Snap Consumer AR

Saudi Arabia Report 2021

The following report is a deep dive into how Snapchatters are using AR in Saudi Arabia 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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01 Introduction

Key Takeaways

AR adoption is tracking with the mobile usage boom - by 2025, **almost all of the Gen Z and Millennial population in Saudi Arabia will be frequent AR users.**[1]

78% of people successfully identify AR when they see it[2]**,** but when talking about it, they have a hard time defining or describing what it is.

56% of Snapchatters in Saudi Arabia 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 **81% 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]

1: See additional methodology details in appendix
2: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Aggregate average (n=808)
Q: AR Recognition for 9 examples
3: Base = Snapchatters (n=291)
Q: Why do you use AR?
4: Base = Aggregate (n=840)
Q: Augmented Reality is useful / Augmented Reality is not useful | A: Agree much more with A, Agree somewhat more with A
5: Harvard Business Review Article, "How AR is Redefining 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."

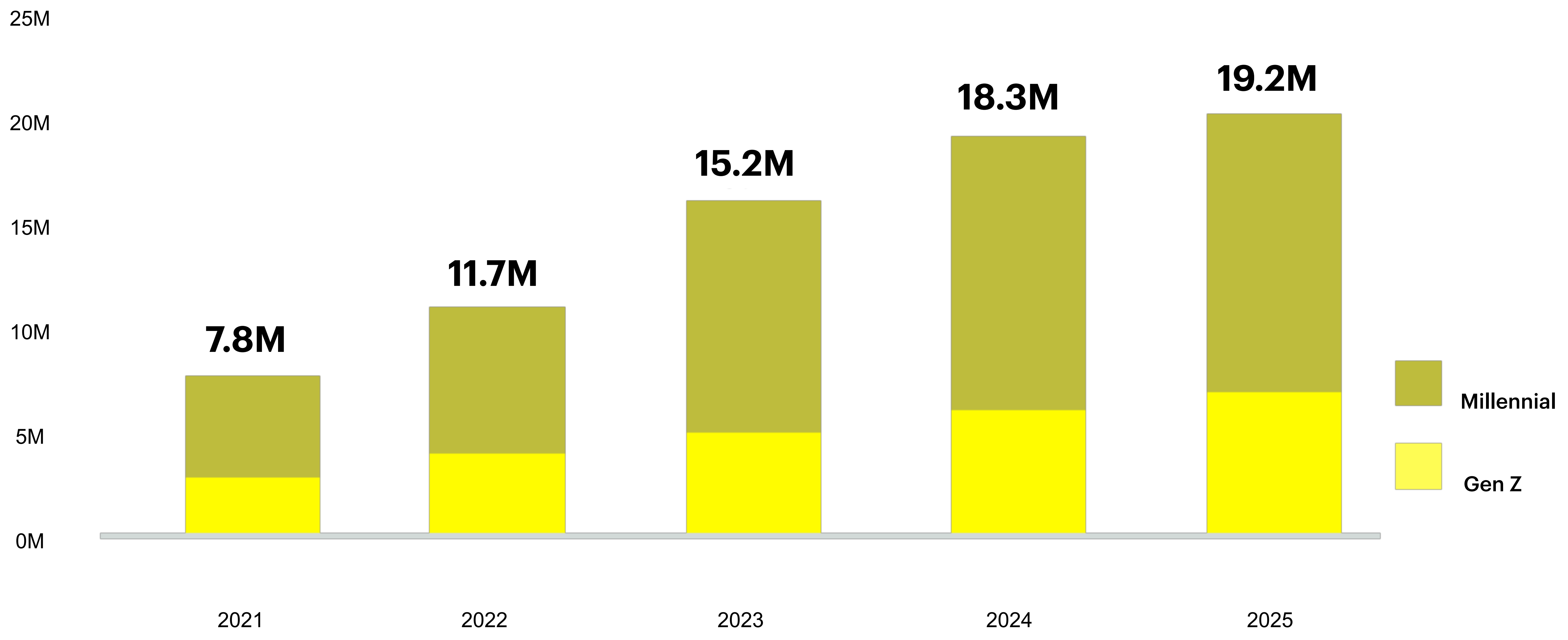
Eitan Pilipski
SVP Camera Platform
Snap Inc.

AR is growing

By 2025, **almost all** of the Gen Z and Millennial population* in Saudi Arabia will be frequent AR users.[1]

Frequent AR Users

Based on people ages 13-44 who use social / communication apps



1: See additional methodology details in appendix
*Global population of Gen Z and Millennials includes people ages 13-44 (based on UN World Population Prospects 2019) who have smartphones (based on Statista Digital Market Outlook)

Note: 2021 AR Consumers based on people who use AR weekly or daily from 2021 Global Deloitte Study commissioned by Snap Inc.
2022 to 2025 forecasted in line with 2000-2003 growth rate of smart phone users 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).

