



3M | Futures

Global Survey Results

Global

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

People want innovation in science and technology to focus on fixing environmental and societal problems – specifically prioritizing public health, humanitarian crises, extreme weather crises, a cure for Alzheimer’s and ecological disasters over the next 5 years.

- Many feel that “too much screen time” is a health issue that should be addressed, and we are too reliant on technology in our everyday lives. However, despite those perceptions most feel that technological advancements like access to information, digital entertainment and digital news will have a similar impact on society over the next 10 years as they’ve had over the past 10 years. Social media is perceived to have had a less positive impact on society than some of the other advancements.

2

People expect a lot of new innovations in science and technology to become a part of our everyday lives over the next 10 years and most are willing to try new advancements with the exception of taking a commercial space flight or using an entirely AI-driven therapist.

Methodology: This poll was conducted between November 17-December 18, 2021 among a sample of 22,001 Adults. The interviews were conducted online. An oversample of N=2,200 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 1 percentage point.

Key Findings — AI (Artificial Intelligence)



1

Most are familiar with AI technology and recognize its role in their everyday lives, this is especially true among those ages 18-40.

- 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 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 November 17-December 18, 2021 among a sample of 22,001 Adults. The interviews were conducted online. An oversample of N=2,200 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 1 percentage point.

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



1

Familiarity and usage of augmented reality, and virtual reality is higher for those under the age of 40.

- Despite what people think, many are interacting with these technologies without even realizing – most people have used a form of augmented reality before and only about half believe the technology plays a significant role in their everyday lives.

2

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

Methodology: This poll was conducted between November 17-December 18, 2021 among a sample of 22,001 Adults. The interviews were conducted online. An oversample of N=2,200 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 1 percentage point.

Key Findings — Sustainability

1

Most agree that businesses need to be more committed to using sustainable materials for manufacturing. Additionally, a majority want large companies and governments to be held responsible for their environmental impact.

- Single-use plastics are viewed as a bigger threat to the environment, than fossil fuels and fast fashion.

2

Willingness to buy or lease an all-electric vehicle or rent or own a fully sustainable home is higher for younger people, parents, and those living in urban areas than other groups.

Methodology: This poll was conducted between November 17-December 18, 2021 among a sample of 22,001 Adults. The interviews were conducted online. An oversample of N=2,200 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 1 percentage point.

Key Findings — New Paradigm

1

The pandemic has made a lasting impact on people’s lives. Most have had a significant life change as a result of the pandemic, and most agree that it has made them more aware of their personal health.

- As a result of all of this change there is room for innovations that impact public health, how we work, schooling, and other aspects of our everyday lives.


2

Since most prefer in-person socialization and seek out hobbies that allow them to unplug, tech-driven innovations may be met with some resistance among those trying to decrease the amount of tech in their lives.

3

People have mixed feelings about telehealth technology, however, those that have already used telemedicine services are more likely to have a positive perception.

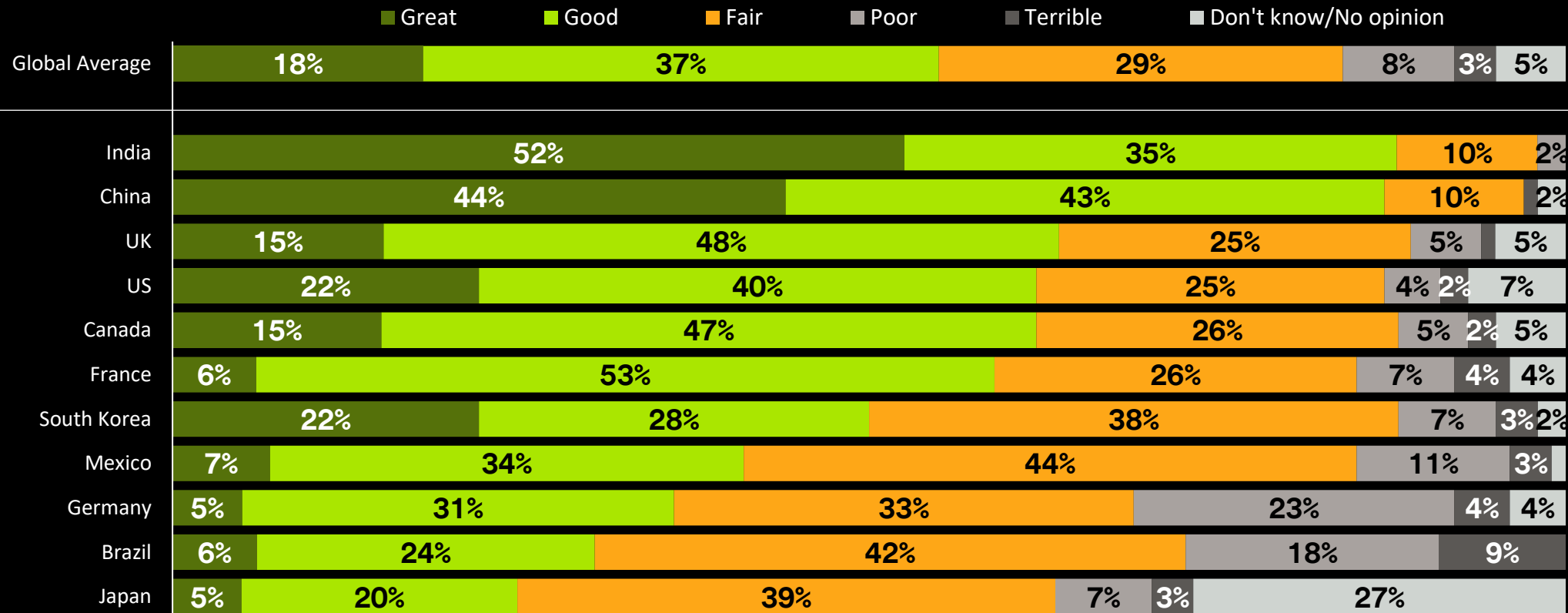
Methodology: This poll was conducted between November 17-December 18, 2021 among a sample of 22,001 Adults. The interviews were conducted online. An oversample of N=2,200 of was also fielded among those 18-24 – The interviews were conducted online. Results from the full survey have a margin of error of plus or minus 1 percentage point.



Science & Technology Perceptions

On average, most rate their country 'fair' or better on technological access for their citizens. Those living in India and China give their countries much higher 'great' ratings.

How would you rate [COUNTRY] on technological access for its citizens?



Globally those ages 18-24 are 25% more likely to rate their country 'great' on technological access for its citizens than those ages 41-65.

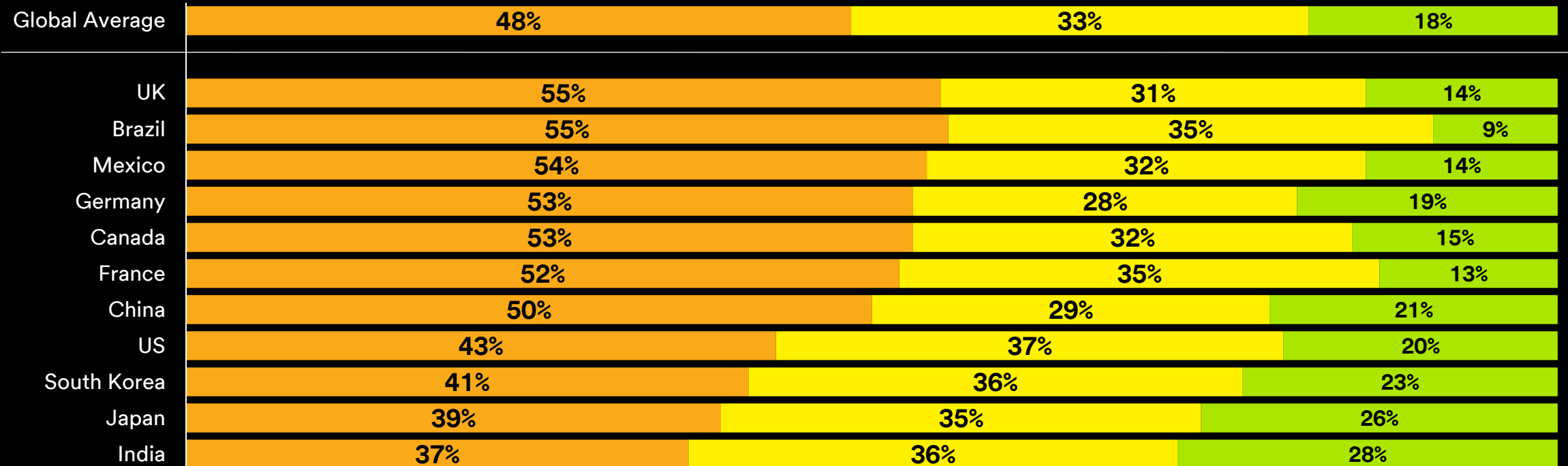
A plurality believe that finding solutions to environmental and societal problems should be the primary focus of science and tech innovation.

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 propaganda and technological terrorism, like hacking and data stealing."

