



3M | Futures

Germany Survey Results

Germany

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

Germans believe science and technology should prioritize finding a cure for Alzheimer's and dementia, expanding internet access for all, and solving humanitarian crises like immigration, famine, conflict and extreme poverty.

2

Most are concerned about the impacts of social media, and roughly a quarter of German adults also believe 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, will be interesting to those who are concerned about the potential harms of technology.

Methodology: This poll was conducted between December 3-December 13, 2021 among a sample of 2,000 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 Germans 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 the potential for AI technology to help humans do more work faster and smarter, 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 3-December 13, 2021 among a sample of 2,000 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

Only one-third are familiar with augmented reality, but most expect the role of augmented reality in our everyday lives to increase over the next 5 years.

- Despite only one-third thinking that AR currently plays a significant role in their everyday life, many are interacting with these technologies without even realizing – most Germans have used a form of augmented reality before.

2

Half of Germans are familiar with virtual reality but only one-third feel it plays a significant role in their lives today. 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 December 3-December 13, 2021 among a sample of 2,000 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

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

Older Germans are more likely to agree that climate change is a threat, and that business and governments should be held accountable. Willingness to buy or lease an all-electric vehicle or rent or own a fully sustainable home is higher among younger Germans.

Methodology: This poll was conducted between December 3-December 13, 2021 among a sample of 2,000 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

1

Over half of Germans have experienced a significant life change because of the pandemic. Those ages 18-24 are even more likely to have experienced a change, primarily due to the pandemic's impact on their education.

2

Due to the pandemic, much of Germans' daily life has moved online. Most Germans would like to continue exercising and working at home, but most prefer socializing in-person.

3

Most agree that telehealth could increase access to medical care and that telehealth could reduce the spread of germs, but many also believe it is important that medical professionals be able to see and touch patients.

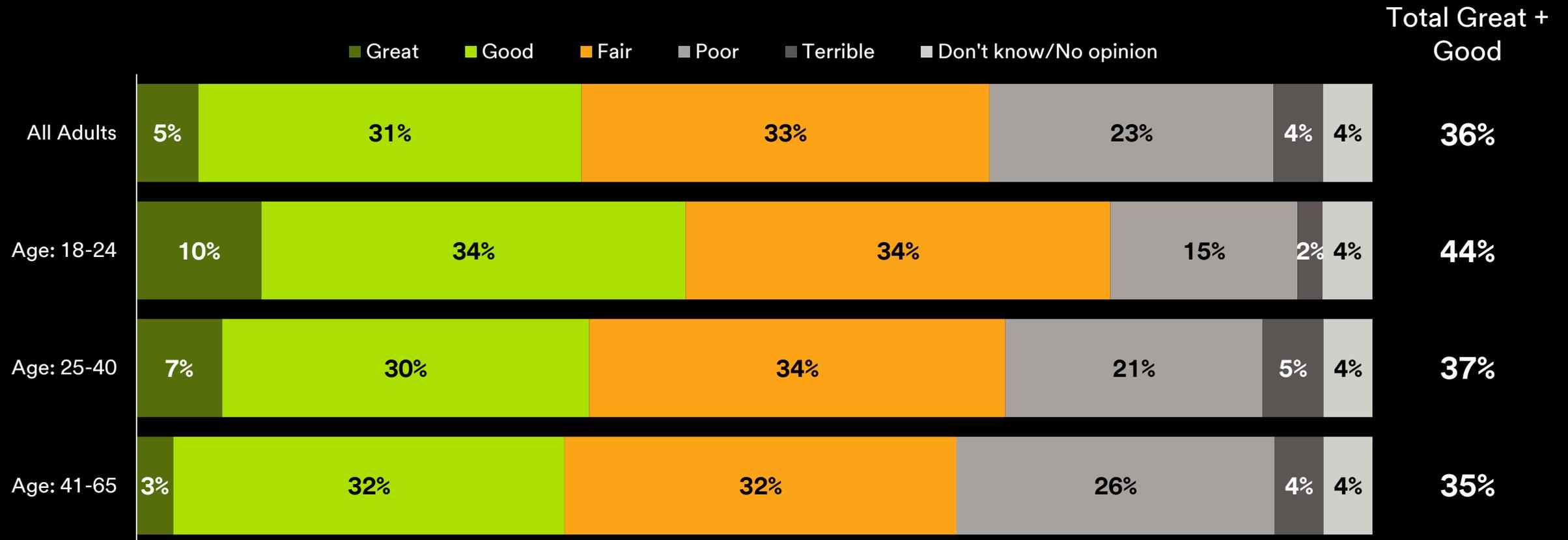
Methodology: This poll was conducted between December 3-December 13, 2021 among a sample of 2,000 Adults. The interviews were conducted online. An oversample of N=200 of was also fielded among those 18-24 – The interviews were conducted online. Results from the full survey have a margin of error of plus or minus 2 percentage points.



Science & Technology Perceptions

About one third of German adults feel Germany has good or great technological access. Younger Germans are more likely to say Germany is doing great.

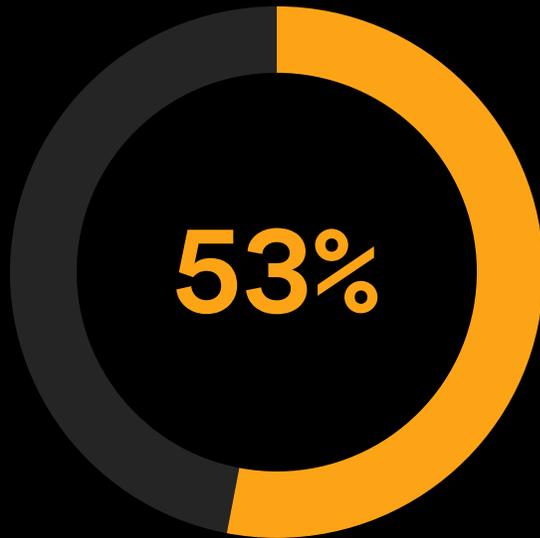
How would you rate Germany on technological access for its citizens?



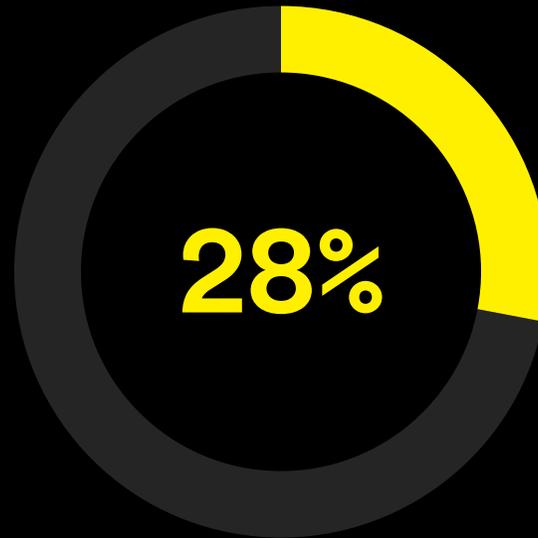
Over half of Germans believe science and technological innovation should focus on finding solutions for environmental and societal problems.

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

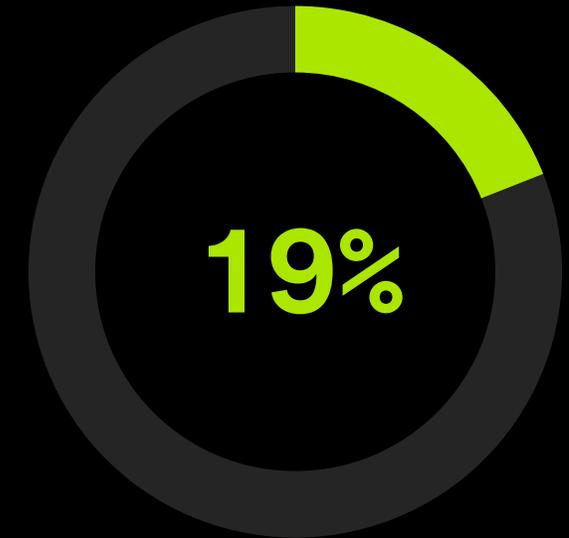
"Find solutions to today's **environmental and societal problems**, including climate change, sustainability, social injustice, clean water access, homelessness, etc."



"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."



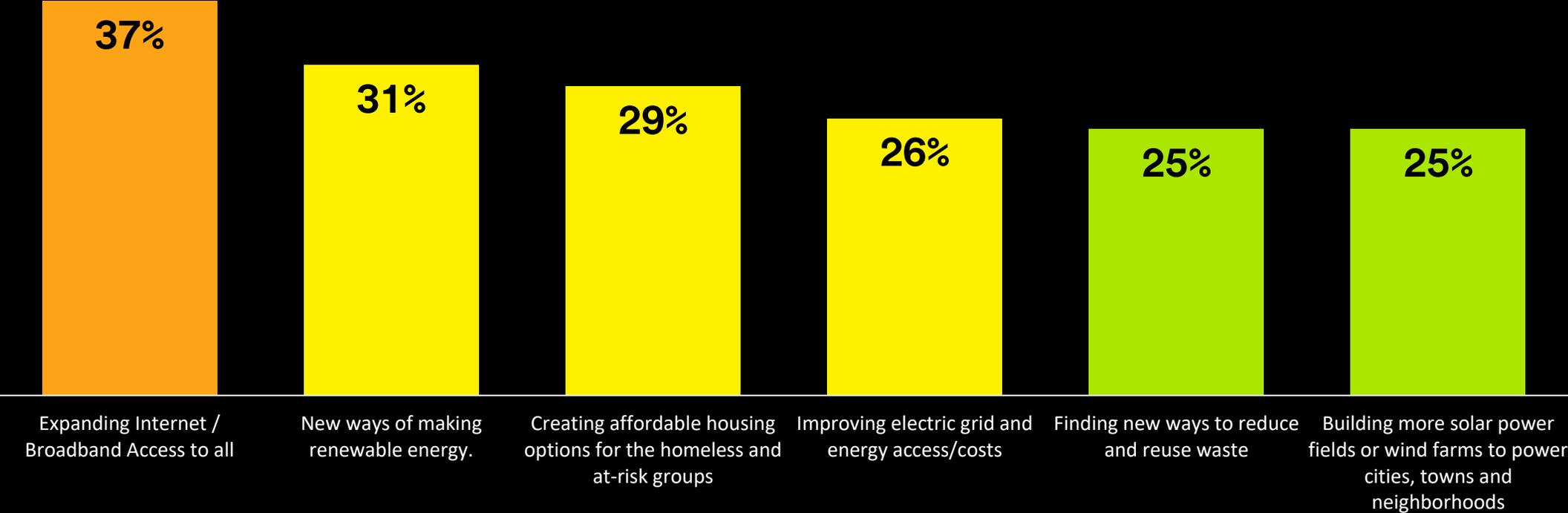
"**Advance the human race to achieve the impossible**, seeing how far we can innovate to create a futuristic and convenient world."



