

So, AV getting smarter and smarter, the LLMs because of Gen AI are enabling that. The hardware is something we'll see more of coming off the manufacturing line, so to speak, as software makes these cars better and better.

So pretty fascinating, to go from GenAI to AV. And we can talk for hours about more disruption happening.

Anne Malone (18:54)

This was great. And I have to think a lot about myself, how much change is coming and how ready I am for that. But it's always energizing to talk to you, Ron. So I appreciate it.

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Disclaimer (19:23)