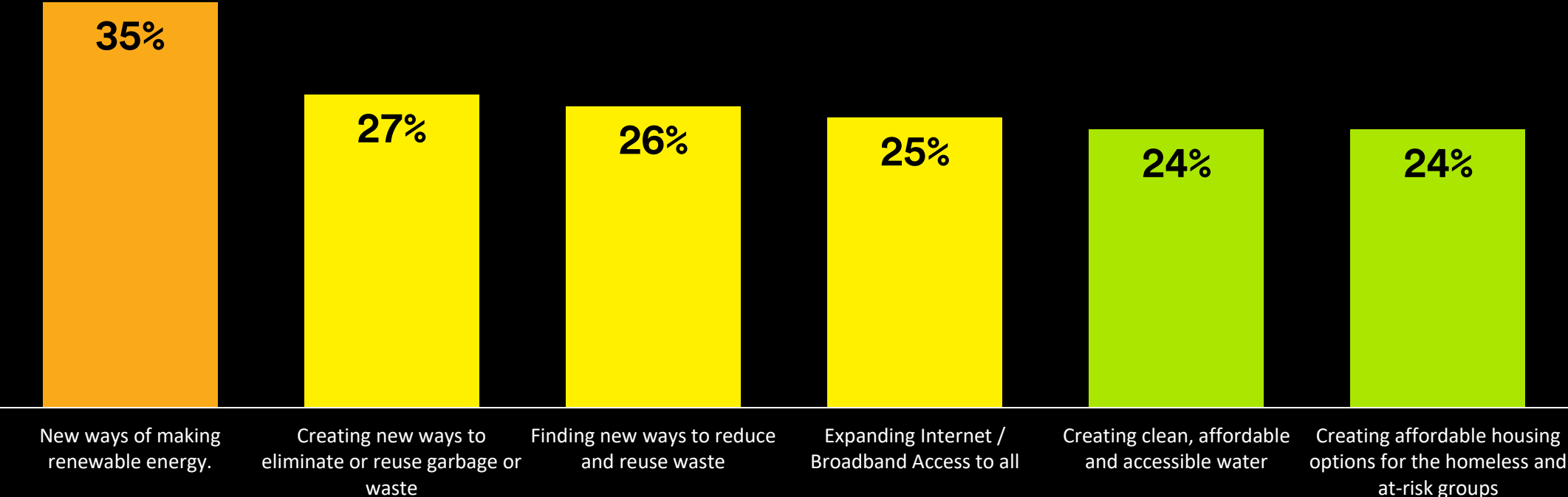
■ "**Advance the human race to achieve the impossible**, seeing how far we can innovate to create a futuristic and convenient world."



Finding new ways of making renewable energy is considered the most important infrastructure development for science and tech to prioritize in the next 5 years.

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:

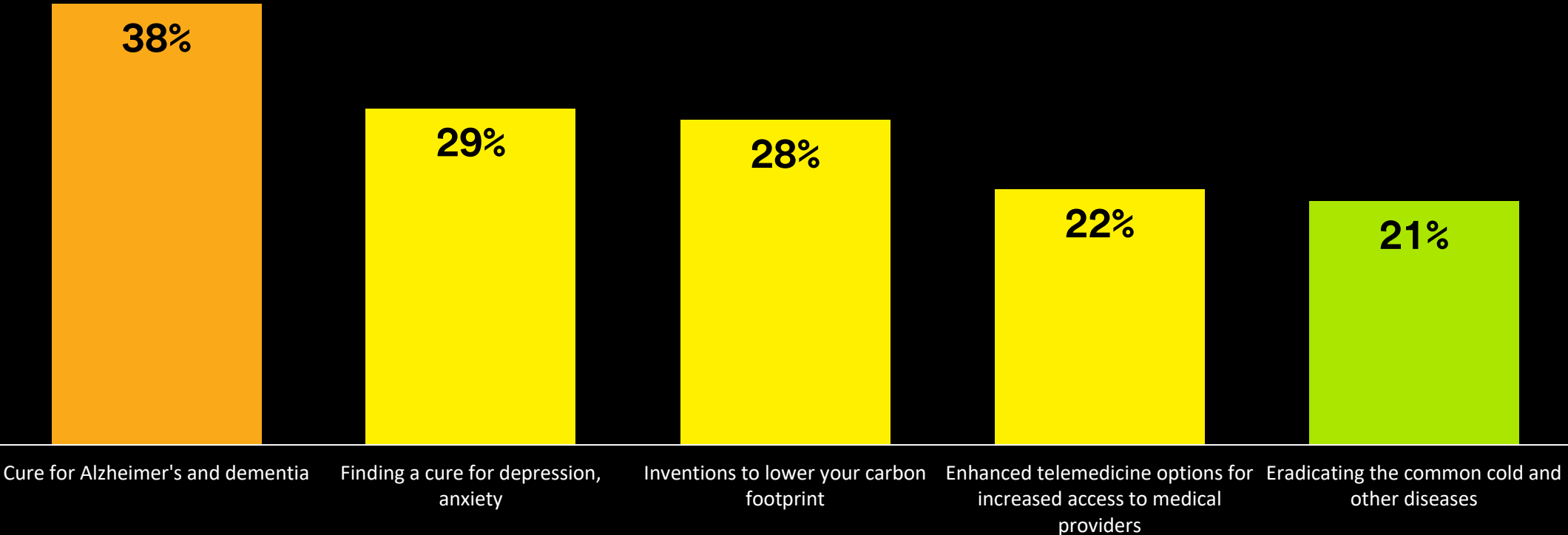


*Creating clean, affordable and accessible water and Creating affordable housing options for the homeless and at-risk groups both included since they have the same % and are tied for the 5th selected response.

Finding a cure for Alzheimer's and dementia is considered the most important human development that science and tech should prioritize in the next 5 years.

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.

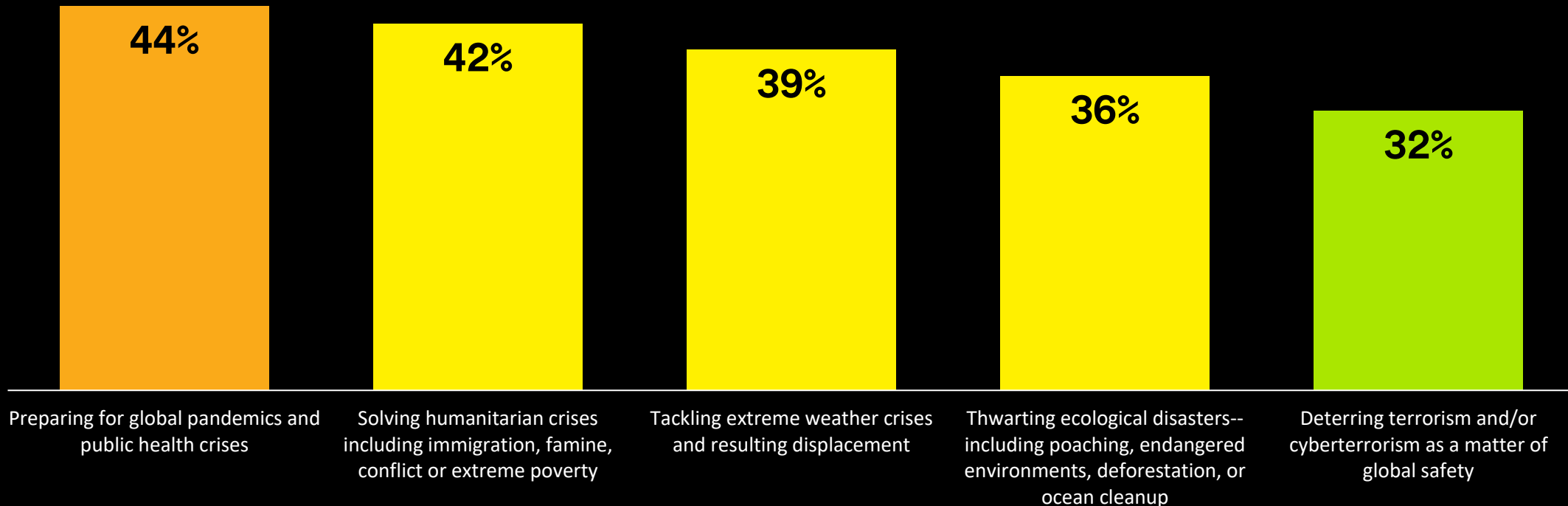
Top 5 selected:



Preparing for public health crises and solving humanitarian crises are the global crises that people feel science and tech 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:



People agree that technology should make our lives easier, however, there are concerns about how much we rely on technology in our everyday lives and too much screen time.

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

 **76%**

of people agree...

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

 **75%**

of people agree...

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

 **73%**

of people agree...

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

 **73%**

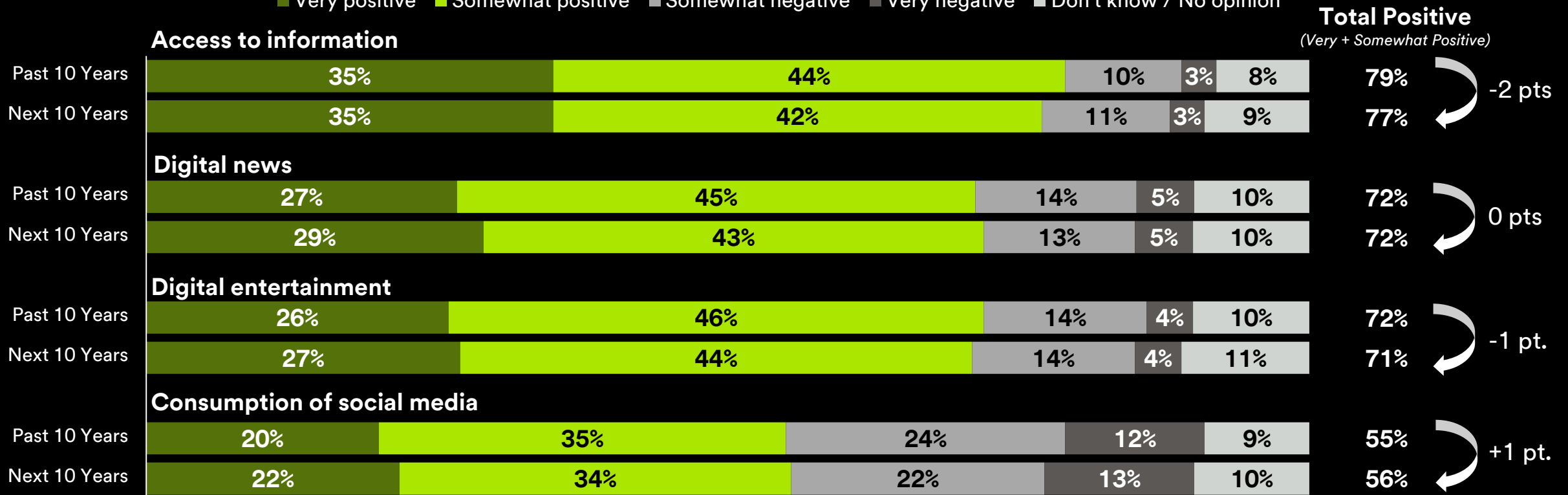
of people agree...