Germans believe internet access, renewable energy, and affordable housing should all be top priorities for science and technology innovation.

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:

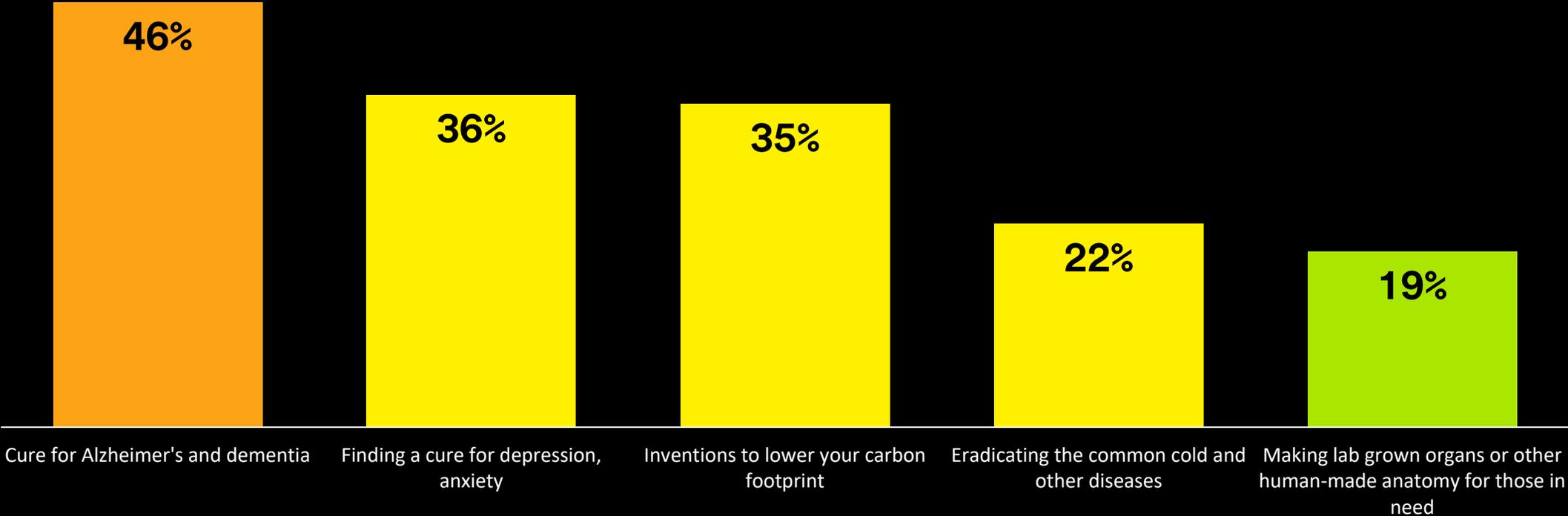


*'Finding new ways to reduce and reuse waste' and 'Building more solar power fields or wind farms to power cities, towns and neighborhoods' both included since they have the same % and are tied for the 5th selected response.

Adults in Germany agree that innovation should prioritize cures for Alzheimer's, dementia, depression, and anxiety, and ways to lower carbon footprints.

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.

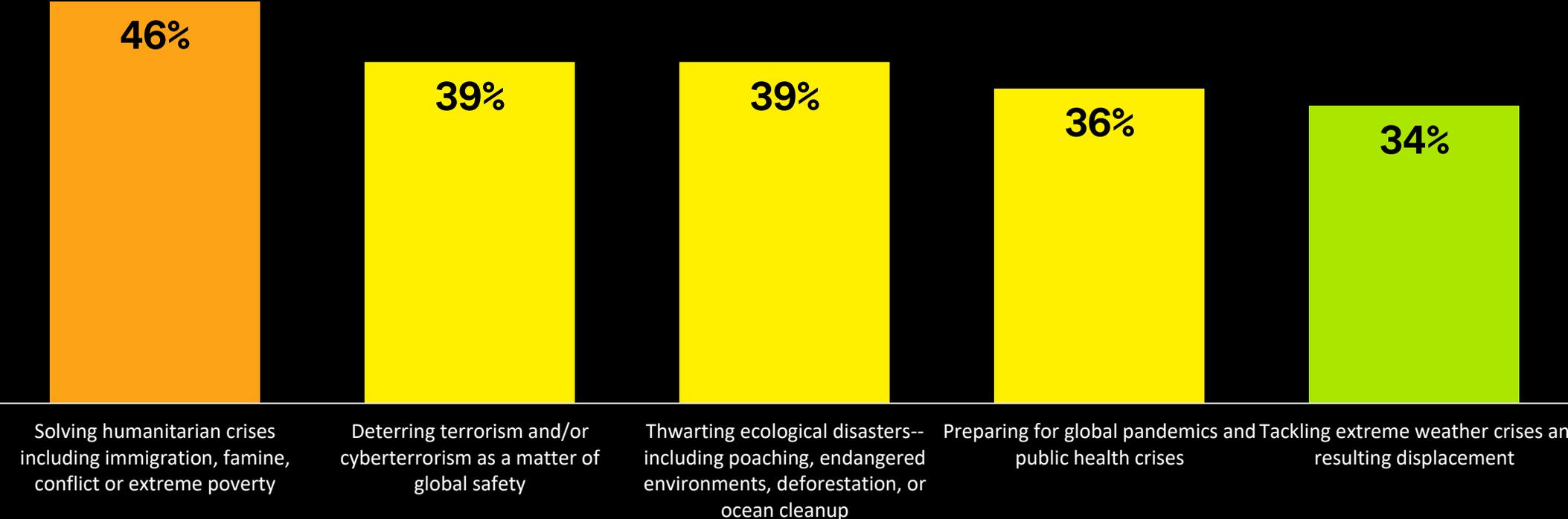
Top 5 selected:



Most Germans' top priority is solving humanitarian crises, followed by deterring terrorism and thwarting ecological disasters.

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?

 **65%**

of people agree...

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

 **68%**

of people agree...

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

 **65%**

of people agree...

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

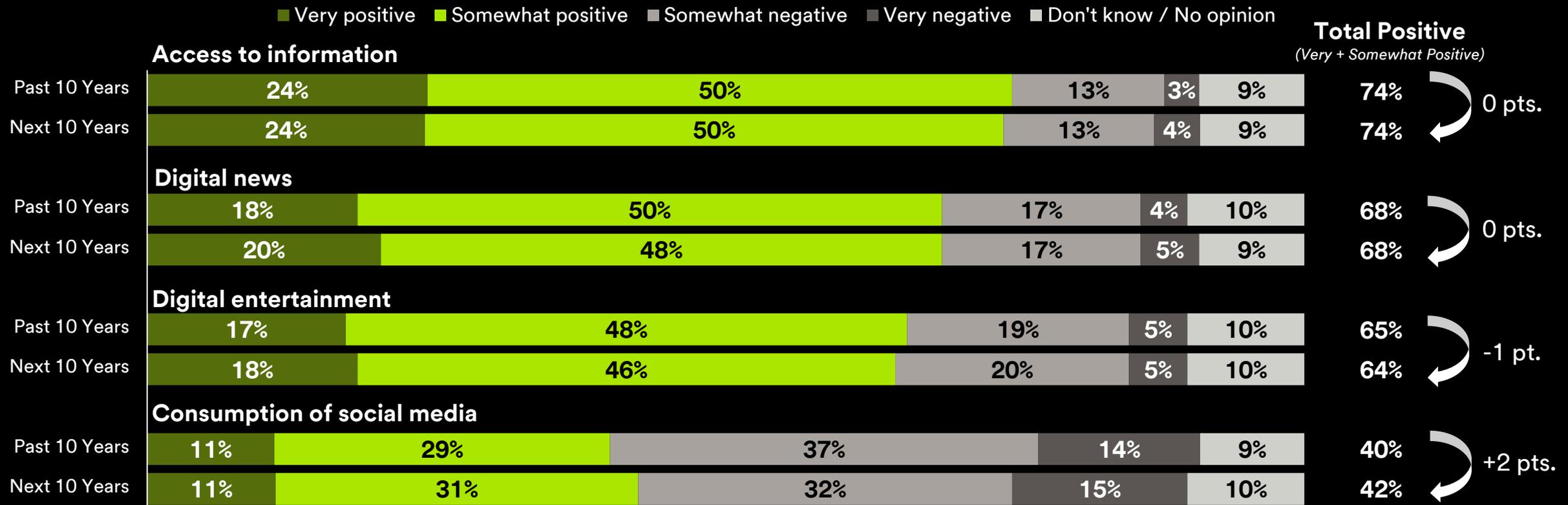
 **67%**

of people agree...

