The following report is a deep dive into how Snapchatters are using AR in the US based on the Snap Consumer AR Global Report. For a more comprehensive market view, please read the Snap Consumer AR Global Report.
AR is a critical tool for brands to stand out and deliver customer value and confidence.

Introduction
AR is the next form of mobile engagement, elevating the consumer experience and setting new expectations for digital engagement.

AR’s Impact on Brands
AR is a critical tool for brands to stand out and deliver customer value and confidence.

AR is Evolving Fast
AR cannot be ignored as the new, rapidly-growing consumer experience that will soon be everywhere, all the time.

AR is Here Today and Here to Stay
AR is already here, widely recognized as both fun and useful and driving fast adoption and growth.

Conclusion
There is an imperative to meet consumer’s AR demand, and now is the time to act for brands, platforms, and developers.
Introduction
AR adoption is tracking with the mobile usage boom - by 2025, nearly 60% of the US population and almost all people who use social / communication apps will be frequent AR users.¹

72% of people successfully identify AR when they see it², but when talking about it, they have a hard time defining or describing what it is.

74% of Snapchatters in the US and across generations use AR to have fun; the majority are discovering AR through social / communications apps.³

AR is generally seen as a “toy”, but 68% of people expect and desire to use it as a practical “tool” in their everyday lives.⁴

Interacting with products that have AR experiences leads to a 94% higher conversion rate.⁵

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¹ See additional methodology details in appendix.
² 2021 Global Deloitte Digital Study commissioned by Snap Inc.
³ Base = Aggregate average (n=752)
⁴ All Aluminum for Teenagers
⁵ Agree / Agree somewhat / Agree much
⁶ Base = Aggregate (n=772)
⁷ Agreement of 1-6 would be a useful / Augmented Reality is not useful / A-Grey much
⁸ Harvard Business Review Article, "How AR is Redeining Retail in the Pandemic"
There is something really unique happening right now – an incredible number of hobbyists and professionals are using AR. Downloading tools across the Snap AR platform. They’re taking time to learn, they’re curious."

AR is growing
By 2025, nearly 60% of the US population* and almost all people who use social / communication apps will be frequent AR users.¹

Frequent AR Consumers
Based on people ages 13-69 who use social / communication apps

Note: 2021 AR Consumers based on people who use AR weekly or daily from 2021 Global Deloitte Digital Study commissioned by Snap Inc.
2022 to 2025 forecasted is line with 2000-2003 growth rate of smartphone users since AR is at the ‘Toys’ phase of adoption (of use) based off what this transition took place with mobile phones, one can argue that this was when games like ‘snake’ started being available (e.g., 1997: Nokia 6110 device released, 1999: emojis were invented, 2000: Nokia 3310 launched, and the first commercially available camera phone launched in Japan).
Younger generations and Snapchatters are driving AR growth

Age Differences

Younger people are 55% more likely to use AR,¹ and they are 36% more likely to believe AR is important in their lives.²

But, AR is not just for Gen Z; Millennials and Gen X show the highest affinity for AR.³

Snapchatters are 1.9x as likely to use AR frequently compared to Non-Snapchatters.⁴

~50% of Snapchatters believe AR is important to their lives.⁵

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¹: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Age 13-17 (n=61), Age 18+ (n=133)
Q: How familiar are you with AR? | A: I use AR all the time

²: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Age 13-17 (n=135), Age 35-44 (n=87)
Q: AR is important to me / AR is not important to me | A: Agree much more with A, Agree somewhat with A

³: Publicis Groupe & Snap Inc. Study
Base: Gen Z (n=1,261), Millennials (n=1,632), Gen X (n=1,107)
QP7A: Thinking about your expected use of AR technology post-COVID, do you expect to start using AR? Please select one response

⁴: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Snapchatters (n=125), Non-Snapchatters (n=69)
Q: How familiar are you with AR? | A: I use AR all the time

⁵: Base = Snapchatters (n=249)
Q: AR is important to me / AR is not important to me | A: Agree much more with A, Agree somewhat with A
“As AR evolves, it will revolutionize our lives and will become as significant of a technology shift as the web or mobile was to society, changing how we view and interact with the world around us.”

