The following report is a deep dive into how Snapchatters are using AR in Germany based on the Snap Consumer AR Global Report.

For a more comprehensive market view, please read the Snap Consumer AR Global Report.
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| 03 | AR is Evolving Fast | AR cannot be ignored as the new, rapidly-growing consumer experience that will soon be everywhere, all the time. |
| 04 | 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. |
| 05 | Conclusion | There is an imperative to meet consumer’s AR demand, and now is the time to act for brands, platforms, and developers. |
Introduction
Key Takeaways

AR adoption is tracking with the mobile usage boom - by 2025, over **60% of Germany’s population and almost all people who use social / communication apps will be frequent AR users.**

74% of people successfully identify AR when they see it, but when talking about it, they have a hard time defining or describing what it is.

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

AR is generally seen as a “toy”, but **80% of people expect and desire to use it as a practical “tool” in their everyday lives.**

Interacting with products that have AR experiences leads to a **94% higher conversion rate.**
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, over 60% of Germany’s 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 to line up, 2030 to 2033 growth rate of smartphone users since AR is in the ‘Toy-phase of adoption’ of early look at when 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).

1: See additional methodology details in appendix

*Global population includes people ages 13-69 (based on UN World Population Prospects 2019)

1: Based on people ages 13-69 who use social / communication apps

Eitan Pilipski
SVP Camera Platform
Snap Inc.

Frequent AR Consumers

By 2025, over 60% of Germany’s population* and almost all people who use social / communication apps will be frequent AR users.1

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1: See additional methodology details in appendix

*Global population includes people ages 13-69 (based on UN World Population Prospects 2019)
Younger generations and Snapchatters are driving AR growth

**Age Differences**

Younger people are **61% more** likely to use AR,¹ and they are **10% 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 **3.3x** as likely to use AR frequently compared to Non-Snapchatters.⁴

Almost **60%** 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=49), Age 18+ (n=108)
Q: How familiar are you with AR? | A: I use AR all the time

²: Base = Age 13-17 (n=152), Age 35-44 (n=94)
Q: AR is important to me / AR is not important to me | A: Agree much more with A, Agree somewhat more with A

³: Publicis Groupe & Snap Inc. Study
Base: Gen Z (n=1,261), Millennials (n=1,632), Gen X (n=1,107)
Q: 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=118), Non-Snapchatters (n=39)
Q: How familiar are you with AR? | A: I use AR all the time

⁵: Base = Snapchatters (n=299)
Q: AR is important to me / AR is not important to me | A: Agree much more with A, Agree somewhat more 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

92% 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.
Base = Snapchatters (n=225)
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 have interacted with a brand’s AR experience are nearly 30% more likely to pay attention to the 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

1: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = People who use AR all the time or have used AR before (n=224)
Q: How familiar are you with AR? | A: I use AR all the time, I have used AR before
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/effect 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=113)
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/effect 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

Snapchatters are 36% more likely than Non-Snapchatters to share a brand’s AR experience with friends and family.

Brands are

21%

more likely to be considered if they have a branded AR experience.
AR builds consumer confidence

42% 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

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¹ 2021 Global Deloitte Digital Study commissioned by Snap Inc.
   Base = Snapchatters (n=214)
   Q: How does AR impact your browsing and/or shopping experience?

² NielsenIQ Analysis, Augmented retail: The new consumer reality

³ 2016 Label Insight Transparency ROI Study via Inc.

⁴ ARInsider 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 nearly 15% more likely to purchase products through a brand’s website than Non-Snapchatters.²

¹ Harvard Business Review, “How AR is Redefining Retail in the Pandemic”
² 2021 Global Deloitte Digital Study commissioned by Snap Inc.
AR connections drive revenue

Consumers who view AR as a social activity are **30% more likely** to purchase products from the brand.¹

- Snapchatters are **172% more likely** than Non-Snapchatters to use AR to connect with others.²
- Snapchatters share AR photos and videos with friends and/or family **170% more** than Non-Snapchatters.³

¹: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
2: Base = Snapchatters (n=134), Non-Snapchatters (n=54)
3: Base = Snapchatters (n=185), Non-Snapchatters (n=75)
4: 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>Gen Z</th>
<th>Millennial</th>
<th>Gen X</th>
<th>Boomer</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>40.4M</td>
<td>53.3M</td>
<td>43.1M</td>
<td>4.0M</td>
</tr>
<tr>
<td>2022</td>
<td>43.1M</td>
<td>56.6M</td>
<td>46.4M</td>
<td>4.2M</td>
</tr>
<tr>
<td>2023</td>
<td>53.3M</td>
<td>68.0M</td>
<td>56.4M</td>
<td>5.0M</td>
</tr>
<tr>
<td>2024</td>
<td>91.8M</td>
<td>122.2M</td>
<td>102.2M</td>
<td>10.3M</td>
</tr>
<tr>
<td>2025</td>
<td>146.1M</td>
<td>200.4M</td>
<td>169.5M</td>
<td>19.2M</td>
</tr>
</tbody>
</table>