Younger generations and Snapchatters are driving AR growth

Age Differences

Younger people are **28% more** likely to believe AR is important in their lives.[1]

But, AR is not just for Gen Z; **Millennials and Gen X show the highest affinity for AR.**[2]

Snapchatters

77% of Snapchatters believe AR is important to their lives.[3]

88% of Snapchatters believe AR will be important in 5 years.[4]

1: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Age 13-24 (n=349), Age 35-44 (n=166)
Q: AR is important to me / AR is not important to me | A: Agree much more with A, Agree somewhat more with A
2: 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
3: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Snapchatters (n=396)
Q: AR is important to me / AR is not important to me | A: Agree much more with A, Agree somewhat more with A
4: Base = Snapchatters (n=455)
Q: How useful and/or important do you think AR will be in 5 years? | A: Very useful / important, Somewhat useful / important

"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

02

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]

96%

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

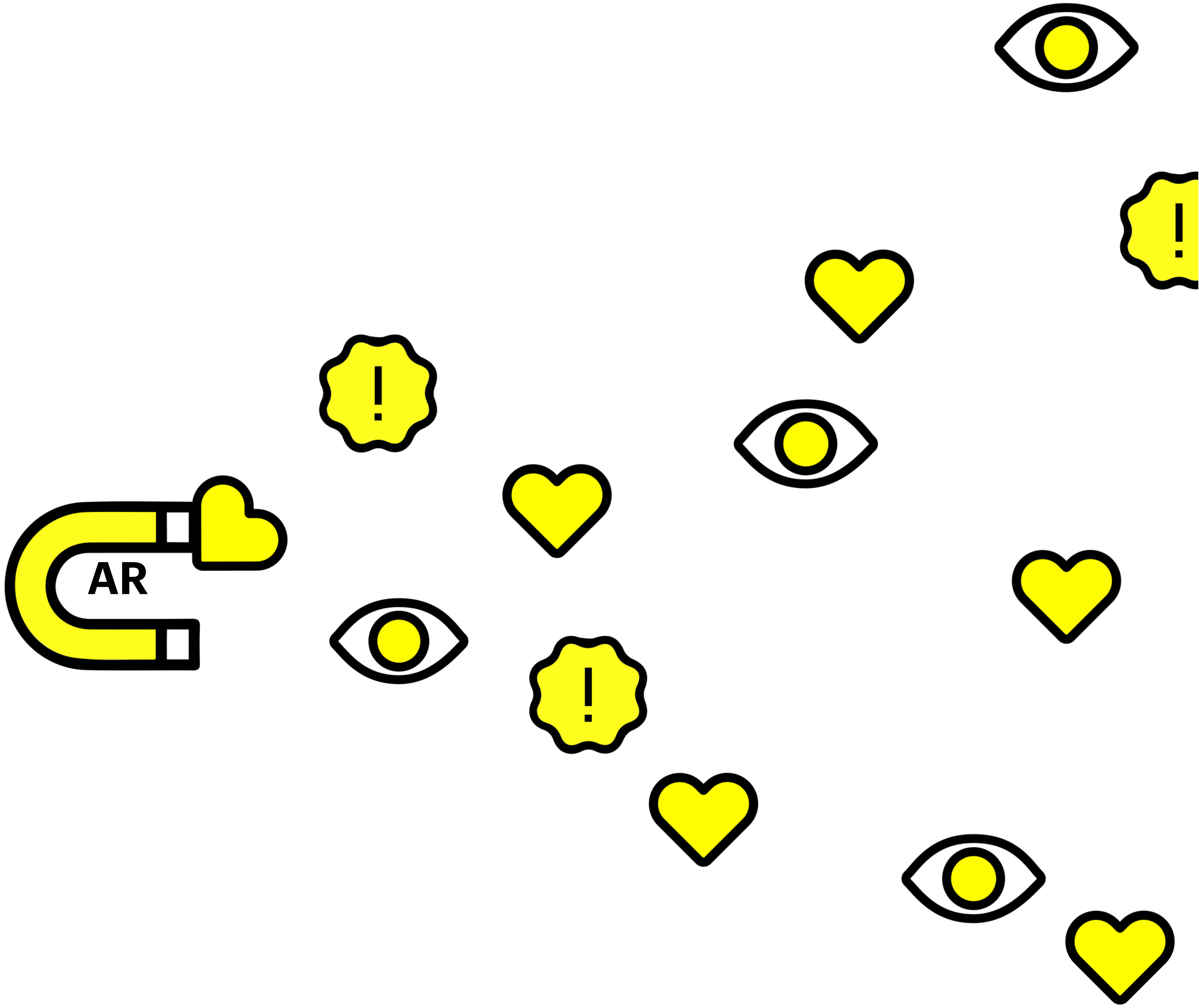
1: Gartner Press Release
2: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Snapchatters (n=249)
Q: Will you use AR while browsing and/or shopping more or less than last year?