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

People expect technological advancements will have a similar impact in the next 10 years as they've had over the past 10 years. Consumption of social media is perceived to have had a less positive impact on society than other advancements.

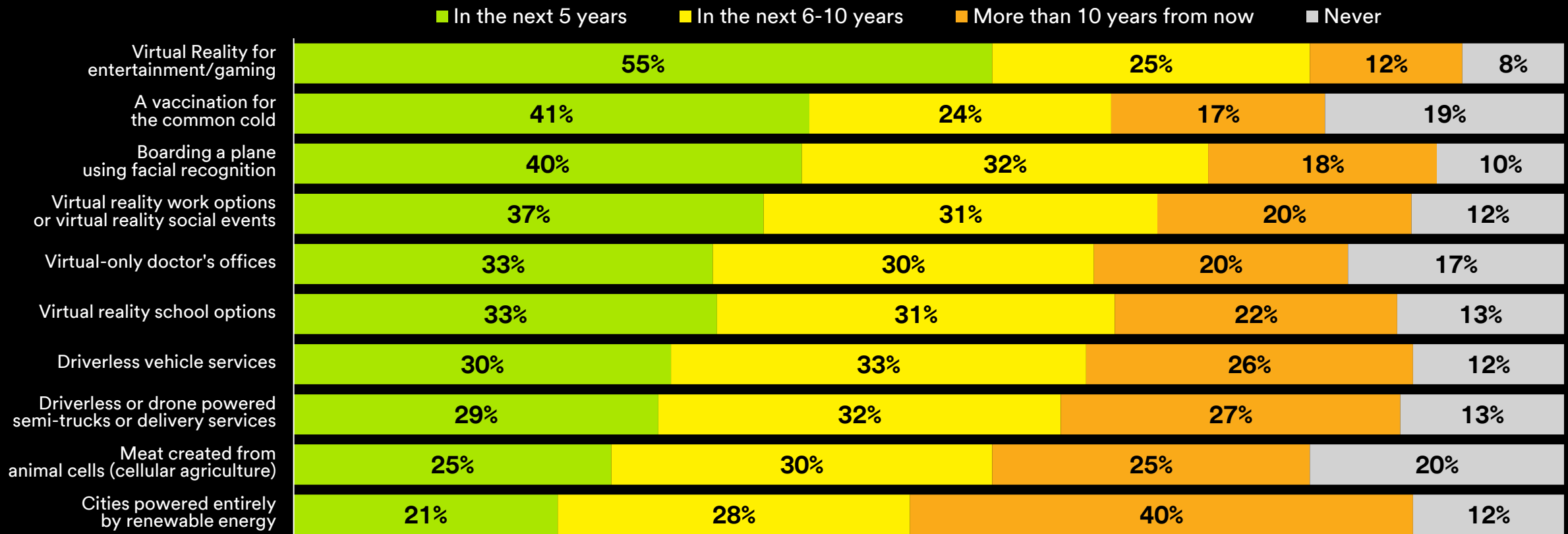
Do you believe that each of the following has had a positive or negative impact on society over the past 10 years/in the next 10 years?

■ Very positive
 ■ Somewhat positive
 ■ Somewhat negative
 ■ Very negative
 ■ Don't know / No opinion



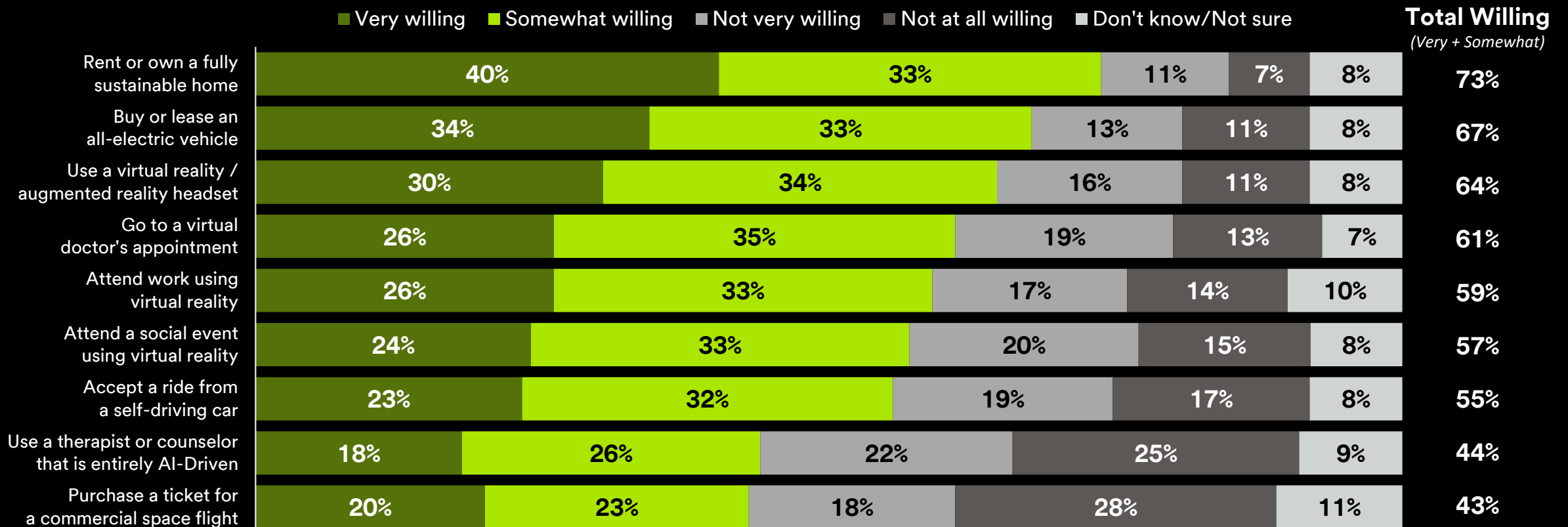
Most believe that virtual reality for entertainment or gaming will be a normal part of our everyday lives sooner than other advancements.

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



People are most willing to rent or own a fully sustainable home and are less willing to take a commercial space flight or use a therapist that is entirely AI-driven.

How willing are you to try each of the following ?



The image features a dark background with a glowing purple circuit board pattern. A solid purple rounded rectangle is positioned in the top-left corner. The text 'AI (Artificial Intelligence)' is displayed in a bold, white, sans-serif font, centered horizontally and partially overlapping the purple rectangle and the circuit lines.

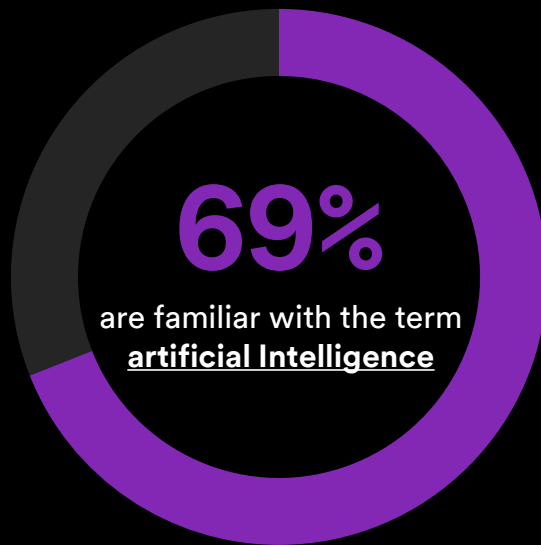
AI (Artificial Intelligence)

Most are familiar with AI and feel that it plays a significant role in their everyday lives. Most also 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?

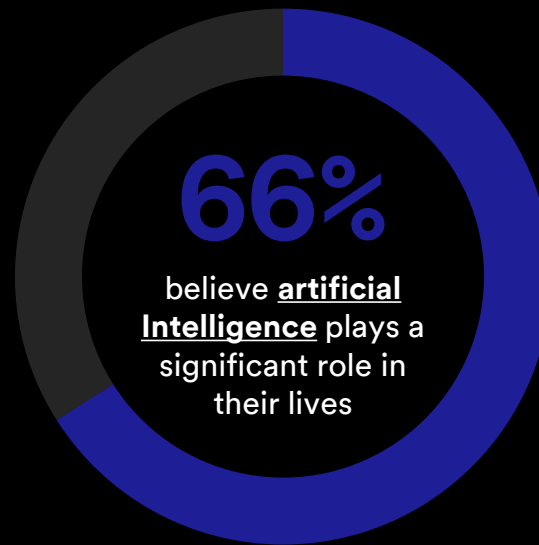
Familiarity:

(Very + Somewhat Familiar)



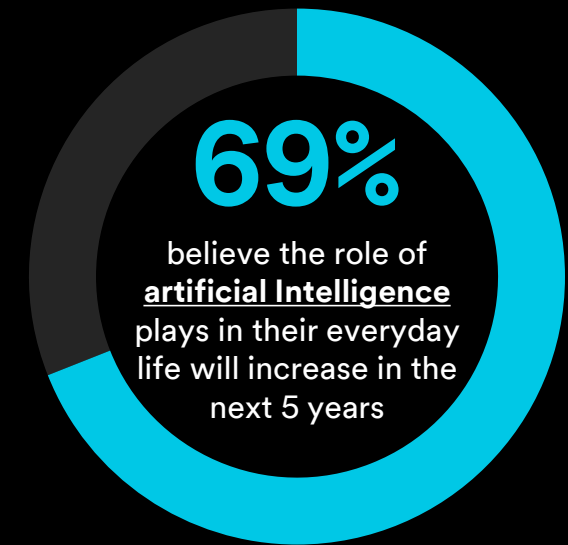
Current Role:

(Very + Somewhat Significant)



Future Role:

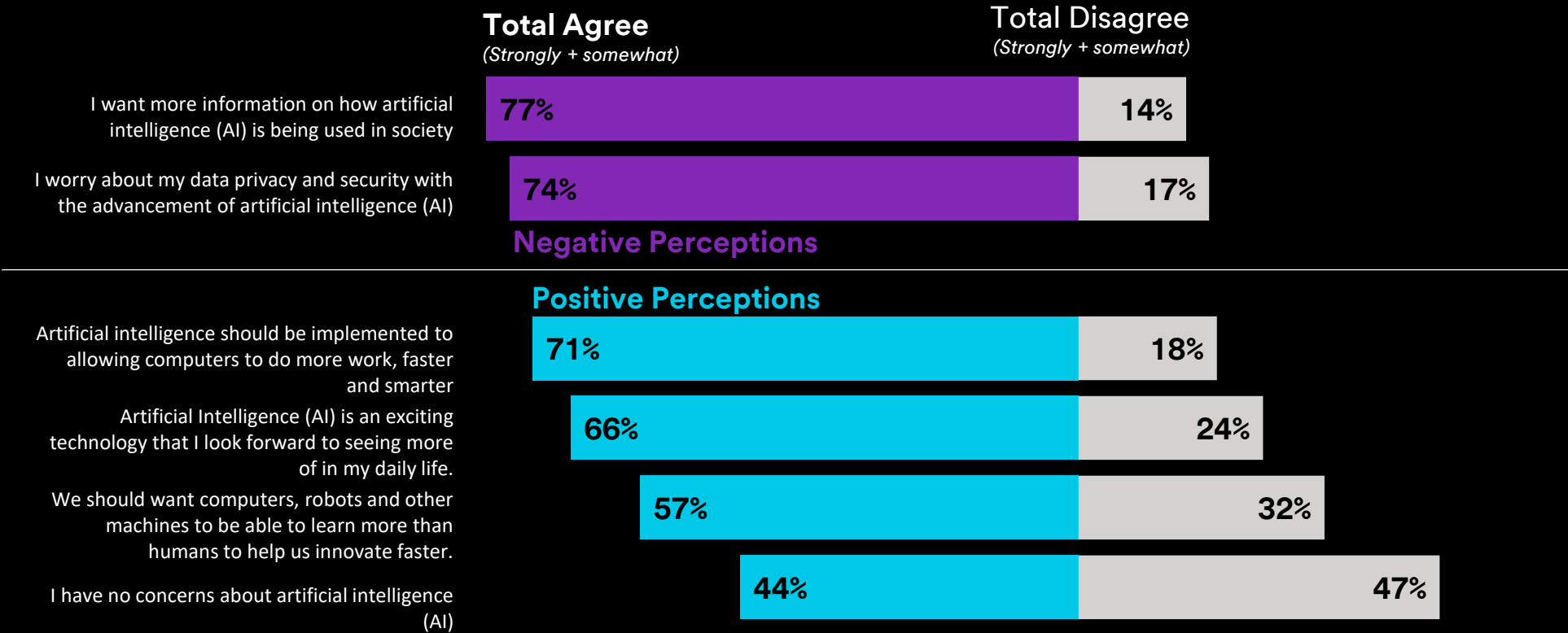
(Increase in the next 5 years)



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 outweigh optimism—people want to know more about how AI is being used in society and are worried about data privacy.

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



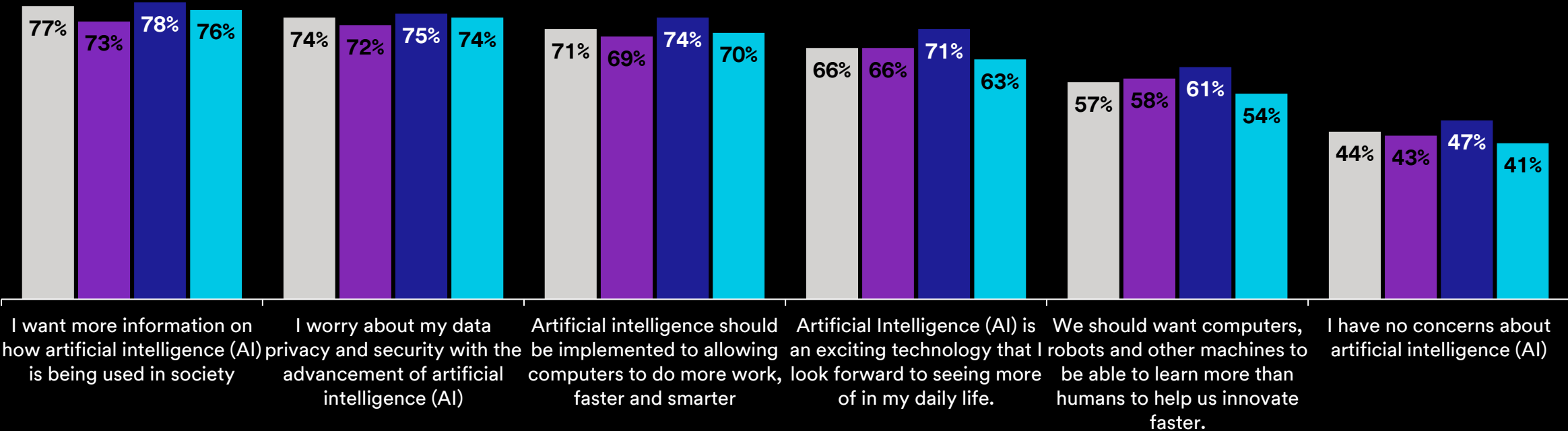
Those ages 25-40 are more likely to have a positive sentiment about AI technology, though this group also agrees that they want more information on the technology and worries about data privacy.

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





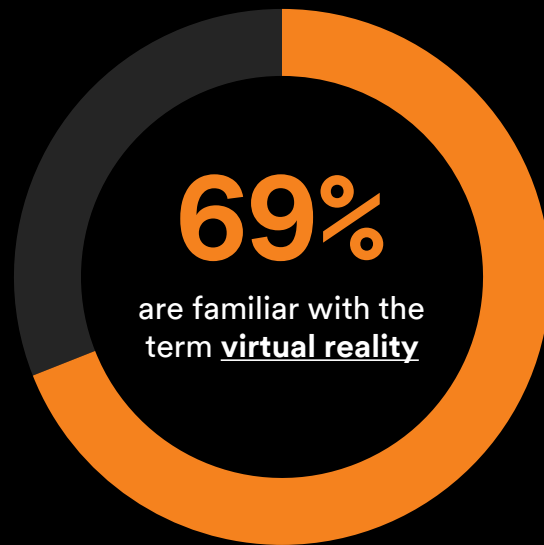
AR & VR (Augmented Reality & Virtual Reality)

About half are familiar with VR and feel that it plays a significant role in their everyday lives. A majority agree 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)



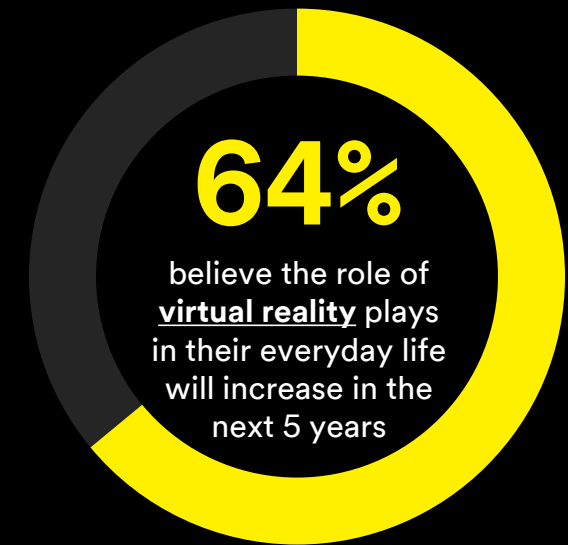
Current Role:

(Very + Somewhat Significant)



Future Role:

(Increase in the next 5 years)



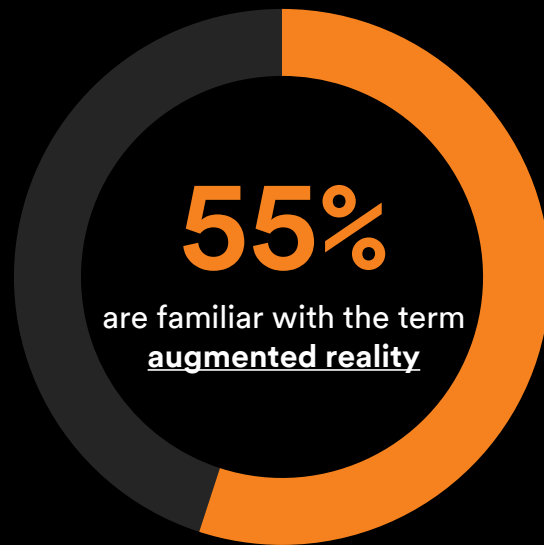
Those ages 18-40 are more familiar with VR and believe it plays a more significant role in their everyday lives than those 41-65.

About half are familiar with AR and feel that it plays a significant role in their everyday lives. A majority 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?

