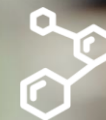


**3M** Science.  
Applied to Life.™

# State of Science Index

2020 Global Report



3M State  
of Science  
Index



# SOSI manifesto: Science matters

Science matters to 3M because it improves daily life for people all over the world, at home, at work and at play.

Science matters to society in the future as exponential population growth brings challenges that only science can solve.

Science *should* matter to citizens because their daily lives and future quality of life depends on it. But *does* it? 3M set out to discover whether and how the world appreciates science.

State of Science Index (SOSI) is a global, corporate thought leadership platform now in its third year.



# Evolution of the State of Science Index

## 2018

Benchmarked individuals' perceptions, sentiment and trust toward science for the first time around the world.

Fielded Jun.-Aug. 2017

## 2019

Tracked whether and how perceptions of science have changed over one year

Explained the “why” behind certain insights we learned in the first year.

Fielded Jul.-Sep. 2018

## 2020 Pre-Pandemic

Evaluated trends in science perception based on three years of tracking data.

Probed deeper into timely topics around the world, such as STEM inequality, sustainability, etc.

Fielded Aug.-Oct. 2019

## 2020 Pandemic Pulse

Aims to understand how perceptions of science have shifted since the onset of COVID-19.

Identifies contrasts in attitudes prior to and during the pandemic at a time when science is highly relevant and “trust is on the rise.”

Fielded Jul.-Aug. 2020

# Historical context

For the last four years, 3M has conducted the annual State of Science Index to track attitudes to science through multi-country original research.

In the past year, we have conducted two surveys:

1. The first wave – called the 2020 Pre-Pandemic Survey – was fielded a few months before the pandemic hit, completed in October of 2019. It marks our third year of exploring attitudes to science and builds on two prior years of research (fielded in 2017 and 2018 and reported in 2018 and 2019, respectively).
2. The second wave – called the 2020 Pandemic Pulse – was fielded in July-August 2020, about six months into the pandemic. This research captures a snapshot of how science is perceived in this moment in time, against the backdrop of the coronavirus outbreak. It enables us to compare and contrast current attitudes around science against sentiment captured before the pandemic.

For the first time since conducting the State of Science Index, we have enough historical data to call out trends from questions we have tracked over time.

# Who and where we're surveying for 2020

## Who?

~1,000 general population respondents per country\*

## Where?

### 2020 Pre-Pandemic

14 Countries: US, Canada, UK, Germany, Poland, Spain, Brazil, Mexico, Japan, Singapore, South Korea, China, India, South Africa  
(Total sample of 14,105 globally)

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### 2020 Pandemic Pulse

Global launch (11 countries): US, Canada, UK, Germany, Poland, Spain, Brazil, Japan, Singapore, South Korea, China  
(Total sample of 11,082 globally)

Following global launch: Mexico, UAE

Not included: India, South Africa

\*Representative sample of national population adults (18+) in each country based on age, gender, region, race/ethnicity (where applicable); Additional weighting also done on education, income, urban vs. rural for certain countries to achieve better national representation and ensure sample is consistent year over year