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 **23% 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.
Base = Snapchatters with over 60% of friends and family sharing AR (n=51), Snapchatters with less than 40% of friends and family sharing AR (n=67)
Q: How many of your friends and family do you think use AR today? | 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?

Brands and people connect better with AR experiences

Brands are

34%

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

Snapchatters are **20% more likely** than Non-Snapchatters to feel AR gives them a reason to share a photo or video.[2]

1: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = People who use AR all the time (n=135)
Q: How familiar are you with AR? | A: I use AR all the time | 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=104), Non-Snapchatters (n=86)
Q: How does AR impact your communication experience? Please select all that apply.

AR builds consumer confidence

68%

of Snapchatter shoppers agree that AR gives them more confidence about product quality.[1]

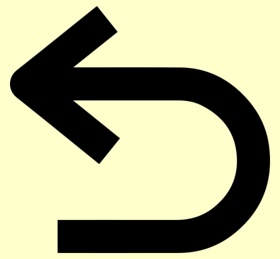
+

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=354)
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

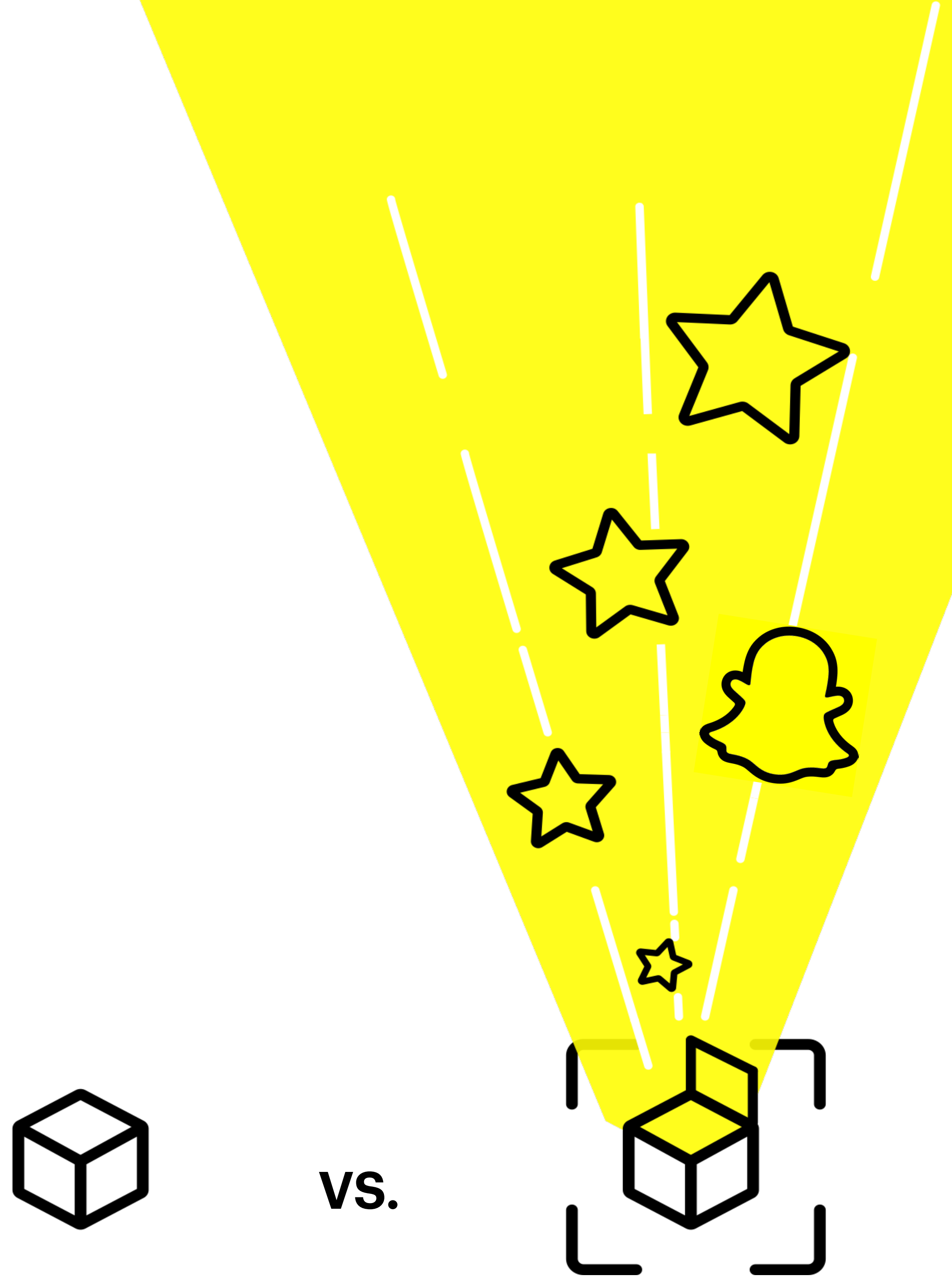
"The conversion rates that we've seen have surprised us, as a result **we're doubling-down on AR** experiences to drive eCommerce."

