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This annual research report seeks to highlight the technological breakthroughs evolving today and creating the potential for super exponential growth tomorrow.
We believe that innovation is taking off now, corroborating our original research and boosting our confidence that our strategies are on the right side of change.
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Hello.
Thank you for turning in to hear about the digital consumer section of this year's Big Ideas.
We're really excited to show you the research that we have done that we think highlights the important trends taking place in the digital space.
We'll hear from myself, Nicholas Gruce, an associate portfolio manager at ARC, and Andrew Kim.
Hi.
I'm Andrew, and I am a research associate at ARC covering all things consumer and fintech.
Thanks, Nick.
So if we can go to the first slide, today we believe consumers spend roughly 39% of their free time online, and that number is going to reach over 50% by 2030.
One main driver, we think, is going to be the proliferation of AI.
We believe as AI tools are rolled out in the workplace, working hours will be freed up, and while, yes, a portion of that will go back into working, another portion of that time will go into leisure activities, both physical and digital.
And as I'm sure you've heard about in the AI section already, from both William and Frank, this has been a momentous year for AI, and we think we should start to see some of this productivity lift as soon as these tools are rolled out to the broader public.
And as such, we're going to see an enormous increase in the amount of free time over the next decade as this productivity lift allows people more leisure time spent.
And so you can see in this left chart what we think AI can do to the productivity of workers and then associating that with the free time that they'll have because of this productivity lift.
And so with that, you'll see that AI is not necessarily highlighted in each slide coming next, but it is an underlying theme throughout this where we look at AI and think this is

going to be a driver of free time over the next decade.
And so with that, I'll pass it off to Andrew Kim, who will take you through connected TV, social, advertising, and sports betting, and get into some of the trends we think are going to really shape the next decade of the digital consumer.
All right, thanks, Nick.
On the slide, we focus on connected TV as an interesting growth factor within advertising, and we emphasize the continued disconnect we see between CTV viewership and ad dollars in the U.S.
Specifically, we estimate that the number of CTV households is now 18 percent higher than all linear TV households, but CTV only accounts for 23 percent of total TV budgets, including linear and free-to-air spend.
We think CTV provides clear advantages to linear when it comes to more advanced targeting and attribution capabilities, and we think that these benefits will enable CTV to capture both top of funnel needs and bottom funnel advertising tied to outcomes, attracting dollars from not only linear TV advertisers, but also other digital advertisers.
And we think that these advantages are finally clear to U.S. advertisers as seen by the proliferation of QR code ads and Roku's recent partnership with DoorDash, and we forecast CTV advertising and linear advertising to intersect in five years.
Linear is at $70 billion today, CTV is at $21 billion.
We think budgets will flip in 2027 with linear at $45 billion compared to CTV's $53 billion.
We think a large majority of CTV spend will still be brand advertising as linear advertisers migrate over.
So we think around 20 percent of spend will be allocated to direct response advertising as CTV measurement tools continue to improve.
On the social media front, we note how short-form video has taken consumer mindshare by storm over the past two years.
In 2022, TikTok overtook Instagram in terms of total hours spent on the app and reached parity with Facebook.
And we can see it translate to ad growth with TikTok growing ad dollars much faster than peers since launch.
While it's unclear if TikTok will remain dominant as Meta, YouTube, and Snap all compete for eyeballs, we recognize that the mechanics of social media have fundamentally changed from following feed-based social media to whoever has the best recommendation algorithms.
Demand for sports betting remained strong this past year, and we estimate that total handle in the U.S. and Canada grew over 80 percent to over $100 billion in 2022, benefiting from additional legalizations and also, in our view, the clear consumer preference for mobile betting.
Online and mobile sports betting represented less than 20 percent of total volume back in 2018, and we think it grew to nearly 90 percent in 2022.
We forecast that betting will continue to grow, with mobile betting being the clear beneficiary of additional legalizations, and we think online betting in the U.S. and Canada will grow to more than $300 billion in the next five years.
We also touch on gaming in this section and believe that the next wave of growth in gaming will come from the expansion of diverse virtual worlds, and we compare the attendance of various