Allan Cook
Digital Reality Business Leader
Deloitte Digital
AR’s Impact on Brands
A lot of people are using AR to make purchase decisions... and plan to keep doing so

There are

100 million consumers

shopping with AR online and in-stores.¹

94%

of Snapchatters agree they'll use AR the same or more when shopping next year.²

¹: Gartner Press Release
²: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
   Based on a Snapchatter survey of 237

Q: Will you use AR while browsing and/or shopping more or less than last year?
AR captures consumer attention

AR delivers almost **2x** the levels of visual attention compared to their non-AR equivalent, leading to improved memories and more powerful responses from consumers.¹

Snapchatters who frequently use AR with their family and friends are **76% more likely to pay attention to a brand.**²

¹ Zappar, Article, “How augmented reality affects the brain.”
² 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Brands and people connect better with AR experiences

40%

more likely to be considered if they have a branded AR experience.¹

Snapchatters are 37% more likely than Non-Snapchatters to share a brand’s AR experience with friends and family.²

¹ 2021 Global Deloitte Digital Study commissioned by Snap Inc. Base = People who use AR all the time (n=77). Q: Sometimes brands will create AR experiences through an app camera (e.g., a big movie company makes an AR experience where the heroes of a movie are fighting next to you, or a restaurant provides you a filter that turns you into a hamburger). What impact, if any, does interacting with that AR experience have on your perception of that brand? | A: I am more likely to pay more attention to the brand, I am more likely to share a brand’s AR experience with friends and family, I am more likely to consider their products.

² Base = Snapchatters (n=141), Non-Snapchatters (n=105). Q: Sometimes brands will create AR experiences through an app camera (e.g., a big movie company makes an AR experience where the heroes of a movie are fighting next to you, or a restaurant provides you a filter that turns you into a hamburger). What impact, if any, does interacting with that AR experience have on your perception of that brand? | A: I am more likely to share a brand’s AR experience with friends and family.
AR builds consumer confidence

52% of Snapchatter shoppers agree that AR gives them more confidence about product quality.¹

Over half of people want to use AR technology to assess products, allowing for a risk-free, “try-before you buy”, experience.²

Nearly 3 in 4 consumers say they’re willing to pay more for a product that promises the total transparency that AR can provide.³

Returns are a $550 billion problem, which AR can help fix. AR-guided purchases led to a 25% decrease in returns.⁴

¹ 2021 Global Deloitte Digital Study commissioned by Snap Inc. Base = Snapchatters (n=270)
² NielsenIQ Analysis, "Augmented retail: The new consumer reality"
³ 2016 Label Insight Transparency ROI Study via Inc.
⁴ AR Insider Article, "Does AR Really Reduce eCommerce Returns?"
The results are in 🥼
AR interactions drive conversion

The conversion rates that we’ve seen have surprised us, as a result we’re doubling-down on AR experiences to drive eCommerce.”

Robert Triefus
EVP of Brand & Customer Engagement
Gucci

Interacting with products that have AR experiences leads to a 94% higher conversion rate, as individuals can better assess them and feel connected with brands.¹

Snapchatters are 44% more likely to purchase products through a brand’s website than Non-Snapchatters.²
AR connections drive revenue

Consumers who view AR as a social activity are **38% more likely** to purchase products from the brand.¹

- Snapchatters are **50% more likely** than Non-Snapchatters to use AR to connect with others.²
- Snapchatters share AR photos and videos with friends and/or family **~160% more** than Non-Snapchatters.³

¹: 2021 Global Deloitte Digital Study commissioned by Snap Inc. 
Base = AR is a group activity - Agree much more / somewhat more with (n=91), Aggregate (n=174) 
Q: AR is a group activity / AR is a solo activity | A: Agree much more / somewhat more with A | Q: Sometimes brands will create AR experiences through an app camera (e.g., a big movie company makes an AR experience where the heroes of a movie are fighting next to you, or a restaurant provides you a lens/filter that turns you into a hamburger). What impact, if any, does interacting with that AR experience have on your perception of that brand? | A: I am more likely to purchase their products through the brand’s app where I saw the brand's AR experience

²: Base = Snapchatters (n=144), Non-Snapchatters (n=98) 
Q: Why do you use AR?