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]

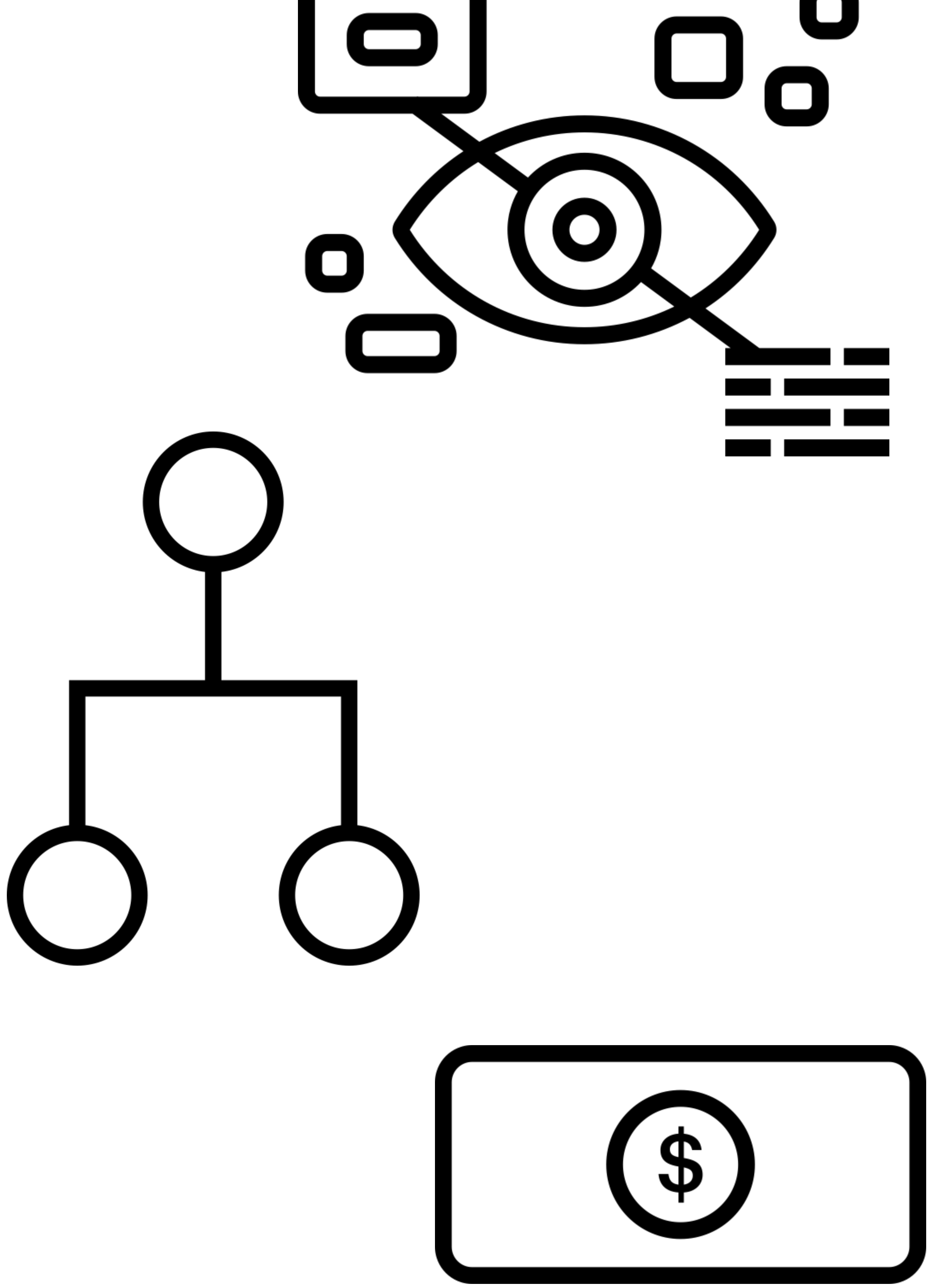


Snapchatters who have interacted with a brand's AR experience are **38% more likely** to purchase products through the brand's website.[2]

1: Harvard Business Review Article, "How AR is Redefining Retail in the Pandemic"
2: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Snapchatters (n=195)
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 purchase their products through the brand's website

AR connections drive revenue

Consumers who interact with a brand's AR experience are…



41%

more likely to share the experience with family and friends[1]

43%

more likely to purchase products from the brand[2]

