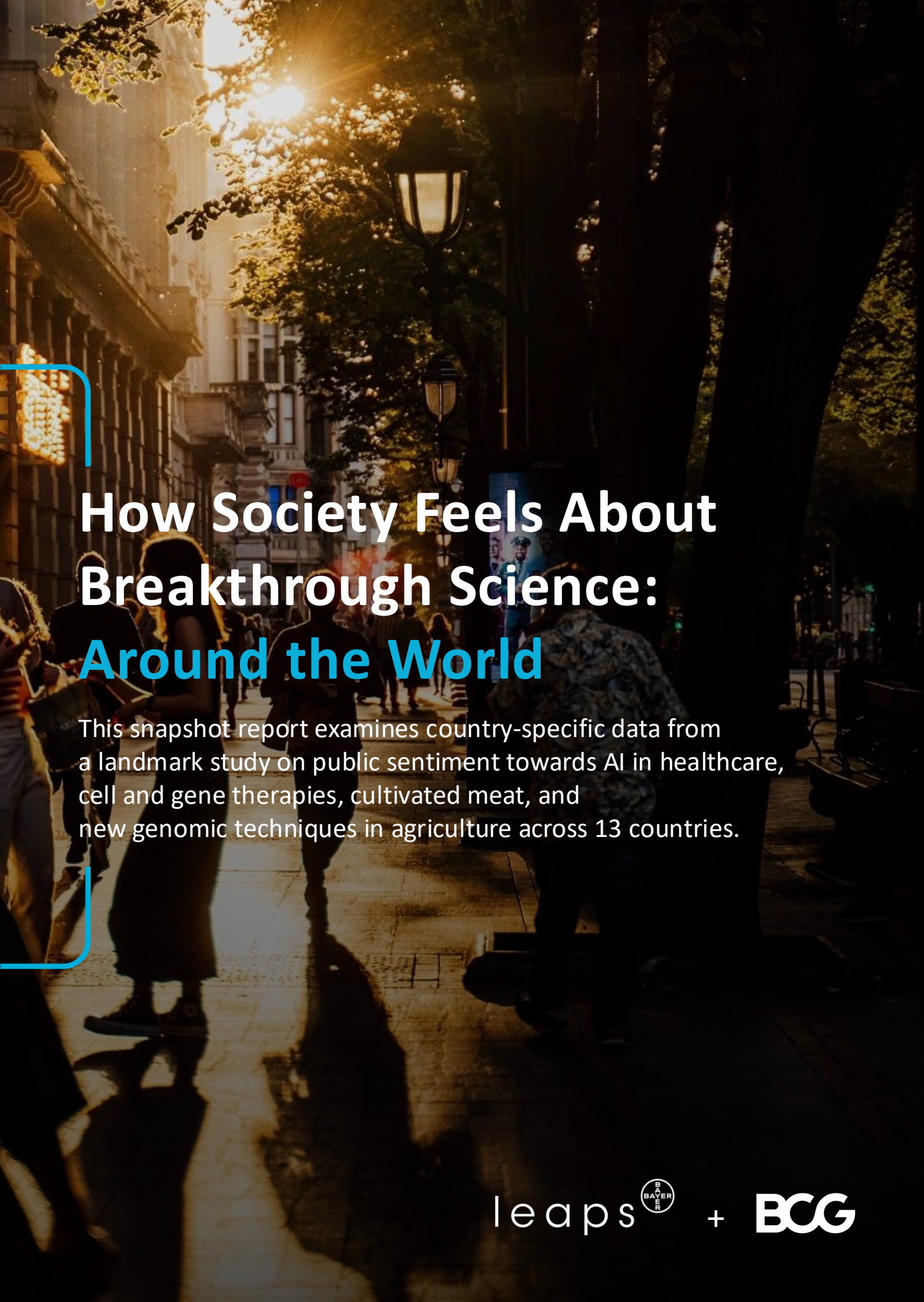
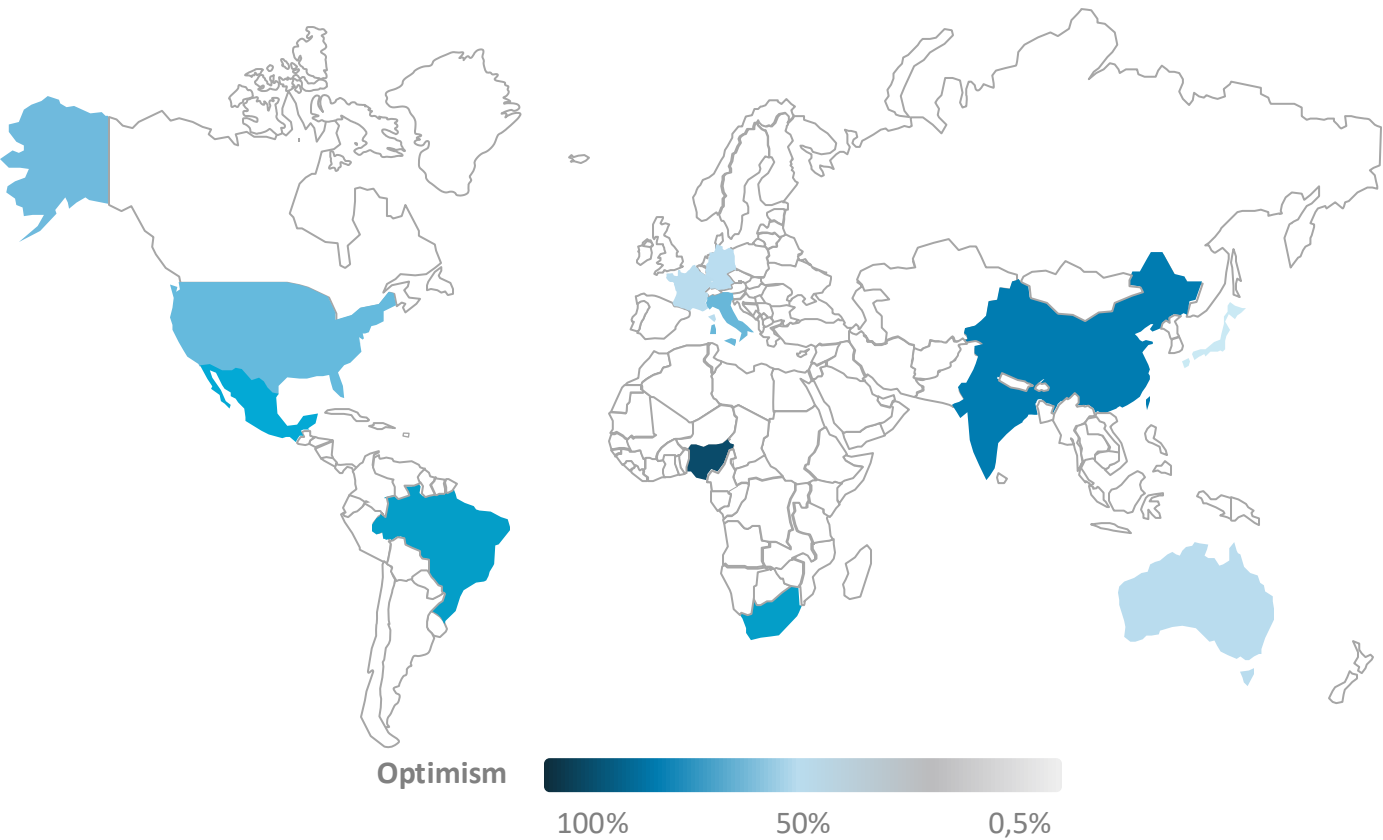




How Society Feels About Breakthrough Science: Around the World

This snapshot report examines country-specific data from a landmark study on public sentiment towards AI in healthcare, cell and gene therapies, cultivated meat, and new genomic techniques in agriculture across 13 countries.

Optimism towards science & technology around the world is influenced by country income level



High income (n=7,005)

Australia, France, Germany, Italy, Japan, Singapore, US

Upper-middle income (n=4,104)

Brazil, China, Mexico, South Africa

Lower-middle income (n=2,002)

India, Nigeria

Leaps by Bayer (the company’s impact investment arm) and BCG, together with Ipsos (a leading market research agency), conducted one of the largest surveys to date on global public sentiment towards four transformative technologies of our time: artificial intelligence (AI) in healthcare, cell and gene therapies, new genomic techniques in agriculture, and cultivated meat. This study collected insights from over 13,000 participants aiming to build a comprehensive view of public understanding, fears, hopes, and priorities surrounding these innovations. The findings are published in a series of reports:

- 1. How Society Feels About Breakthrough Science (Main Report)
- 2. How Society Feels About Breakthrough Science in the USA (Snapshot of US-specific findings)
- 3. How Society Feels About Breakthrough Science Across Generations (Snapshot of generational differences)
- 4. **How Society Feels About Breakthrough Science Around the World (Snapshot of country-specific insights)**

How Society Feels About Breakthrough Science Around the World explores findings from twelve countries, organized through the lens of income levels, as defined by the World Bank’s income classification system. Our findings demonstrate a strong sense of optimism in lower and upper middle-income countries. With the exception of Europe, common attitudes are evident within income levels, while geographical proximity plays a lesser role. This report explores the distinctive attitudes evident in each nation, providing insight into respondents’ hopes and fears.

Q: At this moment, to what extent are you optimistic or pessimistic about the direction in which the world is heading in terms of science & technology (n=13,111) Note: Optimistic includes very and fairly optimistic.
*Country income levels determined as per World Bank Income Classification 2024-2025 High income n=7,005, upper-middle income n=4,104, lower-middle income n=2,002



1

How People Feel About Breakthrough Science

In high income countries

Australia, France, Germany, Italy, Japan, Singapore*

High income countries around the world are largely the least optimistic about science and technology and the most skeptical about breakthrough science. AI advances in healthcare are on the rise in high income nations like the US, with over 1240 AI/ML-enabled medical devices cleared by the FDA as of July 2025¹, accompanied by concerns around AI and data privacy. Concern around AI is not limited to the US—similar data is seen in Australia, Japan, and across Europe.

Distinctive attitudes emerge across countries, underscoring diverging cultural currents. For example, participants in France are the least likely to try cultivated meat, Japanese respondents had the highest levels of neutrality on the potential for breakthrough science, and German respondents had the highest rate of belief that scientific progress is moving too slowly.

*Note that US-specific findings are published in a separate snapshot [report](#).

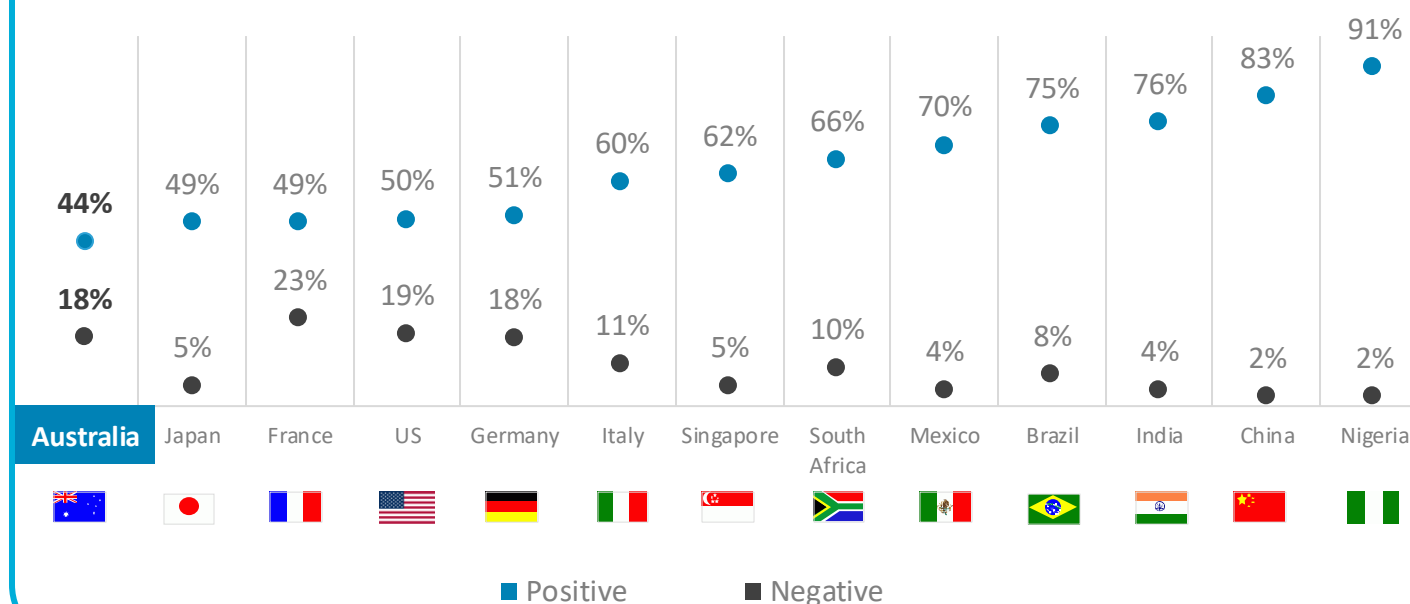
1. <https://www.fda.gov/medical-devices/software-medical-device-samd/artificial-intelligence-enabled-medical-devices>