# Additional survey methodology details

<b>Survey methodology &amp; timing</b>	<b>15-20 minute survey, combination offline and online</b> <ul style="list-style-type: none"> <li>• 2020 Pre-Pandemic: Fielding/interviewing completed Aug. 19 – Oct. 22, 2019</li> <li>• 2020 Pandemic Pulse: Fielding/interviewing completed Jul. 22 – Aug. 16, 2020</li> </ul>
<b>Global trends: 2019 – 2020 Pandemic Pulse (3 waves)</b>	<b>11-country average</b> <ul style="list-style-type: none"> <li>• The number of countries for the 2020 Pandemic Pulse was reduced due to fielding disruptions related to COVID-19 in some markets (India, Mexico, South Africa). When comparing global changes from 2019 through the 2020 Pandemic Pulse, the 11-country average can be used since the same countries were surveyed in 2019 and the 2020 Pre-Pandemic Survey.</li> </ul>
<b>Global trends: 2018 – 2020 Pandemic Pulse (4 waves)</b>	<b>9-country tracking average</b> <ul style="list-style-type: none"> <li>• Two countries were removed (Saudi Arabia and France) and added (South Korea and Spain) in 2019, and as such, results can only be compared between the 9 countries that were surveyed across all four waves. When comparisons across all four waves of data are made, the 9-country tracking average must be used, rather than the 11-Country Average.</li> </ul>
<b>Margin of error</b>	<b>At the 95% confidence level</b> <ul style="list-style-type: none"> <li>• 2020 Pre-Pandemic 14-country average: +/- 0.83 percentage points</li> <li>• 11-country average: +/- 0.94 percentage points</li> <li>• 9-country tracking average: +/- 1.03 percentage points</li> <li>• Each individual country: +/- 3.10 percentage points</li> </ul>
<b>Data in this report</b>	<b>Unless otherwise noted with an asterisk, all data in this report is from the 2020 Pandemic Pulse.</b>
<b>Science was defined as**:</b>	<b>Science is the process of pursuing knowledge about the world and how things in the world work through logically gathering, observing, experimenting and applying truths on a particular subject</b>

\*Additional weighting also done on education, income, urban vs. rural for certain countries to achieve better national representation and ensure sample is consistent year over year

\*\*Science definition provided in two-thirds of the survey

# Four key themes underpin the State of Science in 2020

## Image of science

Around the world, the image of science is on the rise.

People see science with a renewed level of significance—but **barriers remain**.

## Sustainability

Sustainable solutions remain an important focus.

The world is **united in wanting science to solve big challenges**, and finding **sustainable solutions** are still a clear priority even amidst COVID-19.

## STEM equity

STEM equity and gender/race inequality are barriers that impact our future.

**Lack of access to a good STEM education**, especially among underrepresented minority groups, is a barrier to future advancements in science and technology.

## Leadership & responsibility

**Science leadership: There's an opportunity for collaboration and shared responsibility.**

**While governments** on their own are most trusted to solve global challenges, the **private sector** has an opportunity to **work with governments, academia, NGOs and ordinary citizens** to address critical global challenges.