**2021-2025 CAGR of AR Photos / Videos per Day.¹**

+ **40%**

¹ See additional methodology details in appendix. CAGR: 4-year compound annual growth rate that measures the annual increase in AR Photos / Videos per day from 2021 to 2025

² Snap Inc. internal data Q1 2020.
AR is Here Today and Here to Stay
Where do Snapchatters use AR most today?

76% 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>Percentage</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>87%</td>
<td>Communication</td>
</tr>
<tr>
<td>53%</td>
<td>Media &amp; Entertainment</td>
</tr>
<tr>
<td>57%</td>
<td>Gaming</td>
</tr>
<tr>
<td>30%</td>
<td>Shopping</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

Note: Across all 15 markets, the 2021 Global Deloitte Digital Study commissioned by Snap Inc was fielded 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?

81% learn about AR from social / communication channels and networking.¹

Snapchatters who use AR frequently are more likely to have over 40% of their friends and family using AR.²

Snapchatters are 58% more likely to discover AR through an advertisement than Non-Snapchatters.³

¹: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Snapchatters (n=414)
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=62), Snapchatters who have used AR before (n=86)
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: 40-60%, 60-80%, Over 80%

³: Base = Snapchatters (n=80), Non-Snapchatters (n=55)
Q: Where did you first discover AR content?
Snapchatters are 58% more likely to discover AR through an advertisement than Non-Snapchatters.
Why do they use AR?

TECH: OSMOSIS  
“I didn’t even realize I was using it”

TOY: JOY  
“I want to have fun and connect with friends”

TOOL: UTILITY  
“I need to and it’s useful”

TOTALITY: UBIQUITY  
“It’s everywhere and commonplace”
What are Snapchatters using AR for, today?

Snapchatters frequently use AR for communication (183%) and gaming (118%) more than Non-Snapchatters.9

Communication 83% use¹

44% to be more creative⁵

Gaming 58% use²

47% to make gameplay more interactive⁶

Media 56% use³

46% to make what they are watching more enjoyable⁷

Shopping 36% frequently use⁴

46% to try products out⁸

1. 2021 Global Deloitte Digital Study commissioned by Snap Inc.
   Base = Snapchatters (n=425)
   Q: Frequency of Use by Reason: Communication | A: Several times each day, Once a day, Several times a week, Once a week, Several times a month, Once a month
   2. Base = Snapchatters (n=298)
   Q: Frequency of Use by Reason: Gaming | A: Several times each day, Once a day, Several times a week, Once a week, Several times a month, Once a month
   3. Base = Snapchatters (n=285)
   Q: Frequency of Use by Reason: Media | A: Several times each day, Once a day, Several times a week, Once a week, Several times a month, Once a month
   4. Base = Snapchatters (n=185)
   Q: Frequency of Use by Reason: Shopping | A: Several times each day, Once a day, Several times a week, Once a week, Several times a month, Once a month
   5. Base = Snapchatters (n=115)
   Q: How does AR impact your communication experience?
   6. Base = Snapchatters (n=111)
   Q: How does AR impact your gaming experience?
   7. Base = Snapchatters (n=111)
   Q: How does AR impact your entertainment experience?
   8. Base = Snapchatters – Communication (n=97), Non-Snapchatters – Communication (n=50), Snapchatters – Gaming (n=112), Non-Snapchatters – Gaming
   9. Base = Snapchatters – Communication (n=135), Non-Snapchatters – Communication (n=50), Snapchatters – Gaming (n=112), Non-Snapchatters – Gaming

Snap Inc.
### What are Snapchatter shoppers using AR for, today?¹

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Used AR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>73%</td>
</tr>
<tr>
<td>Automotive</td>
<td>49%</td>
</tr>
<tr>
<td>Home Décor</td>
<td>68%</td>
</tr>
<tr>
<td>Travel</td>
<td>46%</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>58%</td>
</tr>
<tr>
<td>Household goods</td>
<td>45%</td>
</tr>
<tr>
<td>Beauty &amp; Wellness</td>
<td>56%</td>
</tr>
<tr>
<td>Restaurant &amp; Food Delivery</td>
<td>43%</td>
</tr>
<tr>
<td>Entertainment</td>
<td>53%</td>
</tr>
</tbody>
</table>

¹ 2021 Global Deloitte Digital Study commissioned by Snap Inc. Base are all Snapchatters in April 2021. Restaurants and food delivery (n=92), household goods (n=123), telecommunications (n=117), retail (n=185), beauty & wellness (n=130), entertainment (n=120), home décor (n=171), automotive (n=122), travel (n=119).
AR is a natural extension of the shopping experience, aiding in decision making.