Australia

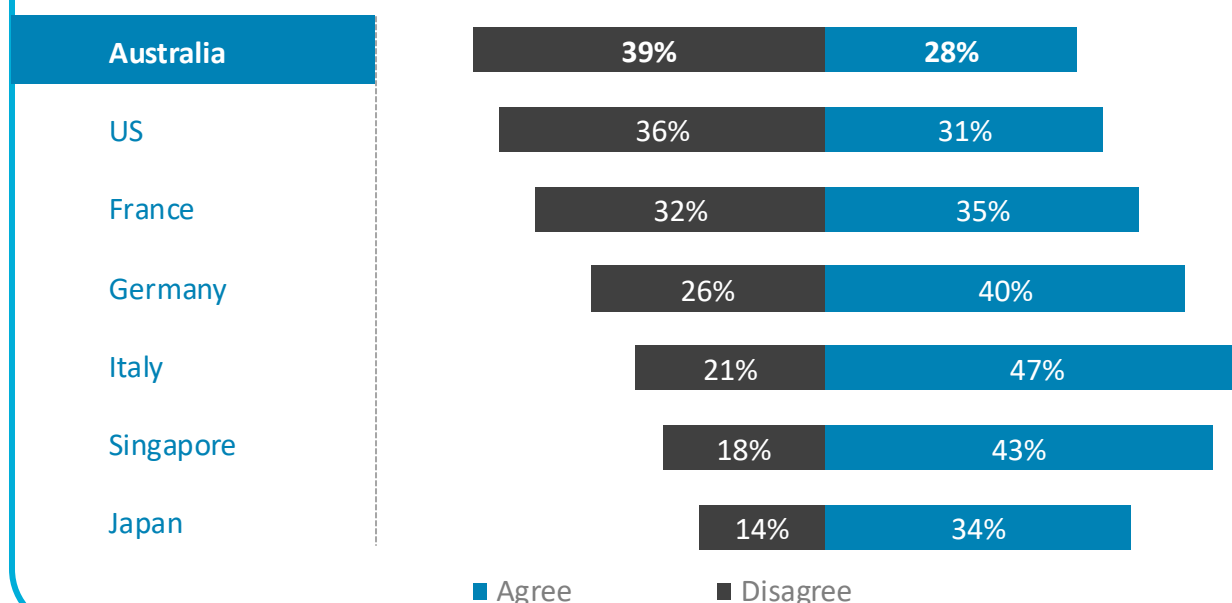
Respondents in Australia are the least positive about AI and health among countries surveyed.

Feelings towards impact of AI on the future of human health



Among high-income countries, Australia has the highest proportion of respondents who disagree that they trust AI to handle health data.

Trust in AI to handle health and medical data among high income countries

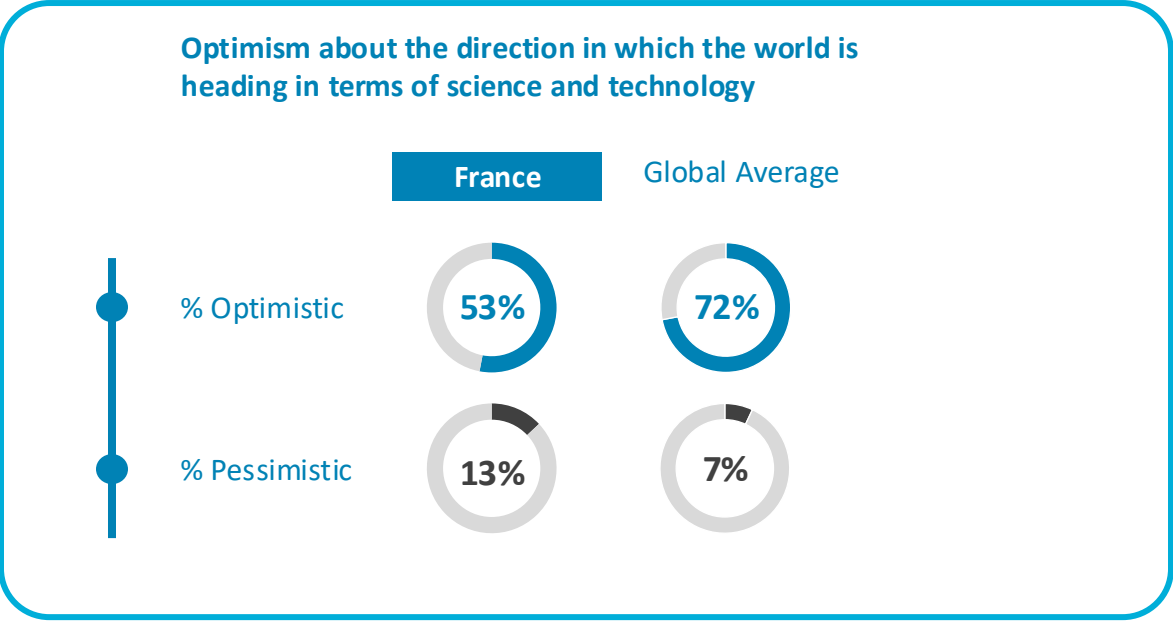


Base: Total n=13,111 online adults aged 18+ . (n=1,000 in each US, Germany, Italy, France, and Australia; n=1,001 in each Brazil, Mexico, Nigeria, India; n=1,002 in each South Africa and Japan; n=1,003 in Singapore; and n=1,100 in China). High income : US, Germany, Italy, France, Japan, Singapore, Australia. Q. To what extent do you feel positive or negative about the impact of Artificial Intelligence (AI) on the future of human health? Note: Positive= only positive answers, very and fairly positive. Negative= only negative answers, very and fairly negative. Q. To what extent do you agree or disagree with the following statements about Artificial Intelligence (AI)? 'I trust AI to handle my health and medical data'. Note: Agree = only positive answers, strongly and tend to agree. Disagree = only negative answers, strongly and tend to disagree. Note that neutral opinion / 'neither agree nor disagree' or 'don't know' are not shown here

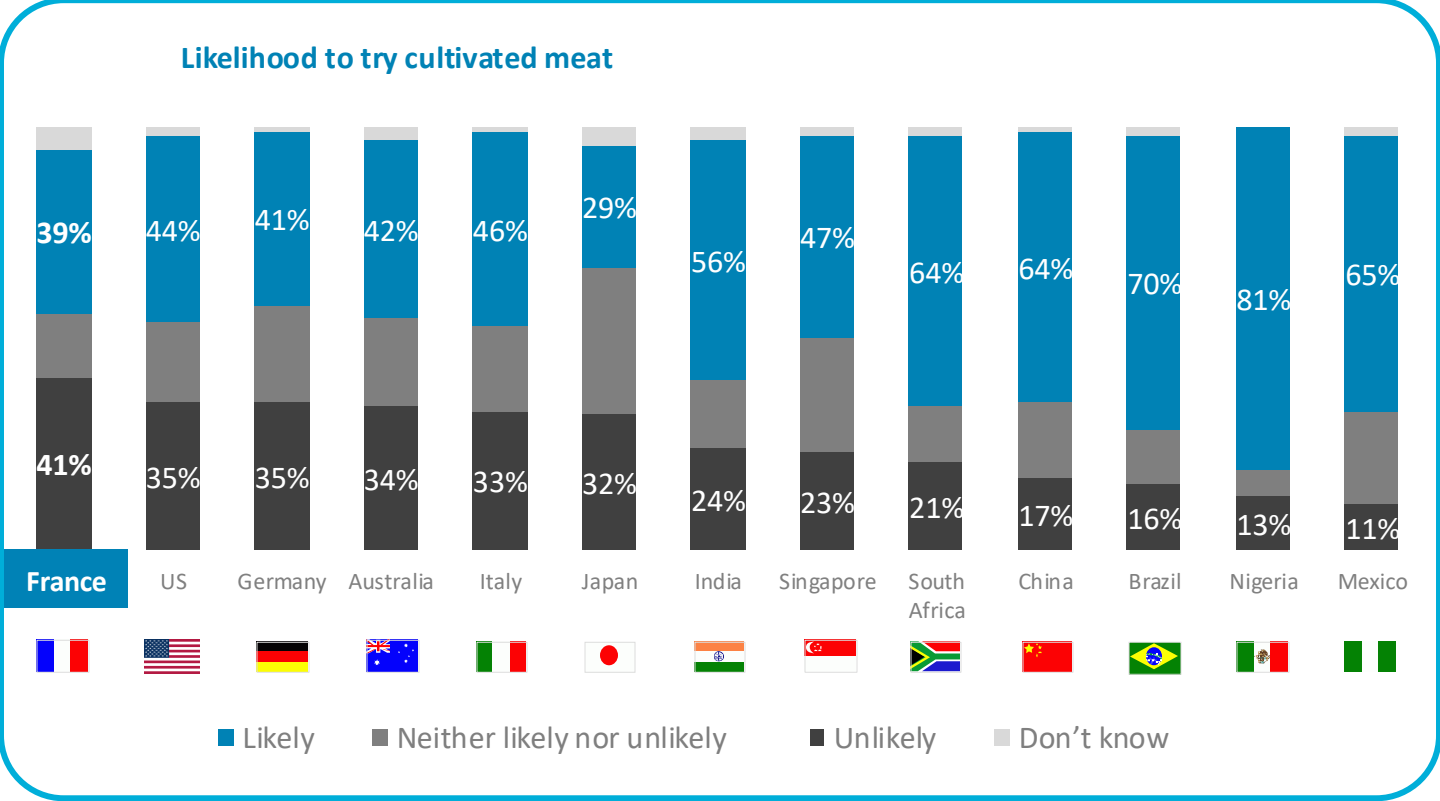


France

Respondents in France show high pessimism towards scientific innovation.



They are also the most unlikely to try cultivated meat across surveyed countries.