## Theme 1:

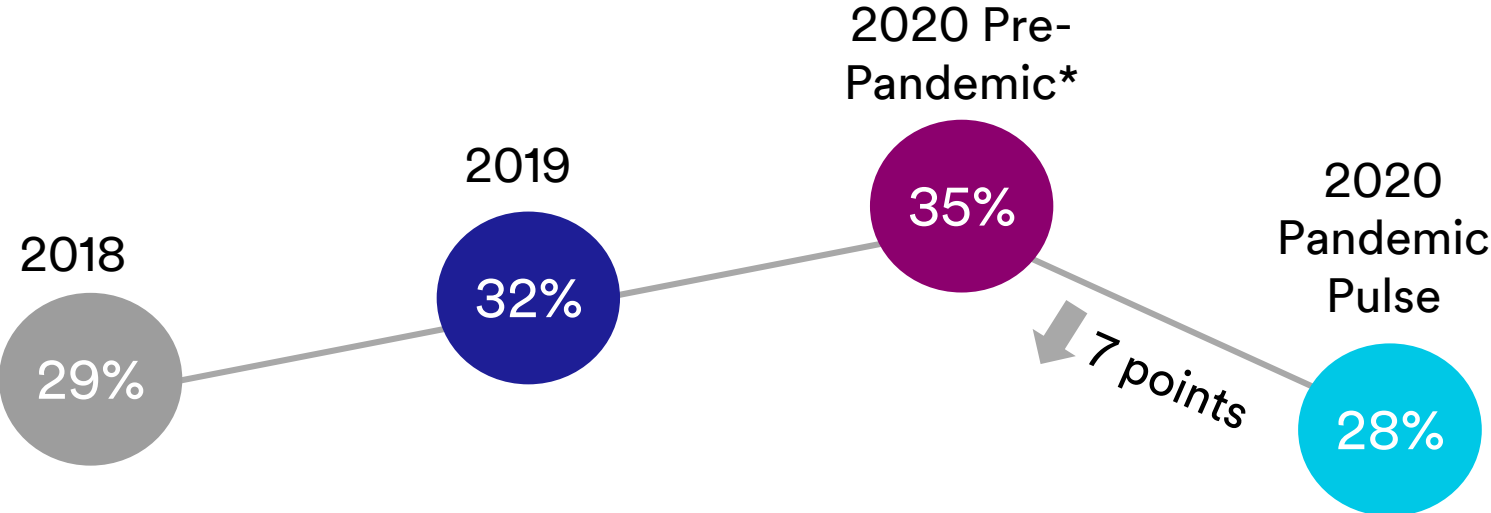
### Image of science

Around the world, the image of science is on the rise.



# Science skepticism has declined for the first time in three years

“I am skeptical of science”



Countries with the biggest drops in skepticism compared to 2020 Pre-Pandemic:

UK: ↓ 11 points

Japan: ↓ 11 points

Brazil: ↓ 9 points

US: ↓ 8 points

Canada: ↓ 8 points

Q3. How much do you agree or disagree with each of the following statements? – I am skeptical of science. Base= 2020 Pandemic Pulse 9-Country Tracking Average (9,077) Fielded Jul-Aug 2020; 2020 Pre-Pandemic 9-Country Tracking Average (9,065) Fielded Aug-Oct 2019; 2019 9-Country Tracking Average (9,014) Fielded Jul-Sep 2018; 2018 9-Country Tracking Average (9,023) Fielded Jun-Aug 2017



# In parallel, trust in science has increased

**89%**

**↑4 pts**

*Since 2018*

**Trust science**

*(vs. 85% 2020 Pre-Pandemic, 87% in 2019, 85% in 2018)*

**86%**

**↑7 pts**

*Since 2018*

**Trust scientists**

*(vs. 80% 2020 Pre-Pandemic, 81% in 2019, 79% in 2018)*

**36%**

**↓6 pts**

*Since 2019*

**People who only believe science that aligns with their personal beliefs**

*(vs. 41% 2020 Pre-Pandemic, 42% in 2019)*

Q3. How much do you agree or disagree with the following statements? – Completely agree - I trust science, I trust scientists; Base= 2020 Pandemic Pulse 9-Country Tracking Average (9,077) Fielded Jul-Aug 2020; 2020 Pre-Pandemic 9-Country Tracking Average (9,065) Fielded Aug-Oct 2019; 2019 9-Country Tracking Average (9,014) Fielded Jul-Sep 2018; 2018 9-Country Tracking Average (9,023) Fielded Jun-Aug 2017

Q3. How much do you agree or disagree with the following statements? – Completely agree - I only believe science that aligns with my personal beliefs; Base=2020 Pandemic Pulse 11-Country Average (11,082) Fielded Jul-Aug 2020; 2020 Pre-Pandemic 11-Country Average (11,079) Fielded Aug-Oct 2019; 2019 11-Country Average (11,014) Fielded Jul-Sep 2018

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# When it comes to credible sources for scientific information, scientists are most trusted

% who believe scientific information coming from each source:

## Mostly believe:

- Those working in scientific fields (84%)
- Documentaries (79%)
- My regular news outlets (67%)
- Public health officials (67%)

## Mixed believe & skeptical:

- Friends or family (60%)
- Colleagues (48%)
- Company websites (47%)