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

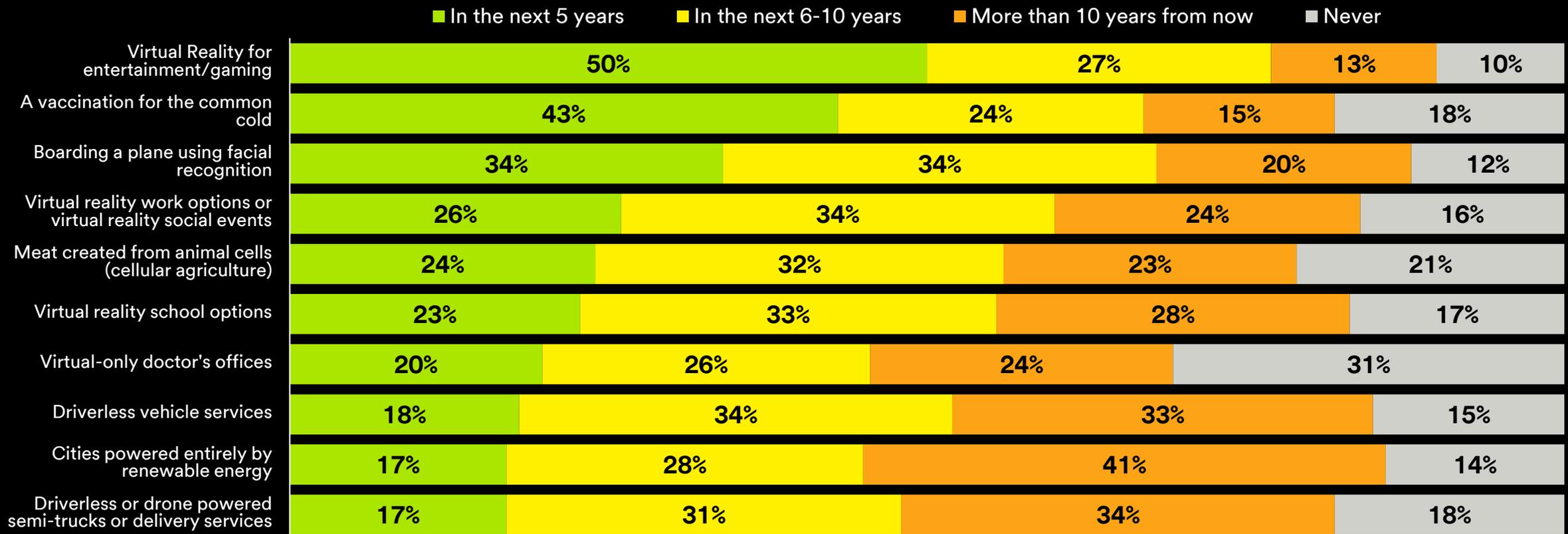
Germans expect technological advancements will have a similar impact in the next 10 years as they've had over the past 10 years. Consumption of social media is perceived to have had a less positive impact on society than other advancements.

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?



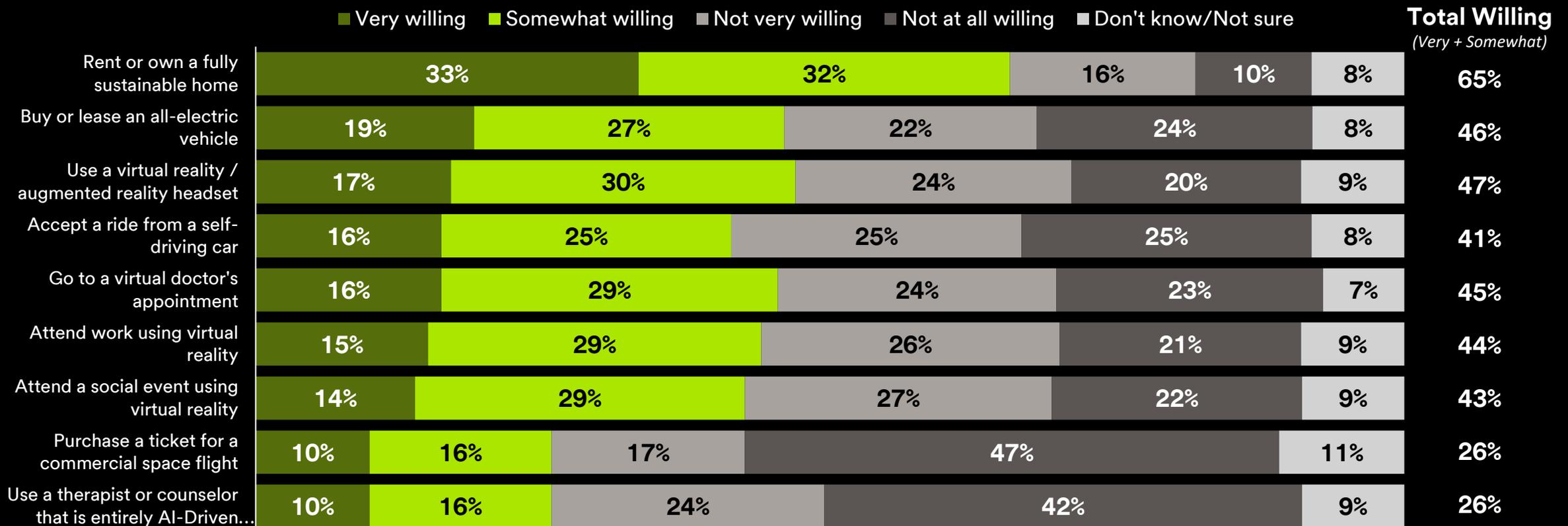
Most believe that virtual reality for entertainment or gaming will be a normal part of our everyday lives sooner than other advancements.

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



Almost two-thirds of Germans are willing to rent or own a fully sustainable home, and almost half are willing to use an all-electric vehicle or use a VR/AR headset.

How willing are you to try each of the following ?



The background features a dark purple to black gradient with a glowing circuit board pattern in a lighter purple hue. A solid dark purple rounded rectangle is positioned in the top-left corner. The text 'AI (Artificial Intelligence)' is centered in the lower-left area in a bold, white, sans-serif font.

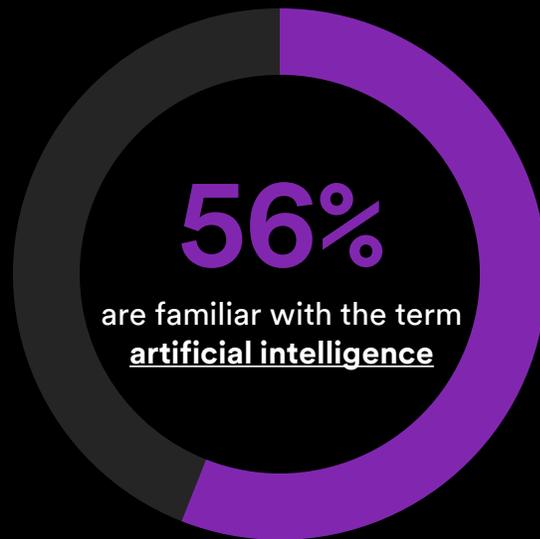
AI (Artificial Intelligence)

Many 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?

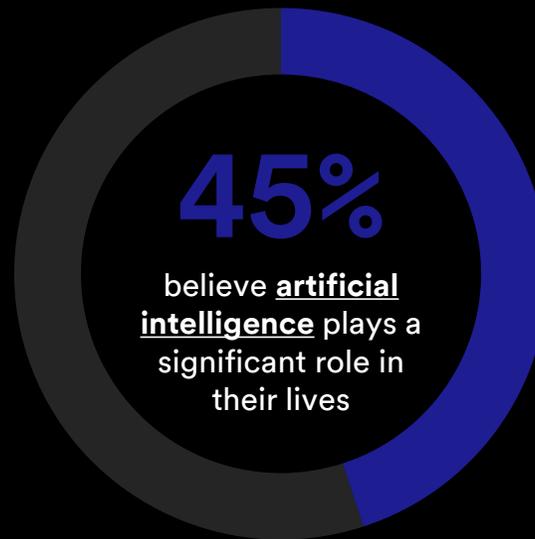
Familiarity:

(Very + Somewhat Familiar)



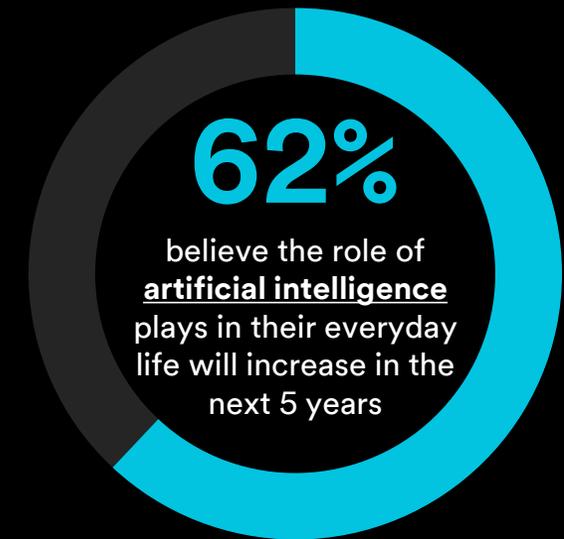
Current Role:

(Very + Somewhat Significant)



Future Role:

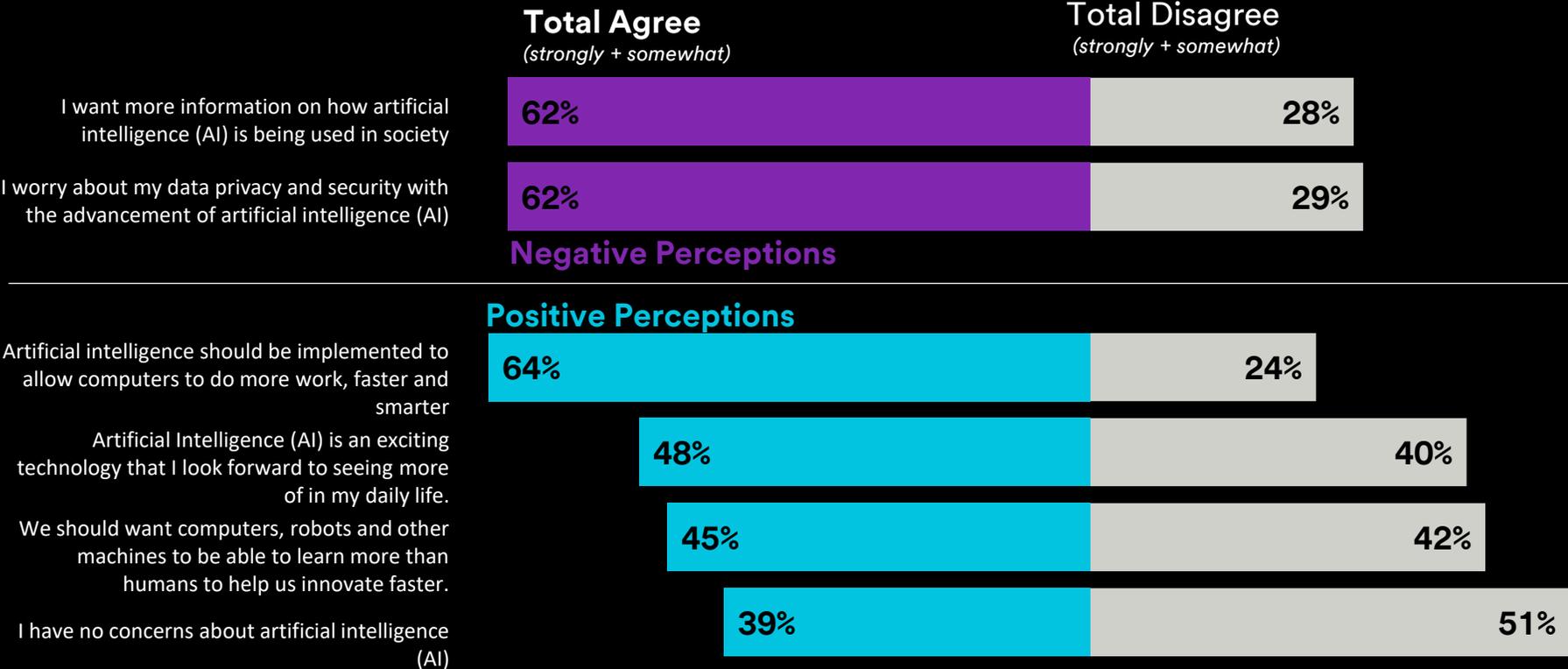
(Increase in the next 5 years)



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.

In general, concerns over AI slightly outweigh optimism. Germans feel AI may make computers more effective, but they are also concerned about data security/privacy.

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

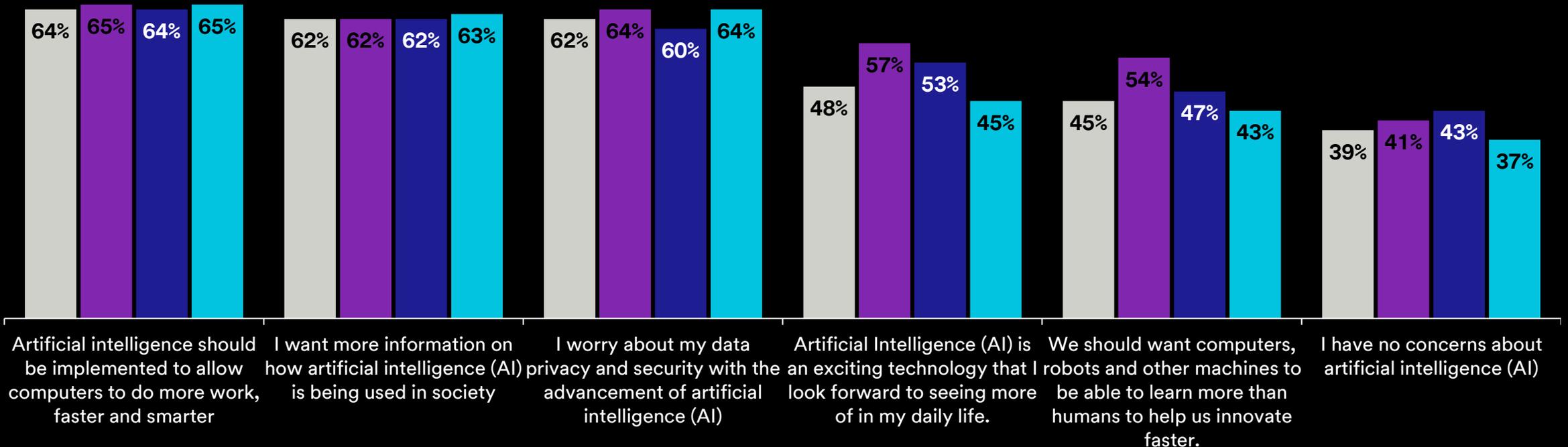


Those ages 18-24 are more likely to be excited about AI technology, though this group also agrees that they want more information on the technology and worries about data privacy.

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

Total Agreement
(Strongly + Somewhat Agree)

■ All Adults ■ Age: 18-24 ■ Age: 25-40 ■ Age: 41-65





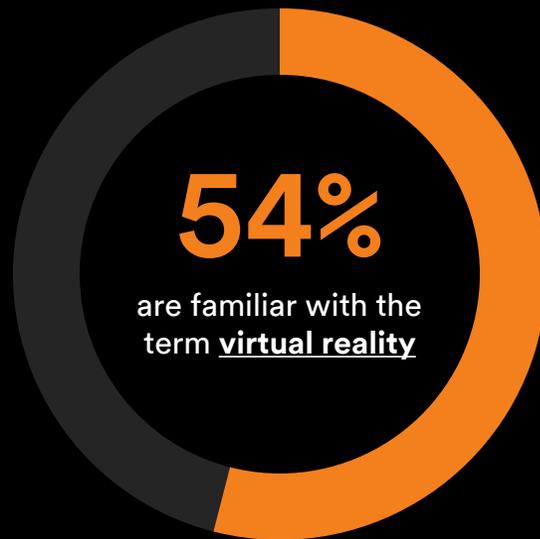
AR & VR **(Augmented Reality** **& Virtual Reality)**

Most are familiar with VR and agree the role of VR in their everyday lives will increase in the next 5 years. Only one-third feel that it currently plays a significant role in their everyday life.

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?

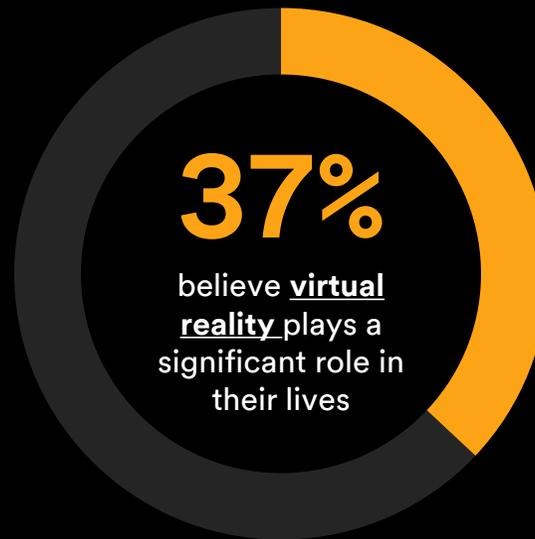
Familiarity:

(Very + Somewhat Familiar)



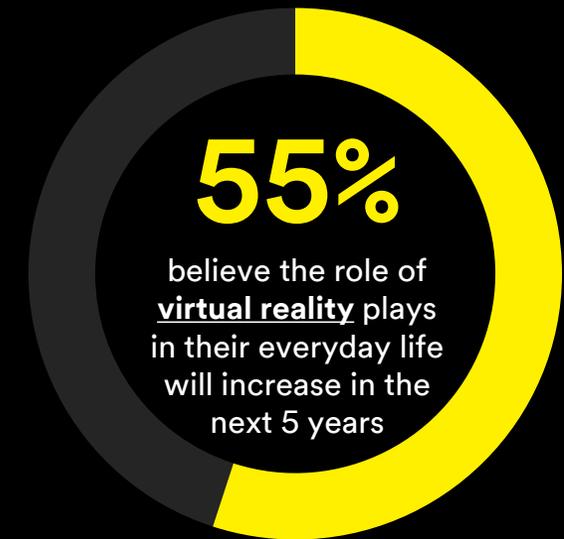
Current Role:

(Very + Somewhat Significant)



Future Role:

(Increase in the next 5 years)



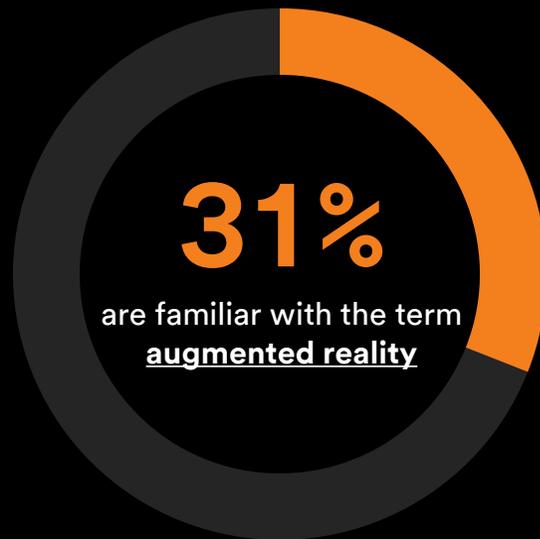
Those ages 18-40 are more familiar with VR and believe it plays a more significant role in their everyday lives than those 41-65.

About one-third are familiar with AR and feel that it plays a significant role in their everyday lives. Almost half 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?