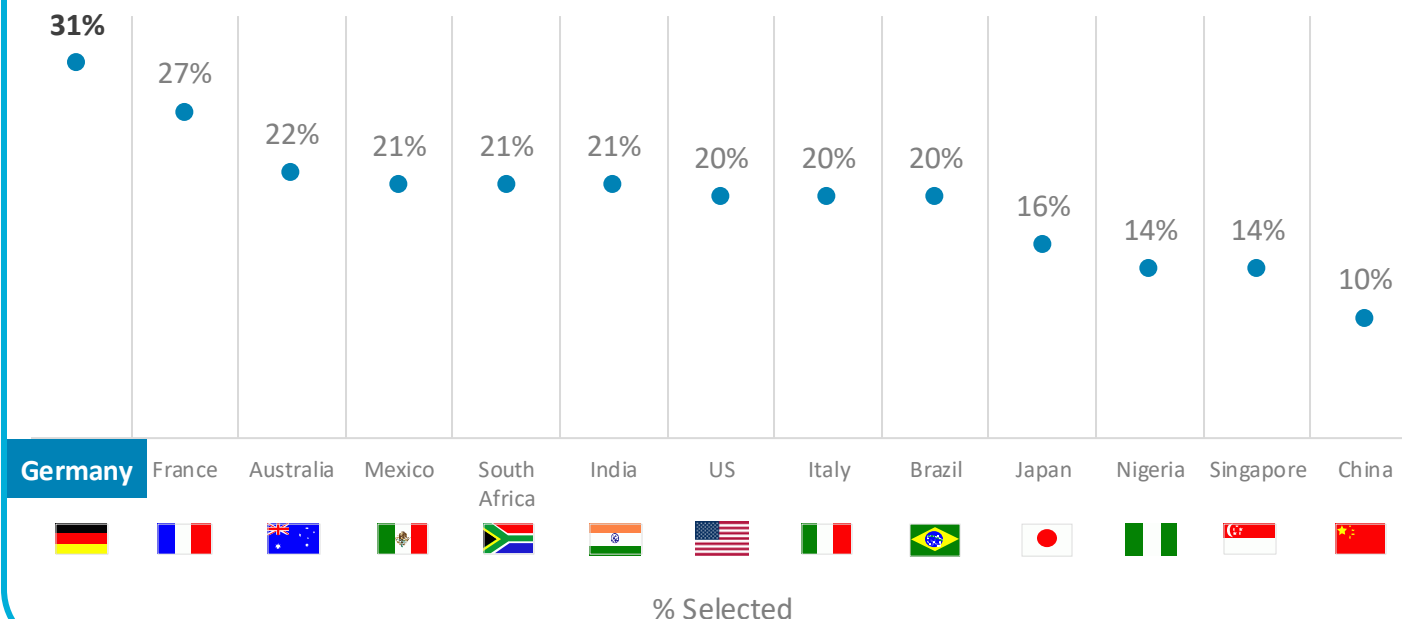
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Germany

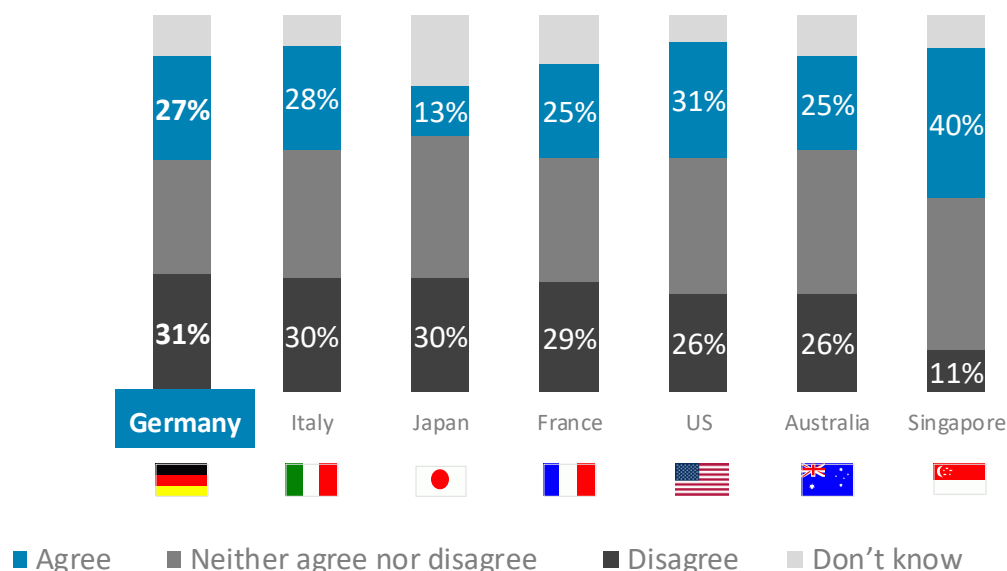
Germany has the highest rates of belief that ‘scientific innovation is happening too slowly’ among countries surveyed.

Belief that scientific innovation is happening too slowly



More German and other high-income-country respondents feel their views are not reflected by their government’s policy.

Agreement that own views on scientific innovation are reflected in government policy among high income countries

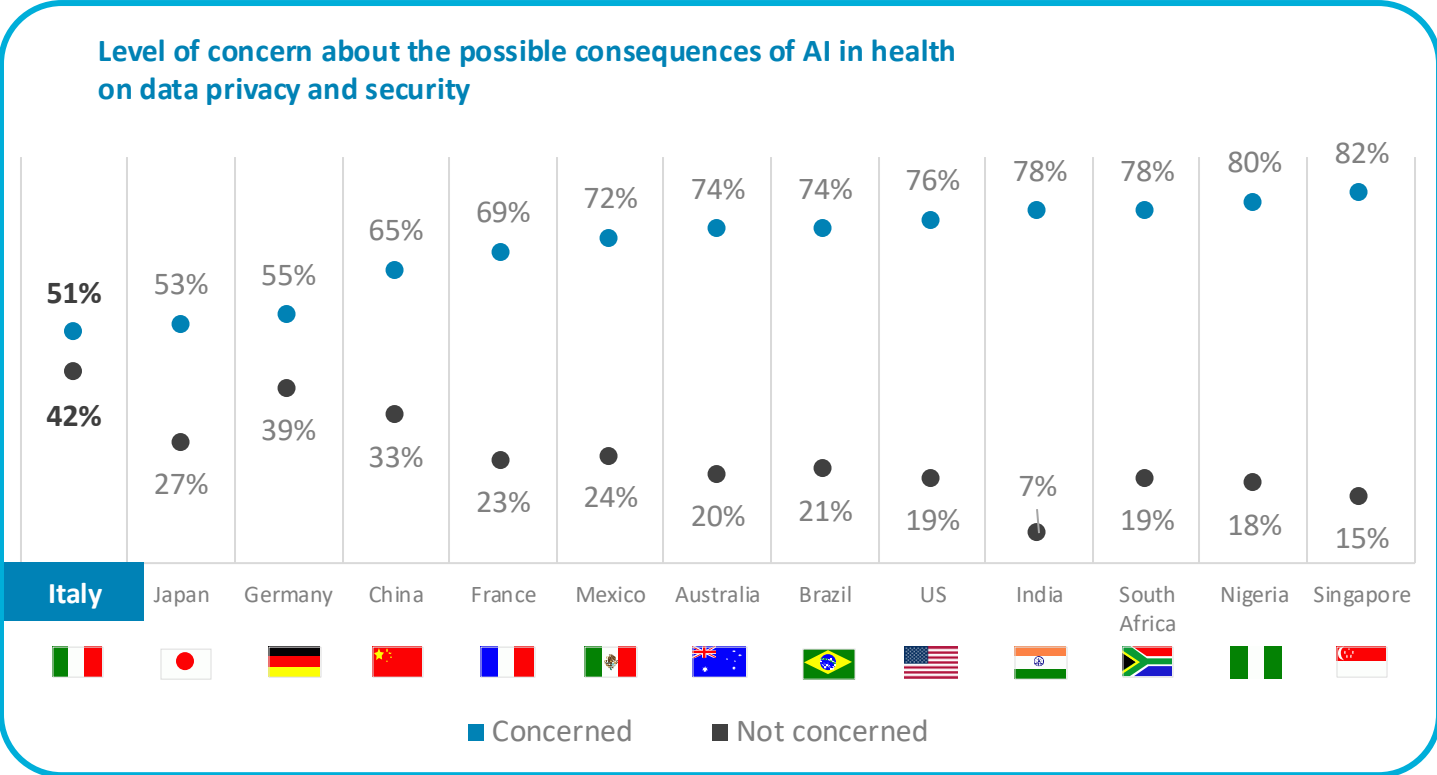


Base: Total n=13,111 online adults aged 18+ . (n=1,000 in each US, Germany, Italy, France, and Australia; n=1,001 in each Brazil, Mexico, Nigeria, India; n=1,002 in each South Africa and Japan; n=1,003 in Singapore; and n=1,100 in China). High income countries: US, Germany, Italy, France, Japan, Singapore, Australia. Q. Which of the following best describes your views about the pace of scientific innovation today? "I believe scientific innovation is happening too slowly". Q. To what extent do you agree, or disagree, with each of the following statements? "I feel my views on scientific innovation are reflected in government policy". Note: Agree = only positive answers, strongly and tend to agree. Disagree = only negative answers, strongly and tend to disagree.

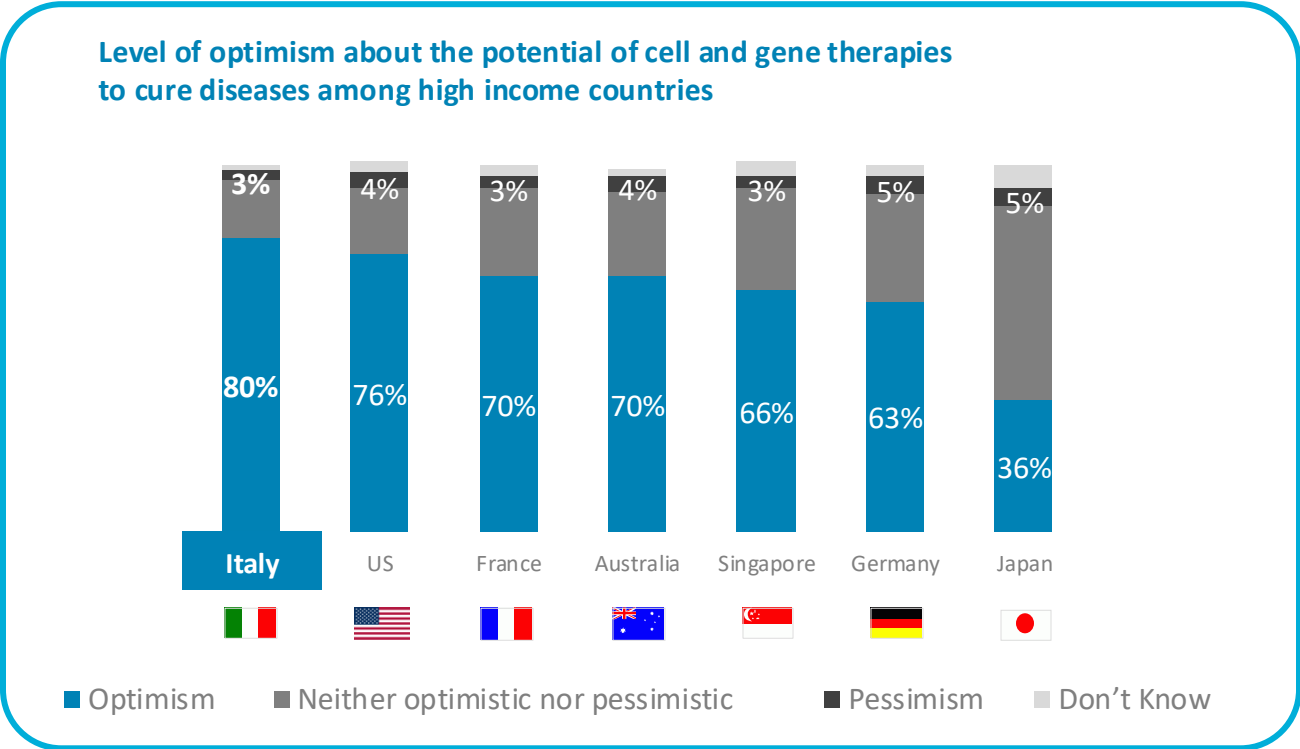


Italy

Respondents in Italy show the least concern regarding data privacy and security in health AI among surveyed countries.



They demonstrate the most optimism about the curative potential of C&G therapy among high income countries.