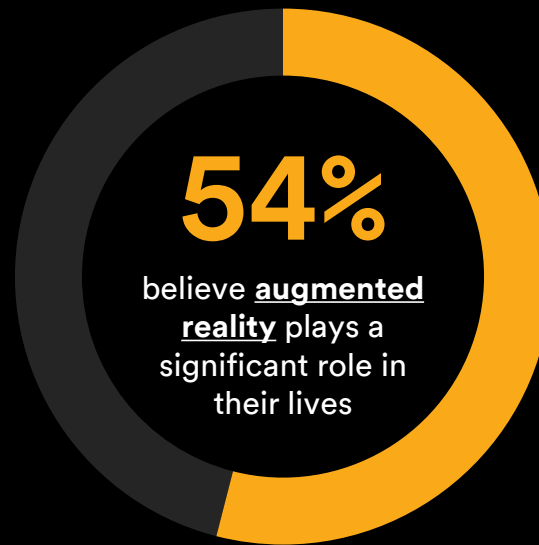
Familiarity:

(Very + Somewhat Familiar)



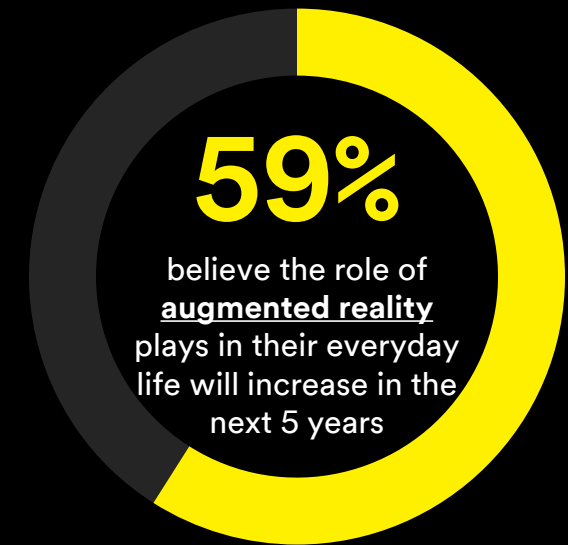
Current Role:

(Very + Somewhat Significant)



Future Role:

(Increase in the next 5 years)

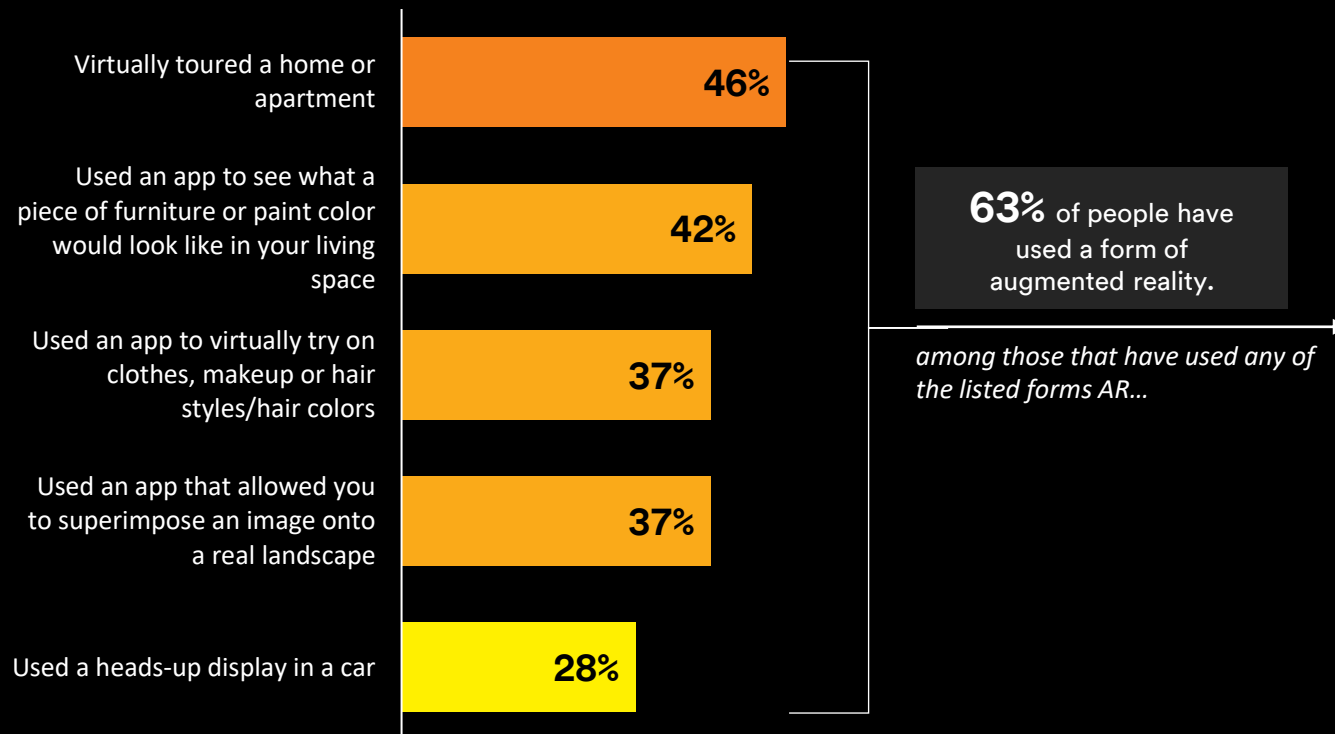


Those ages 18-40 are more familiar with AR and believe it plays a more significant role in their everyday lives than those 41-65.

Those who have used augmented reality before 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:



Familiarity with AR

68% Total Familiar

(Very + Somewhat)

+13 vs. All Adults ▲

Current Role of AR

76% Total Significant Role

(Very + Somewhat)

+10 vs. All Adults ▲

Future Role of AR

78% Expect an Increased Role

+9 vs. All Adults ▲

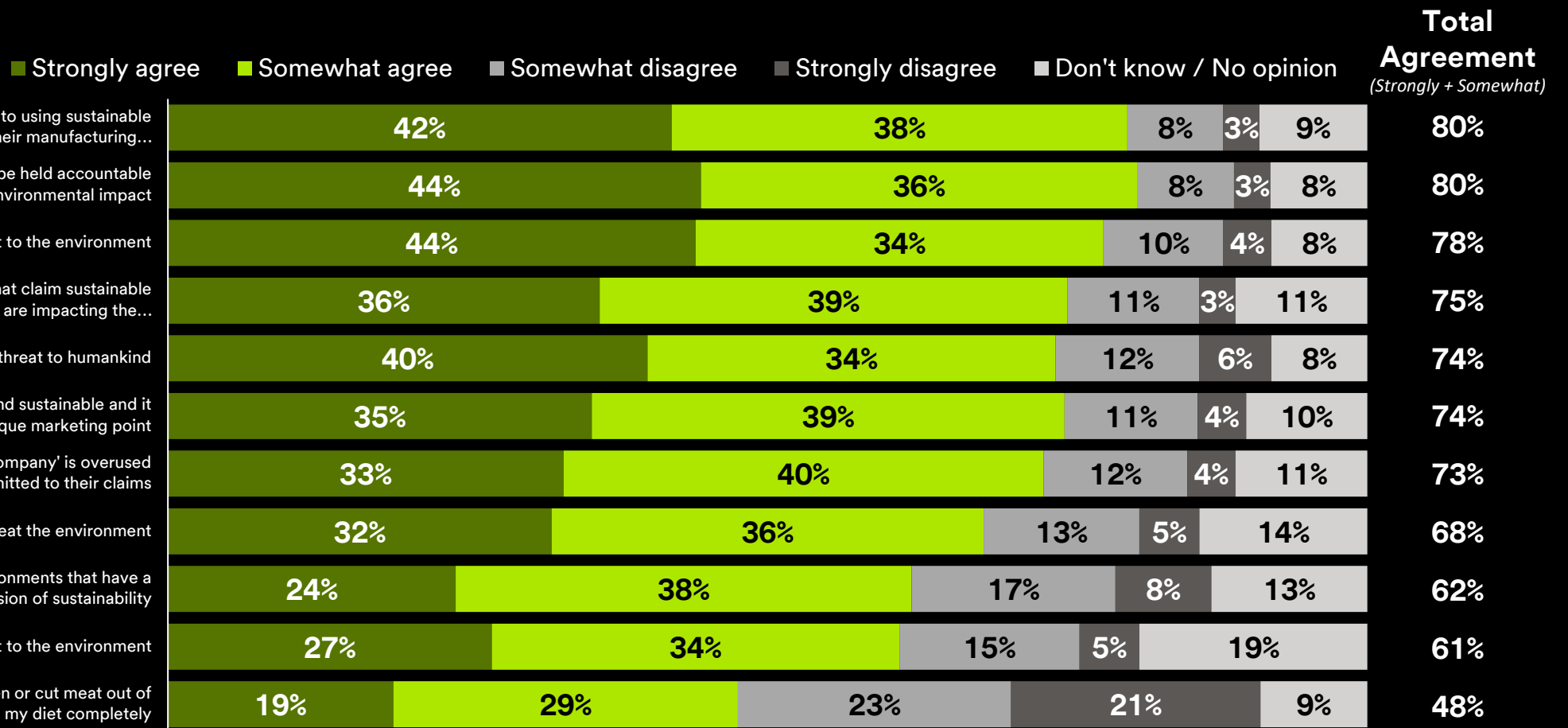
▲ Indicates positive movement outside of the MOE

The image features a black background with several overlapping, stylized green leaves on the left side. The leaves are rendered in a dark green color with a slight gradient and are arranged in a fan-like pattern. The word "Sustainability" is written in a bold, white, sans-serif font across the middle of the image, partially overlapping the leaves.

Sustainability

Most agree that companies and governments should be held accountable for their environmental impact and that businesses need to be more committed to using sustainable materials for manufacturing.