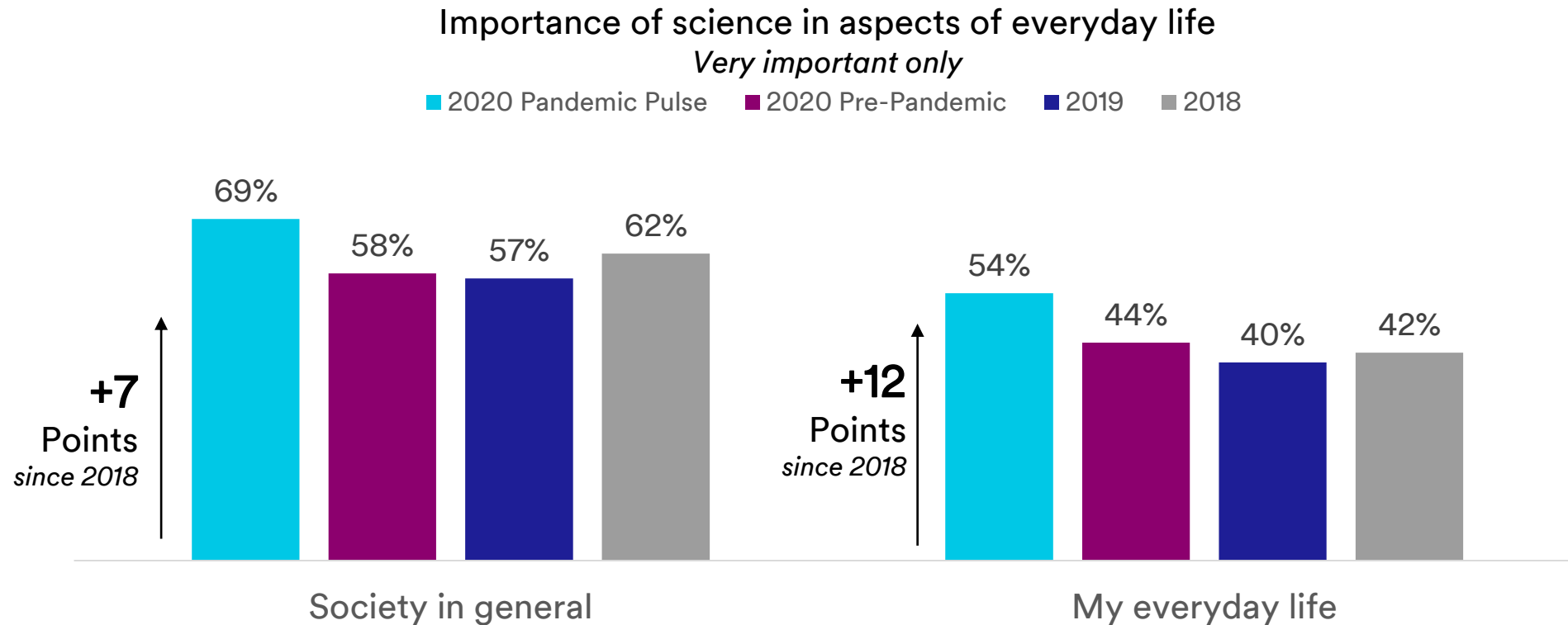
## Mostly skeptical:

- Social media posts (27%)
- Politicians (27%)
- Celebrities (25%)

*People are far more likely to believe science information coming from their preferred traditional news sources (67%) than social media (27%)*