- Snapchatters are **45% more likely** than Non-Snapchatters to use AR to connect with others.[3]
- **59%** of Snapchatters share AR photos and videos with friends and/or family every day.[4]

1: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base: Aggregate (n=432)
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
2: Base = Aggregate (n=448)
Q: Same as above | A: I am more likely to purchase their products through the brand's app where I saw the brand's AR experience
3: Base = Snapchatters (n=211), Non-Snapchatters (n=148)
Q: Why do you use AR?
4: Base = Snapchatters (n=304)
Q: How often do you capture or share photos and videos with your friends and/or family? | A: Several times each day, Once a day

03 AR is Evolving Fast

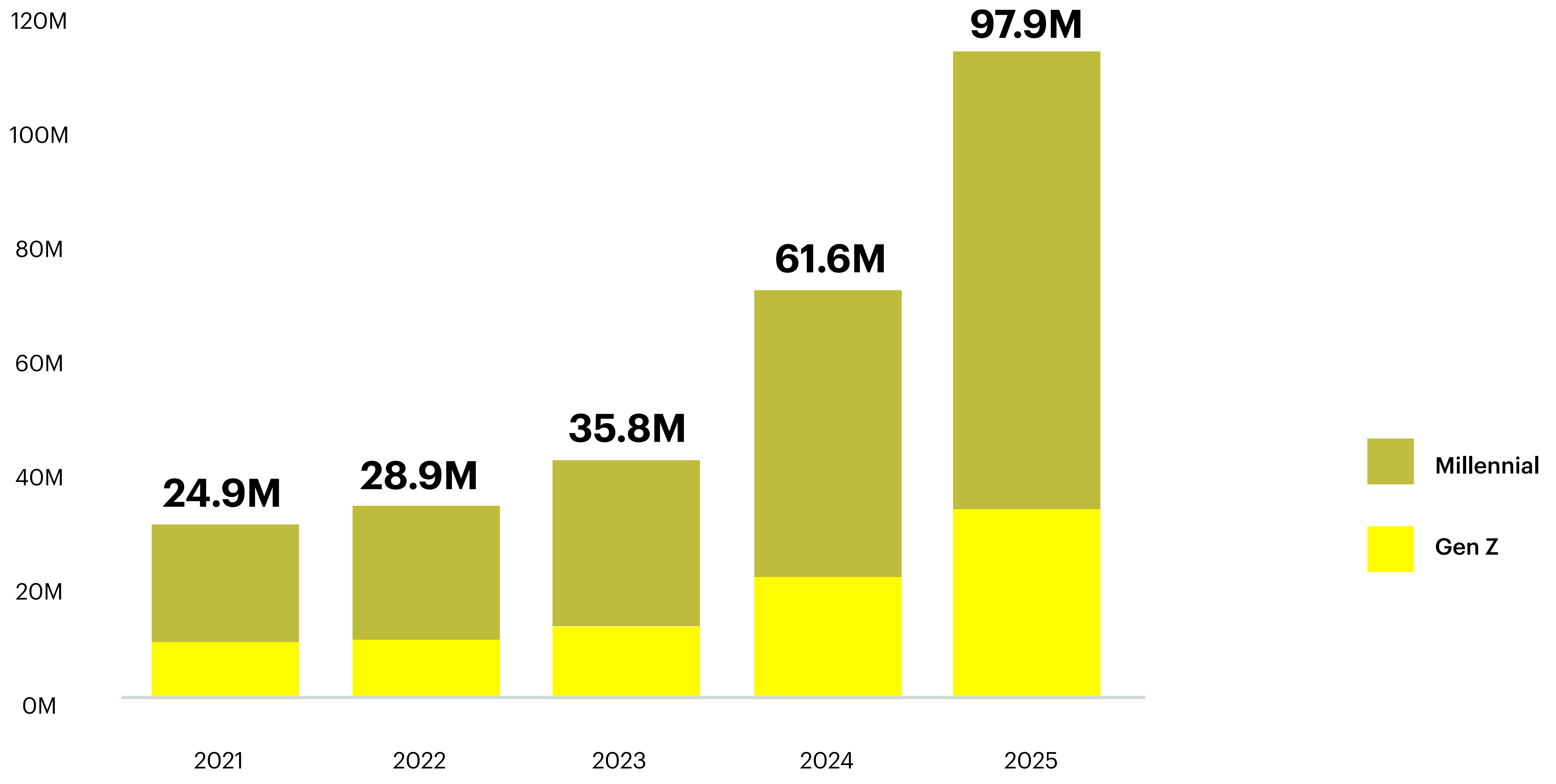
Almost **25 Million** AR photos and / or videos are taken daily by consumers

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]

AR Photos / Videos Per Day[1]

Generational Breakout of Daily AR Photos / Videos Created



+40% 2021-2025 CAGR of AR Photos / Videos per Day.[1]

1: See 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
2: Snap Inc. internal data Q1 2020.