³: Base = Snapchatters (n=152), Non-Snapchatters (n=60) 
Q: How often do you capture or share photos and videos with your friends and/or family? | A: Several times each day
AR is Evolving Fast
Almost **160 Million** AR photos and/or videos are taken daily by consumers.

AR use will grow with an increase in awareness and access to AR experiences and content.

On Snapchat, there are **500 million minutes** of AR playtime per day on average.²

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### AR Photos / Videos Per Day¹

**Generational Breakout of Daily AR Photos / Videos Created**

<table>
<thead>
<tr>
<th>Year</th>
<th>Boomer</th>
<th>Gen X</th>
<th>Millennial</th>
<th>Gen Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>157.2M</td>
<td>11.4M</td>
<td>20.4M</td>
<td>140.2M</td>
</tr>
<tr>
<td>2022</td>
<td>173.6M</td>
<td>13.3M</td>
<td>22.8M</td>
<td>170.5M</td>
</tr>
<tr>
<td>2023</td>
<td>214.8M</td>
<td>16.7M</td>
<td>27.3M</td>
<td>225.4M</td>
</tr>
<tr>
<td>2024</td>
<td>369.7M</td>
<td>27.7M</td>
<td>48.4M</td>
<td>323.0M</td>
</tr>
<tr>
<td>2025</td>
<td>588.2M</td>
<td>38.5M</td>
<td>70.5M</td>
<td>579.4M</td>
</tr>
</tbody>
</table>

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² Additional methodology details in appendix. CAGR: 4-year compounded annual growth rate that measures the annual increase in AR Photos / Videos per day from 2021 to 2025.

Snap Inc. internal data Q1 2020.

+ **40%** 2021-2025 CAGR of AR Photos / Videos per Day.¹
AR is Here Today and Here to Stay
Where do Snapchatters use AR most today?

~80% of Snapchatters use AR primarily in their homes.¹

Snapchatters predominantly use AR at home and do so for a wide range of uses.

What are Snapchatters using AR for at home?²

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>78%</td>
</tr>
<tr>
<td>Media &amp; Entertainment</td>
<td>38%</td>
</tr>
<tr>
<td>Gaming</td>
<td>43%</td>
</tr>
<tr>
<td>Shopping</td>
<td>31%</td>
</tr>
</tbody>
</table>

Today's use cases most align with activities you would do at home, and 34% of Snapchatters say they will use AR at home more than last year.³

¹ 2021 Global Deloitte Digital Study commissioned by Snap Inc.
² Q: Where do you typically use AR? Please rank the locations from where you use AR the most to the least.
³ Q: How will your total AR usage compare to last year? – At home

Note: Across all 15 markets, the 2021 Global Deloitte Digital Study commissioned by Snap Inc in field from February 23, 2021 to April 5, 2021. Since the survey was conducted during the COVID-19 pandemic, primary usage of AR in consumers’ homes may be higher than normal.
How are Snapchatters learning about AR?

