



# **3M** | Futures

## **Japan Survey Results**

# Japan

**The 3M Futures Study was conducted across 11 countries to understand global perceptions of science and technology innovation—and its role in society.**

**The survey also highlighted Artificial Intelligence, Augmented & Virtual Reality, Sustainability and “The New Paradigm,” an area focused on the pandemic’s impact on our lives.**

France – Brazil – China – Mexico – Canada – Japan – Germany – UK – USA – India – South Korea

# Key Findings — Science & Technology Perceptions



**1** Japanese adults believe science and technology should prioritize finding a cure for Alzheimer's and dementia, new ways of making renewable energy, and preparing for global pandemics and health crises.

**2** Most agree that 'too much screen time' is an issue, and 45% of adults agree that we are too dependent on technology in our daily lives. Innovations that bring people together, and information about the diverse groups working to solve today's problems may be interesting to those who are concerned about the potential harms of technology.

**3** People expect a lot of new innovations in science and technology to become a part of our everyday lives over the next 10 years.

**Methodology:** This poll was conducted between December 6, 2021 and December 10, 2021 among a sample of 2000 Adults. The interviews were conducted online. An oversample of N=200 of was also fielded among those 18-24 – The interviews were conducted online. Results from the full survey have a margin of error of plus or minus 2 percentage points.

# Key Findings — AI (Artificial Intelligence)



1

**About half of Japanese adults are familiar with artificial intelligence and recognize its role in their everyday lives.**

- Regardless of the role people feel AI is currently playing in their everyday lives, they expect it to increase over the next 5 years, and many believe cutting-edge AI advancements like driverless vehicles will be a part of our lives in the next 5-10 years.

2

**While there is excitement around AI technology, people have concerns related to data privacy and want more transparency on how the technology is being used in society.**

**Methodology:** This poll was conducted between December 6, 2021 and December 10, 2021 among a sample of 2000 Adults. The interviews were conducted online. An oversample of N=200 of was also fielded among those 18-24 – The interviews were conducted online. Results from the full survey have a margin of error of plus or minus 2 percentage points.

# Key Findings — AR (Augmented Reality) and VR (Virtual Reality)



**1**

**About one-third of Japanese adults are familiar with virtual reality and augmented reality and believe that they play a significant role in their everyday lives.**

- About 1 in 5 have used augmented reality before. Those who have are more likely to be familiar with the technology and its role in their everyday lives.

**2**

**Virtual reality is expected to be a normal part of our everyday lives sooner than most other advancements, especially in uses related to gaming and entertainment.**

**Methodology:** This poll was conducted between December 6, 2021 and December 10, 2021 among a sample of 2000 Adults. The interviews were conducted online. An oversample of N=200 of was also fielded among those 18-24 – The interviews were conducted online. Results from the full survey have a margin of error of plus or minus 2 percentage points.

# Key Findings — Sustainability



**1**

**Over half of Japanese adults agree that climate change is the biggest threat to humankind, and that governments and businesses should bear responsibility for sustainability efforts.**

- Agreement with these statements was particularly high among those ages 41-65, who were also more likely to state that improvements to the electric grid and energy costs should be a top priority for science & innovation.

**2**

**Less than 10% of Japanese adults said they were willing to rent or own a fully sustainable home, or to use an all-electric vehicle. Adults ages 18-24 were much more likely to be willing to do either.**

**Methodology:** This poll was conducted between December 6, 2021 and December 10, 2021 among a sample of 2000 Adults. The interviews were conducted online. An oversample of N=200 of was also fielded among those 18-24 – The interviews were conducted online. Results from the full survey have a margin of error of plus or minus 2 percentage points.

# Key Findings — New Paradigm

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**1**

**About a third of Japanese adults have experienced a significant life change because of the pandemic. Those ages 18-24 are even more likely to have experienced an impact on their education.**

**2**

**Despite shifts due to the pandemic, most prefer in-person to virtual interactions and activities, although many prefer to work and exercise at home.**

**3**

**Over half of Japanese adults agree that it's important that doctors are able to see and touch patients, but more than half also agree that these services would limit the spread of germs and increase access to medical care.**

**Methodology:** This poll was conducted between December 6, 2021 and December 10, 2021 among a sample of 2000 Adults. The interviews were conducted online. An oversample of N=200 of was also fielded among those 18-24 – The interviews were conducted online. Results from the full survey have a margin of error of plus or minus 2 percentage points.



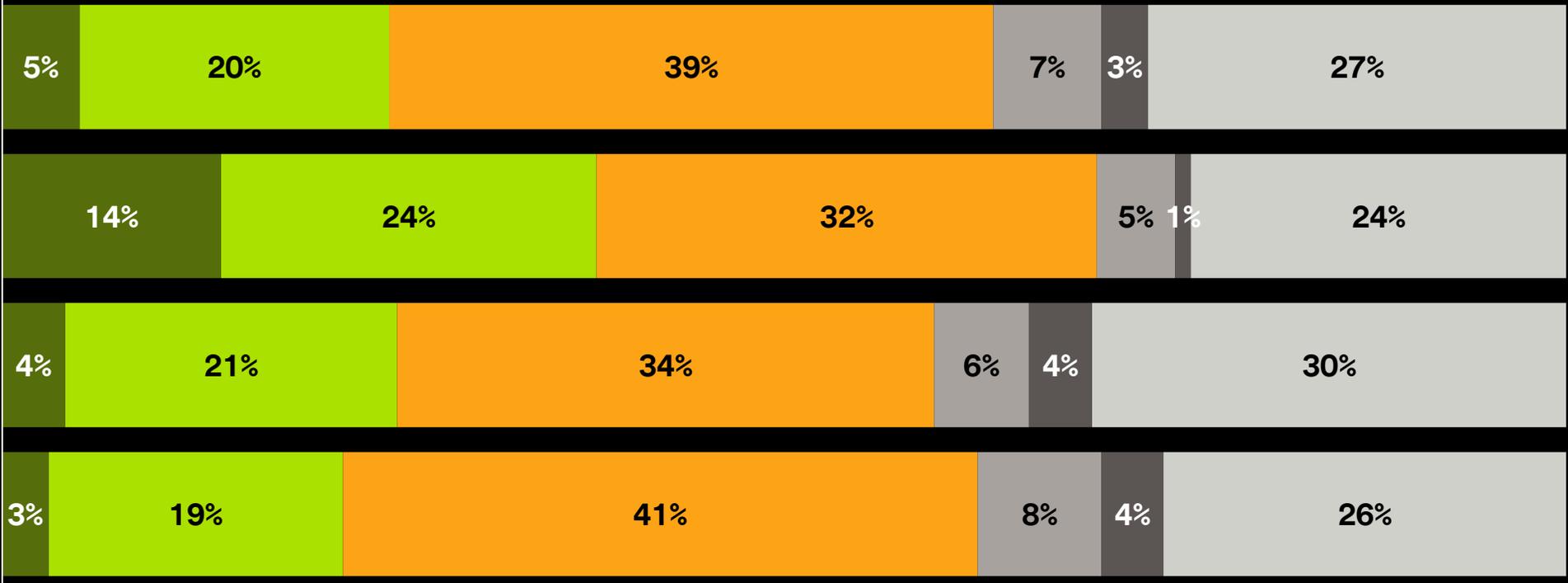
# **Science & Technology Perceptions**

**A quarter of Japanese adults feel the country is doing good or great on technological access. Those 18-24 are more likely to rate the country's access as great.**

How would you rate Japan on technological access for its citizens?

Great Good Fair Poor Terrible Don't know/No opinion

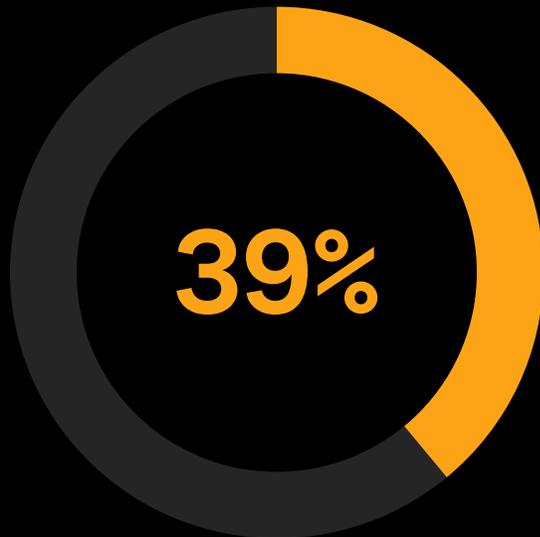
Total Great + Good



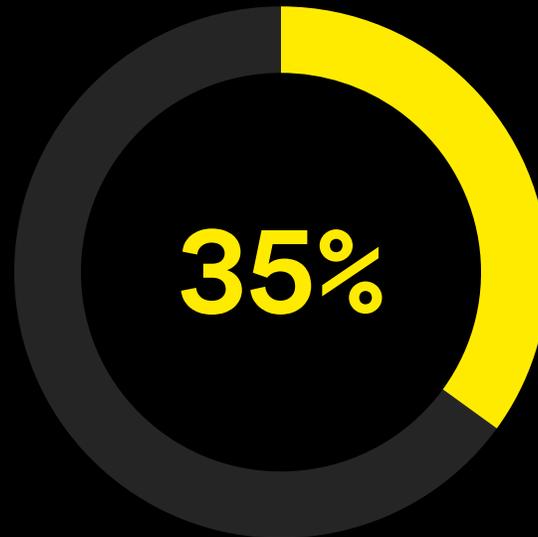
Japanese adults are split on what innovation should focus on. A similar number of adults believe efforts should prioritize ‘environmental and societal problems’ and ‘broader global crises’.

Which of the following statements best aligns with your belief on the primary focus of science and technological innovation? ‘Science and technological innovation should...!’

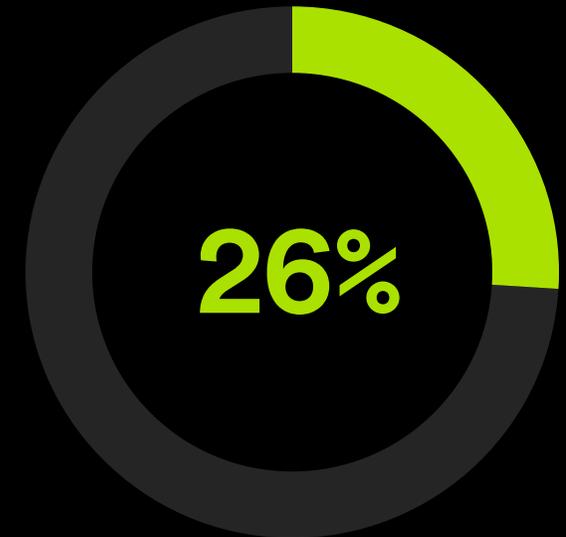
“Find solutions to today’s **environmental and societal problems**, including climate change, sustainability, social injustice, clean water access, homelessness, etc.”