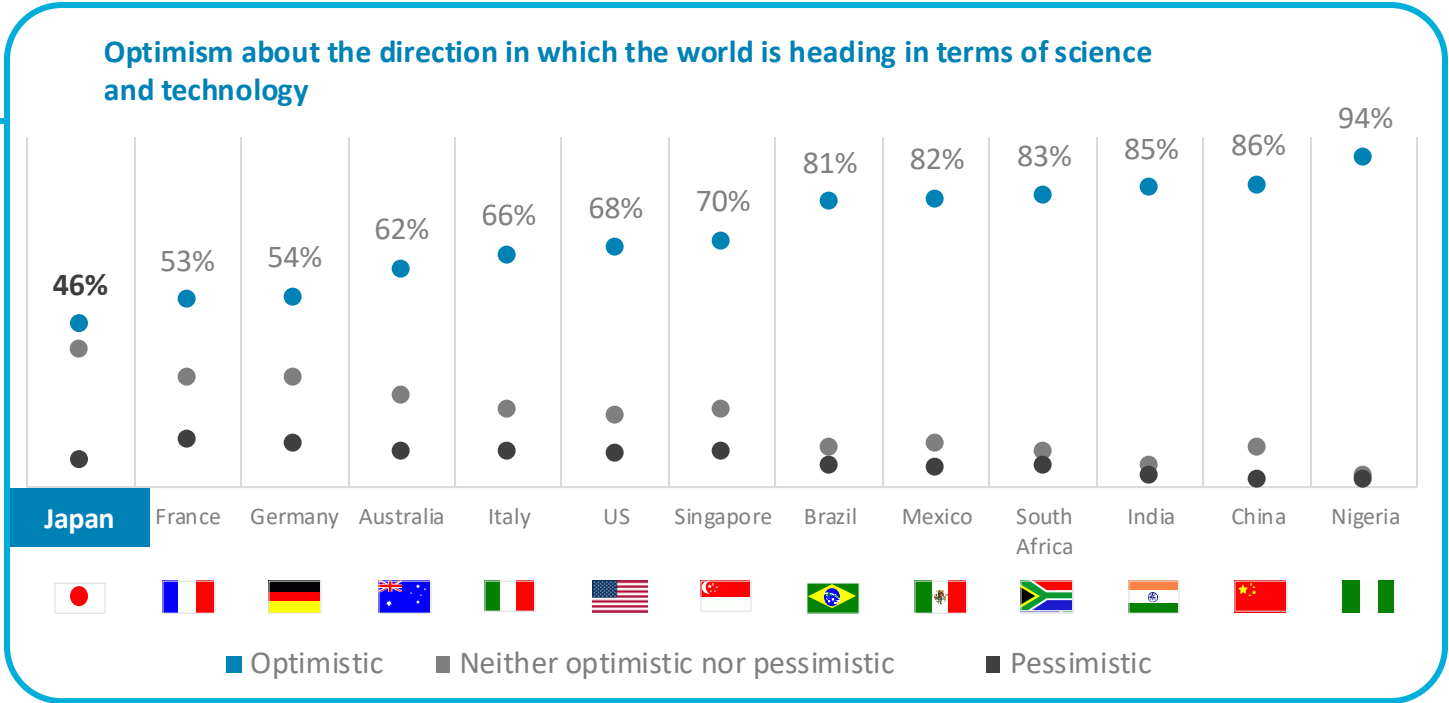
Base: Total n=13,111 online adults aged 18+ . (n=1,000 in each US, Germany, Italy, France, and Australia; n=1,001 in each Brazil, Mexico, Nigeria, India; n=1,002 in each South Africa and Japan; n=1,003 in Singapore; and n=1,100 in China). High income countries: US, Germany, Italy, France, Japan, Singapore, Australia. Q. How concerned, if at all, are you about each of the following possible consequences with regards to the use of Artificial Intelligence (AI) for medicine and health care? "Data privacy and security concerns". Note: Concerned = only positive answers, very and fairly concerned. Not concerned = only negative answers, not very and not at all concerned. Q. Are you optimistic or pessimistic about the potential of cell and gene therapy to cure diseases such as Parkinson's Disease and other degenerative diseases? Note: Optimistic = only positive answers, very and fairly optimistic. Pessimistic = only negative answers, very and fairly pessimistic. . Note that neutral opinion / 'neither concerned or unconcerned' e' or 'don't know' are not shown for top chart.

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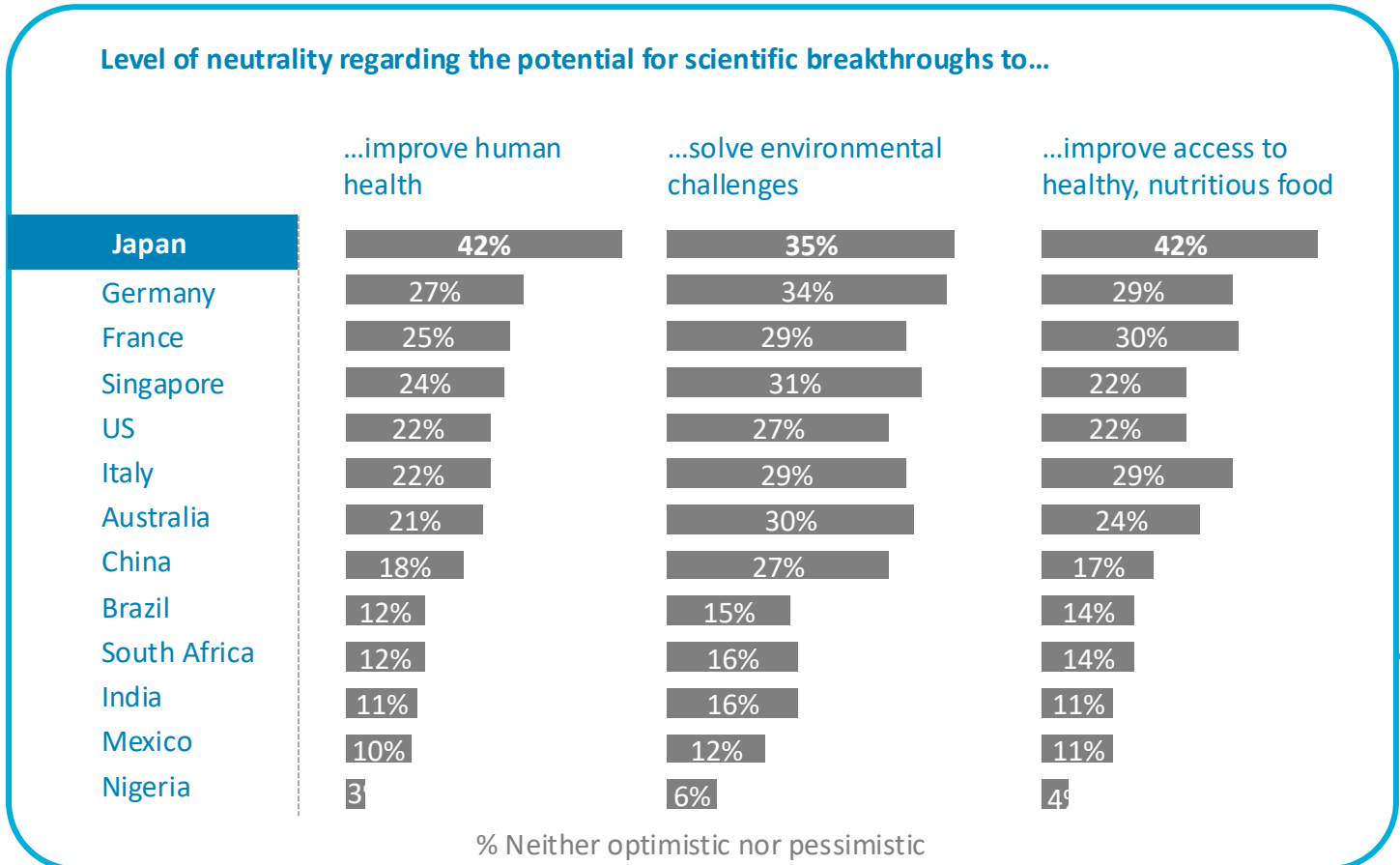


Japan

Respondents in Japan show the highest levels of neutrality about the future of science and tech among countries surveyed.



They also show high levels of neutrality about the potential for scientific breakthroughs to address specific challenges.

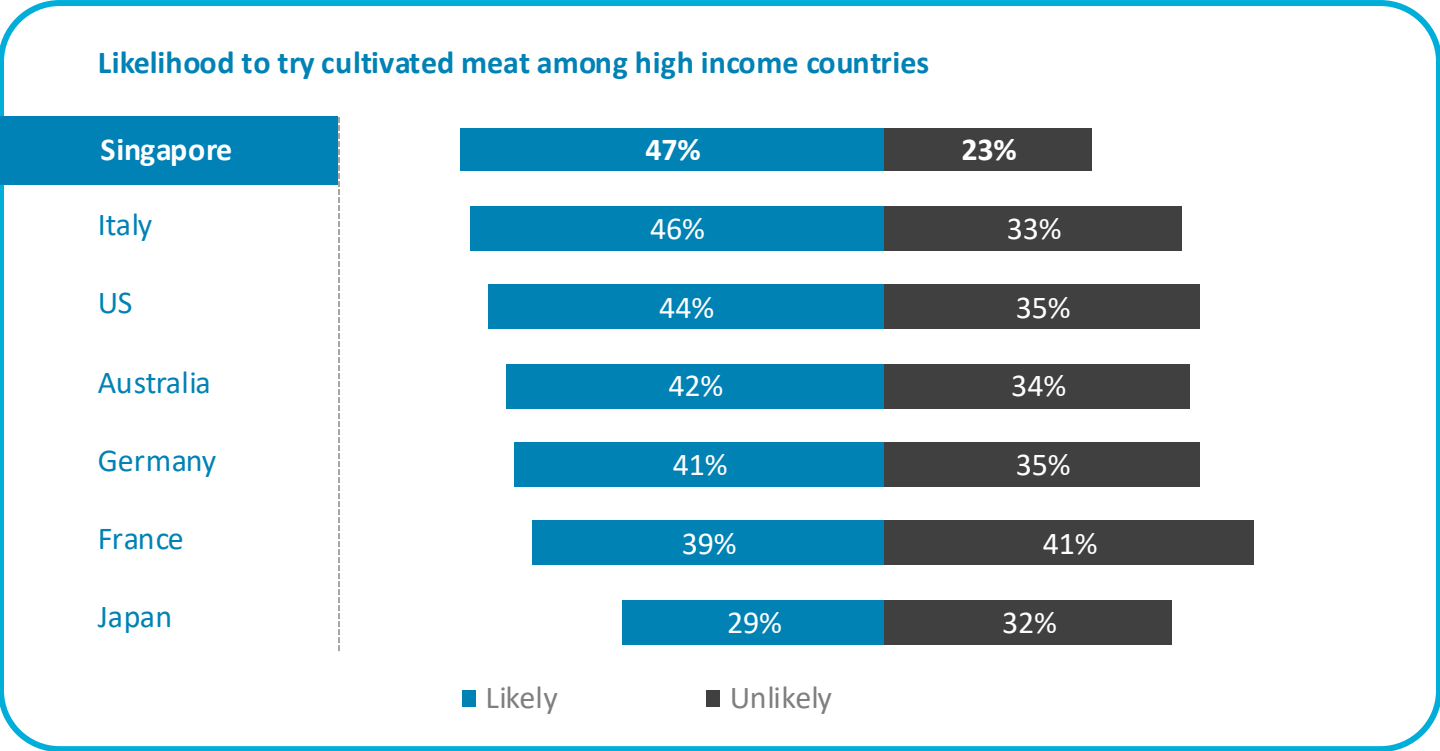


Base: Total n=13,111 online adults aged 18+ . (n=1,000 in each US, Germany, Italy, France, and Australia; n=1,001 in each Brazil, Mexico, Nigeria, India; n=1,002 in each South Africa and Japan; n=1,003 in Singapore; and n=1,100 in China). Q. At this moment, to what extent are you optimistic or pessimistic about the direction in which the world is heading in terms of: "Science and technology". Note: Optimistic = only positive answers, very and fairly optimistic. Pessimistic = only negative answers, very and fairly pessimistic. Note that 'don't know' not shown.. Q. To what extent are you optimistic or pessimistic about the potential for scientific breakthroughs to achieve each of the following? "Significantly improve human health", "Solve environmental challenges", "Improve access to healthy, nutritious food".