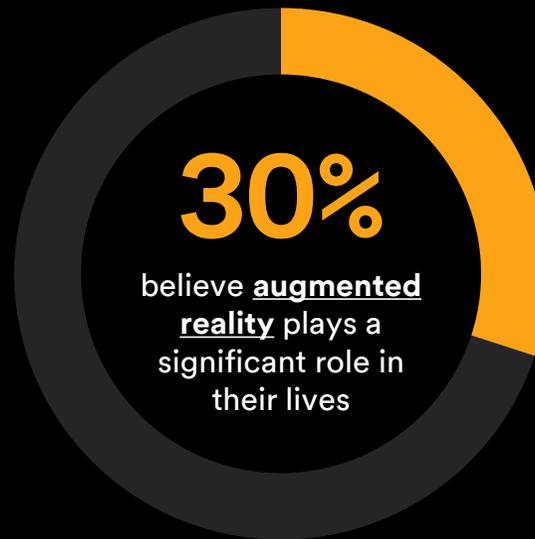
Familiarity:

(Very + Somewhat Familiar)



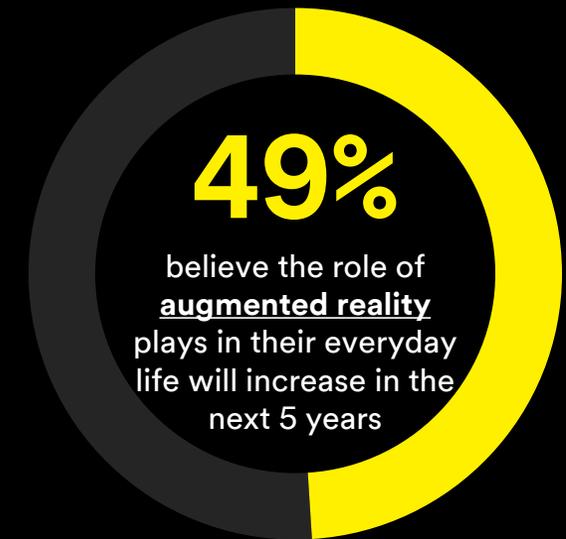
Current Role:

(Very + Somewhat Significant)



Future Role:

(Increase in the next 5 years)

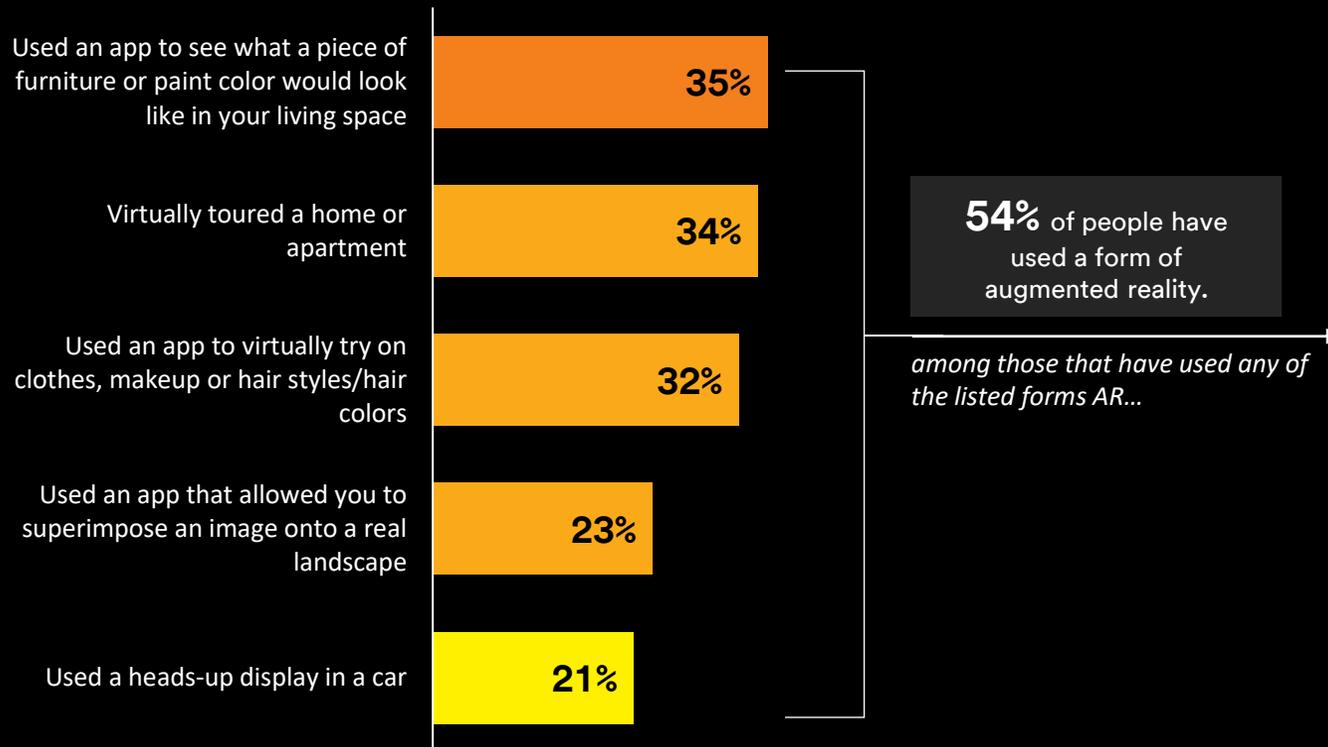


Those ages 18-40 are more familiar with AR and believe it plays a more significant role in their everyday lives than those 41-65.

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

41% Total Familiar

(Very + Somewhat)

+10 vs. All Adults ▲

Current Role of AR

42% Total Significant Role

(Very + Somewhat)

+12 vs. All Adults ▲

Future Role of AR

57% Expect an Increased Role

+8 vs. All Adults ▲

▲ Indicates positive movement outside of the MOE

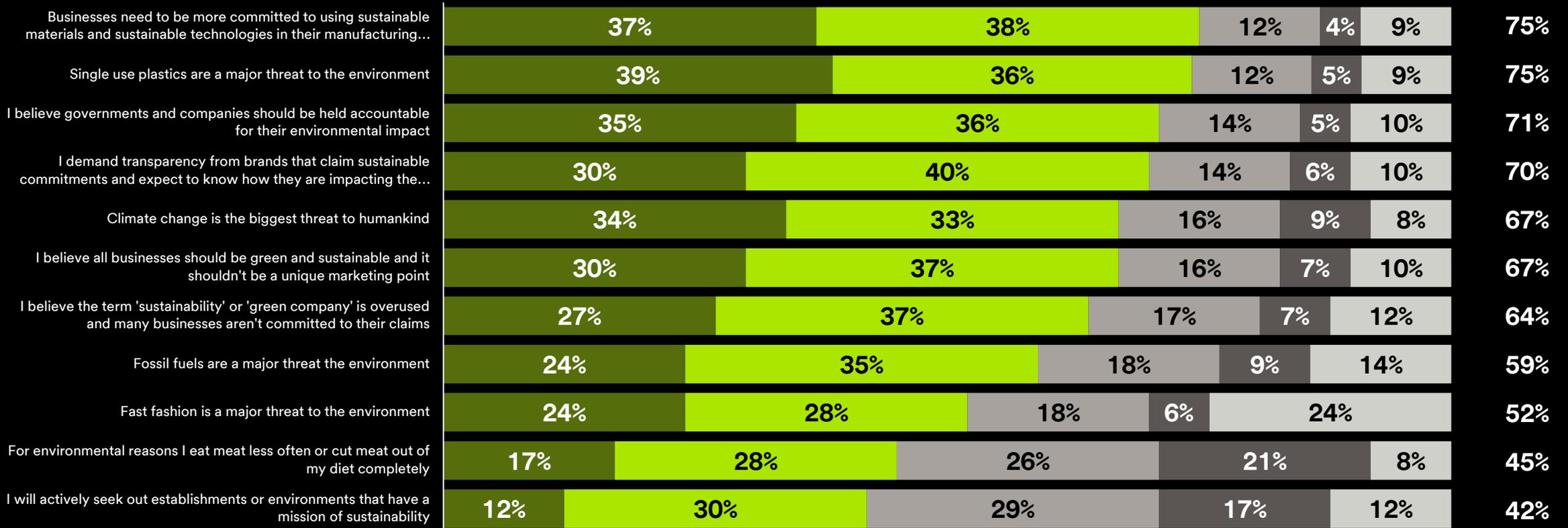
The background features several overlapping, dark green leaf shapes on a solid black background. The leaves are positioned primarily on the left side of the frame, with some extending towards the center. The word "Sustainability" is written in a bold, white, sans-serif font across the middle of the image, overlapping the green leaves.

Sustainability

Germans agree most strongly that businesses need to be more committed to sustainability, and that single-use plastics are a major threat to the environment.

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

■ Strongly agree
 ■ Somewhat agree
 ■ Somewhat disagree
 ■ Strongly disagree
 ■ Don't know / No opinion
 Total Agreement
(Strongly + Somewhat)



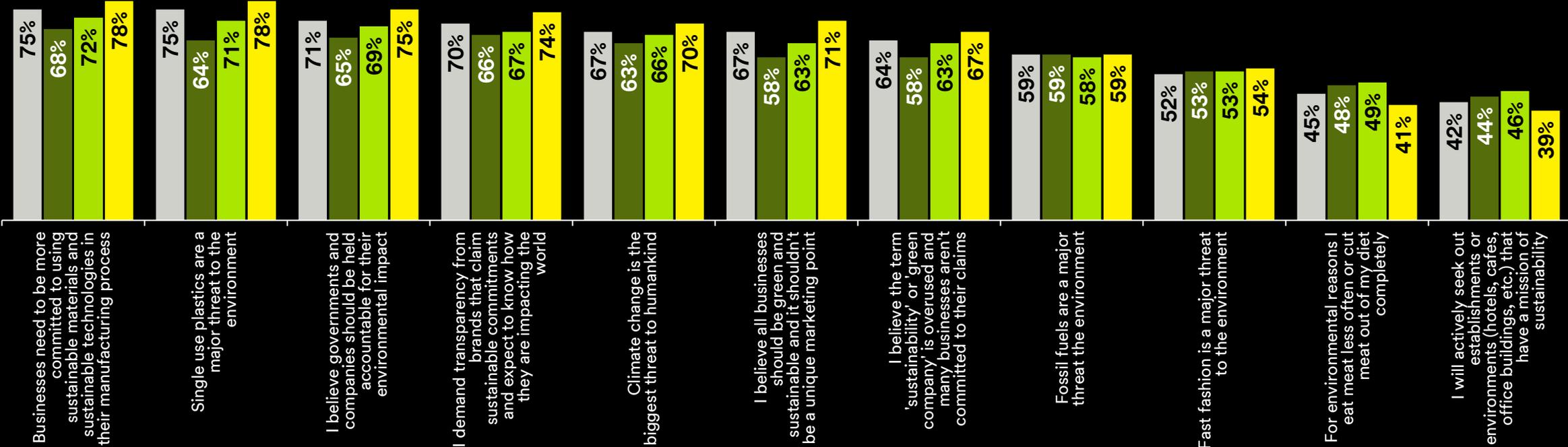
Older Germans are more likely to agree with each pro-environmental statement than those ages 18–24.