Snapchatters are almost 85% more likely to discover AR through an advertisement than Non-Snapchatters.¹

Snapchatters who use AR frequently are more likely to have over 50% of their friends and family using AR.²

Learn about AR from social / communication channels and networking.¹

¹ 2021 Global Deloitte Digital Study commissioned by Snap Inc.
2: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Snapchatters (n=440)
Q: Where did you first discover AR content? | A: I saw people I know using it on social media, communication, and camera apps, I saw it in an advertisement on social media, communication, or camera app, I stumbled across it while exploring viral content on social media, communication, or camera app, I saw celebrities / influencers use it on social media, communication, and camera apps, I read about it on a blog / forum, I heard about it from friends / family, in-person
2: Base = Snapchatters who use AR all the time (n=55), Snapchatters who have used AR before (n=72)
Q: How familiar are you with AR? | A: I use AR all the time, I have used AR before
Q: How many of your friends and family do you think use AR today? | A: 60-80%, Over 80%
3: Base = Snapchatters (n=79), Non-Snapchatters (n=43)
Q: Where did you first discover AR content?
Snapchatters are almost 85% more likely to discover AR through an advertisement than Non-Snapchatters.³
<table>
<thead>
<tr>
<th>Why do they use AR?</th>
<th>TECH: OSMOSIS</th>
<th>“I didn’t even realize I was using it”</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOY: JOY</td>
<td>“I want to have fun and connect with friends”</td>
<td></td>
</tr>
<tr>
<td>TOOL: UTILITY</td>
<td>“I need to and it's useful”</td>
<td></td>
</tr>
<tr>
<td>TOTALITY: UBIQUITY</td>
<td>“It's everywhere and commonplace”</td>
<td></td>
</tr>
</tbody>
</table>
What are Snapchatters using AR for, today?

**Communication**
63% frequently use

45% to be more creative

50% to make gameplay more interactive

**Gaming**
35% frequently use

50% to make what they are watching more enjoyable

42% to try products out

**Media**
33% frequently use

**Shopping**
23% frequently use

Snapchatters frequently use AR for communication and gaming almost 100% more than Non-Snapchatters.9

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1: 2021 Global Deloitte Digital Study commissioned by Snap Inc. 
2: Base = Snapchatters (n=328) 
3: Base = Snapchatters (n=179) 
4: Base = Snapchatters (n=169) 
5: Base = Snapchatters (n=118) 
6: Base = Snapchatters (n=119) 
7: Base = Snapchatters (n=121) 
8: Base = Snapchatters (n=106) 
9: Base = Snapchatters – Communication (n=89), Non-Snapchatters – Communication (n=122), Snapchatters – Gaming (n=89), Non-Snapchatters – Gaming (n=55)
What are Snapchatter shoppers using AR for, today?¹

<table>
<thead>
<tr>
<th>Category</th>
<th>Used AR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>74%</td>
</tr>
<tr>
<td>Home Décor</td>
<td>68%</td>
</tr>
<tr>
<td>Beauty and Wellness</td>
<td>52%</td>
</tr>
<tr>
<td>Household goods</td>
<td>49%</td>
</tr>
<tr>
<td>Automotive</td>
<td>48%</td>
</tr>
<tr>
<td>Entertainment</td>
<td>48%</td>
</tr>
<tr>
<td>Travel</td>
<td>47%</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>46%</td>
</tr>
<tr>
<td>Restaurant &amp; Food Delivery</td>
<td>37%</td>
</tr>
</tbody>
</table>

¹ 2021 Global Deloitte Digital Study commissioned by Snap Inc.

Base for AR Shopping Categories: Total Snapchatters (n=1364)
Telcom (n=335), Travel (n=211), Entertainment (n=220), Home Décor (n=260), Beauty & Wellness (n=185), Retail (n=185), Food & Drink Delivery (n=185), Entertainment (n=185), Home Décor (n=185), Beauty & Wellness (n=185), Retail (n=185), Automobile (n=185), Travel (n=185), Telcom (n=185)
AR is a natural extension of the shopping experience, aiding in decision making

- 48% discovered it as part of browsing or shopping
- 64% of shoppers are likely to use AR when they come across it
- 40% help shoppers decide what to buy

1. 2021 Global Deloitte Digital Study commissioned by Snap Inc.
   Base = Snapchatters (n=120)
   Q: How have you found AR while browsing and/or shopping?