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



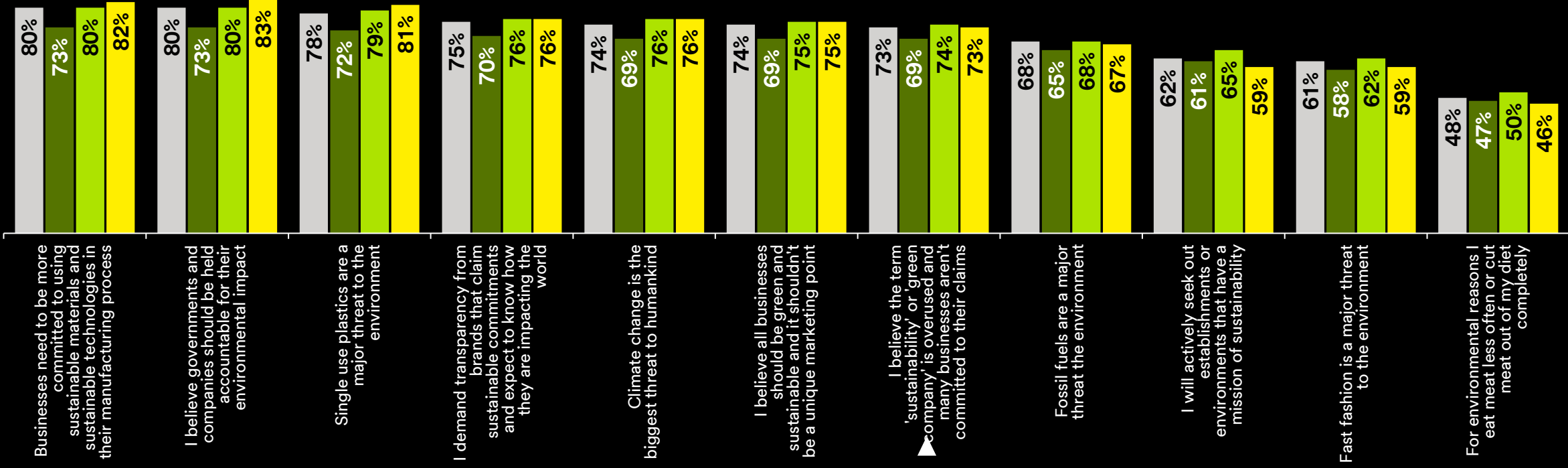
Those over the age of 25 are more likely to agree with each pro-environmental statement than those ages 18–24.

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

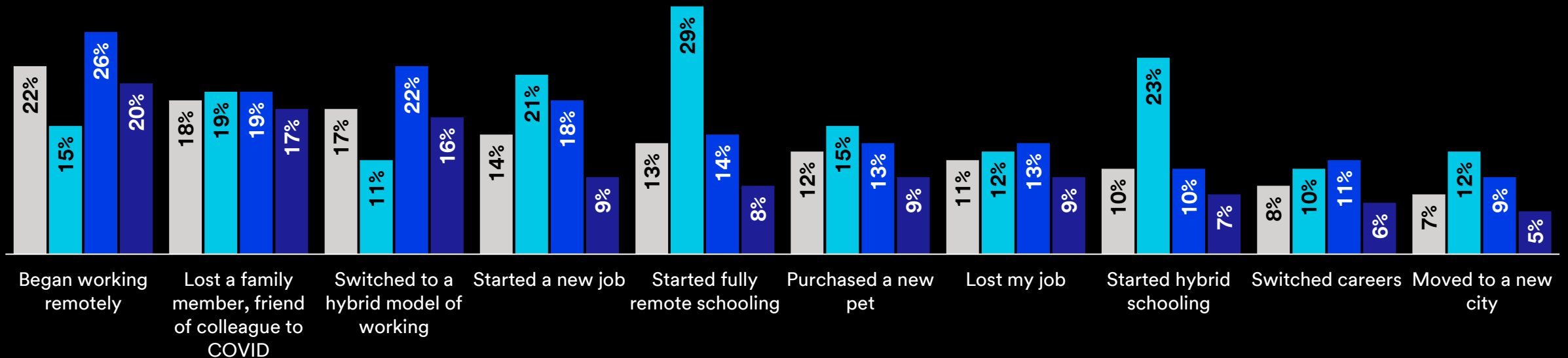
A majority have experienced a significant life change as a result of the pandemic. Those ages 18-40 are more likely to have started fully remote or hybrid schooling than other groups.

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



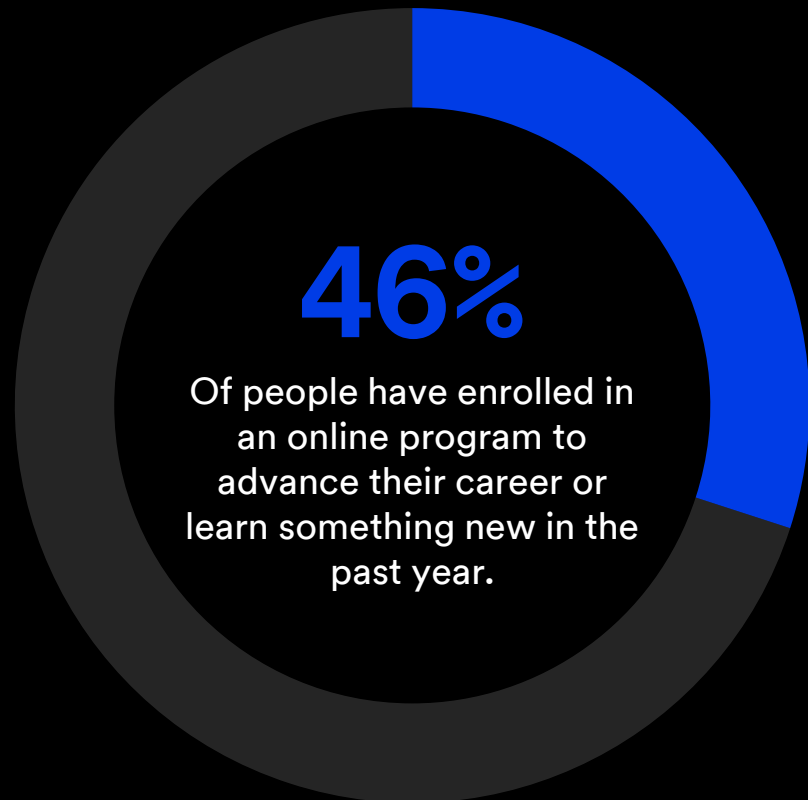
68% Of people have experienced a significant life change as a result of the pandemic

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



In the past year, just under half of people have enrolled in an online training program to advance their career or learn something new.

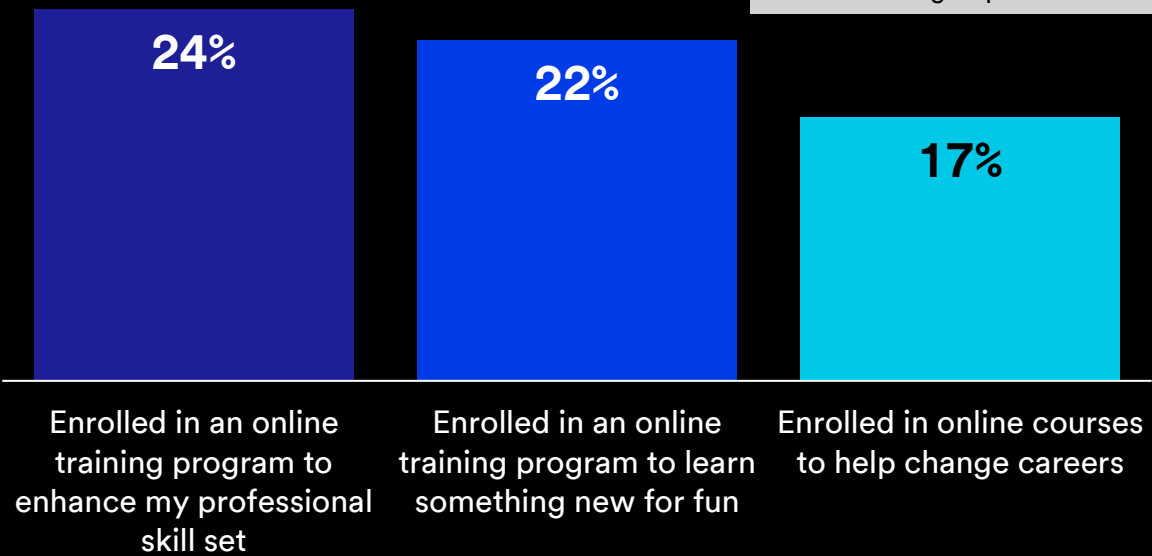
In the past year have you done any of the following?



What did they enroll in?

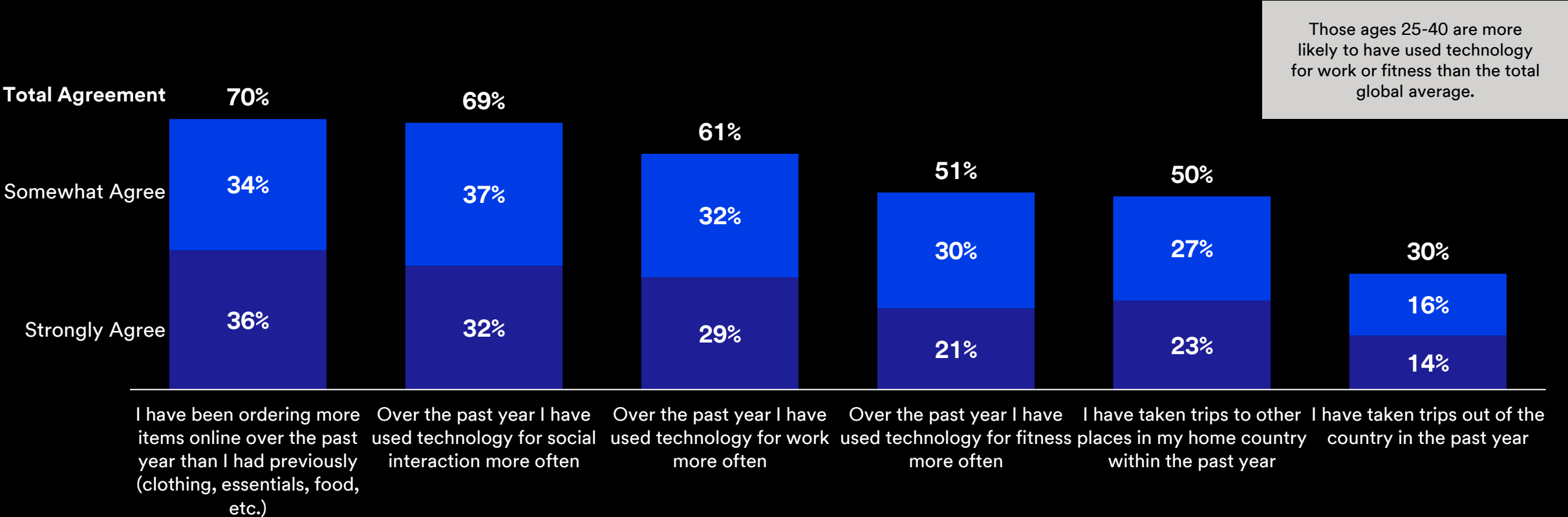
(among all respondents)

Those ages 25-40, urbanites, and parents are more likely to have enrolled in an online training program than other groups.