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

Total Agreement

(Strongly + Somewhat Agree)

■ All Adults ■ Age: 18-24 ■ Age: 25-40 ■ Age: 41-65

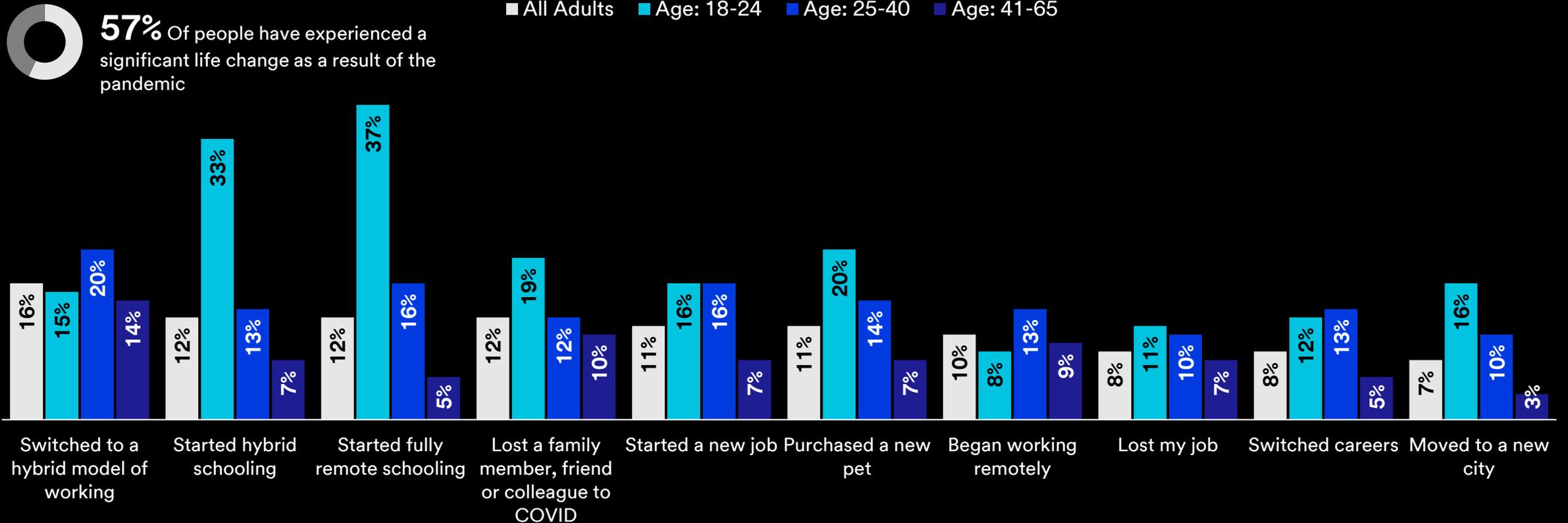




New Paradigm

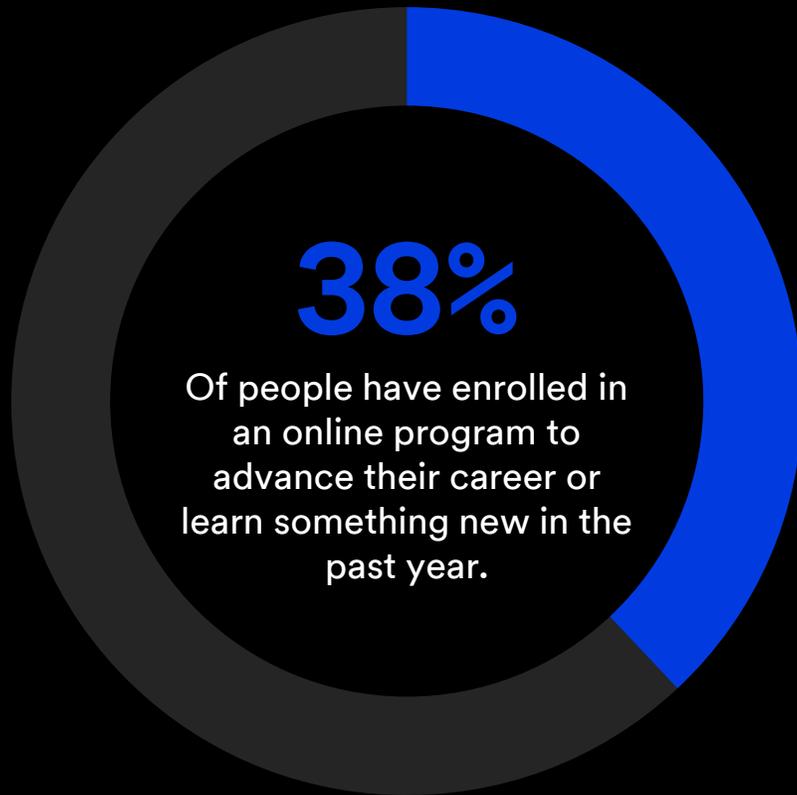
A majority have experienced a significant life change as a result of the pandemic. Those ages 18-24 are more likely to have started fully remote or hybrid schooling than other groups.

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



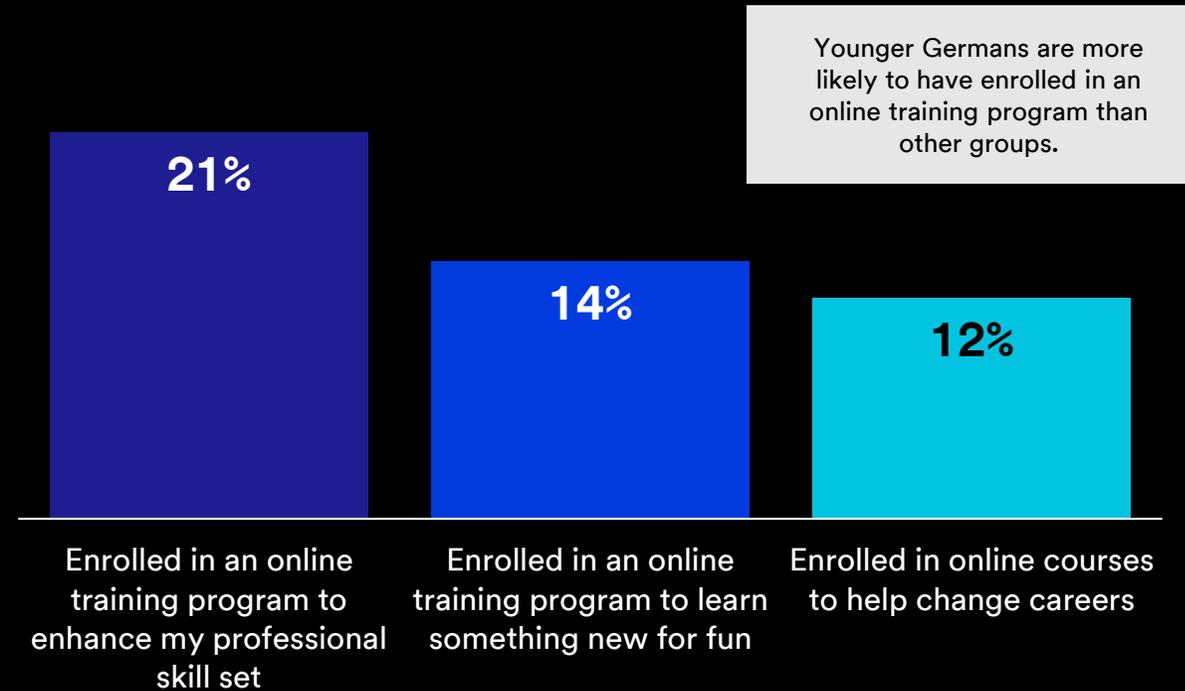
In the past year, over one-third of Germans have enrolled in an online training program to advance their career or learn something new.

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



What did they enroll in?