# As the pandemic spread globally in 2020, science gained importance to people around the world

## We see this in every country surveyed



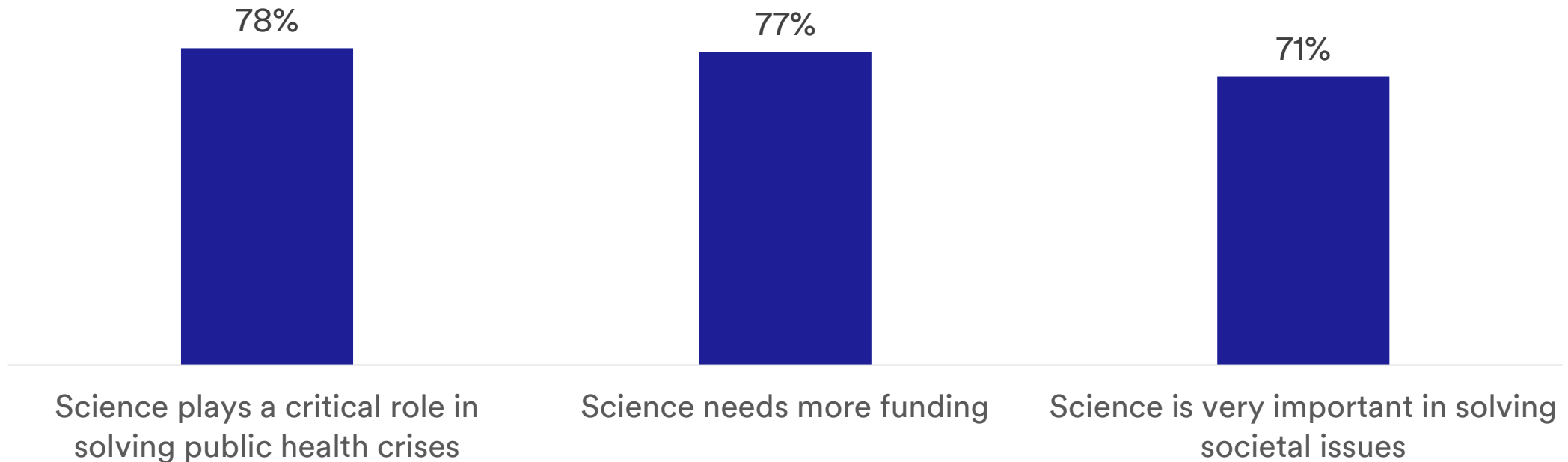
Q1. Thinking about the present-day, how important do you feel science is... - Very important only Summary Base= 2020 Pandemic Pulse 9-Country Tracking Average (9,077) Fielded Jul-Aug 2020; 2020 Pre-Pandemic 9-Country Tracking Average (9,065) Fielded Aug-Oct 2019; 2019 9-Country Tracking Average (9,014) Fielded Jul-Sep 2018; 2018 9-Country Tracking Average (9,023) Fielded Jun-Aug 2017

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# Because of COVID-19, people are more likely to acknowledge the critical role that science plays in society

Has COVID-19 made you more likely to agree with...



Q17. Has the coronavirus/COVID-19 outbreak made you more or less likely to agree with each of the following statements? - More likely to agree, Base= 2020 Pandemic Pulse 11-Country Average (11,082) Fielded Jul-Aug 2020







# The world is united in the belief that we should value and follow science

82%

There are negative consequences to society if people do not value science

87%

*Jumps 5 pts among emerging markets*

92%

People's actions should follow scientific evidence/advice to contain the spread of COVID-19

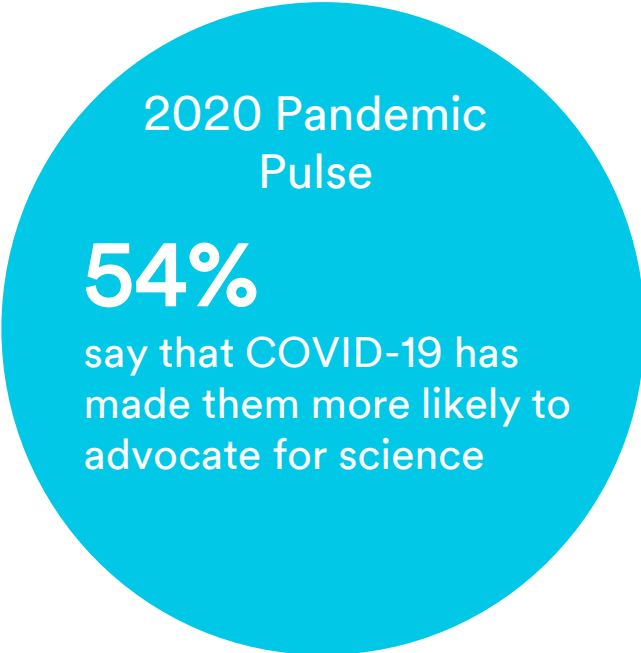
Q12. How much do you agree or disagree with the following statement? - There are negative consequences for society if people do not value science. Base= 2020 Pandemic Pulse 11-Country Average (11,082), Emerging Markets (3,017) Fielded Jul-Aug 2020