- 56% of shoppers are likely to use AR when they come across it
- 47% help shoppers decide what to buy
- 31% discovered it as part of browsing or shopping
64% of 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**²: 32%
- **Shopping**³: 27%
- **Gaming**⁴: 23%
- **Communications**⁵: 22%

34% want to create their own interactive media plots by guiding characters through a script.⁶

54% want to readily view information about an item or product as soon as it's scanned with the phone camera.⁷

33% want to customize environments to their own imagination and share with others.⁸

40% want to project their AR avatar into their favorite games, media & entertainment.⁹

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¹ 2021 Global Deloitte Digital Study commissioned by Snap Inc.
² Base = Snapchatters (n=329)
³ Q: How useful and/or important do you think AR will be in your life in 5 years? (Very useful / important, Somewhat useful / important)
⁴ Q: Will you use AR in gaming more or less than last year?
⁵ Q: Will you use AR while browsing and/or shopping more or less than last year?
⁶ Q: How do you feel about AR on social media, communication, and camera apps? (I want more ways to interact with friends and family using AR)
⁷ Q: Will you use AR in shopping more or less than last year?
⁸ Q: Will you use AR in media & entertainment more or less than last year?
⁹ Q: Will you use AR in communications more or less than last year?
Utility is a primary driver for Snapchatters’ future AR usage¹

1. 2021 Global Deloitte Digital Study commissioned by Snap Inc.
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

54% believe AR allows them to be more creative.\(^1\)

41% believe they are AR creators in their everyday lives.\(^2\)

Snapchatters are 1.8x as likely to be AR creators.\(^3\)

53%

Snapchatters

VS.

29%

Non-Snapchatters

have used tools to create AR.

1. 2021 Global Deloitte Digital Study commissioned by Snap Inc.
2. Base = Aggregate (n=572)
3. Q: How much do you agree or disagree with each of the statements below? AR allows me to be more creative? Base = Aggregate (n=572)
4. Q: Base = Aggregate (n=435), Snapchatters (n=271), Non-Snapchatters (n=164)
5. Base = Aggregate (n=389), Snapchatters (n=238), Non-Snapchatters (n=151)
6. 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 lenses/filter/effects? Base = Aggregate (n=572), Snapchatters (n=271), Non-Snapchatters (n=164)
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

Germany 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
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

AR Adoption Rate
AR Adoption Rate of Total Population
AR Adoption Rate of Social and Comms App Population

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

2022-2025 Forecast
2022 Baseline
See above

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)

¹: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
³: Statista Global Social Network Penetration 2017-2025
AR Photos / Videos per Day Methodology

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)

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)</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)</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>

Step 1: Identify scenarios for number of photos and or videos taken daily

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)

Mid: assumes average of low and high case (2.5, 7, 12)

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.

Step 2: Select case to apply to analysis

Note: High case was chosen based on input from Snap Inc.

Step 3: Apply adjustment factor to correct for people who are using AR but may not realize it

Note: Based on 2021 Global Deloitte Digital Study commissioned by Snap Inc., it was discovered that ~13% of respondents who use AR could not successfully identify AR >50% of the time.

Step 1: Take annual AR photos and or videos and divide by 365 to get daily AR photos and or videos

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%)

Mid: assumes average of low and high case (10%, 30%, 50%, 70%, 90%)

High: assumes highest quantity in each range (20%, 40%, 60%, 80%, 100%)

Step 2: Select case to apply to analysis

Note: High case was chosen based on input from Snap Inc.

Step 3: Apply adjustment factor to correct for people who are using AR but may not realize it

Note: Based on 2021 Global Deloitte Digital Study commissioned by Snap Inc., it was discovered that ~13% of respondents who use AR could not successfully identify AR >50% of the time.

2023-2025 Forecast

2022 Baseline × 2007 Growth Rate of Smartphone Device Sales

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) + ARKit (iOS). If this grows at global smartphone growth equivalent, there could be ~4.18B by 2025.
<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Country</th>
<th>Company</th>
<th>Date</th>
</tr>
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