04

AR is Here Today and Here to Stay

Where do Snapchatters use AR most today?

52%

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]

92% **Communication**

79% **Media & Entertainment**

82% **Gaming**

73% **Shopping**

Today's use cases most align with activities you would do at home, and 61% of Snapchatters say they will use AR at home more than last year.[3]

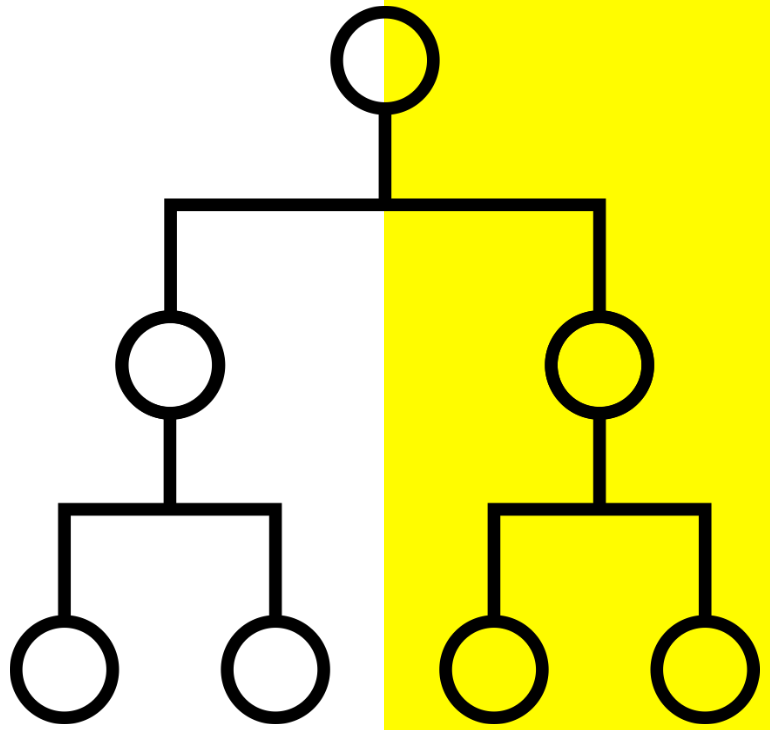
1: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Snapchatters (n=261)
Q: Where do you typically use AR? Please rank the locations from where you use AR the most to the least. | A: At Home Rank 1st
2: Base = Snapchatters at home – Communication (n=240), M&E (n= 206), Gaming (n=213), Shopping (n=192)
Q: Where do you typically use AR? Please rank the locations from where you use AR the most to the least. | A: At Home Rank 1st |
Q: How often do you use AR for any of the following reasons? | A: Several times each day, Once a day, Several times a week, Once a week, A few times a month, Once a month
3: Base = Snapchatters (n=315)
Q: How will your total AR usage compare to last year? – At home | A: I will use AR more than last year

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?

87%

learn about AR from social / communication channels and networking.[1]



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

Snapchatters are **21% more likely** to discover AR through celebrities or influencers using AR on social and communication apps.[3]

1: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Snapchatters (n=451)
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 a 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=64), Snapchatters who have used AR before (n=70)
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=106), Non-Snapchatters (n=87)
Q: Where did you first discover AR content?

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 are about 30% more likely to use AR for Shopping to see how products look around them and to get information about a product than Non-Snapchatters.[9]

Communication
84% frequently use[1]

45% to be more creative[5]

Gaming
75% frequently use[2]

50% to make gameplay more interactive[6]

Media
75% frequently use[3]

~50% to make what they are watching more enjoyable[7]

Shopping
59% frequently use[4]

42% to try products out[8]

1: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Snapchatters (n=433)
Q: Frequency of Use by Reason: Communication | A: Several times each day, Once a day, Several times a week, Once a week
2: Base = Snapchatters (n=388)
Q: Frequency of Use by Reason: Gaming | A: Several times each day, Once a day, Several times a week, Once a week
3: Base = Snapchatters (n=388)
Q: Frequency of Use by Reason: Media | A: Several times each day, Once a day, Several times a week, Once a week
4: Base = Snapchatters (n=307)
Q: Frequency of Use by Reason: Shopping | A: Several times each day, Once a day, Several times a week, Once a week
5: Base = Snapchatters (n=90)
Q: How does AR impact your communication experience?
6: Base = Snapchatters (n=133)
Q: How does AR impact your gaming experience?
7: Base = Snapchatters (n=156)
Q: How does AR impact your entertainment experience?
8: Base = Snapchatters (n=113)
Q: How does AR Impact your browsing and/or shopping experience?
9: Base = Snapchatters – Try Out (n=210), Non-Snapchatters – Try Out (n=164), Snapchatters – Product Info (n=201), Non-Snapchatters – Product Info (n=150)
Q: Below is a list of many specific ways you can use AR. Please select any of the ways that you have tried AR. Please select all that apply. | A: Trying out new products to see how they look in the space around me and to get a better sense of the details (e.g., new appliance, home decor, paint) | A: Viewing information about an item or product as soon as I scan it with my phone camera (e.g., by scanning a pair of shoes that I see someone wearing, I can learn where to purchase the same pair, or learn about an art exhibit at a museum)