“Protect us from **broader global crises** like future pandemics and public health preparedness, as well as propoganda and technological terrorism, like hacking and data stealing.”



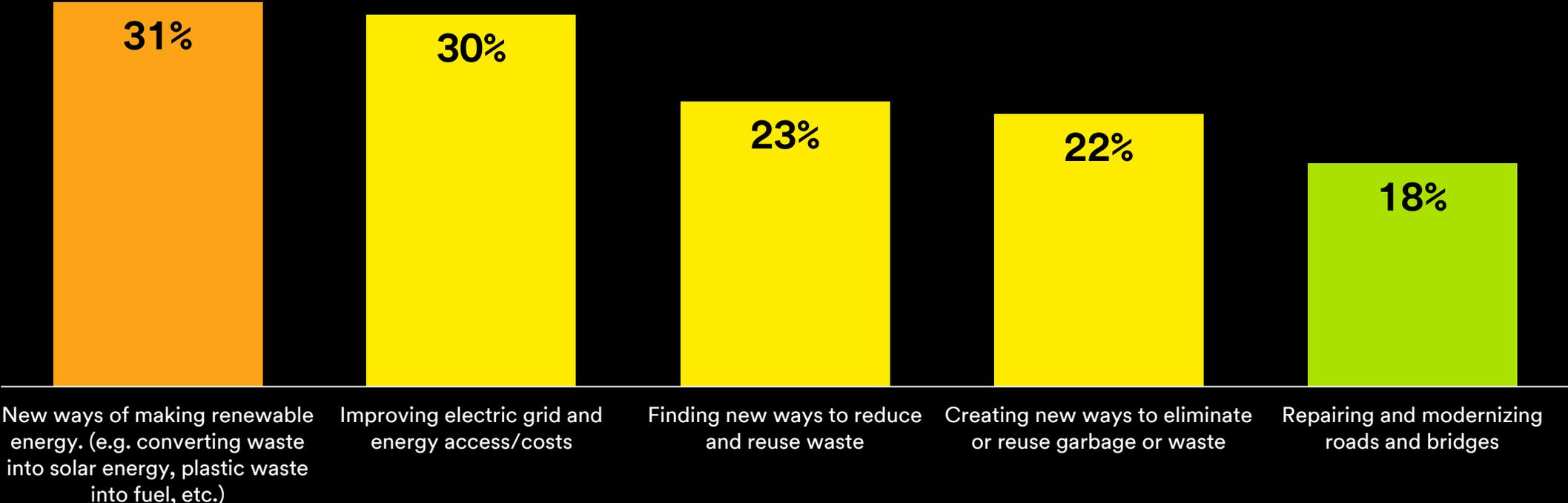
“**Advance the human race to achieve the impossible**, seeing how far we can innovate to create a futuristic and convenient world.”



# Japanese adults think science and technology innovation should prioritize new ways of making renewable energy and improving the electric grid and energy access/costs.

What infrastructure developments do you think are most important for science and technology innovation to prioritize in the next five years? Select up to 3.

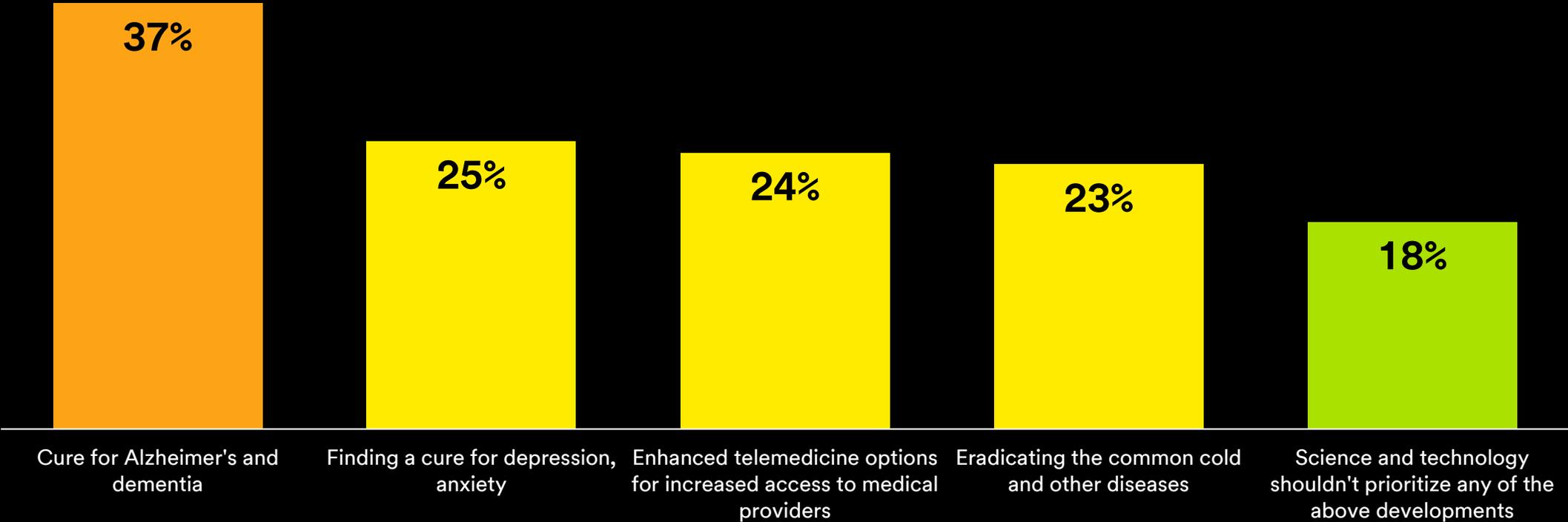
### Top 5 selected:



**Overall, Japanese adults believe that it's most important for science and technology to focus innovation on cures for Alzheimer's, dementia, depression and anxiety.**

What human developments do you think are most important for science and technology innovation to prioritize in the next five years? Select up to 3.

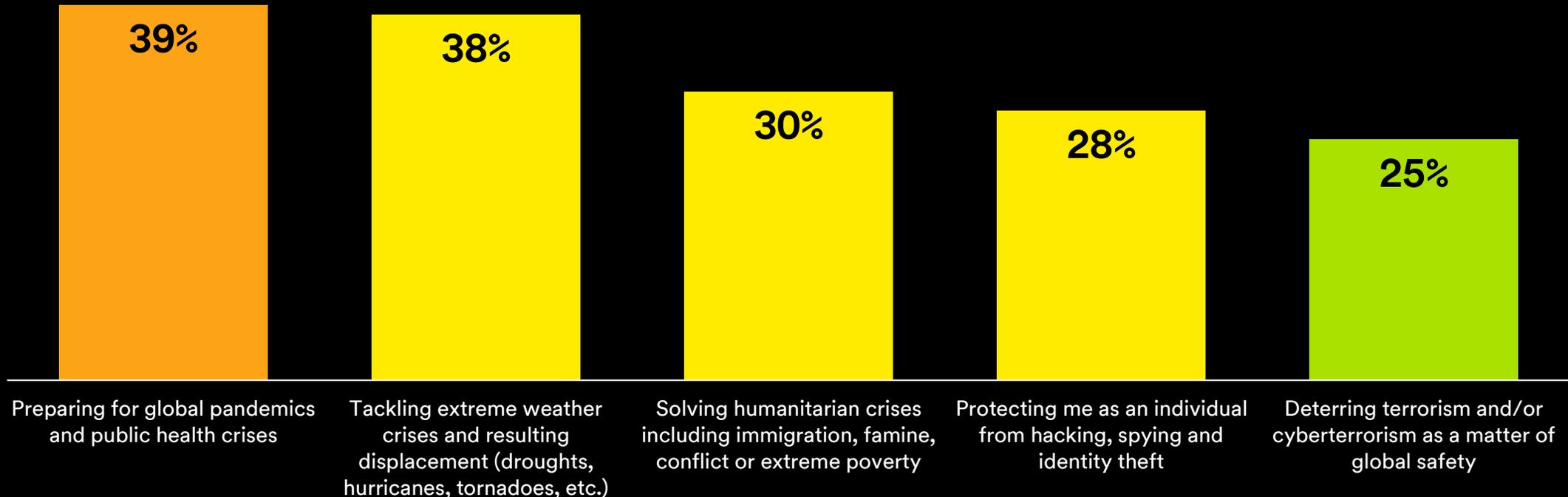
**Top 5 selected:**



# Preparing for public health crises is the global crisis that Japanese adults feel science and technology should prioritize in the next 5 years.

Which of the following global crises do you think are most important for science and technology innovation to prioritize in the next five years? Select up to 3.

## Top 5 selected:



# Japanese adults are split on agreement with statements relating to innovation, technological advancements in convenience, and dependency on technology

How much do you agree or disagree with each of the following statements?



**of people agree...**

*“Diverse groups of people working on today’s problems will lead to greater innovation”*



**of people agree...**

*“I think that ‘too much screen time’ is a health issue that should be addressed”*



**of people agree...**

*“More progress should be made in technology and science to make our lives easier or more convenient”*