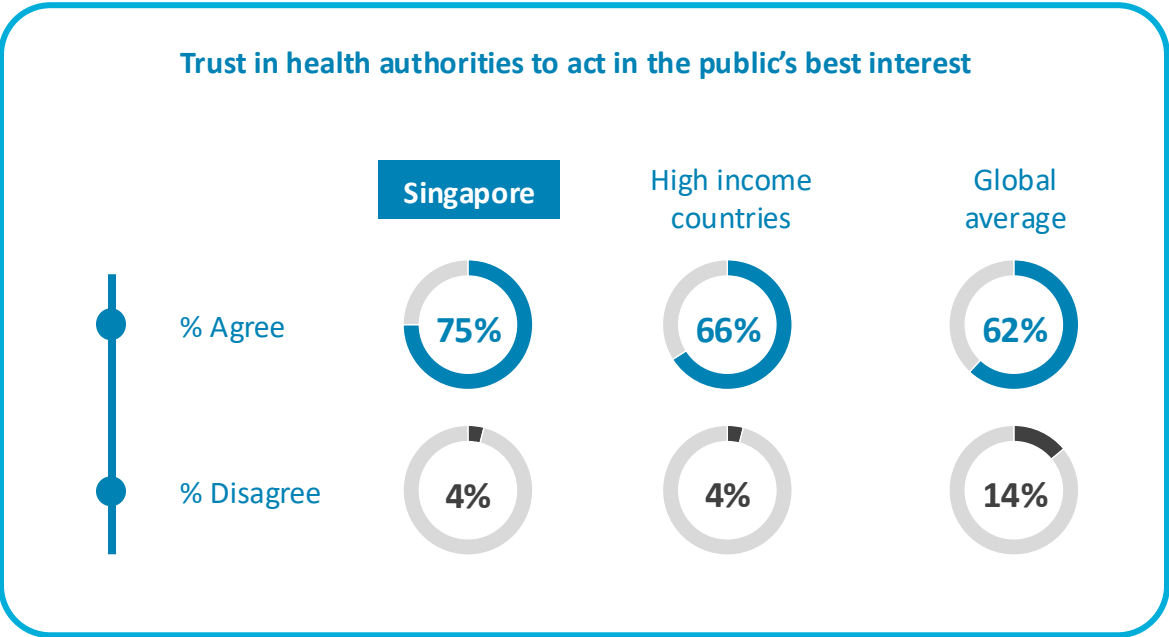


Singapore

Respondents in Singapore are the most willing to try cultivated meat among high income countries surveyed.



They are also the most likely to trust health authorities to act in the public’s best interest.



Base: Total n=13,111 online adults aged 18+ . (n=1,000 in each US, Germany, Italy, France, and Australia; n=1,001 in each Brazil, Mexico, Nigeria, India; n=1,002 in each South Africa and Japan; n=1,003 in Singapore; and n=1,100 in China). High income countries: US, Germany, Italy, France, Japan, Singapore, Australia. Q. How likely or unlikely are you to try cultivated meat if it were to become available near you? Please assume that cost, taste and nutritional value would be the same as conventional meat. Note: Likely = only positive answers, very and fairly likely. Unlikely = only negative answers, very and fairly unlikely. Q. To what extent do you agree, or disagree, with each of the following statements? "I trust health authorities to act in the public's best interest". Note: Agree = only positive answers, strongly and tend to agree. Disagree = only negative answers, strongly and tend to disagree. . Note that neutral opinion / 'neither agree nor disagree' or 'don't know' are not shown here



2

How People Feel About Breakthrough Science

In upper-middle income countries

Brazil, China, Mexico, South Africa

Upper-middle income countries across the globe demonstrate high levels of optimism and openness towards breakthrough science. Concern about climate change is high in Mexico, Brazil and South Africa, though lower than the global average in China.

Openness to try cultivated meat in upper-middle income countries is relatively high, surprisingly so in Brazil (70%) considering that country is the world's largest beef exporter¹ and is among the top 10 in global per capita beef consumption². China stands out for the lowest levels of pessimism about science and technology, and the strongest sentiment that technology is developing at the needed pace.

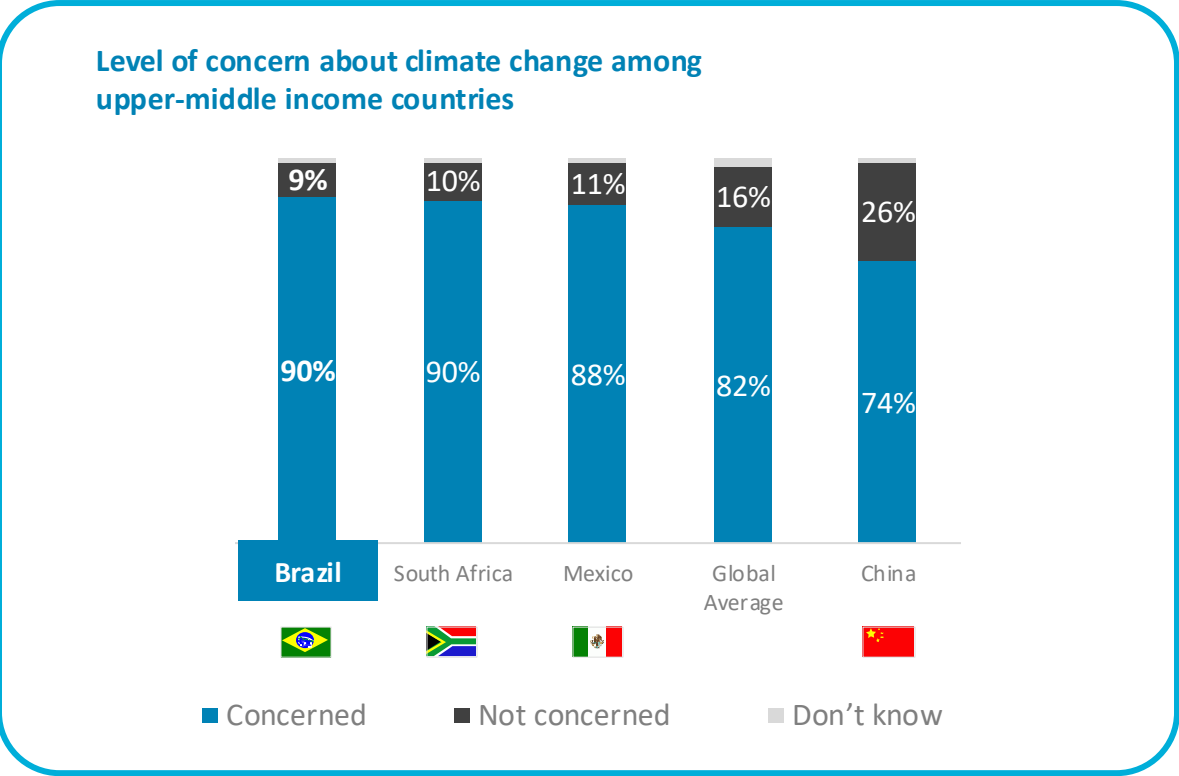
1. USDA Foreign Agriculture Service PSD data for 2025. <https://www.iowafarmbureau.com/Article/World-Beef-Trade>.

2. FAO 2022. <https://www.fao.org/faostat/en/#data/FBS>

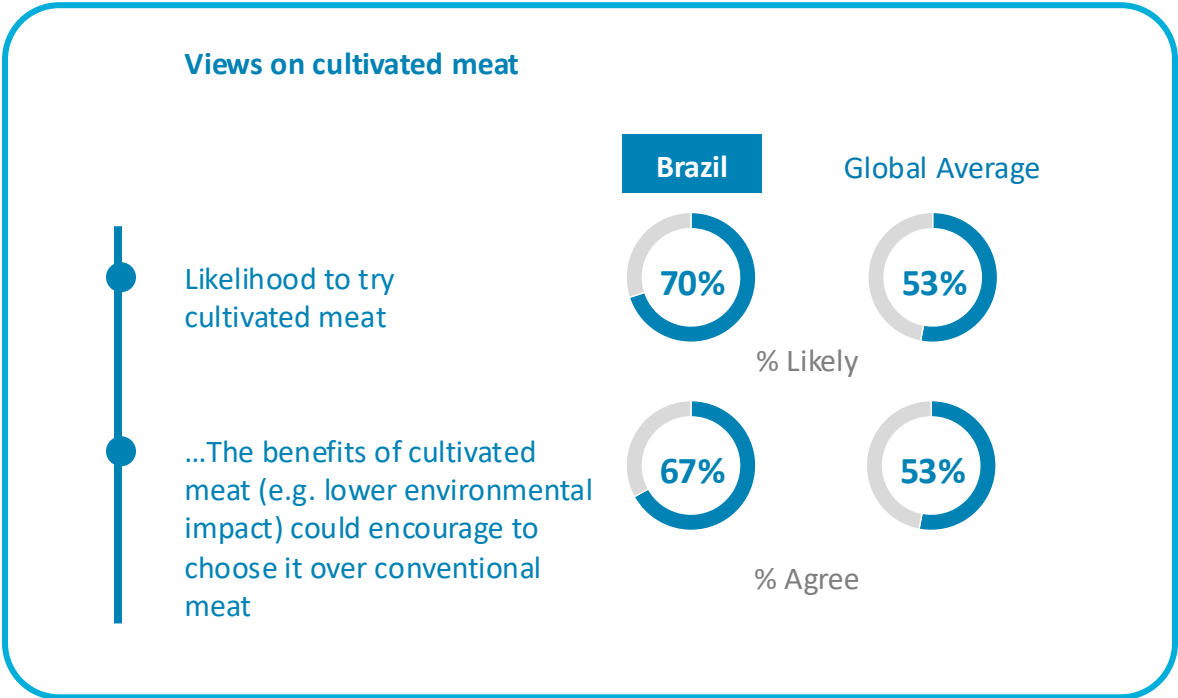


Brazil

Respondents in Brazil demonstrate high concern about climate change.



A substantial portion of respondents agree that the environmental benefits of cultivated meat could sway their choice towards it.