2. Base = Snapchatters (n=161)
   Q: If you come across AR while browsing and/or shopping, how likely are you to try it? A. Somewhat/Very likely

3. Base = Snapchatters (n=102)
   Q: How does AR Impact your browsing and/or shopping experience?
3 in 4 Snapchatters believe that AR will be even more important in their lives in the next 5 years.¹

Next year, Snapchatters plan on using AR more in 4 key growth areas.

- **Media**: 44%
- **Shopping**: 33%
- **Gaming**: 33%
- **Communications**: 29%

31% want to create their own interactive media plots by guiding characters through a script.⁴

55% want to readily view information about an item or product as soon as it’s scanned with the phone camera.⁶

42% want to project their AR avatar into their favorite games, media & entertainment.⁶

42% want to customize environments to their own imagination and share with others.⁶

¹ 2021 Global Deloitte Digital Study commissioned by Snap Inc.
    Base = Snapchatters (n=383)

Q: How useful and/or important do you think AR will be in 5 years? | A: Very useful / important, Somewhat useful / important

2 Base = Snapchatters (n=79)

Q: How would you like to use AR in the next year to enhance the way you view sports, concerts, movies, and TV?²

3 Base = Snapchatters (n=83)

Q: Will you use AR while browsing and/or shopping more or less than last year?³

4 Base = Snapchatters (n=79)

Q: Will you use AR in gaming more or less than last year?⁴

5 Base = Snapchatters (n=75)

Q: How do you feel about AR on social media, communication, and camera apps? | A: I want more ways to interact with friends and family using AR

6 Base = Readily view information about item or product (n=210), Project through AR avatar (n=159), Customize environments (n=162), Create TV/Movie/Video plot narratives (n=117)

Q: Below is a list of ways you could use AR in the future. Please check off all the ways that you would be interested in using AR.
Utility is a primary driver for Snapchatters’ future AR usage¹

Wellness

▲ 275%

Improve Productivity

▲ 141%

Instructions

▲ 125%

Navigation

▲ 72%

Learn Something New

▲ 66%

TV & Sports

▲ 47%

Communicate

▲ 32%

Shopping

▲ 24%

¹ 2021 Global Deloitte Digital Study commissioned by Snap Inc.

Q: Why use AR

Q: Desire for more AR use

Base = Snapchatters, Why use AR - Wellness (n=38), Improve Productivity (n=65), Instructions (n=79), Learn something new (n=117), TV & Sports (n=67), Navigation (n=109), Communicate (n=139), Improve Shopping (n=145) | Snapchatters, Desire for more AR use - Wellness (n=142), Improve Productivity (n=156), Instructions (n=179), Learn something new (n=194), TV & Sports (n=98), Navigation (n=187), Communicate (n=184), Improve Shopping (n=180)
Consumers are becoming creators

Everyday consumers have more access to technology tools that enable them to be creators of digital content.

AR is a creative vehicle

58% believe AR allows them to be more creative.¹

36% believe they are AR creators in their everyday lives.²

Snapchatters are 1.6x as likely to be AR creators.³

Snapchatters

44%

44%

VS.

Non-Snapchatters

27%

27%

have used tools to create AR.

¹ 2019 Global Deloitte Digital Study commissioned by Snap Inc.
² Base = Aggregate (n=608)
³ Q: How much do you agree or disagree with each of the statements below? AR allows me to be more creative? A: Agree/strongly agree

2: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
² Base = Aggregate (n=371), Snapchatters (n=229), Non-Snapchatters (n=142)
³ Q: Have you ever used tools (e.g. Snapchat Lens Studio, Facebook for Developers/Spark AR, Instagram for Developers, TikTok for Developers) to create your own AR? A: Yes
Conclusion

Consumers continuously expect more personalized and engaging experiences that enable them to interact with the world. **AR is delivering that to consumers, today, but there remains untapped potential for so much more.**

Brands know the consumer appetite for AR is already here – consumers are far more likely to pay attention to brands using AR. There is a content imperative for brands to meet consumers AR demand, and now is the time to meet this demand. Brands that meet the demand for AR experiences may be more likely to gain market share in the future.