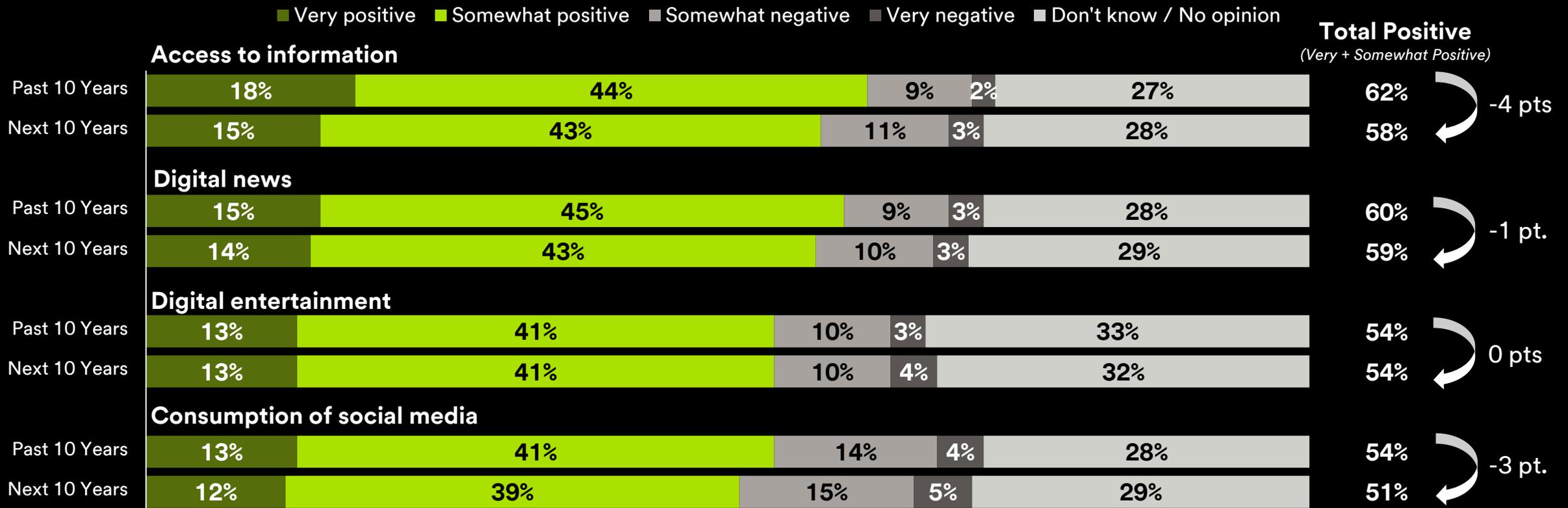


**of people agree...**

*“As a society, we are too dependent on technology in our everyday lives”*

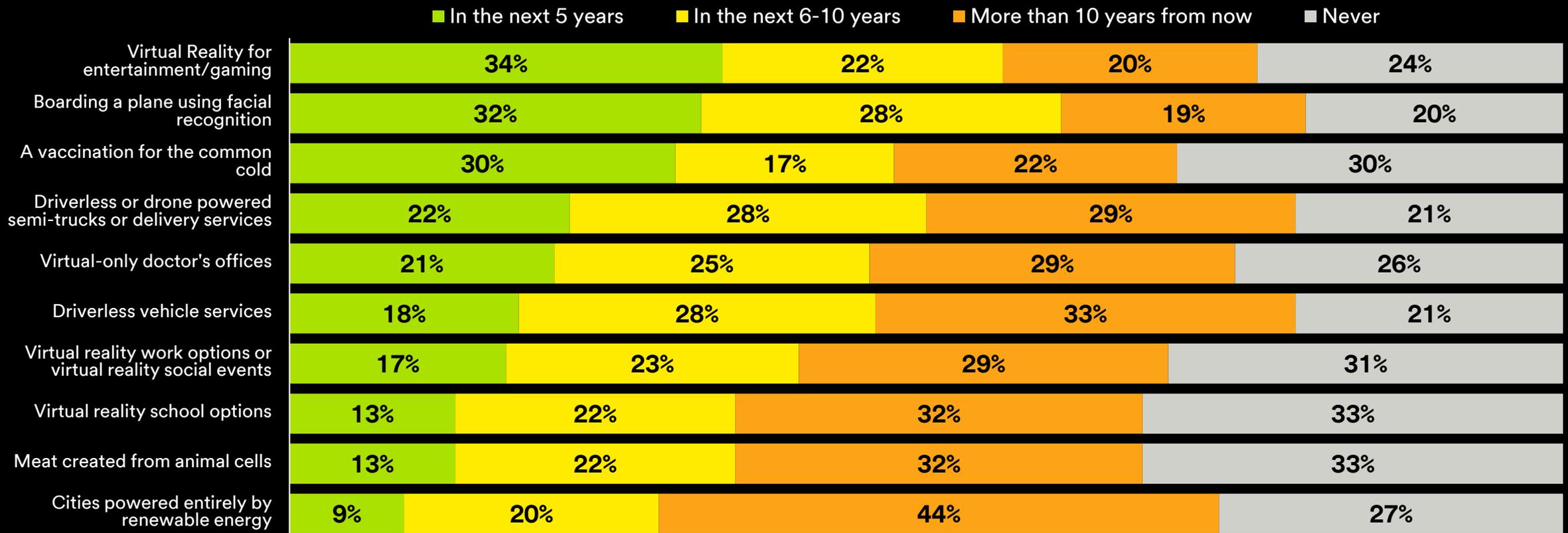
# More Japanese adults believe access to information, digital news/entertainment, and social media have had a positive impact than a negative impact.

Do you believe that each of the following has had a positive or negative impact on society over the past 10 years/in the next 10 years?



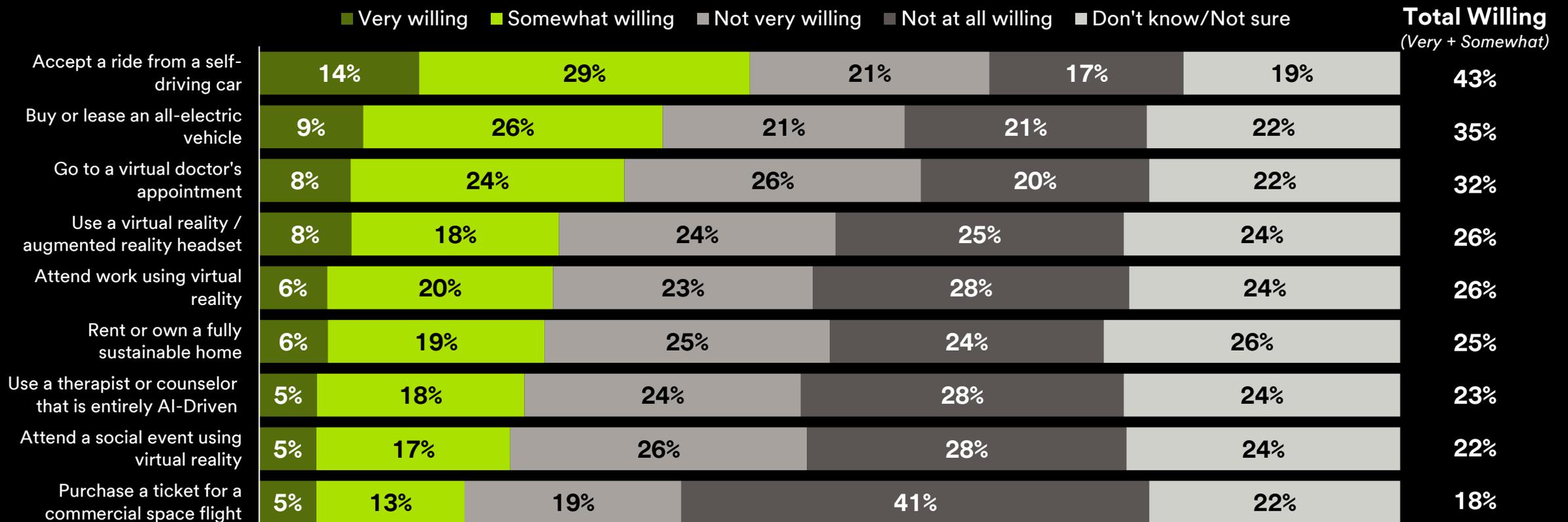
# Japanese adults expect that virtual reality for entertainment will become a normal part of their everyday lives sooner than other advancements like renewable energy for cities.

When, if ever, do you believe each of the following advancements will become a normal part of people's everyday lives?



# Less than half of Japanese adults are willing to try the below; adults are more likely to be willing to accept a ride from a self-driving car than to attend an event using virtual reality or purchase a ticket for a commercial space flight.

How willing are you to try each of the following ?



The background features a dark purple and black color scheme with glowing circuit-like patterns. A large, rounded purple rectangle is positioned in the top-left corner. The text "AI (Artificial Intelligence)" is centered in a bold, white, sans-serif font.

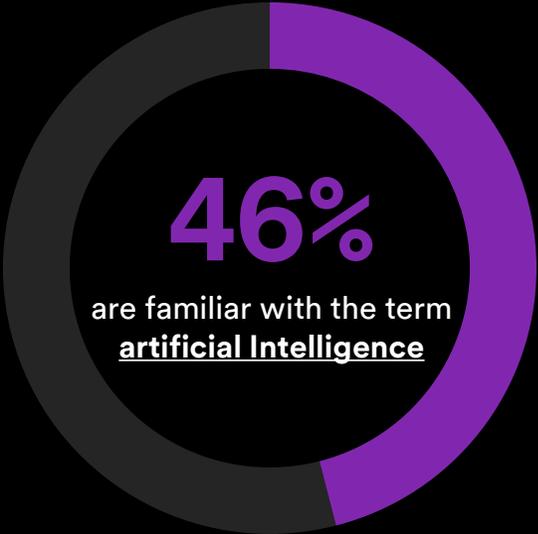
# AI (Artificial Intelligence)

# Half of Japanese adults are familiar with AI and feel that it plays a significant role in their everyday lives. Most agree the role of AI in their everyday lives will increase in the next 5 years.

How familiar are you with the terms? How big of a role do you believe artificial intelligence plays in your everyday life? In the next 5 years do you expect the role of artificial intelligence in your everyday life to increase, decrease or stay the same?

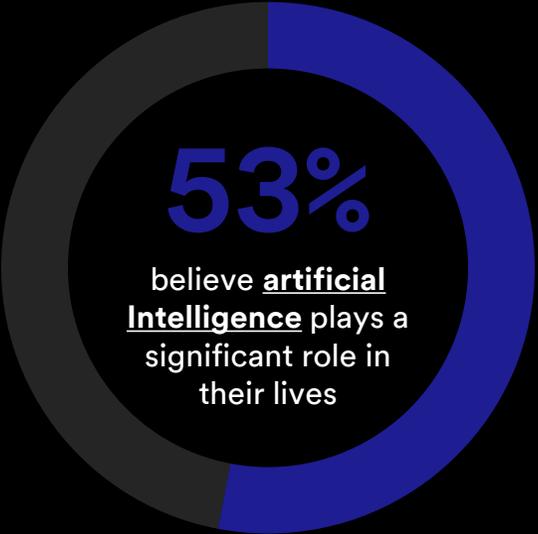
## Familiarity:

*(Very + Somewhat Familiar)*



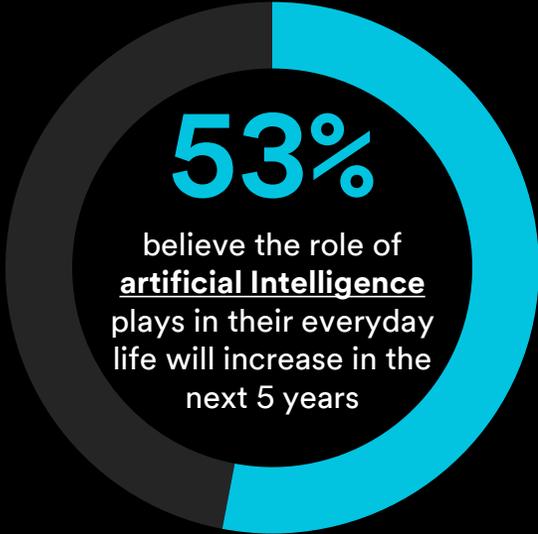
## Current Role:

*(Very + Somewhat Significant)*



## Future Role:

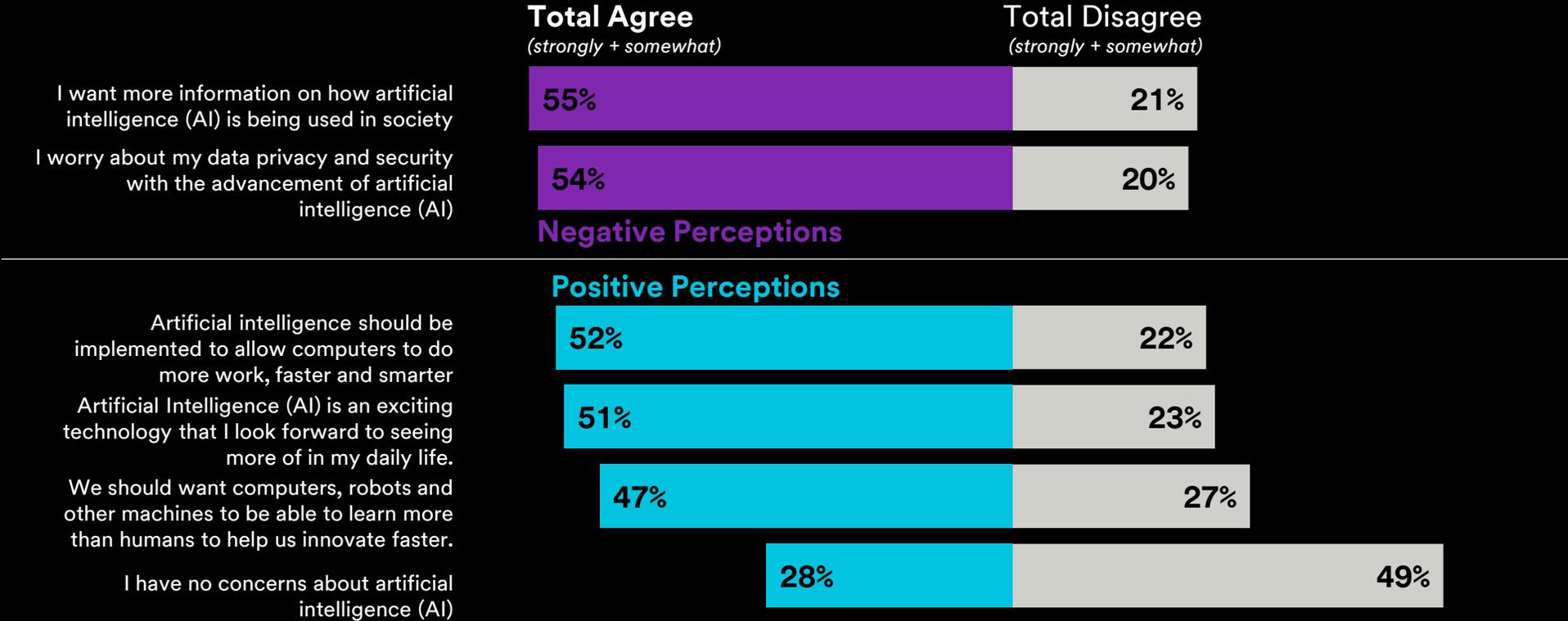
*(Increase in the next 5 years)*



Those ages 18-40 are more familiar with AI and believe it plays a more significant role in their everyday lives than those 41-65.

# Concerns over artificial intelligence slightly outweigh optimism. Japanese adults worry about their data privacy and want more information about how AI is being used in society.

How much do you agree or disagree with each of the following statements related to artificial intelligence (AI)?



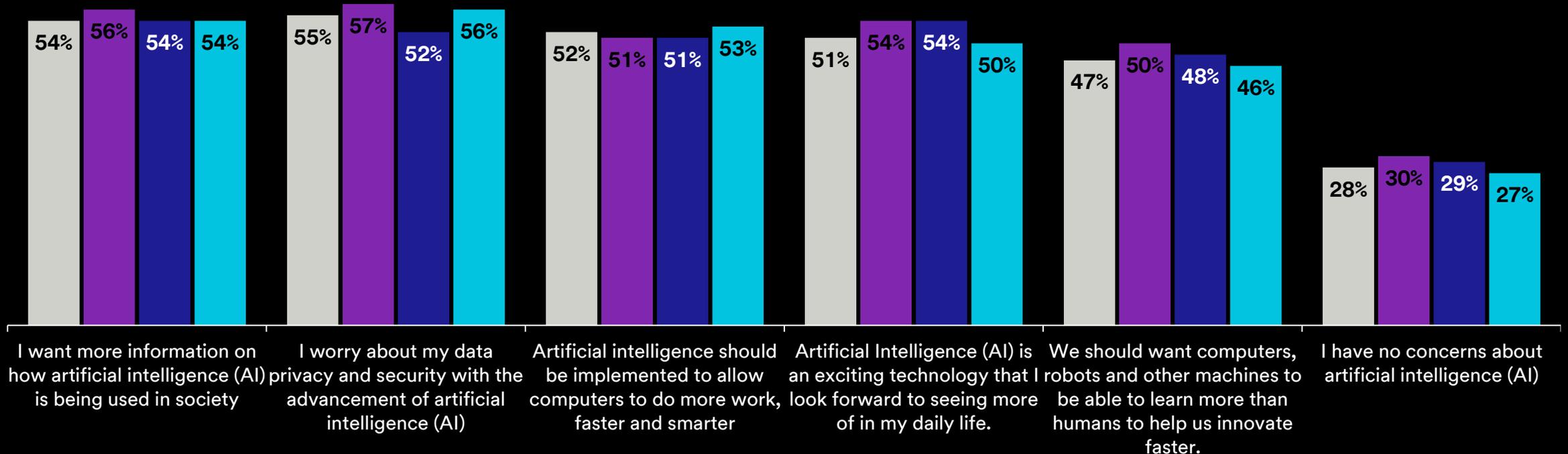
**Japanese adults of all ages are likely to agree that they have concerns about AI. Relative to the general population, those age 18-40 are more likely to agree that AI is an exciting technology, and less likely to agree that they worry about their data privacy.**

How much do you agree or disagree with each of the following statements related to artificial intelligence (AI)?

### Total Agreement

(Strongly + Somewhat Agree)

■ Global Average ■ Age: 18-24 ■ Age: 25-40 ■ Age: 41-65





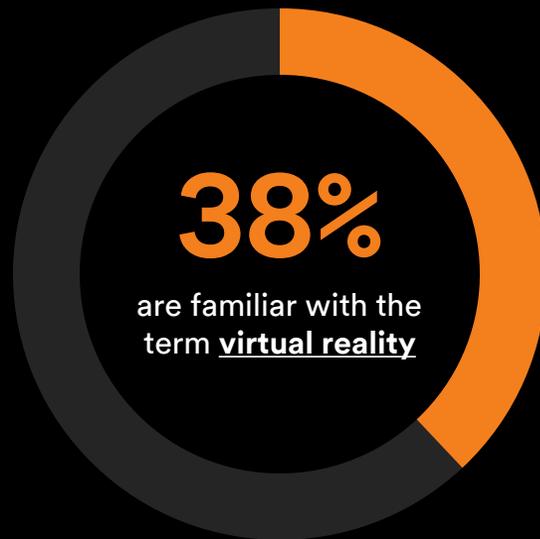
# **AR & VR** **(Augmented Reality** **& Virtual Reality)**

About 2 in 5 people are familiar with VR and feel that it plays a significant role in their everyday lives. The same amount agrees the role of VR in their everyday lives will increase in the next 5 years.

How familiar are you with the terms? How big of a role do you believe virtual reality plays in your everyday life? In the next 5 years do you expect the role of virtual reality in your everyday life to increase, decrease or stay the same?

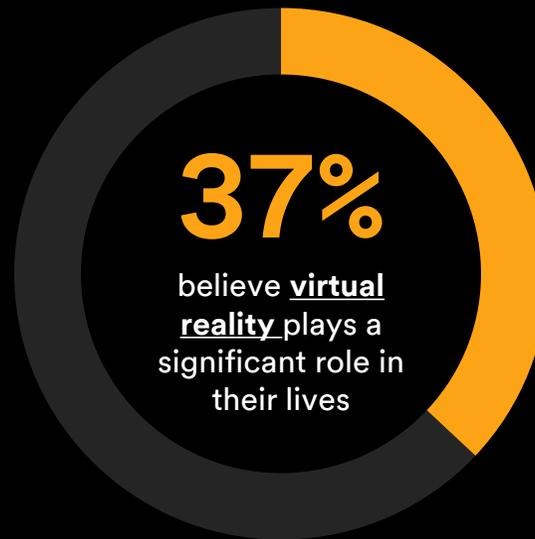
### Familiarity:

*(Very + Somewhat Familiar)*



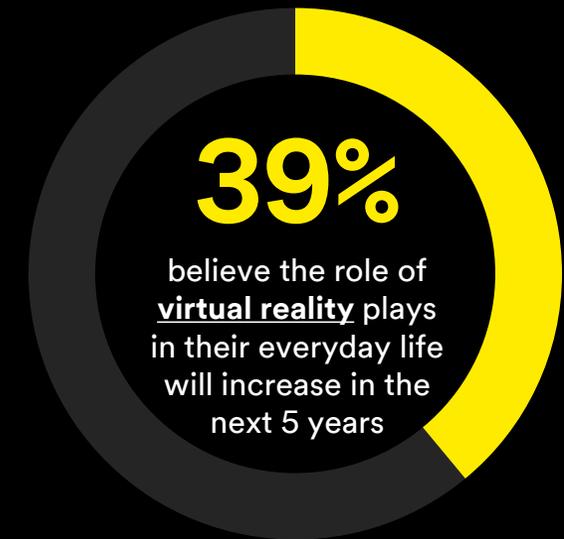
### Current Role:

*(Very + Somewhat Significant)*



### Future Role:

*(Increase in the next 5 years)*



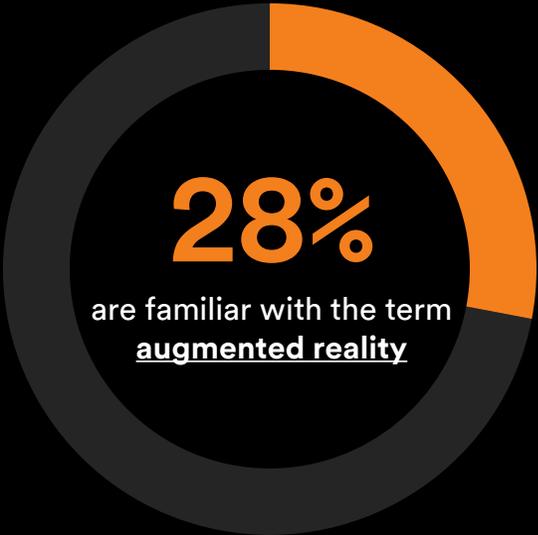
Those ages 18-40 are more familiar with VR and believe it plays a more significant role in their everyday lives than those 41-65.

**Over a quarter are familiar with AR and feel it plays a significant role in their everyday lives. More than a third agree the role of AR in their everyday lives will increase in the next 5 years.**

How familiar are you with the terms? How big of a role do you believe augmented reality plays in your everyday life? In the next 5 years do you expect the role of augmented reality in your everyday life to increase, decrease or stay the same?