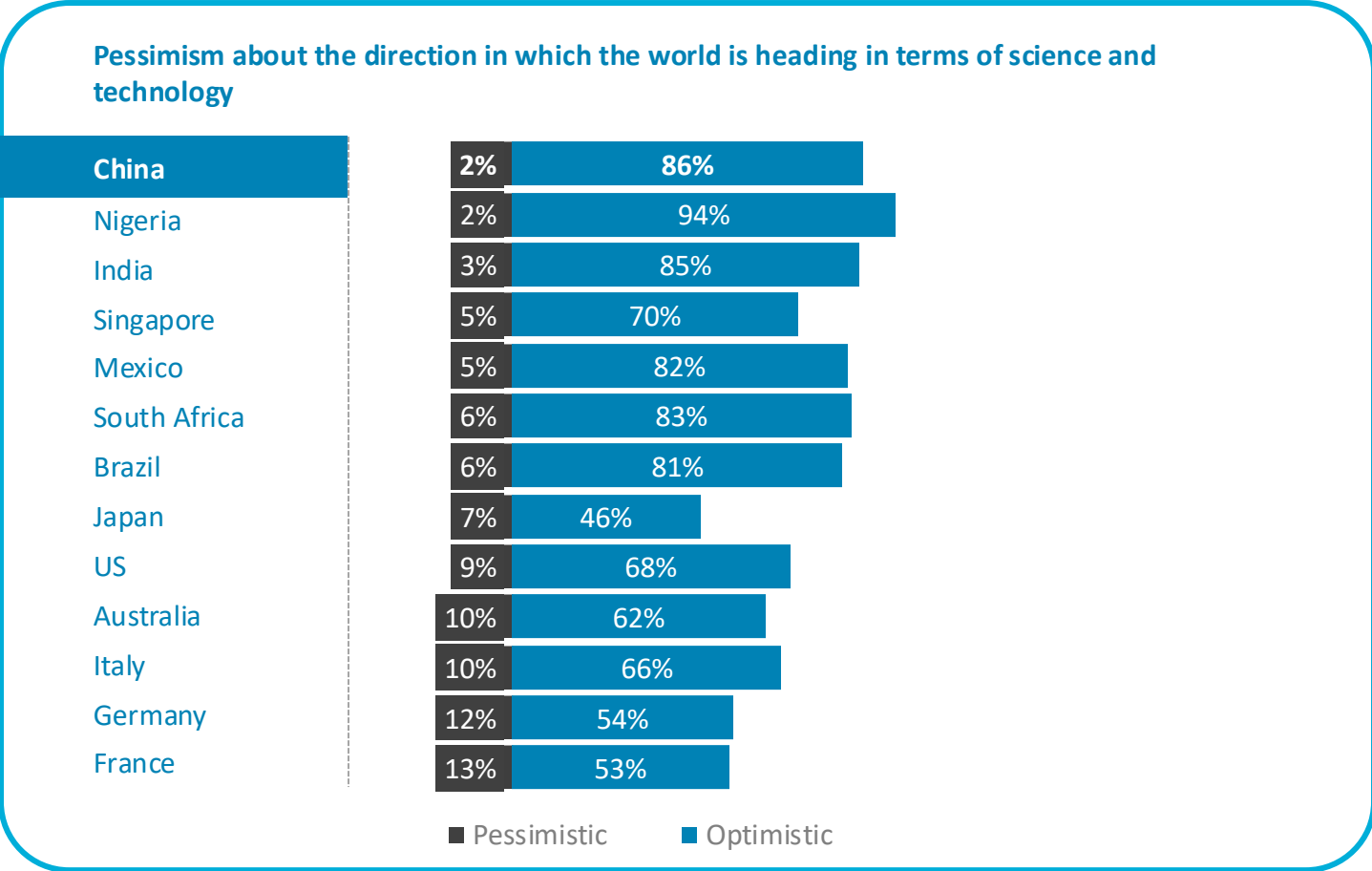


Base: Total n=13,111 online adults aged 18+ . (n=1,000 in each US, Germany, Italy, France, and Australia; n=1,001 in each Brazil, Mexico, Nigeria, India; n=1,002 in each South Africa and Japan; n=1,003 in Singapore; and n=1,100 in China). Upper-middle income countries: Brazil, Mexico, China, South Africa. Q. To what extent, if at all, would you say you are concerned about climate change? Note: Concerned = only positive answers, very and fairly concerned. Not concerned = only negative answers, not very and not at all concerned. Q. How likely or unlikely are you to try cultivated meat if it were to become available near you? Please assume that cost, taste and nutritional value would be the same as conventional meat. Note: Likely = only positive answers, very and fairly likely. Q. To what extent do you agree, or disagree, with each of the following statements? "The benefits of cultivated meat (e.g. lower environmental impact) could convince me to choose it over conventional meat". Note: Agree = only positive answers, strongly and tend to agree.

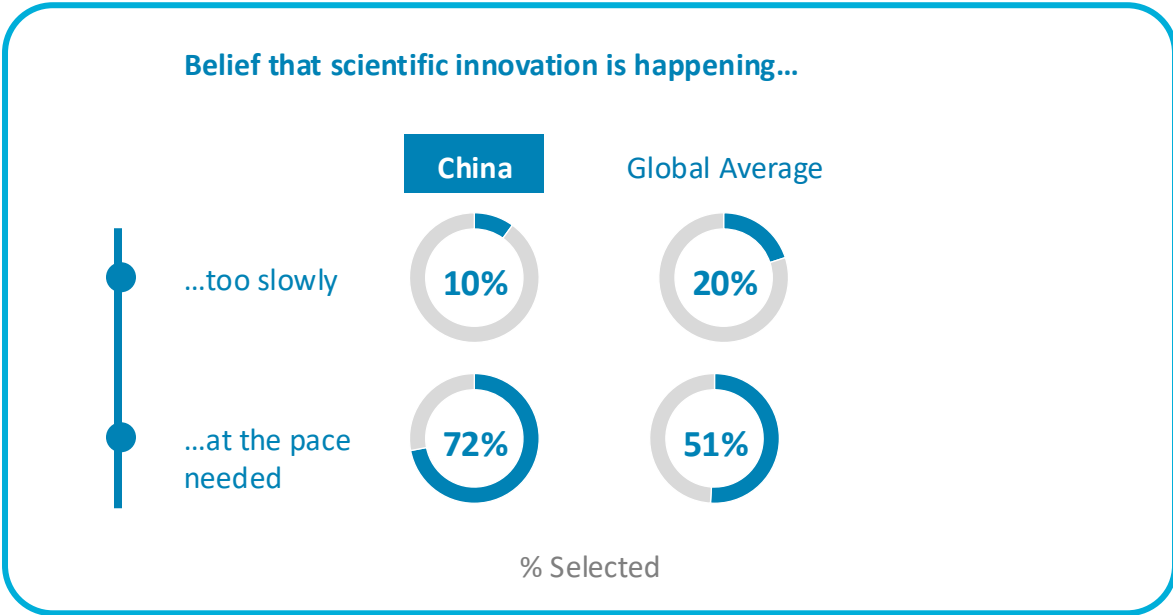


China

Respondents in China are among the least pessimistic about the direction the world is heading in terms of science and technology.



China has the highest proportion of respondents stating scientific innovation is proceeding at the right pace, across countries surveyed.

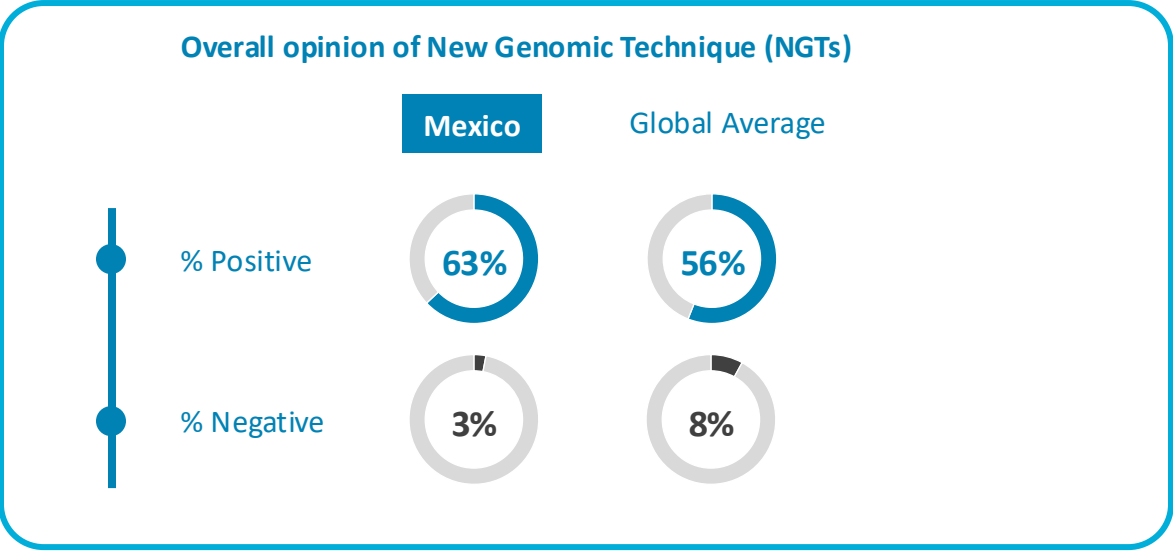


Base: Total n=13,111 online adults aged 18+ . (n=1,000 in each US, Germany, Italy, France, and Australia; n=1,001 in each Brazil, Mexico, Nigeria, India; n=1,002 in each South Africa and Japan; n=1,003 in Singapore; and n=1,100 in China). Q. At this moment, to what extent are you optimistic or pessimistic about the direction in which the world is heading in terms of: "Science and technology". Note: Optimistic = only positive answers, very and fairly optimistic. Pessimistic = only negative answers, very and fairly pessimistic. Q. Which of the following best describes your views about the pace of scientific innovation today? "I believe scientific innovation is happening too slowly", "I believe scientific innovation is happening at the pace needed", "I believe scientific innovation is happening too quickly". . Note that neutral opinion / 'neither optimistic or pessimistic' or 'don't know' are not shown here

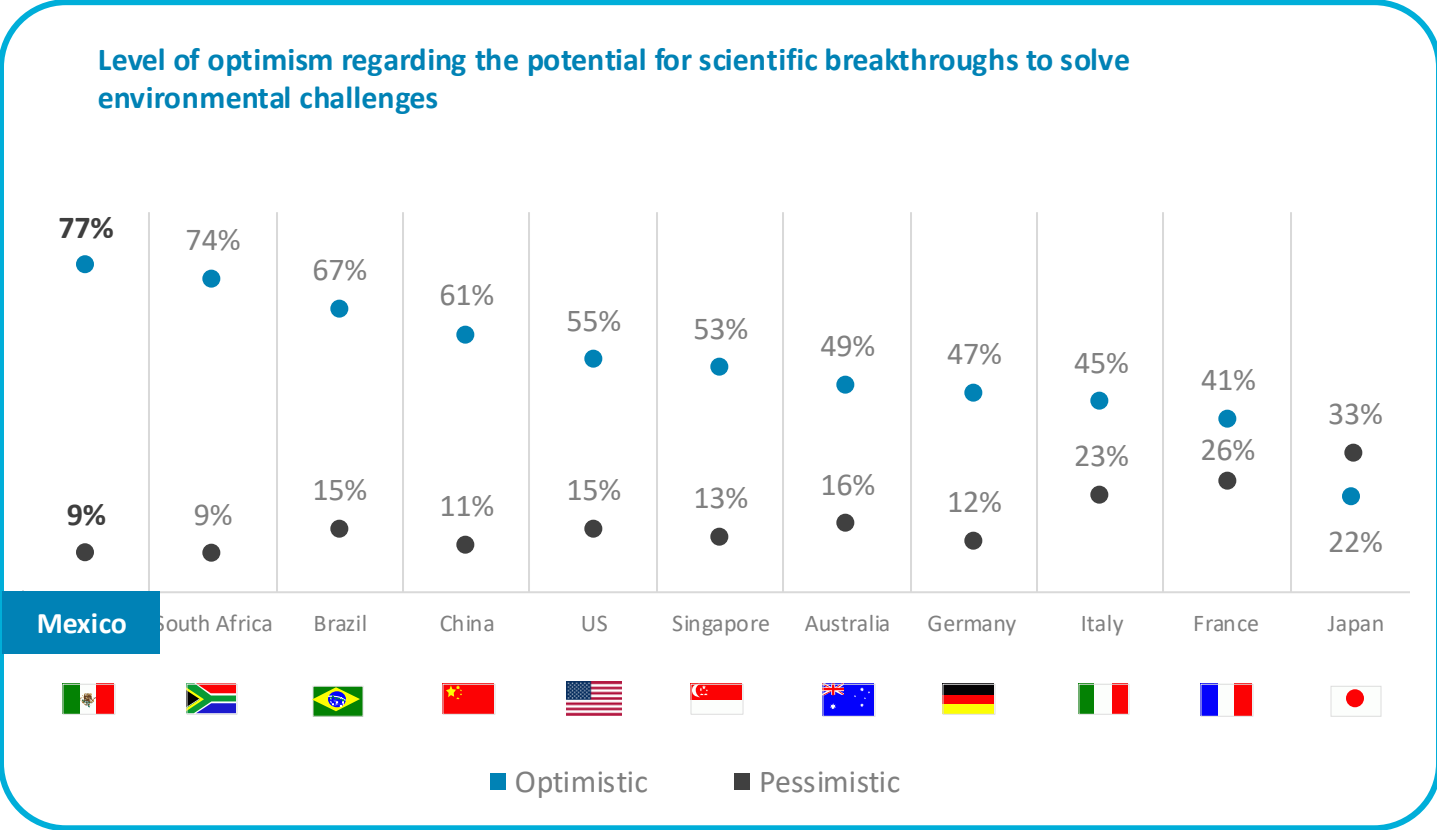


Mexico

Only a very small proportion of respondents in Mexico are negative towards NGTs.



Mexican respondents are the most optimistic about potential for scientific breakthroughs to solve environmental challenges, among high and upper-middle income nations.