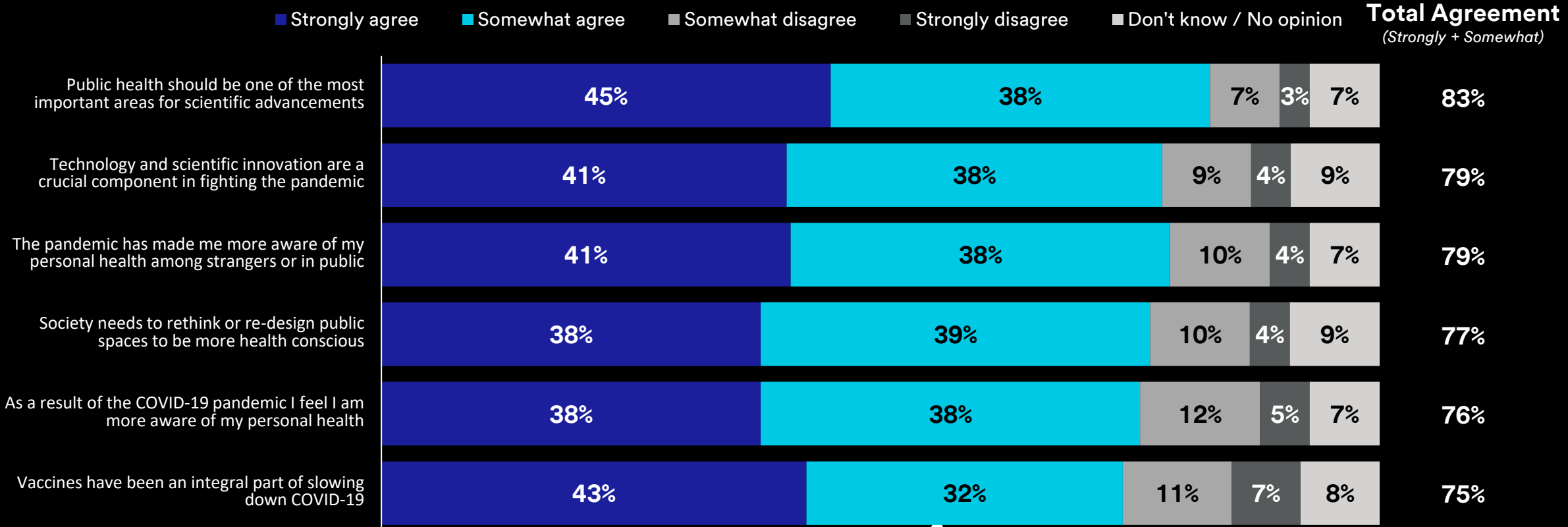
Over the past year, most have ordered more items online, used technology more often for social interaction, and used technology for work more often than they had previously.

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



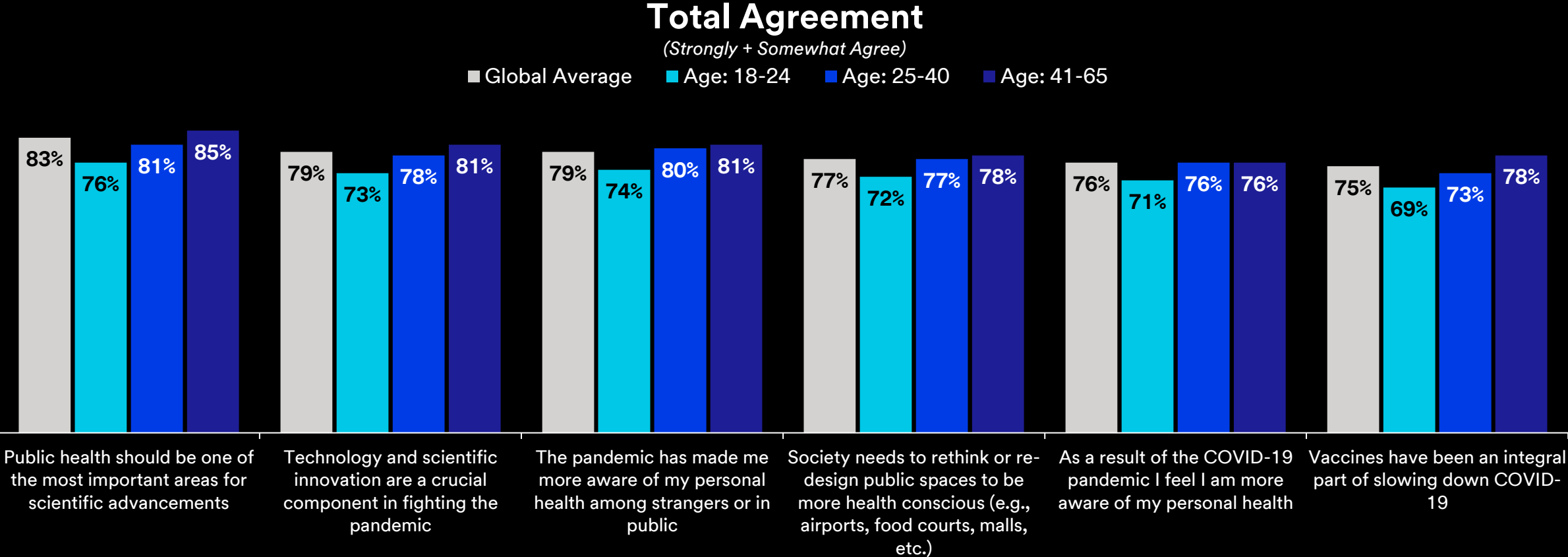
The pandemic has impacted how most people view public health and the role of science and technology in keeping people safe.

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



Those ages 41-65 are more likely to agree with statements related to impact science and technological advancements on public health.

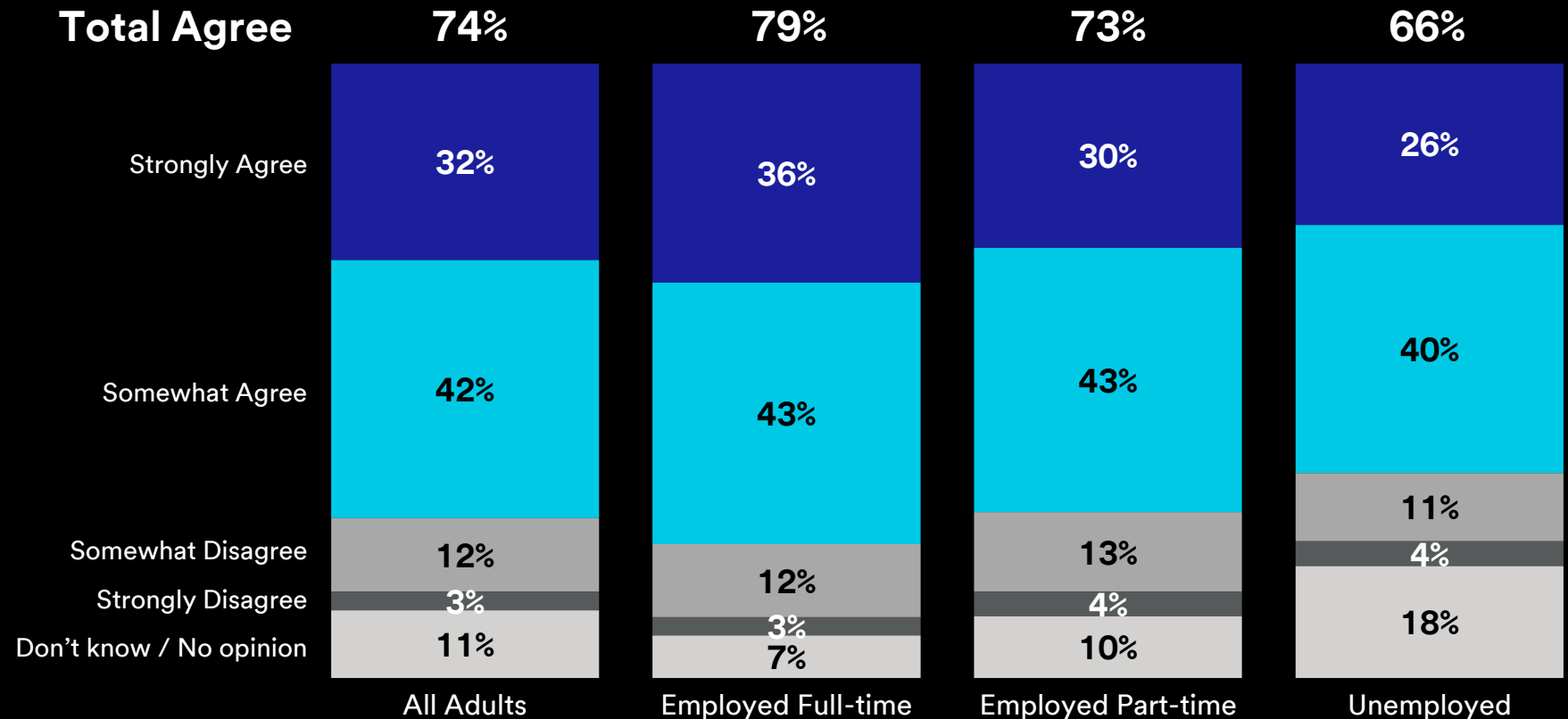
How much do you agree or disagree with each of the following statements?