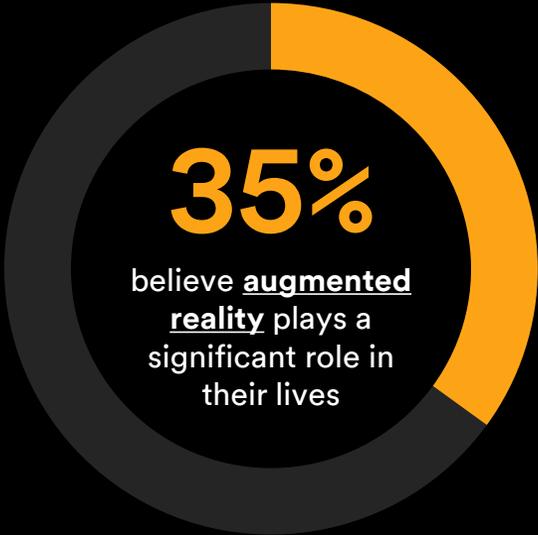
**Familiarity:**

*(Very + Somewhat Familiar)*



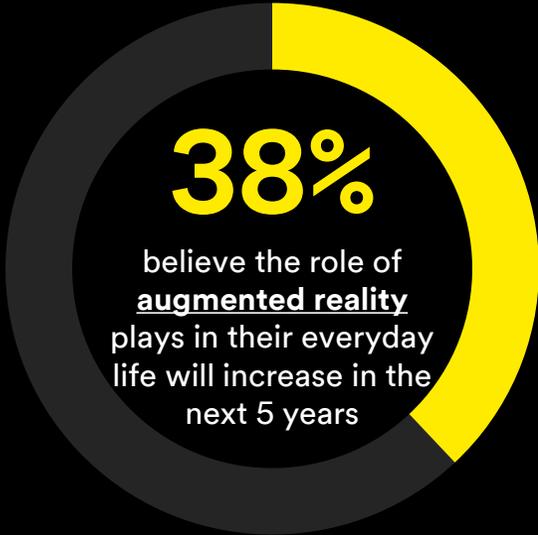
**Current Role:**

*(Very + Somewhat Significant)*



**Future Role:**

*(Increase in the next 5 years)*

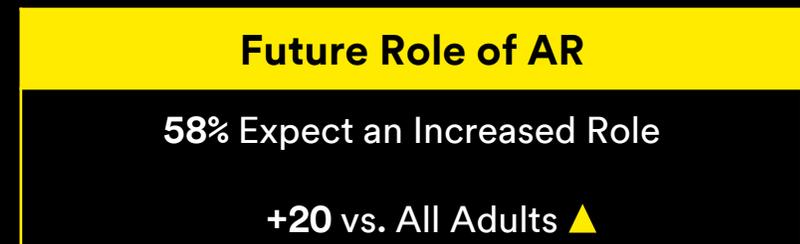
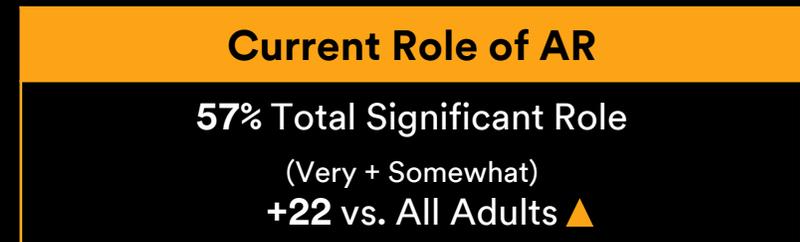
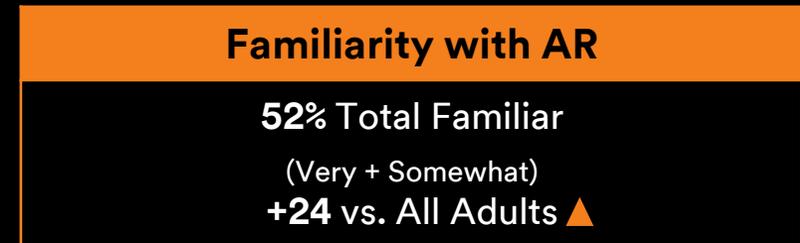
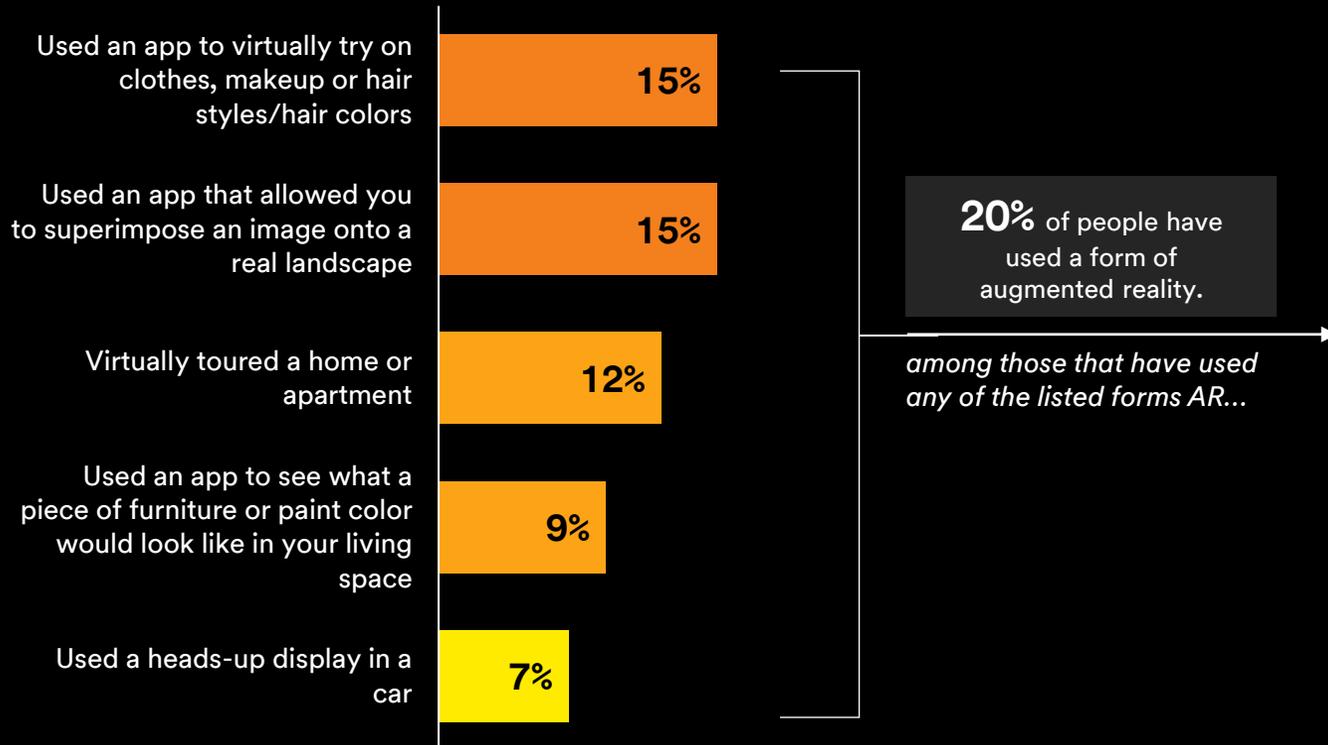


Those ages 18-40 are more familiar with AR and believe it plays a more significant role in their everyday lives than those 41-65.

# While only 1 in 5 Japanese adults has used AR, those who have used it are more familiar with the term and feel it plays a more significant role in their lives compared to all respondents.

Have you ever ...? How familiar are you with the terms? How big of a role do you believe augmented reality plays in your everyday life? In the next 5 years do you expect the role of augmented reality in your everyday life to increase, decrease or stay the same?

## % Have done each of the following:



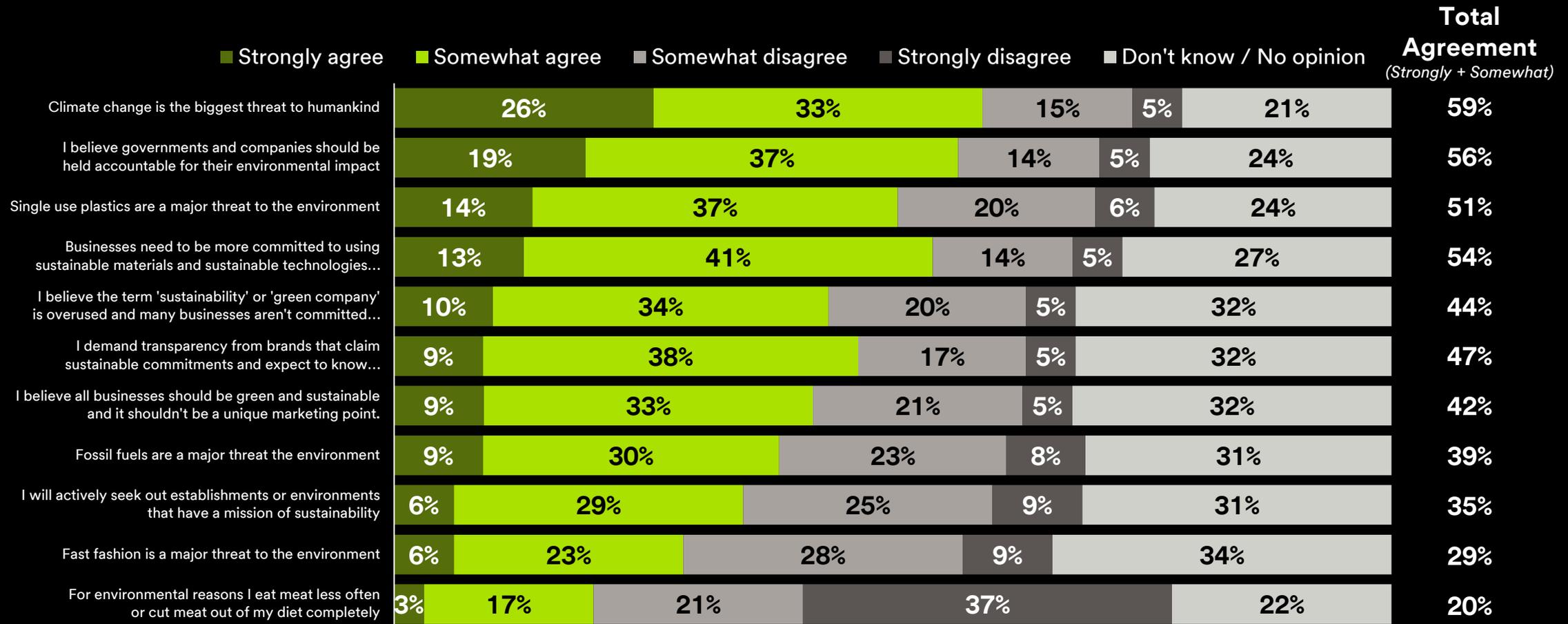
▲ Indicates positive movement outside of the MOE

The image features a black background with several overlapping, dark green leaf shapes on the left side. The leaves are stylized and have a smooth, rounded appearance. The word "Sustainability" is written in a bold, white, sans-serif font across the middle of the image, partially overlapping the green leaves.