The convergence of use cases and the networking effects is expediting AR adoption. But to unlock AR’s potential, **brands, developers, and platforms need to work together to accelerate content development and grow the AR ecosystem.**
Thank you
Appendix
Consumers are redefining the digital experience by using AR.

Augmented Reality (AR) is the next form of mobile engagement that is exciting consumers, driving an enhanced engagement with brands, elevating consumer experiences and increasing brand revenues.

Augmented Reality refers to experiences in which the real-world environment seen through your phone, computer, app camera, or an AR headset is altered or enhanced with the addition of images, objects, text, or other digitally-added information. Augmented Reality could be applied to both visuals of the front facing (selfie) and outward facing (world) cameras.¹
Research Overview US Report, Quantitative Online Survey

- 20-minute online survey among 15,000 international respondents
- Survey in field from February 23, 2021 – April 5, 2021

Alignment with Interdisciplinary Experts

- Experts within the AR industry participated in in-depth interviews to provide context for survey findings and contribute guidance on the future of AR in society.

Respondent Qualification

- n=1000 per market
  - Ages 13-50
  - 500 Snapchatters who use Snapchat at least once daily, split evenly amongst age groups 13-17, 18-24, and 25-50
  - To ensure a representative read on Snapchatters, cell weighting based on nested gender and age were applied to each country to correct for demographic imbalances due to set sampling size.
  - 500 Non-Snapchatters, who do not have Snapchat downloaded/have never heard of Snapchat, minimum of N=100 in all three age groups
- Markets: Australia, Canada, France, Germany, India, Japan, Malaysia, Mexico, The Netherlands, Norway, Saudi Arabia, Sweden, United Arab Emirates, United States, United Kingdom

Local Market Additions and Exceptions

- US: Ethnicity quota (maximum 65% white respondents, maintained only for Snapchatters; Non-Snapchatters sample should be roughly nationally representative)
- KSA and UAE: Representative expat / citizen quotas (88% expat in UAE; 30% expat in KSA for both Snapchatters and Non-Snapchatters).
- Norway: Sample recruited for n=1000 to be representative of social media and communication app users in that market, with a skew on ages reflective of other markets (evenly distributed across 13-17, 18-24, and 25-50)
- Japan: Sample recruited for n=1000 to be representative of smartphone users in that market, with a skew on ages reflective of other markets (evenly distributed across 13-17, 18-24, and 25-50)
### Frequent AR Users Methodology

#### 2021 Baseline

**Frequent AR Users**

People who use AR weekly or daily based on responses to 2021 Global Deloitte Digital Study commissioned by Snap Inc.¹ and extrapolated to population

**Population Base**

2021 Global Population Base: People ages 13-69 = 5.61B worldwide in 2020²

2021 Social and Communications App Population Base: Global Population x Social Media Penetration Rate (48% in 2021)³ = 2.71B

Note: Assumes no increase or decrease in population. Base from 2021 stays same across five years

**AR Adoption Rate**

AR Adoption Rate of Total Population

AR Adoption Rate of Social and Comms App Population

Note: Adoption Rate capped at 100% in out years

#### 2022-2025 Forecast

<table>
<thead>
<tr>
<th>Year</th>
<th>Forecast Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>2021 Baseline</td>
</tr>
</tbody>
</table>

### 2000 Growth Rate of Smartphone Users

Note: 2021 AR Users is at 1999 smartphone user’s adoption level since AR is in the Toy-phase of adoption; if we look at where this transition took place with mobile phones, one can argue that this was when games like ‘snake’ started being available (e.g., 1997: Nokia 6110 device released, 1999: emojis were invented, 2000: Nokia 3310 launched, and the first commercially available camera phone launched in Japan)