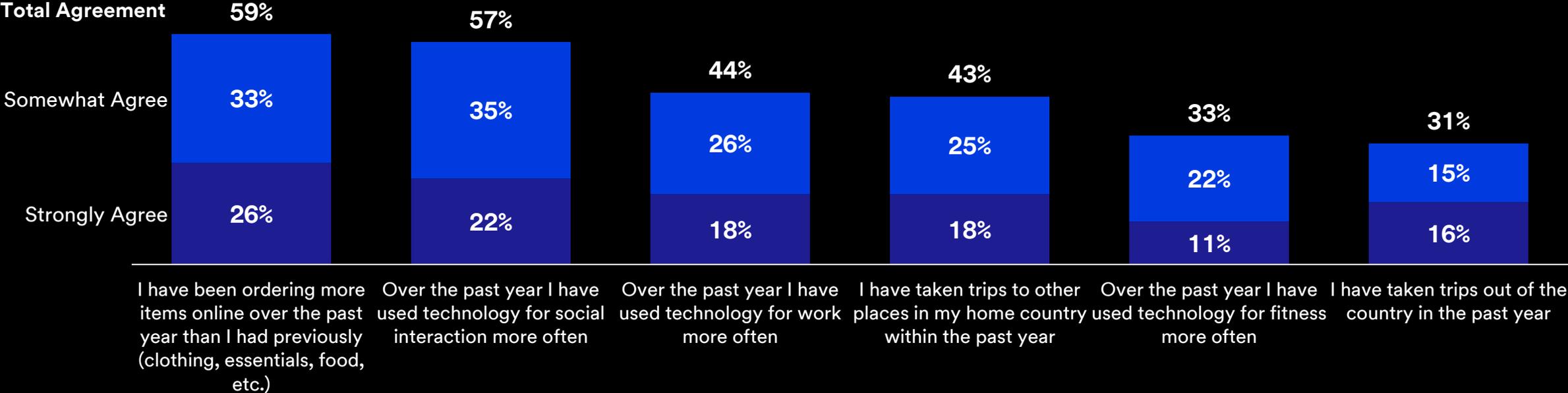
(among all respondents)



Germans have been ordering more online and using technology for social interaction more often this year than they were previously.

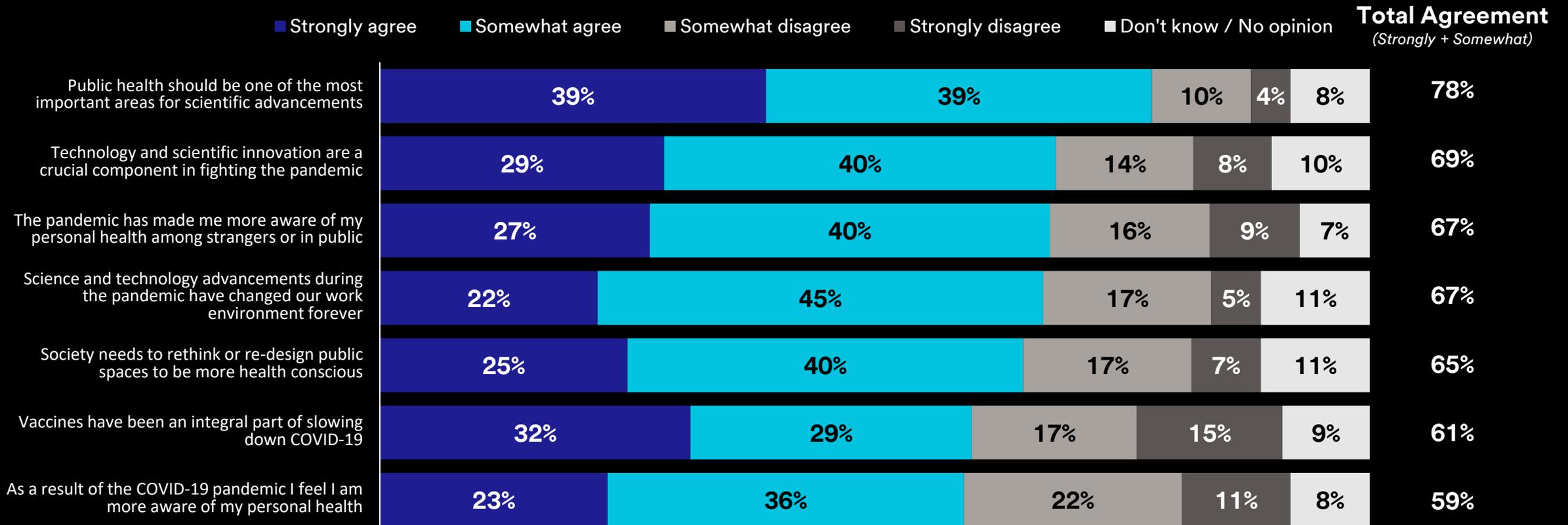
How much do you agree or disagree with each of the following statements?

Those ages 18-40 are more likely to have used technology for social interaction, for fitness, for work more often than other age groups. They are also more likely to have ordered more items online over the past year.



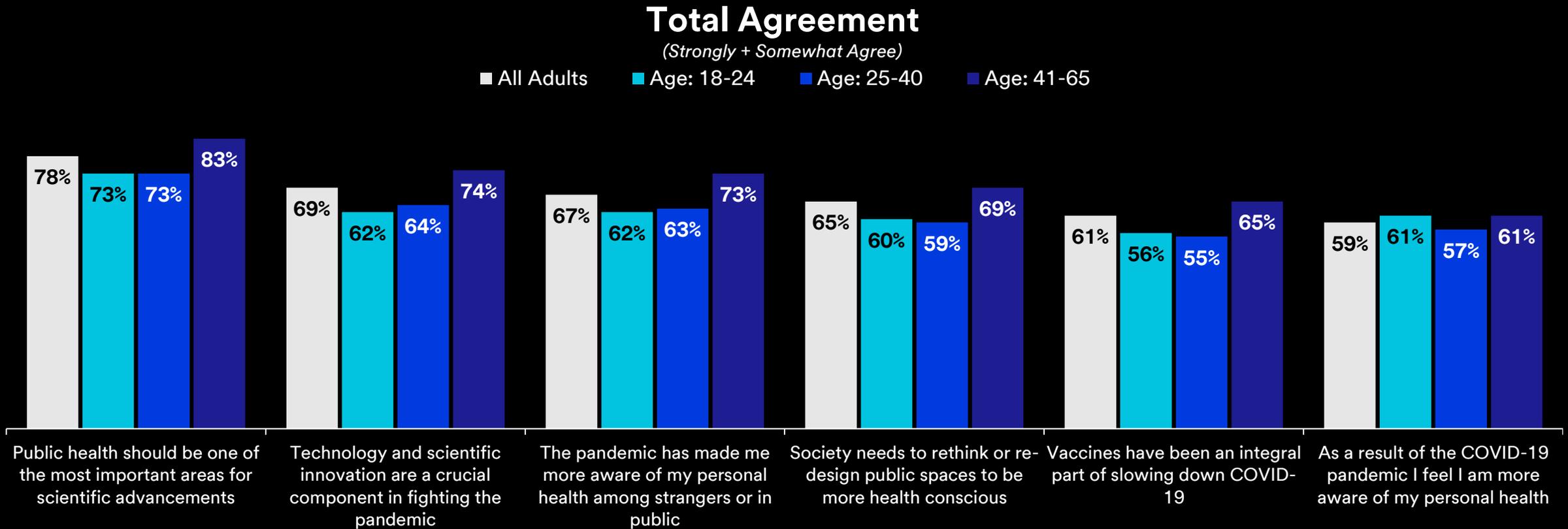
The majority of Germans agree that the pandemic has impacted how they feel about science and technology related to public health.

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 the impact of science and technological advancements on public health.

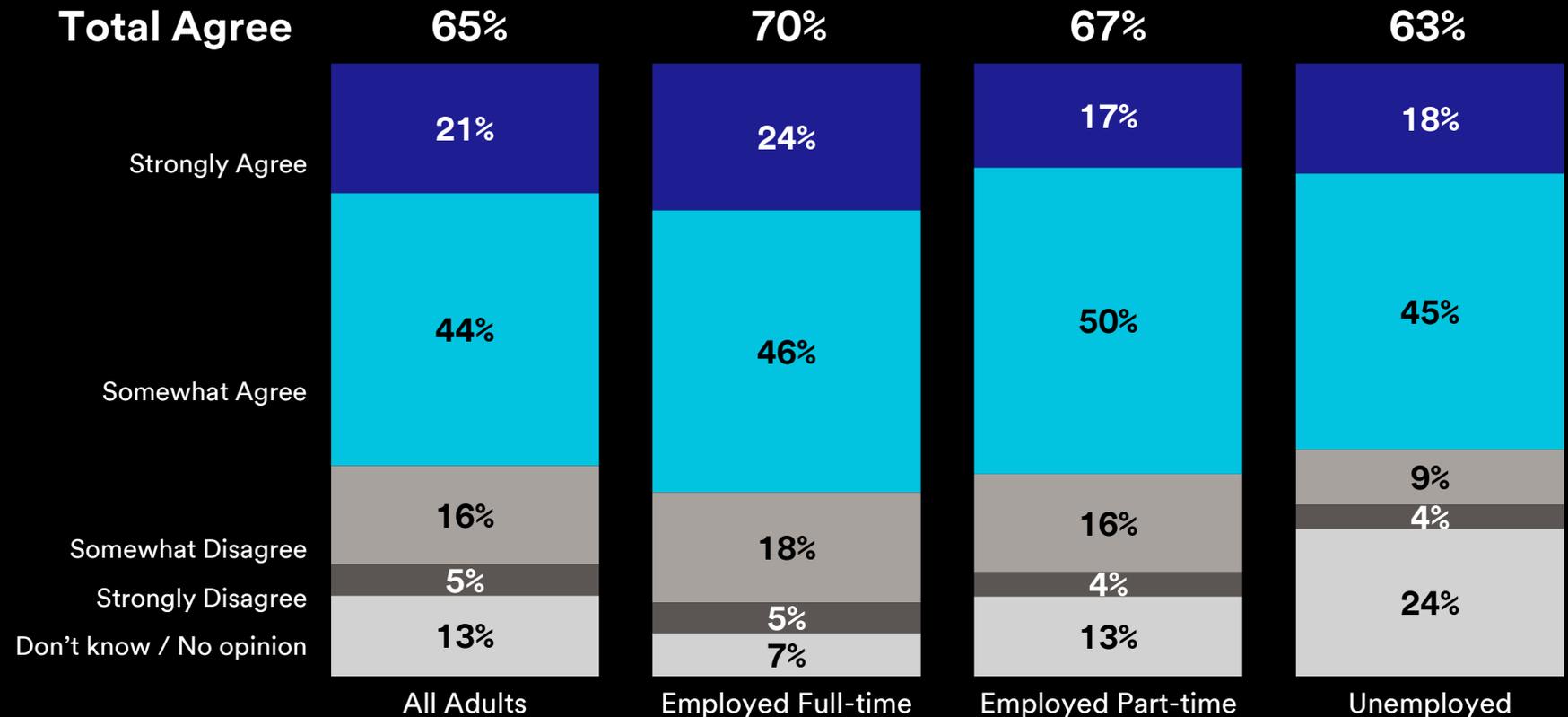
How much do you agree or disagree with each of the following statements?