themed roblox experiences to the attendance of physical amusement parks, and it's easy to see the appeal and scale of virtual worlds when the marginal cost to attend is essentially zero.
We think that the convergence of social media and video games through these virtual worlds will allow gaming to take further share of time and dollars from physical entertainment, and we think that the birth of generative AI tools, such as text-to-image models and text-to-3D models, should also accelerate adoption and engagement growth.
We think the current catalysts at play can translate to a reacceleration in gaming growth over the next five years to a 10% compound annual rate.
With that, I'll hand it back over to Nick to talk about NFTs and the aggregate digital entertainment market.
Thanks, Andrew.
Great job.
While trading volume in the last year for NFTs did increase, no one in this space would tell you that it was necessarily a stellar year for the NFT space.
In fact, most would probably coin this last period of time as an NFT winter.
However, when you get into the underlying data, some really interesting shifts are taking place that we think will be important to this space's future.
Notably, we are seeing developers and consumers shift their resources and attention away from building collectible-like projects and focusing more on projects with underlying utility.
That's what you're seeing in this left chart, and then over in the right chart, you're seeing this shift away from the PFP-type projects and the collectible-like projects over to this utility-based as more developers are spending time and resources on utility-based projects.
I think there's often times when people hear the term NFT, they immediately focus on the profile-picked projects where individual NFTs sell for large sums of money.
While we don't think that is going away entirely, we think that part of the market over the long term is going to be dwarfed by projects that provide more utility to consumers.
So whether it be domain names or digital memberships, we think that the pricing structure of NFT projects over the long term will focus more on the underlying utility and less on the speculation of what is to come.
And so with that, I'll take you into this next slide, which I personally find to be my favorite side of the section.
No, they're all amazing.
In this slide, we're really trying to get at one concept, and it's a concept we've consistently talked about at ARC, and it's this idea of underlying true digital ownership, and that's something we have not had in the web and digital space up until the birth of open source and decentralized blockchains and then the advent of NFTs on top of those.
And what we're seeing in this chart and what you're seeing in this chart is on a property rights index, as you can give your citizens, in this case, these are countries being polled, the identity or the concept of property rights, the GDP per capita continues to increase.
So the more that citizens feel that they can truly own and have this understanding of property rights, the GDP per capita continues to increase.
And we think that this concept, this idea of digital property rights is now just starting to get understood by consumers.

And once consumers understand this, there's going to be a higher propensity to spend on digital assets in the next decade.
And so this gets us into our second to last slide, which is a culmination of really everything that we've talked about thus far and a culmination of the digital consumer.
The idea that as people spend more and more time online, but also as they feel that their property rights are being represented in the digital space, there is going to be a higher willingness to spend online, whether it's spending online for physical services that tack on later, like when you spend for e-commerce and you're using a digital transaction, but then receiving, you know, probably a physical asset, or if it's just purchasing something that is digitally native, whether it's, you know, a streaming subscription or a digital asset that's, you know, hosted and backed by an NFT, all of this, we think is going to start to tick up in this next decade as we spend both time and money online.
And, you know, what's really interesting is when we did this exercise, when we went through, we started to notice that, you know, when you look at these two large sums, you know, we're talking about trillions of dollars, in 2028, you actually get a flip.
You have digital assets and digital spend, leisure spend, flipping that of physical leisure spend. And we think that this is going to be a momentous and really important to the digital consumer over the next decade. And so we'll take you now into the last slide.
And just to give a preface of this last slide in the context of the slide we just showed, what you're seeing in this slide is the revenue that can be attributed off of the spend we just showed. So that's why when we're talking about tens of trillions of dollars in the last slide, in this slide, we're talking about $5 trillion globally. That's what we think the target rate could be by the end of 2030. So in that case, what you're really seeing is real digital revenue should grow at 14% annually from roughly $2 trillion today to over $5 trillion by 2030.
And as we've highlighted in this presentation, there are several buckets of spend, whether it's e-commerce, digital video, sports betting, digital advertising, audio, NFT spending, video gaming, all of these we think up make all of these categories we believe make up the digital consumer and where they're spending their leisure time.
Again, leisure is very important to this section. We're really trying to get at and hone in on the amount of time spent outside of work, outside of school, outside of sleep.
And that's what we're showing in these last two slides. First spend, and then here in this last slide, we're talking specifically to the digital revenue that could be that could materialize over the next 10 years. So with that, I really hope you did enjoy this section. We were really excited to put together all of this research for you. I know we had a lot of fun doing it. And we hope that you have a lot of fun going through it. And if you have any questions, we're all on Twitter, you can reach out to us. We're happy to answer any questions and talk about this. And really hope you enjoyed
it. So thank you.
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