**Sustainability**

# Nearly 60% of Japanese adults agree that climate change is the biggest threat to humankind and that governments and businesses should bear responsibility for sustainability efforts.

How much do you agree or disagree with each of the following statements?



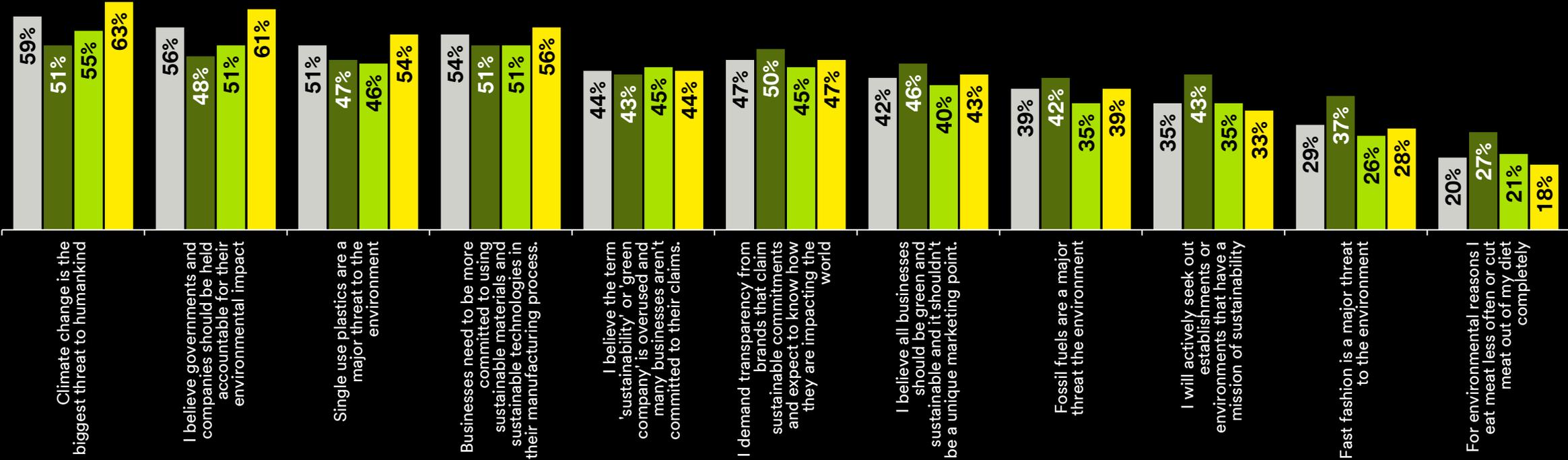
# Those ages 18-24 are less likely than other age groups to agree that climate change is the biggest threat to humankind, and that governments and businesses should be held accountable for their environmental impacts.

How much do you agree or disagree with each of the following statements?

## Total Agreement

(Strongly + Somewhat Agree)

■ Global Average ■ Age: 18-24 ■ Age: 25-40 ■ Age: 41-65

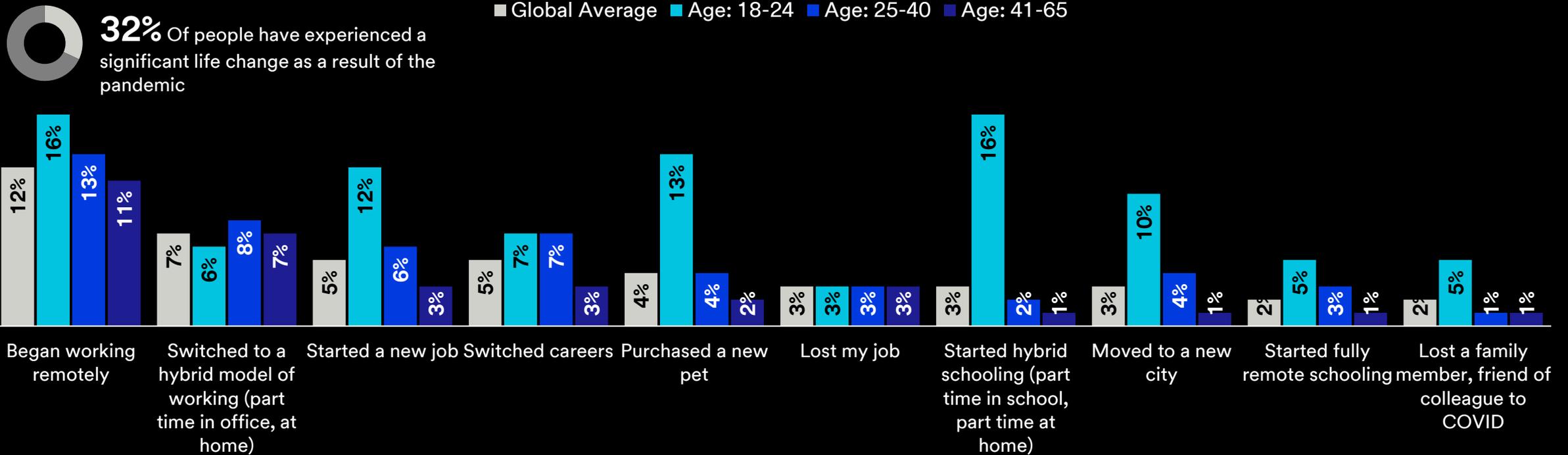




**New Paradigm**

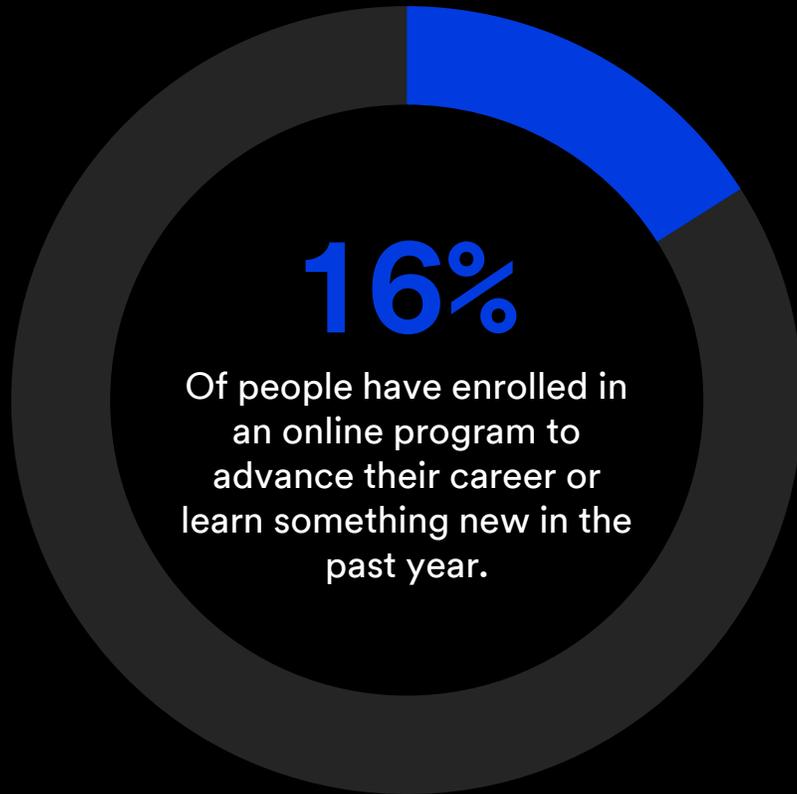
# 32% of Japanese adults have experienced a significant life change because of the pandemic; those ages 18-24 are more likely to have experienced a change related to their education.

As a result of the pandemic, have you experienced any of the following?



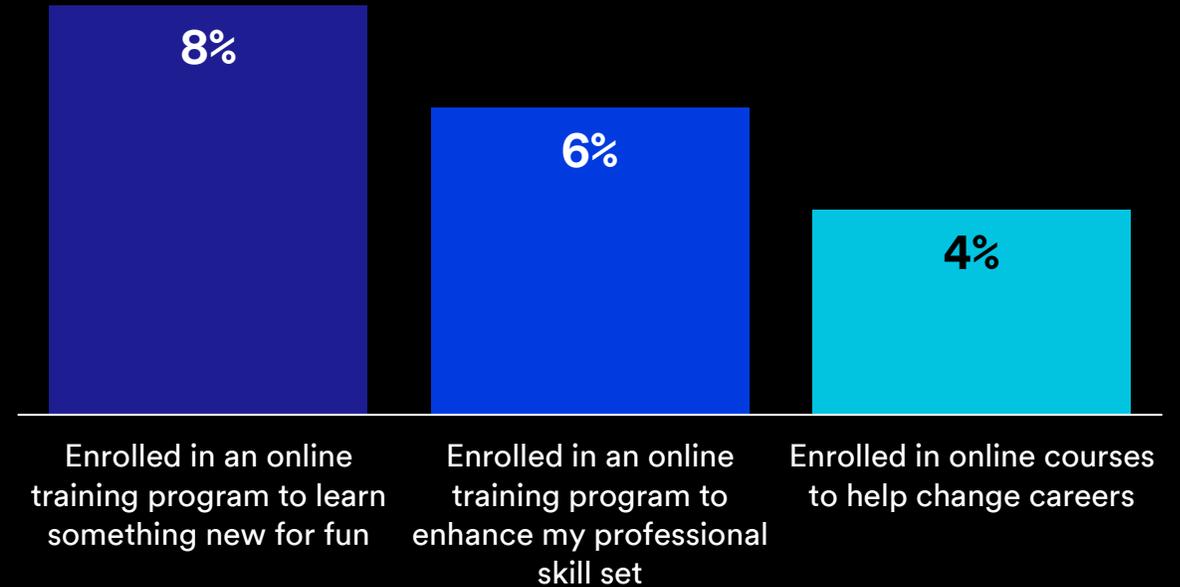
**In the past year, 16% of Japanese adults have enrolled in an online training program.**

In the past year have you done any of the following?