Germans feel that science and technology during the pandemic has changed the work environment forever – especially those employed full-time or part-time.

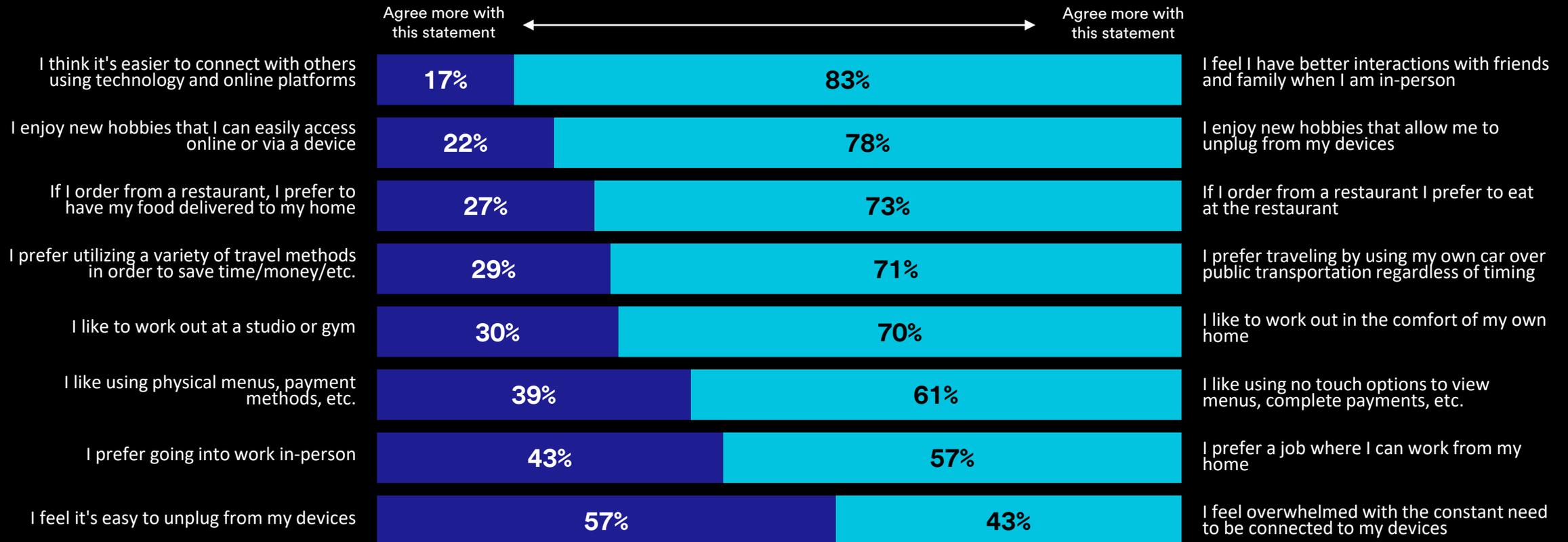
How much do you agree or disagree with each of the following statements?

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



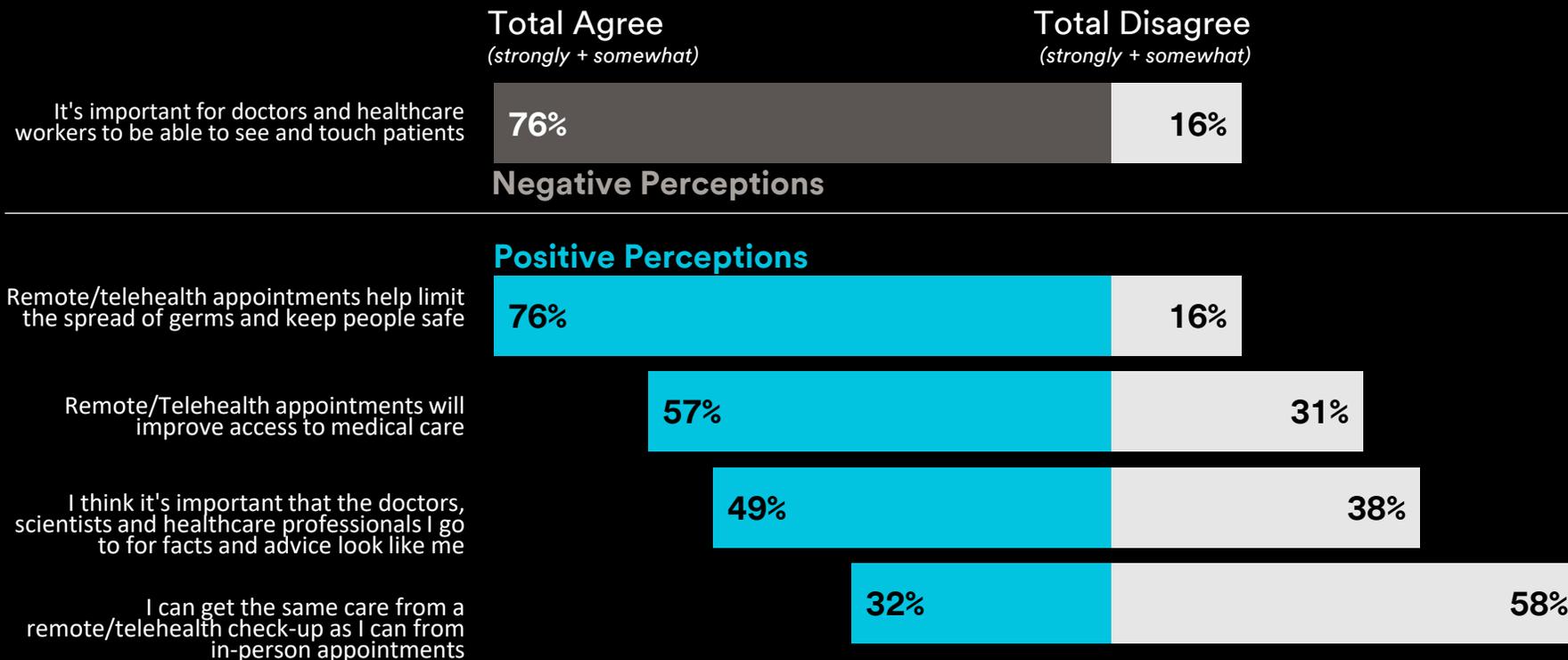
People prefer in-person socialization and hobbies to virtual or online alternatives. However, many prefer working and working out from home.

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



While Germans believe telehealth services can help prevent the spread of germs and improve access to care, they also believe it's important for doctors to see and treat patients in person.

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



among those that have used telemedicine:

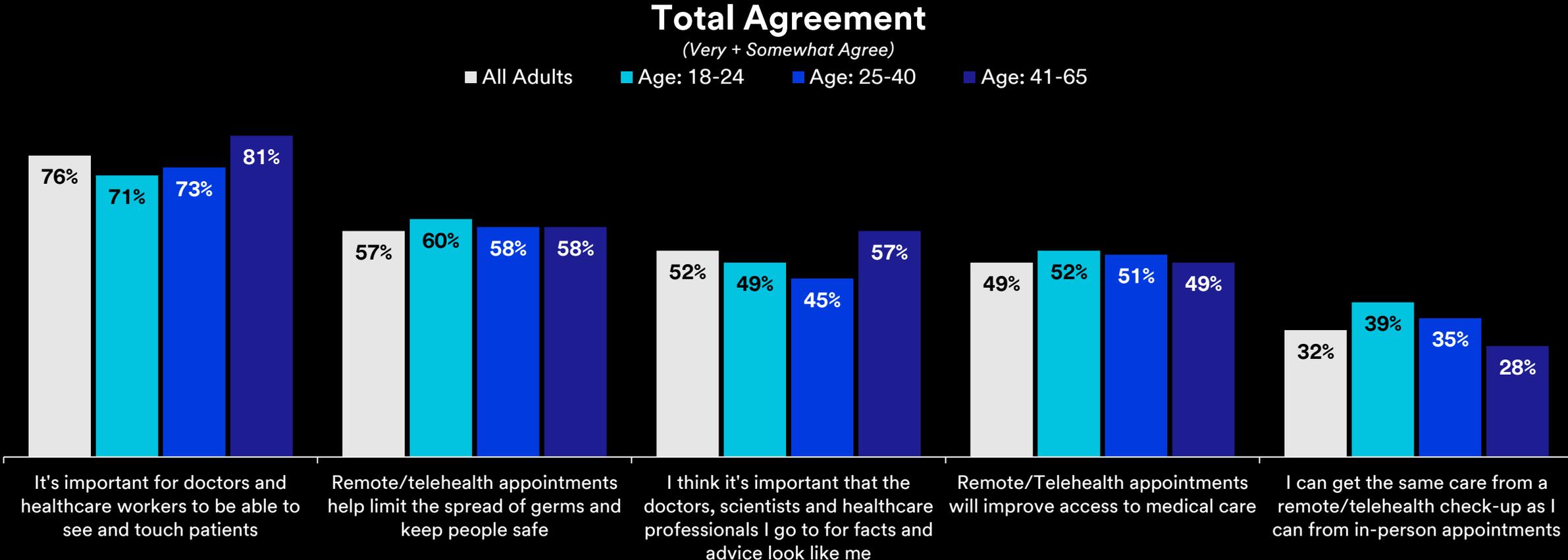
63% agreement "Remote/telehealth appointments help limit the spread of germs and keep people safe" ▲
+14 vs. All Adults

50% agreement "I can get the same care from a remote/telehealth check-up as I can from in-person appointments"
+18 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?





Thank you