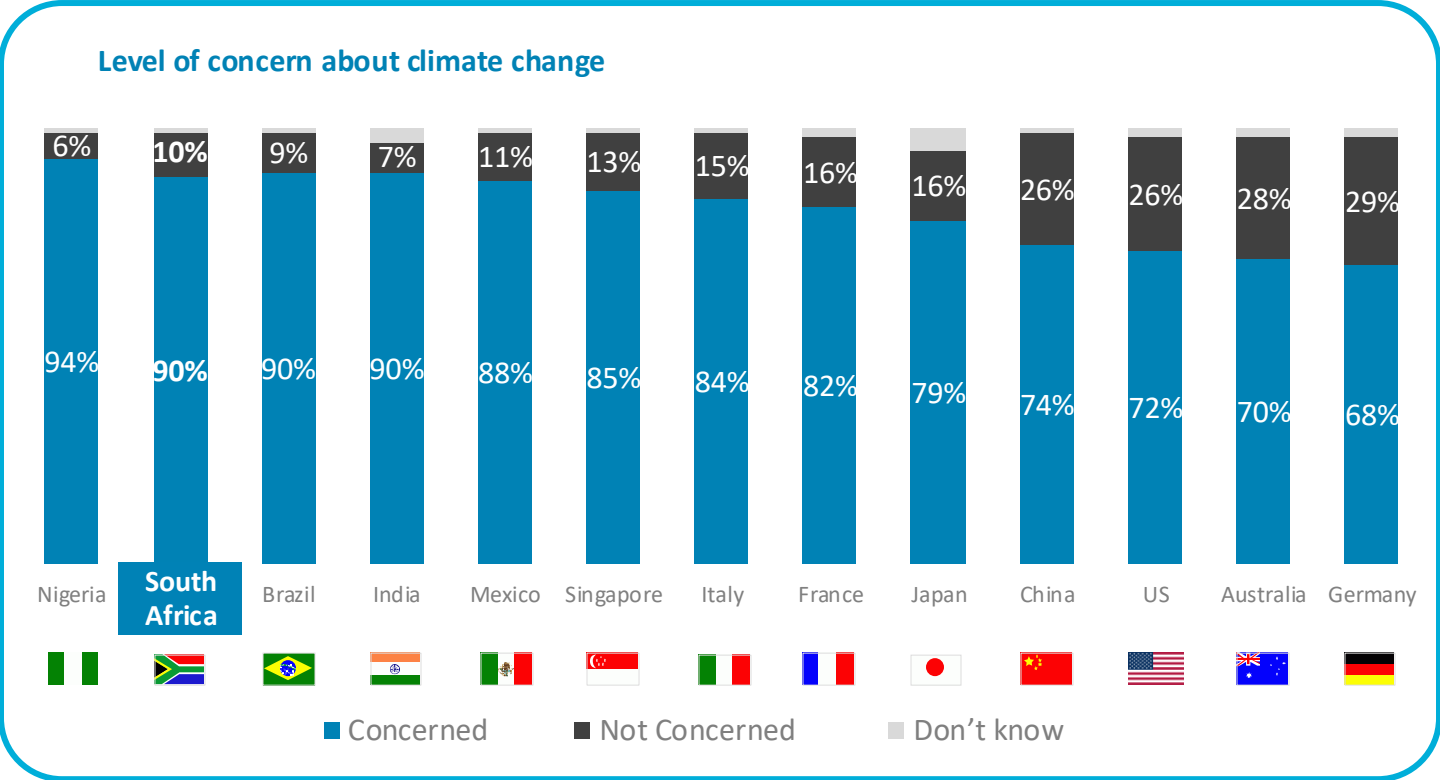


Base: Online adults aged 18+ stating they understood or somewhat understood the definition of the topic (after being shown a description) Total n=11,951; US n=905, Germany n=932, Italy n=897, France n=875, Brazil n=951, Mexico n=972, Nigeria n=986, South Africa n=959, India n=937, China n=997, Japan n=765, Singapore n=888, Australia n=887. Q. Overall, is your opinion of new genomic techniques (NGTs such as genome editing tools like CRISPR) positive, negative or neutral? Note: Positive = only positive answer. Negative = only negative answer. Base: Total n=13,111 on line adults aged 18+. (n=1,000 in each US, Germany, Italy, France, and Australia; n=1,001 in each Brazil, Mexico, Nigeria, India; n=1,002 in each South Africa and Japan; n=1,003 in Singapore; and n=1,100 in China). Q. To what extent are you optimistic or pessimistic about the potential for scientific breakthroughs to achieve each of the following? "Solve environmental challenges". Note: Optimistic = only positive answers, very and fairly optimistic. Pessimistic = only negative answers, very and fairly pessimistic. . Note that neutral opinion / neither optimistic or pessimistic or 'don't know' are not shown here Note: only high- and upper middle-income classified nations shown in bottom chart.

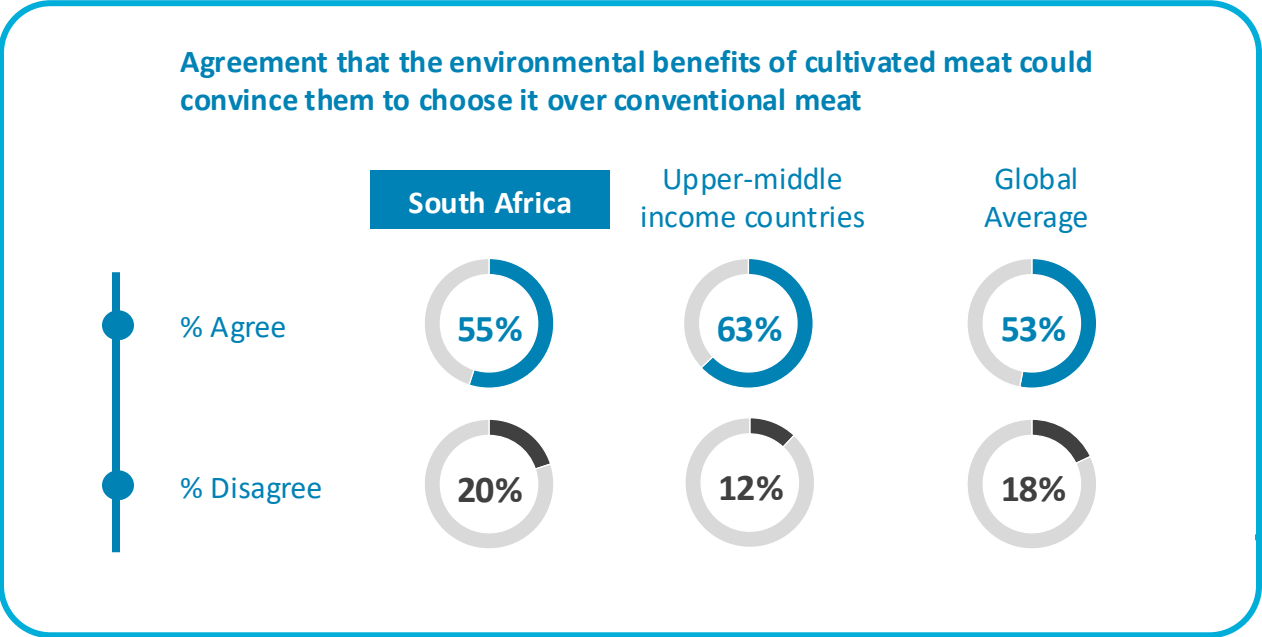


South Africa

Respondents in South Africa are highly concerned about climate change



Despite this concern, only half of respondents agree that the environmental benefits of cultivated meat could convince them to choose it over conventional meat.



Base: Total n=13,111 online adults aged 18+ . (n=1,000 in each US, Germany, Italy, France, and Australia; n=1,001 in each Brazil, Mexico, Nigeria, India; n=1,002 in each South Africa and Japan; n=1,003 in Singapore; and n=1,100 in China). Upper-middle income countries: Brazil, Mexico, China, South Africa. Q. To what extent, if at all, would you say you are concerned about climate change? Note: Concerned = only positive answers, very and fairly concerned. Not concerned = only negative answers, not at all and not very concerned. Q. To what extent do you agree, or disagree, with each of the following statements? "The benefits of cultivated meat (e.g. lower environmental impact) could convince me to choose it over conventional meat." Note: Agree = only positive answers, strongly and tend to agree. Disagree = only negative answers, strongly and tend to disagree.



3

How People Feel About Breakthrough Science

In lower-middle income countries

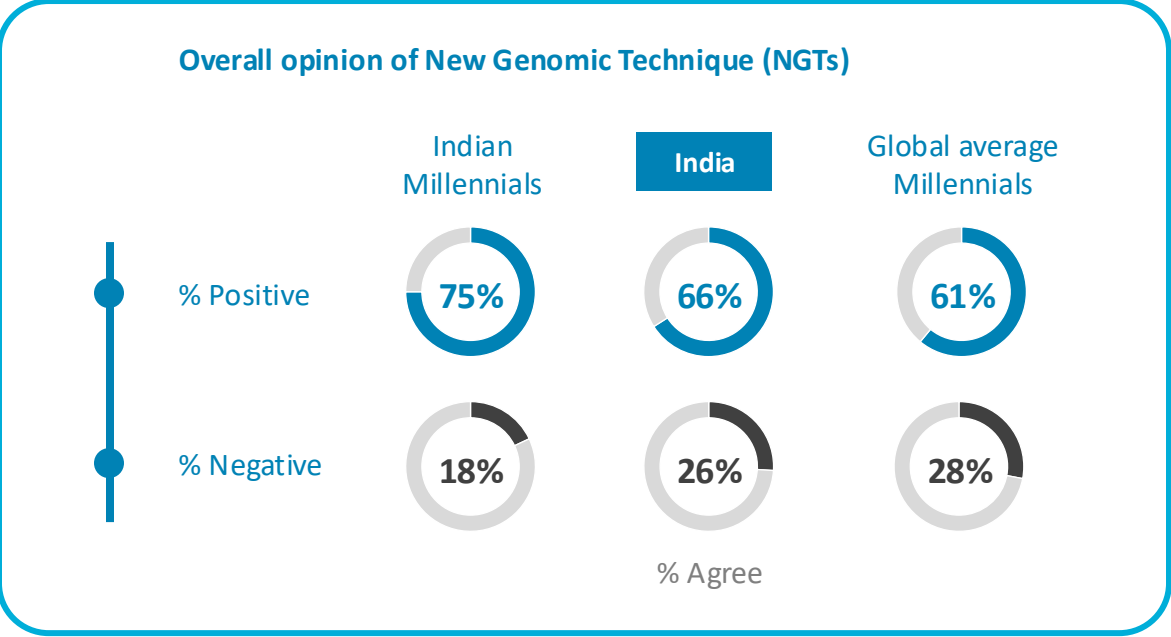
India, Nigeria

Participants in India and Nigeria displayed high levels of optimism regarding science and technology. While attitudes towards NGTs are higher among lower- and upper-middle income countries, Indian Millennials are more optimistic than other generations, but more skeptical of the pharmaceutical industry's pursuit of curative therapies. Younger Nigerian respondents say they feel overwhelmed about food and health information at higher rates than the global average.