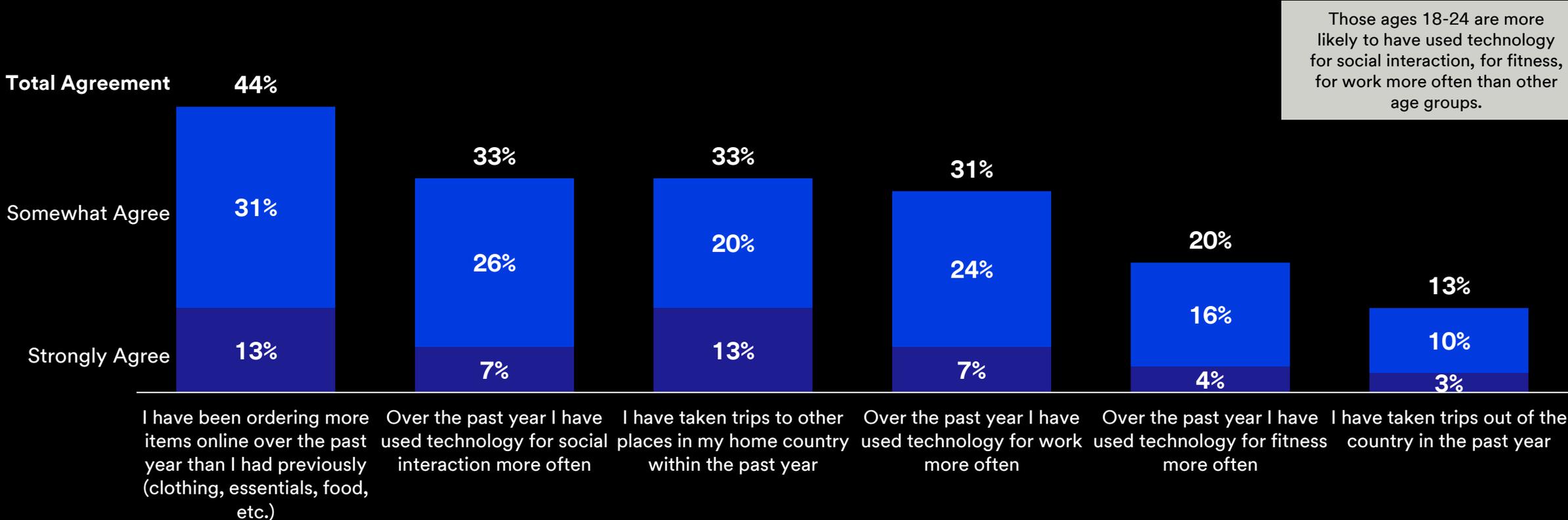
### What did they enroll in?

*(among all respondents)*



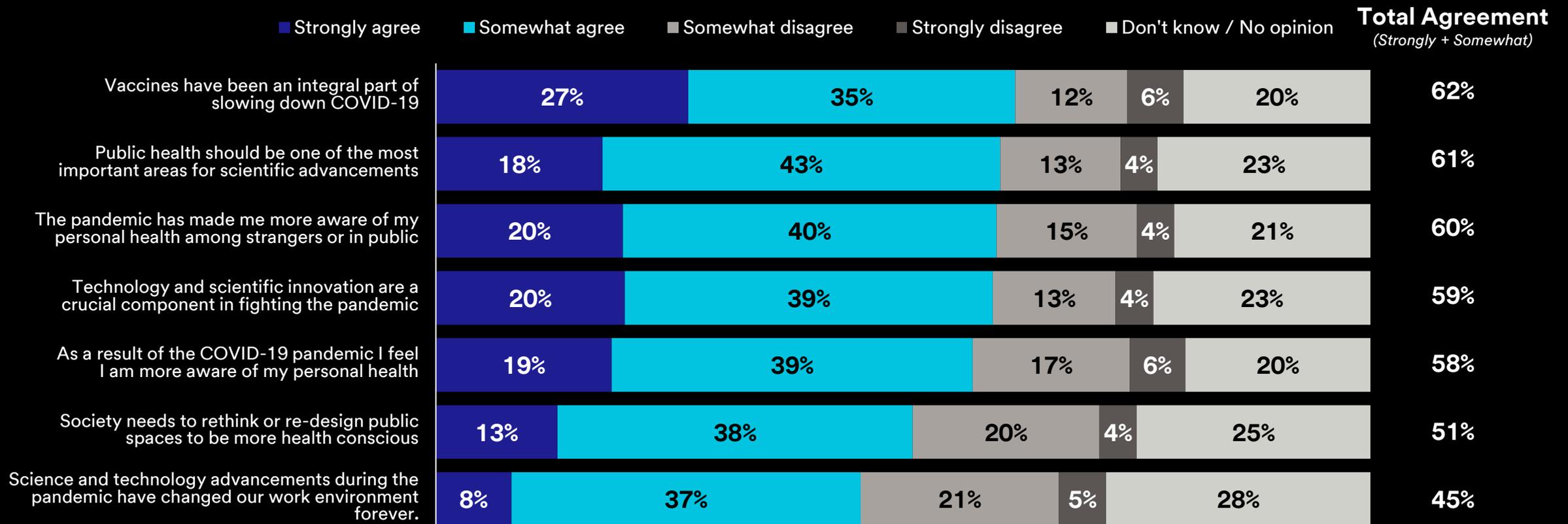
# Less than half of Japanese adults agree that they have been ordering more online and using technology for social interaction more often this year than they were previously.

How much do you agree or disagree with each of the following statements?



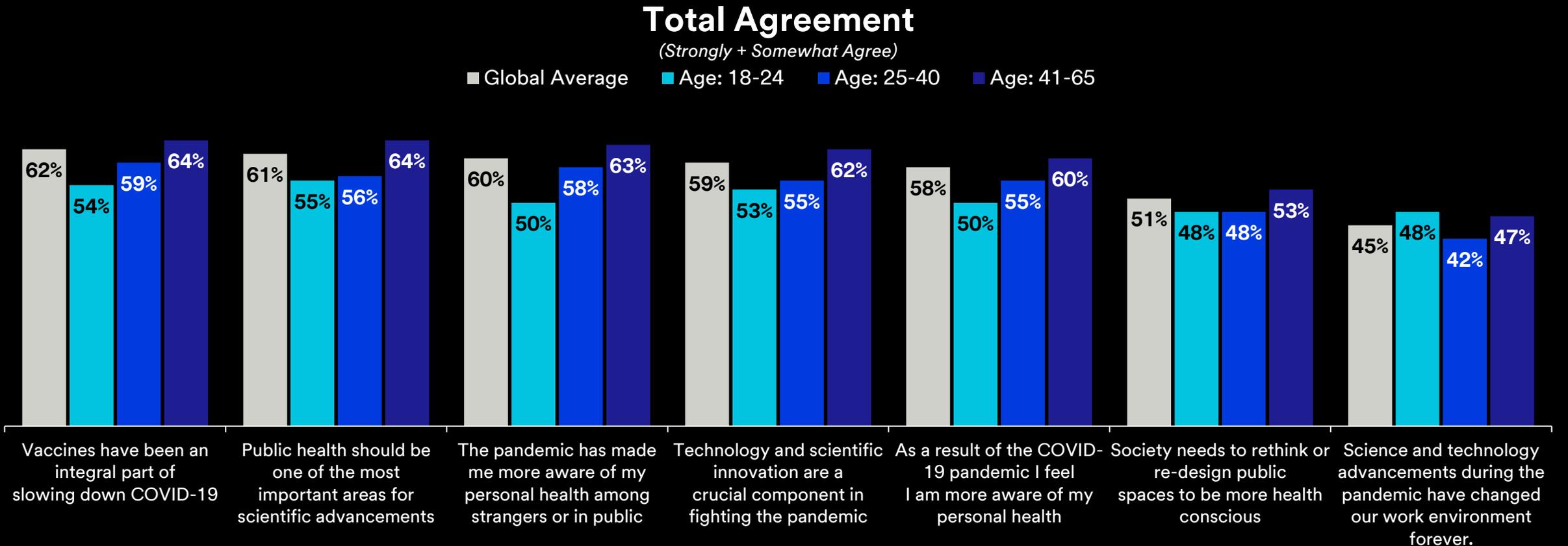
# The pandemic has impacted how most people view public health and the role of science and technology in keeping people safe.

How much do you agree or disagree with each of the following statements?



**Those ages 41-65 are more likely than younger adults to agree that public health should be one of the most important areas for scientific advancements, and that the pandemic has made them more aware of their own health among strangers in public.**

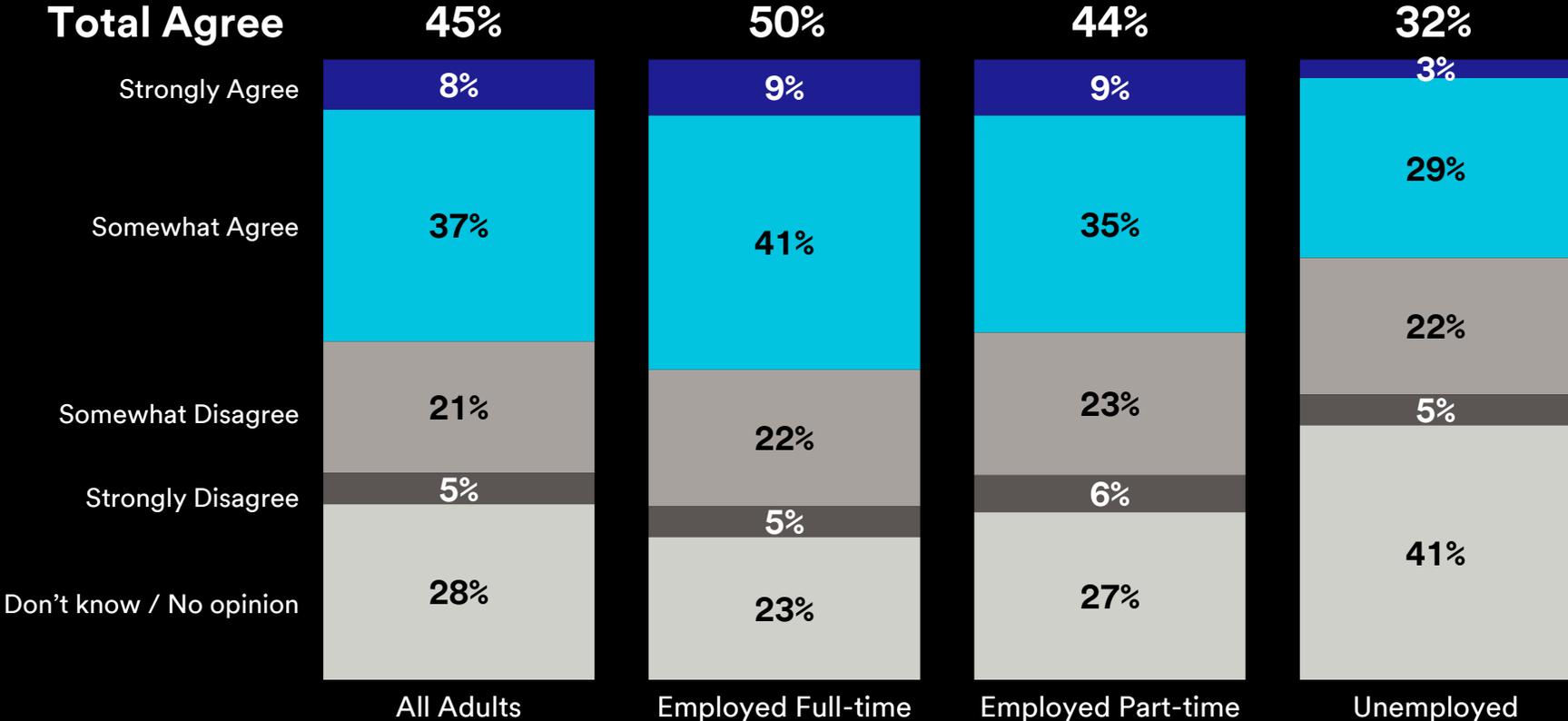
How much do you agree or disagree with each of the following statements?