What are Snapchatter shoppers using AR for, today?[1]

87%
Retail

85%
Telecommunications

82%
Entertainment

82%
Home Décor

79%
Beauty and Wellness

79%
Household goods

79%
Automotive

79%
Travel

77%
Restaurant & Food Delivery

1: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Snapchatters – Retail (n=226), Beauty and wellness (n=204), Household goods (n=205), Telecommunications (n=219), Restaurants / food delivery (n=199), Entertainment (n=219), Home décor (n=213), Automotive (n=205), Travel (n=205)
Q: AR Shopping Categories | A: Total Used AR

What are Snapchatter shoppers using AR for, today?[1]

AR is a natural extension of the shopping experience, aiding in decision making

46% discovered it as part of browsing or shopping[1]

90% of shoppers are likely to use AR when they come across it[2]

40% help shoppers decide what to buy[3]

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=234)
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=104)
Q: How does AR Impact your browsing and/or shopping experience?

88% of Snapchatters believe that AR will be 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]
68%

Shopping[3]
66%

Gaming[4]
61%

Communications[5]
50%

44% want to create their own interactive media plots by guiding characters through a script.[6]

56% want to readily view information about an item or product as soon as it's scanned with the phone camera.[6]

47% want to project their AR avatar into their favorite games, media & entertainment.[6]

45% 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=455)
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=173)
Q: How would you like to use AR in the next year to enhance the way you view sports, concerts, movies, and TV?
3: Base = Snapchatters (n=171)
Q: Will you use AR while browsing and/or shopping more or less than last year?

4: Base = Snapchatters (n=144)
Q: Will you use AR in gaming more or less than last year?
5: Base = Snapchatters (n=131)
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=253), Project through AR avatar (n=216), Customize environments (n=205), Create TV/Movie/Video plot narratives (n=199)
Q: Below is a list of ways you could use AR in the future. Please select all the ways that you would be interested in using AR.

Utility is a primary driver for Snapchatters' future AR usage[1]

Wellness
↑60%

Improve Productivity
↑28%

TV & Sports
↑33%

Navigation
↑19%

Communicate
↑18%

Learn Something New
↑12%

Instructions
↑19%

1: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Snapchatters, Why use AR - Wellness (n=97), Improve Productivity (n=161), Instructions (n=220), Learn something new (n=258), TV & Sports (n=175), Navigation (n=189), Communicate (n=225) | Snapchatters, Desire for more AR use - Wellness (n=156), Improve Productivity (n=207), Instructions (n=262), Learn something new (n=288), TV & Sports (n=233), Navigation (n=225), Communicate (n=266)
Q: Why use AR | Q: Desire for more AR use

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

73%

believe AR allows them to be more creative.[1]

81%

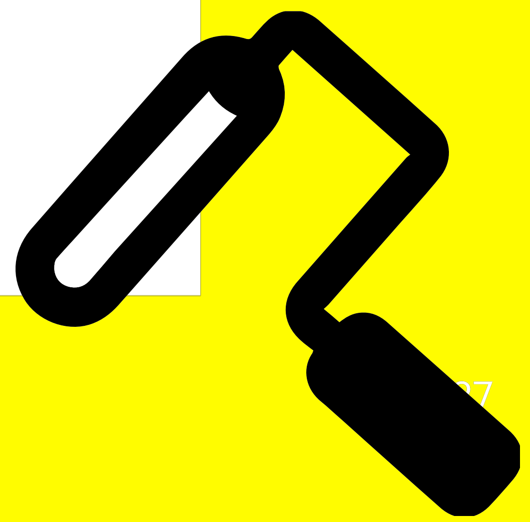
believe they are AR creators in their everyday lives.[2]

1: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Aggregate (n=758)
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: Base = Aggregate (n=843)
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 filters/lenses/effects? | A: Yes

Snapchatters see themselves as AR creators.[3]

82%

Snapchatters



have used tools to create AR.

Note: 80% of Non-Snapchatters have used tools to create AR.[3]

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

07 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]

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

Report Methodology

Research Overview Saudi Arabia 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 ÷ **Population Base** = **AR Adoption Rate**

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 2020[2]
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

2022

2021 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.
Base = Aggregate (n=1,041)
Q: How often do you use AR for any of the following reasons? Communication
Note: Boomers assumed similar behavior to Gen X since Boomers were not part of survey group
2: United Nations Population Division Department of Economic and Social Affairs, World Population Prospects 2019, World Population 2020
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

Number of People ✕ Number of Photos/Videos Taken Daily ✕ % of Photos/Videos that are AR = Daily AR Photos and/or Videos

Number of People

Step 1: Determine Global Population for ages 10-69 (5.99B)[1]

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.