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¹ 2021 Global Deloitte Digital Study commissioned by Snap Inc.
² Base from GlobalPop (2020)
³ How often do you use AR for any of the following reasons? Communication

⁴ Social Media Penetration Rate based on data from World Population Prospects 2019, United Nations Population Division Department of Economic and Social Affairs, World Population prospects 2019, World Population 2020

⁵ Statista Global Social Network Penetration 2017-2025
Overall: Calculations were done by age groups in the 2021 Global Deloitte Digital Study commissioned by Snap Inc. and netted up into a generational view. The following methodology was used for each age group (Ages: 13-17, Ages 18-24, Ages: 25-34, Ages: 35-44, Ages: 45-50).

**AR Photos / Videos per Day Methodology**

**2021 and 2022 Baselines**

<table>
<thead>
<tr>
<th>Number of People</th>
<th>Number of Photos/Videos Taken Daily</th>
<th>% of Photos/Videos that are AR</th>
<th>Daily AR Photos and/or Videos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1: Determine Global Population for ages 10-69 (5.99B)¹</td>
<td>Step 1: Identify scenarios for number of photos and or videos taken daily</td>
<td>Step 1: Identify scenarios for percent of photos and or videos taken that are AR</td>
<td>Step 1: Take annual AR photos and or videos and divide by 365 to get daily AR photos and or videos</td>
</tr>
<tr>
<td>Note: Survey only included Ages 13-50. Ages 10-12 were assumed to have similar behavior to Ages 13-17. Ages 51-69 were assumed to have similar behavior to Ages 45-50.</td>
<td>Note: Since the survey had ranges (few than 5, 5-10, 10 or more), to determine the number of photos, we developed a low, mid, high case. Low: assumes lowest quantity in each range (1.5,10)</td>
<td>Note: Since the survey had ranges (less than 20%, 20-40%, 40-60%, 60-80%, Over 80%), to determine number of photos taken daily that were AR, we developed a low, mid, high case. Low: assumes lowest quantity in each range (0%, 20%, 60%, 80%)</td>
<td>Step 2: Add all age groups to get total daily AR photos and or videos</td>
</tr>
<tr>
<td>Step 2: Determine percent of people within crosstab of survey questions for Frequency of photos and or videos taken daily AND % of photos and or videos that are AR</td>
<td>Mid: assumes average of low and high case (2.5, 7, 12)</td>
<td>Mid: assumes average of low and high case (10%, 30%, 50%, 70%, 90%)</td>
<td>Step 2: Select case to apply to analysis</td>
</tr>
<tr>
<td>Step 3: Apply percent of population from Step 2 to population to get number of people within each crosstab</td>
<td>High: assumes highest quantity in each range (5, 10, 14) 14 was used as a cap for high case to keep daily photos at a reasonable amount for an average user</td>
<td>High: assumes highest quantity in each range (20%, 40%, 60%, 80%, 100%)</td>
<td>Note: High case was chosen based on input from Snap Inc.</td>
</tr>
</tbody>
</table>

**2023-2025 Forecast**

<table>
<thead>
<tr>
<th>2023-2025</th>
<th>2022 Baseline</th>
<th>2007 Growth Rate of Smartphone Device Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022 Baseline</td>
<td>Note: Device growth is used as a proxy for photos/videos growth. Growth rate assumes 2007 smartphone device growth. As of 2021, there are ~1.05B AR Compatible Devices: ARCore (Android)² + ARKit (iOS)³. If this grows at global smartphone growth equivalent, there could be ~4.1B by 2025.</td>
<td></td>
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</tbody>
</table>

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¹ United Nations, Population Division, Department of Economic and Social Affairs, World Population Prospects 2019: World Population 2020
² 34th Global Deloitte Digital Study commissioned by Snap Inc.
³ AR Insider Article, “ARCore Reaches 400 Million Devices”
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