**Many adults feel that science and technology during the pandemic has changed the work environment forever – especially those who are employed full-time.**

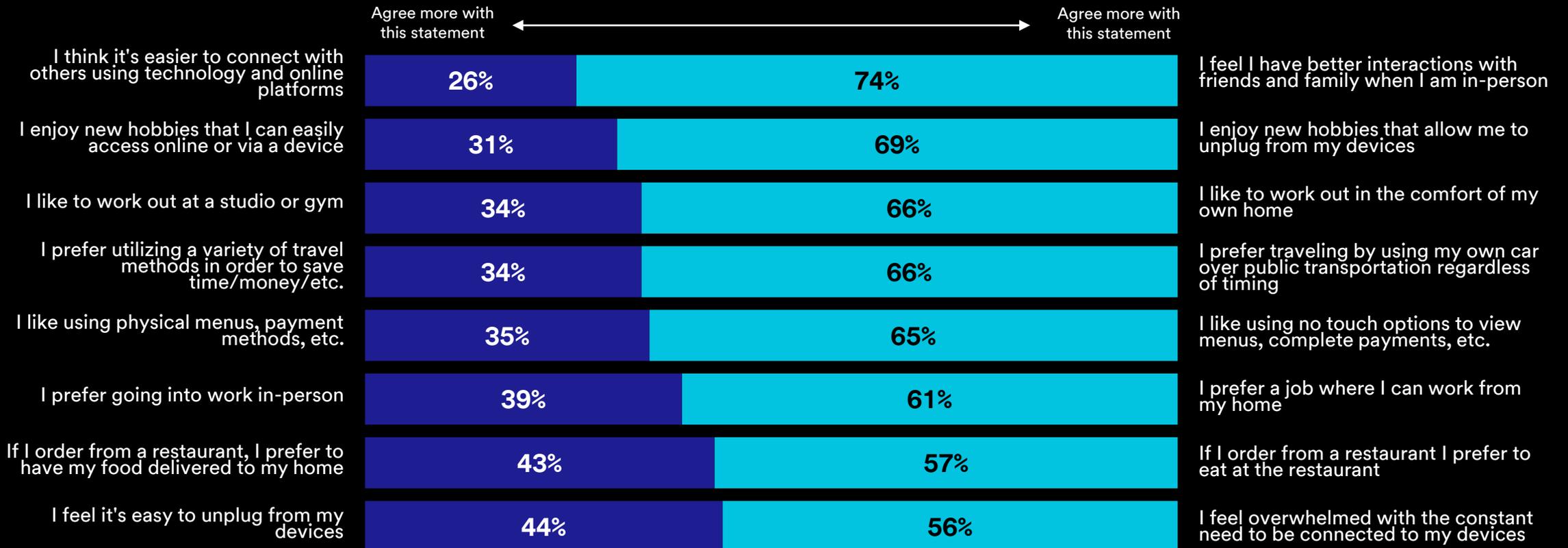
How much do you agree or disagree with each of the following statements?

*“Science and technology advancements during the pandemic have changed our work environment forever.”*



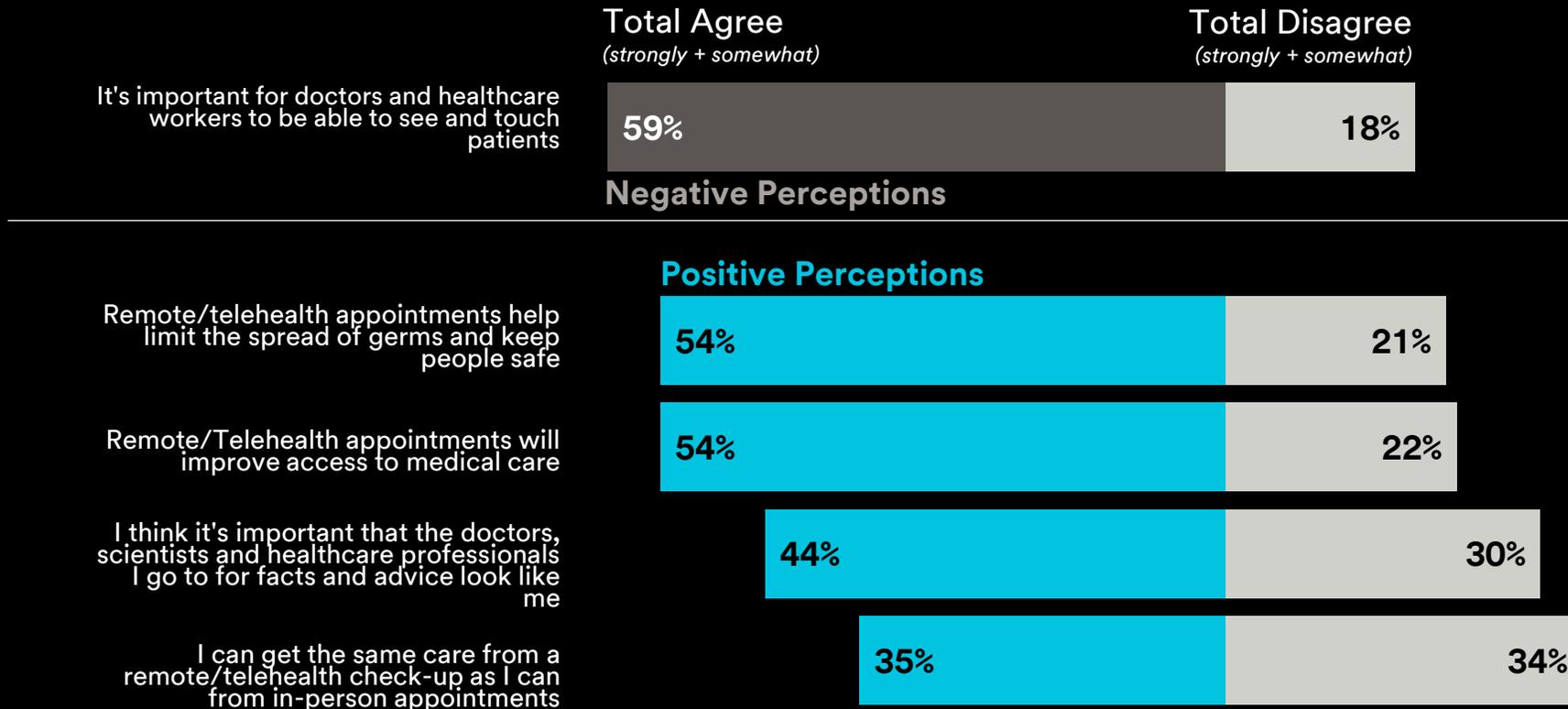
# Japanese adults are likely to agree that they enjoy in-person interaction and activities more than virtual ones, however over half would prefer to work and work out at home.

Which of the following statements align more with how you currently feel?  
among those who chose one statement over the other



# While more than half of Japanese adults agree that telehealth appointments limit the spread of germs and improve access to medical care, nearly 60% also believe that it's important for healthcare workers to be able to see and touch patients.

How much do you agree or disagree with each of the following statements?



## among those that have used telemedicine:

**81%** agreement "Remote/telehealth appointments help limit the spread of germs and keep people safe"  
+27 vs. All Adults ▲

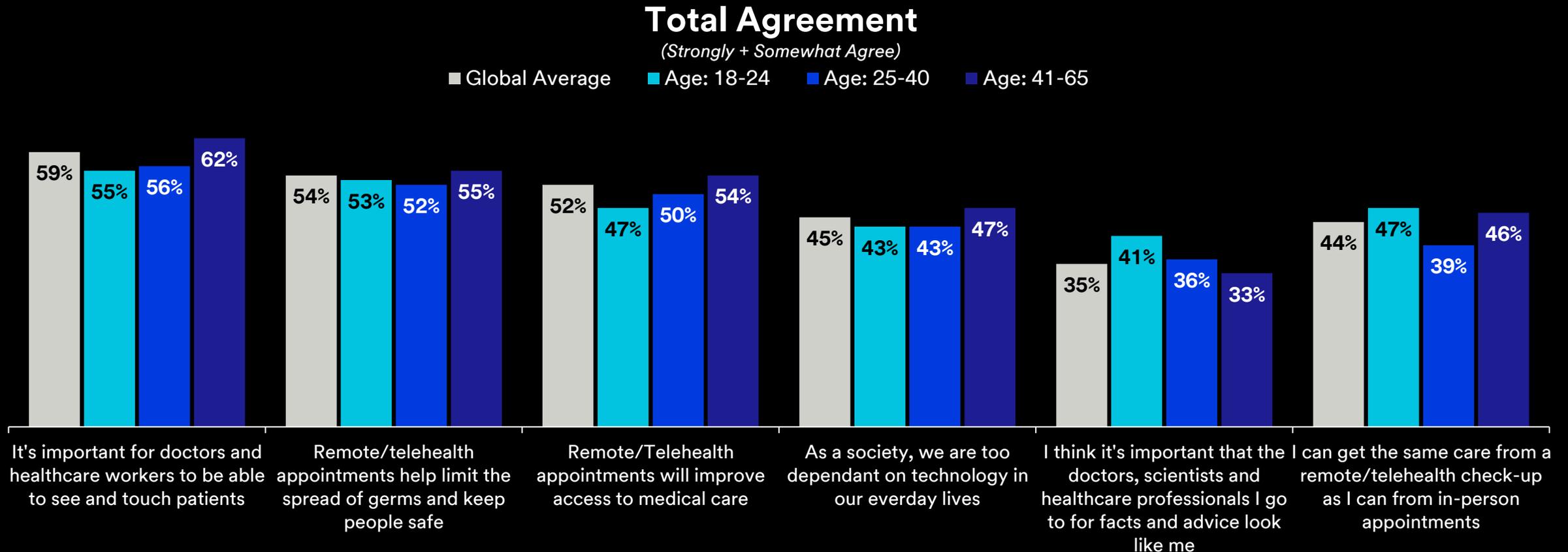
**70%** agreement "Remote/Telehealth appointments will improve access to medical care"  
+18 vs. All Adults ▲

**79%** agreement "I can get the same care from a remote/telehealth check-up as I can from in-person appointments"  
+33 vs. All Adults ▲

▲ Indicates positive movement outside of the MOE

# Adults ages 41-65 are more likely than those ages 18-24 to agree that healthcare workers should be able to see and touch patients, and that telehealth appointments will improve access to medical care.

How much do you agree or disagree with each of the following statements?





**Thank you**