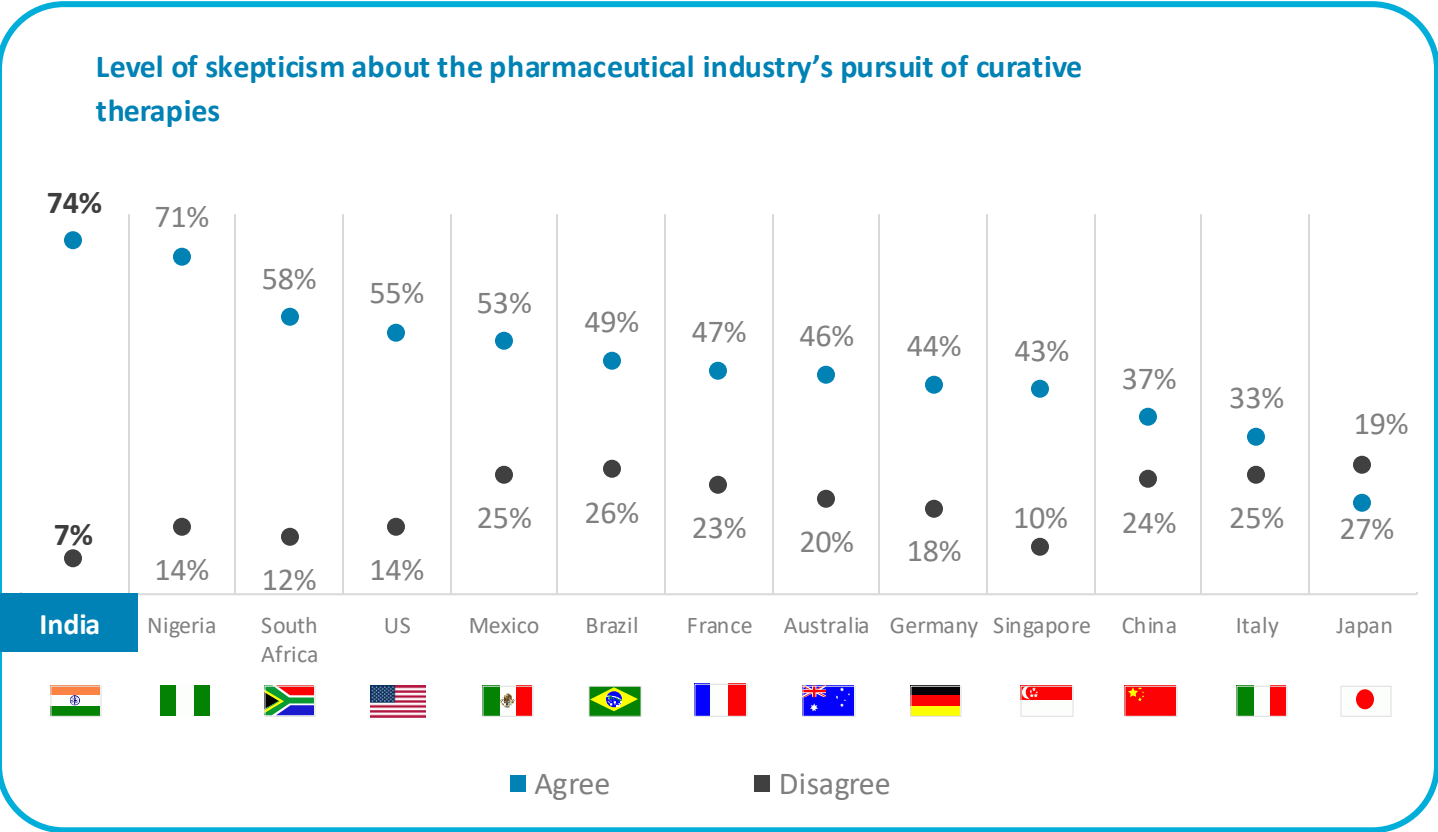


India

Millennial respondents in India hold a positive view on NGTs.



They are also the most skeptical about the pharmaceutical industry’s pursuit of curative therapies.

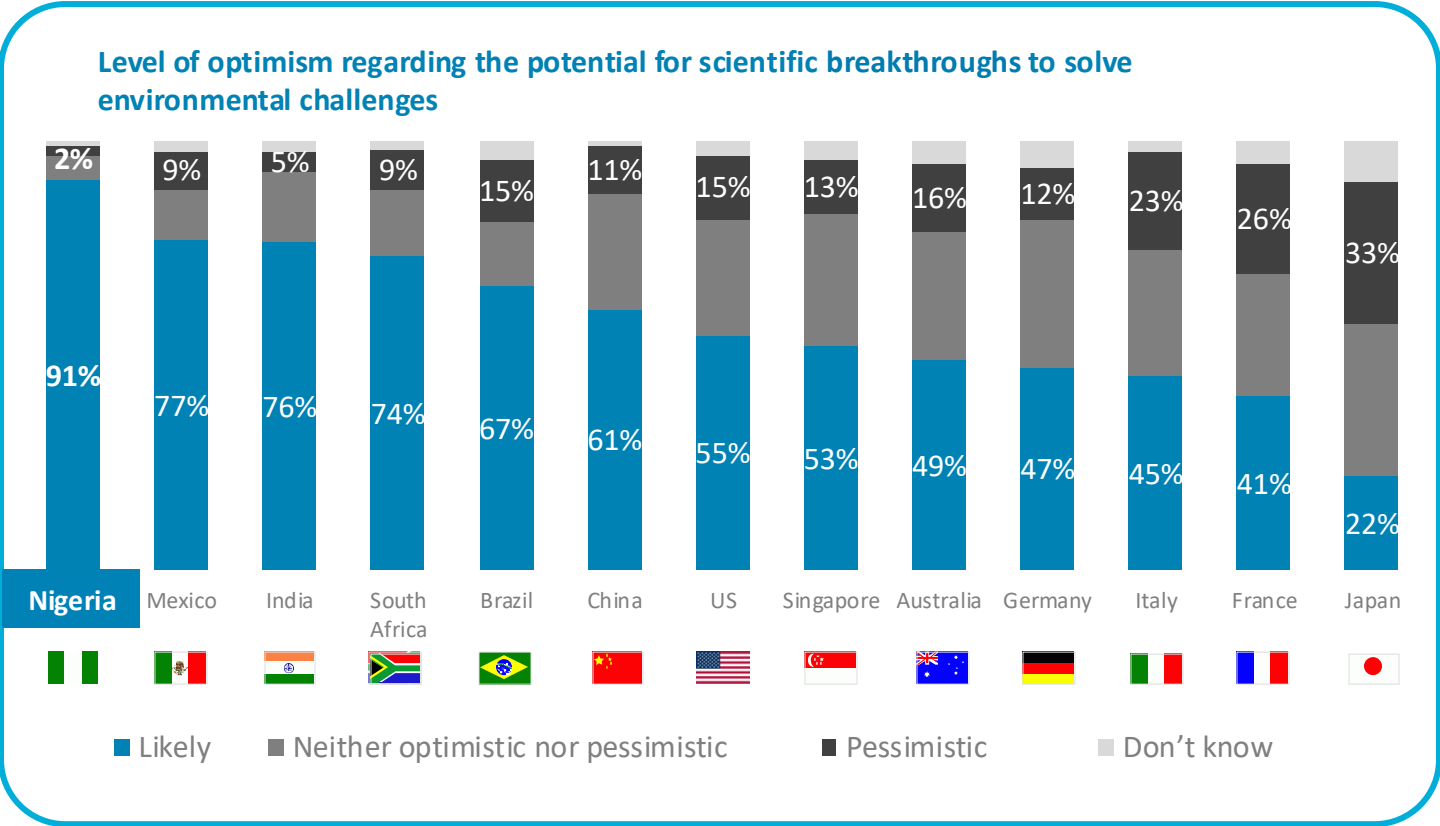


Base: Online adults aged 18+ stating they understood or somewhat understood the definition of the topic (after being shown a description) Total n=11,951; US n=905, Germany n=932, Italy n=897, France n=875, Brazil n=951, Mexico n=972, Nigeria n=986, South Africa n=959, India n=937, China n=997, Japan n=765, Singapore n=888, Australia n=887. Total Millennials (1980-1995) n=3,781. Q. Overall, is your opinion of new genomic techniques (NGTs such as genome editing tools like CRISPR) positive, negative or neutral? Note: Positive = only positive answer. Base: Total n=13,111 online adults aged 18+ . (n=1,000 in each US, Germany, Italy, France, and Australia; n=1,001 in each Brazil, Mexico, Nigeria, India; n=1,002 in each South Africa and Japan; n=1,003 in Singapore; and n=1,100 in China). Total Millennials (1980-1995) n=4,066. Q. To what extent do you agree, or disagree, with each of the following statements? "I am skeptical that the pharmaceutical industry will pursue therapies that cure diseases instead of just treating symptoms". Note: Agree = only positive answers, strongly and tend to agree. Disagree = only negative answers, strongly and tend to disagree.. Note that neutral opinion / 'neither agree nor disagree' or 'don't know' are not shown here

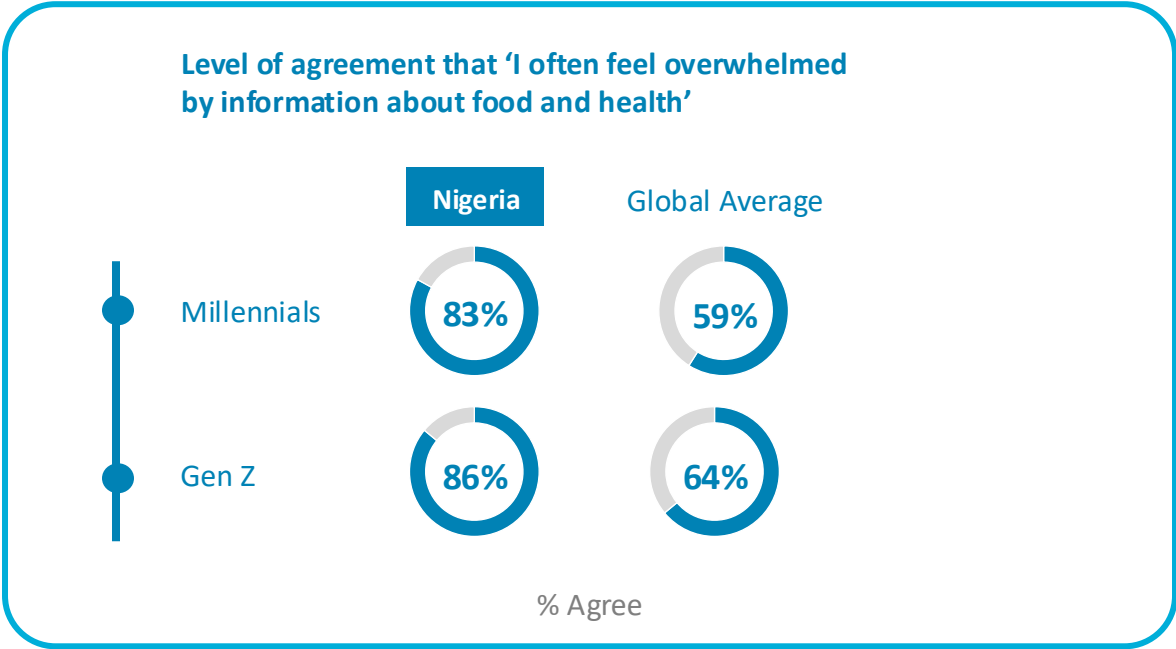


Nigeria

Respondents in Nigeria are the most optimistic about the potential of scientific innovation to solve environmental challenges.



At the same time, younger respondents tend to feel more overwhelmed by food and health information compared to the global average for younger generations surveyed.



Base: Total n=13,111 online adults aged 18+ . (n=1,000 in each US, Germany, Italy, France, and Australia; n=1,001 in each Brazil, Mexico, Nigeria, India; n=1,002 in each South Africa and Japan; n=1,003 in Singapore; and n=1,100 in China). Q. To what extent are you optimistic or pessimistic about the potential for scientific breakthroughs to achieve each of the following? "Solve environmental challenges". Note: Optimistic = only positive answers, very and fairly optimistic. Pessimistic = only negative answers, very and fairly pessimistic. Q. To what extent do you agree, or disagree, with each of the following statements? "I often feel overwhelmed by information about food and health". Note: Agree = only positive answers, strongly and tend to agree.

Methodology

A survey on public attitudes towards breakthrough technologies was conducted online by Ipsos on behalf of Leaps by Bayer and Boston Consulting Group (BCG). Conducted between August 27th and October 18th, 2024, the online survey collected 13,111 responses from adults in 13 countries: Australia, Brazil, China, France, Germany, India, Italy, Japan, Mexico, Nigeria, Singapore, South Africa, and the United States. The sample was weighted to ensure national representation based on region, age, gender, employment status, and ethnicity (in the US). No weighting was applied to adjust on any other demographic. Due to the online manner of the survey, the survey results should be viewed as reflecting the views of the more “connected” segment of the population.

For AI in healthcare the sample included all survey respondents, for cell and gene therapy, new genomic techniques for crops, and cultivated meat certain questions were only shown to those who stated they understood or somewhat understood the respective definition of the topic (after being shown a description) were included in the sample size. Please refer to each page for information on base size.

Age groups were clustered as: Gen Z: (1996-2006) 18-27 years old, Millennial: (1980-1995) 28-43 years old, Gen X (1966-1979) 44-57 years old, Baby Boomer+: (1928-1965) 58+ years old.

Nations’ income classification clusters classified as:

- High income: the United States, Germany, Italy, France, Japan, Singapore, Australia
- Upper-middle income: Brazil, Mexico, China, South Africa
- Lower-middle income: India, Nigeria

For additional information on the study and its methodology
<https://leaps.bayer.com/breakthroughstudy.pdf>

A photograph of a city street at sunset. The sun is low in the sky, creating a warm, golden glow that filters through the trees on the right. Silhouettes of pedestrians are visible in the foreground and middle ground. On the left, there are classical-style buildings. On the right, a digital billboard displays an advertisement featuring a man in a blue uniform. Street lamps are visible along the sidewalk.

leaps  + BCG