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[2]. 2021 based on responses to behaviors today. 2022 based on responses to behaviors next year.

Step 3: Apply percent of population from Step 2 to population to get number of people within each crosstab

Number of Photos/Videos Taken Daily

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.

% of Photos/Videos that are AR

Step 1: Identify scenarios for percent of photos and or videos taken that are AR

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%, 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.[2]

Daily AR Photos and/or Videos

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

Step 2: Add all age groups to get total daily AR photos and or videos

2023-2025 Forecast

2023-2025

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)[3] + ARKit (iOS)[4]. If this grows at global smartphone growth equivalent, there could be ~4.1B by 2025

1: United Nations Population Division Department of Economic and Social Affairs, World Population Prospects 2019, World Population 2020
2: 2021 Global Deloitte Digital Study commissioned by Snap Inc.
Base = Aggregate (n=1,041)

Q: How many photos or videos do you capture on your phone's native (non-app) camera and across all apps in a day? And thinking about all the photos and videos you capture on your phone in a day, what percent of them are captured with or edited to include AR?
3: AR Insider Article, "ARCore Reaches 400 Million Devices"

4: Statista Research, "Augmented reality (AR) and virtual reality (VR) headset shipments worldwide 2020-2025"

Expert Interviews

First Name	Last Name	Country	Company	Date
Glen	Gainor	United States	Amazon Studios	2/13/2021
Raimon	Homs	Spain	Deloitte	2/16/2021
Bryan	Rokoszak	United States	Deloitte Digital	2/16/2021
Alan	Smithson	Canada	MetaVRse	2/16/2021
Ed	Grieg	United Kingdom	Deloitte	2/17/2021
Adrian	Mills	Australia	Deloitte Digital	2/17/2021
Bill	Briggs	United States	Deloitte	2/18/2021
Yagna	Akuluri	India	Deloitte	2/22/2021
Joanna	Popper	United States	HP	2/22/2021
Jason	Williamson	United States	Deloitte	2/22/2021
Donald	Brady	United States	Deloitte Digital	2/23/2021
Shashi	Deethi	India	Deloitte	2/23/2021
Ram	Chandel	United States	Deloitte	2/23/2021
Lokesh	Ohri	United States	Deloitte	2/23/2021
Steven	Bailey	United States	Deloitte	2/23/2021
Jean-Emmanuel	Biondi	United States	Deloitte	2/23/2021
Dea	Lawrence	United States	Variety	2/23/2021
Shrenik	Sadalgi	United States	Wayfair	2/24/2021
Mike	Boland	United States	ARtillery	2/24/2021
Jason	Yim	United States	Trigger Global	2/25/2021
Paul	McDonagh-Smith	United Kingdom	MIT	2/26/2021
Kaitlyn	Kuczer	United States	Deloitte Digital	2/26/2021
Max	Dawes	United Kingdom	Zappar	2/26/2021
Alex	Sanger	United States	Universal Pictures	2/26/2021
Walter	Delph	United States	Magic Leap	3/1/2021
Snehaal	Dhruv	India	SuperFan	3/1/2021

Expert Interviews

First Name	Last Name	Country	Company	Date
Tony	Parisi	United States	Unity	3/3/2021
Anwar	Noriega	Mexico	CEO / Cofounder at Wabisabi Design	3/4/2021
Ines	Alpha	France	3D Makeup Artist	3/5/2021
Alice	Bezirard-Fischer	United Arab Emirates	Wella Company	Write-in
Kirsten	Soumas	United States	Verizon	3/8/2021
Shane	Horneij	United Kingdom	Performance Marketing King	3/9/2021
Qi	Pan	United Kingdom	Snap	3/9/2021
Kimberlee	Archer	United States	Snap	3/9/2021
Carolina	Arguelles	United States	Snap	3/9/2021
Robert	Triefus	Switzerland	Gucci	3/12/2021
Clara	Bacou	United Kingdom	Lens Creator	3/11/2021
Timoni	West	United States	Unity	3/16/2021
Lara	Bean	United Kingdom	adidas	3/16/2021
Peggy	Johnson	United States	Magic Leap	3/19/2021
Jon	Cheney	United States	Seek XR	3/17/2021
James	Clarke	United States	Frito-Lay North America	Write-in
Andrew	McPhee	United States	Snap	3/17/2021
Eitan	Pilipski	United States	Snap	3/17/2021
Allan	Cook	United States	Deloitte Digital	3/18/2021

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