Most agree science and technology during the pandemic have changed the work environment forever.

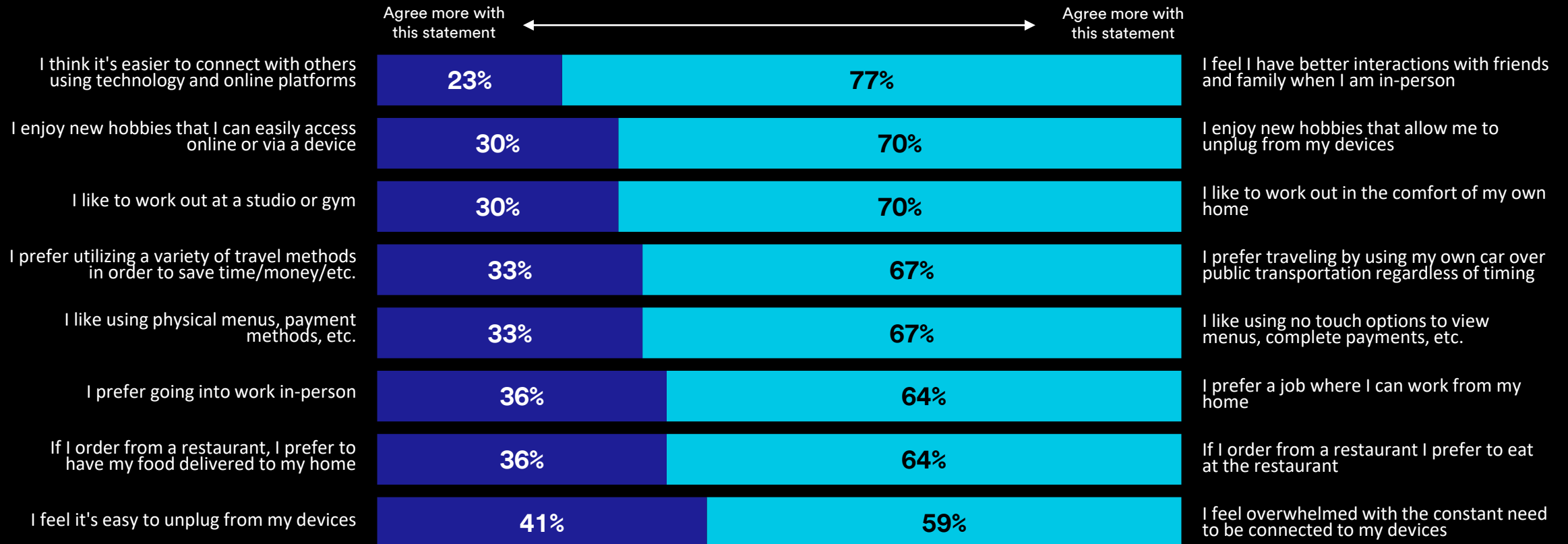
How much do you agree or disagree with each of the following statements?

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



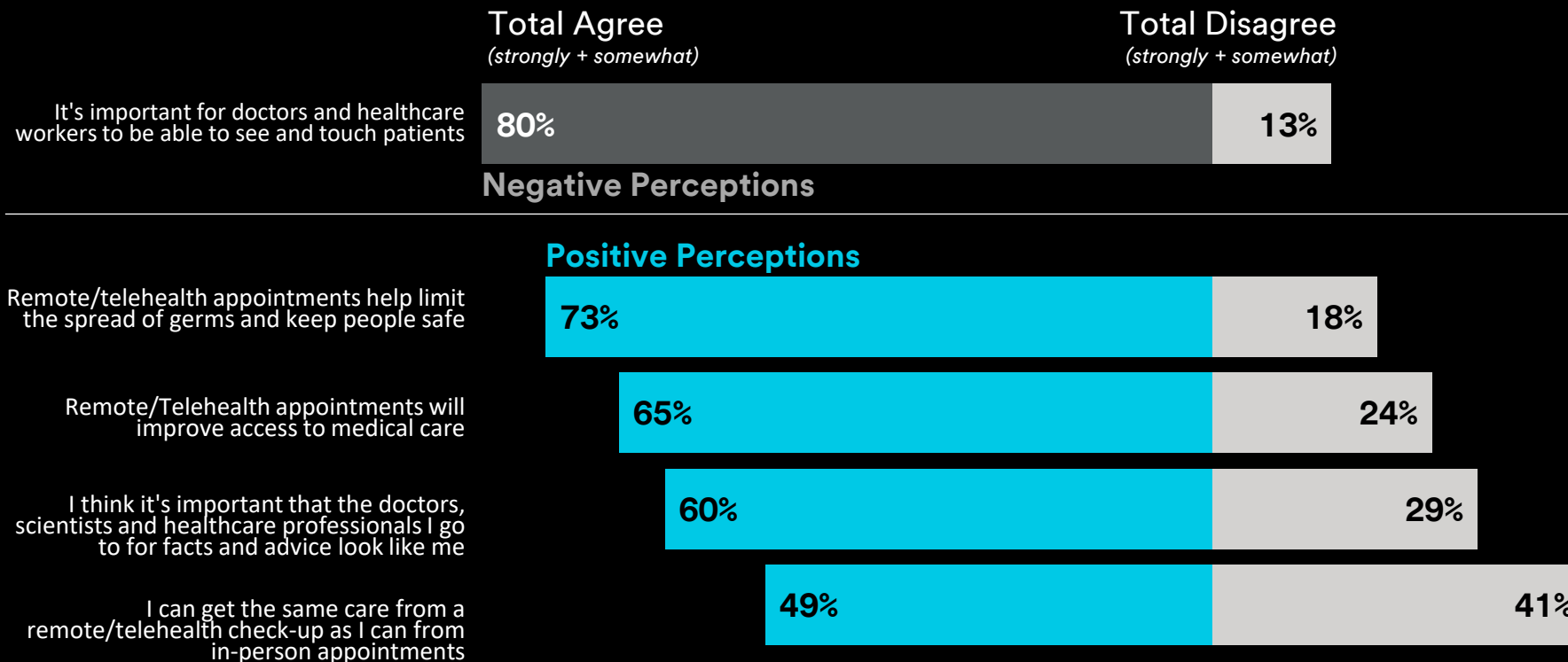
People prefer in-person socialization and hobbies to virtual or online alternatives. However, most prefer working from home, working out at home, and paying with no touch menu and payment options to alternatives.

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



People are split on how they feel about remote/telehealth with many agreeing that telehealth improves access and can keep people safe, but most also agree that it's important for doctors to see and touch patients.

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



among those that have used telemedicine:

85% agreement "Remote/telehealth appointments help limit the spread of germs and keep people safe"
+12 vs. All Adults ▲

79% agreement "Remote/Telehealth appointments will improve access to medical care"
+14 vs. All Adults ▲

64% agreement "I can get the same care from a remote/telehealth check-up as I can from in-person appointments"
+15 vs. All Adults ▲

▲ Indicates positive movement outside of the MOE

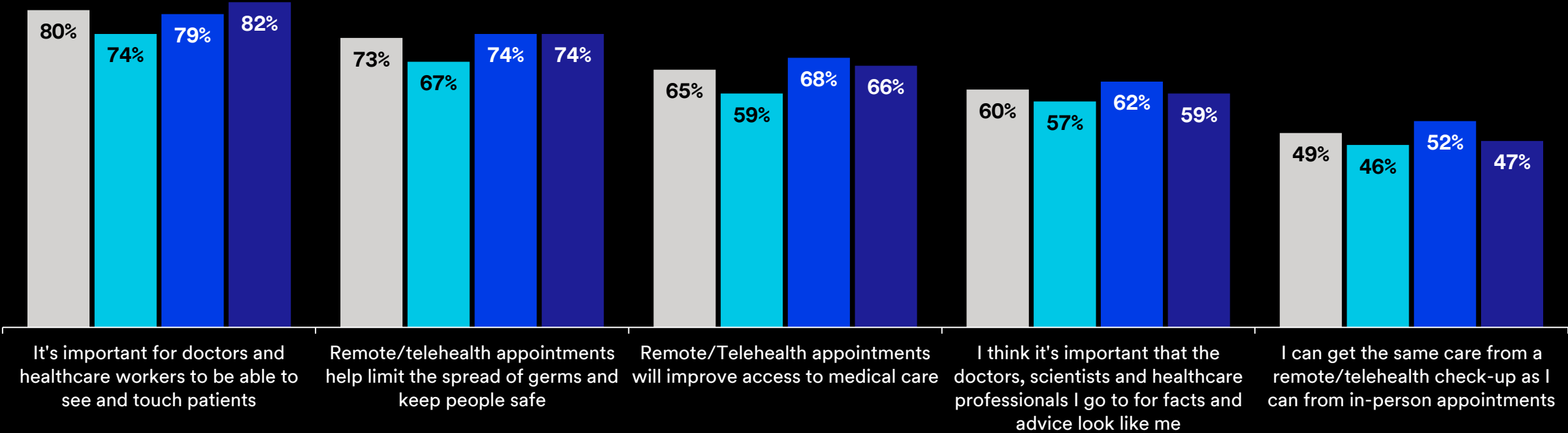
The older people get the more they agree that it's important for doctors and healthcare workers to be able to see and touch patients.

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





Thank you