Q15. How much do you agree or disagree with the following statement? - In order to contain the spread of the coronavirus/COVID-19, people's actions should follow scientific evidence/advice. Base= 2020 Pandemic Pulse 11-Country Average (11,082) Fielded Jul-Aug 2020



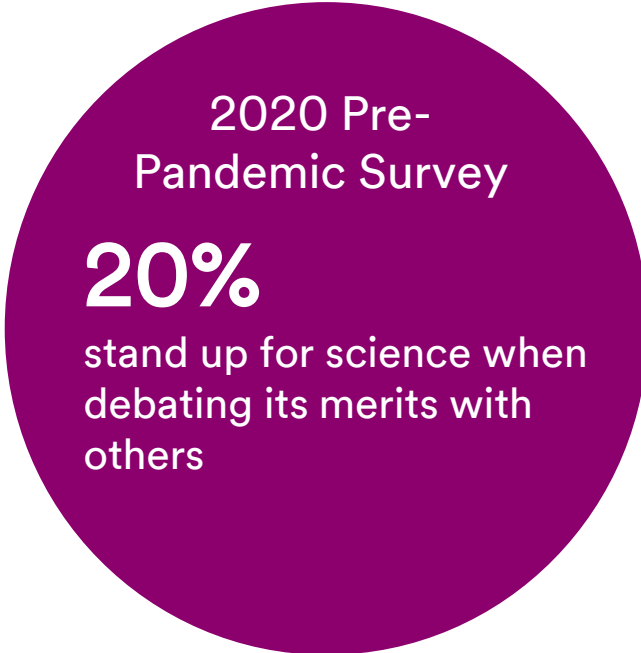
# Many say that COVID-19 has made them more likely to advocate for science, but few were advocates to begin with

Emerging markets and younger generations are most primed to take up advocacy



Who is more likely to advocate for science due to COVID-19?

<b>66%</b> Emerging countries	vs.	<b>49%</b> Developed countries
<b>57%</b> Younger generations	vs.	<b>47%</b> Boomers



Q16. Has the coronavirus/COVID-19 outbreak made you more or less likely to - More likely; Base= 2020 Pandemic Pulse 11-Country Average (11,082), Emerging Markets (3,017), Developed Markets (8,065), Gen Z – Gen X (7,487), Boomers (3,595) Fielded Jul-Aug 2020  
2020 Pre-Pandemic Q18. Which, if any, of the following do you do to support science activities and advancing scientific discoveries? Select all that apply. Base=2020 Pre-Pandemic 14-Country Average (14,105) Fielded Aug-Oct 2019



# Work remains: Despite increased appreciation for science, some troubling headwinds prevail



32%

agree that if science didn't exist, their everyday lives wouldn't be all that different



63%

rarely\* think about the impact of science in their everyday lives  
*\*A little/never*



15-point gap between “science is very important” to society in general (69%) and one's everyday life (54%)

Q1. Thinking about the present-day, how important do you feel science is... - Very important only Summary; Base= 2020 Pandemic Pulse 9-Country Tracking Average (9,077) Fielded Jul-Aug 2020  
Q2. How much do you agree or disagree with each of the following statements? – If science didn't exist, my everyday life wouldn't be all that different NET: Somewhat/completely agree. Base= 2020 Pandemic Pulse 11-Country Average (11,082) Fielded Jul-Aug 2020  
Q4. How much do you think about the impact of science in your everyday life? NET: Never/A little; Base= 2020 Pandemic Pulse 11-Country Average (11,082) Fielded Jul-Aug 2020





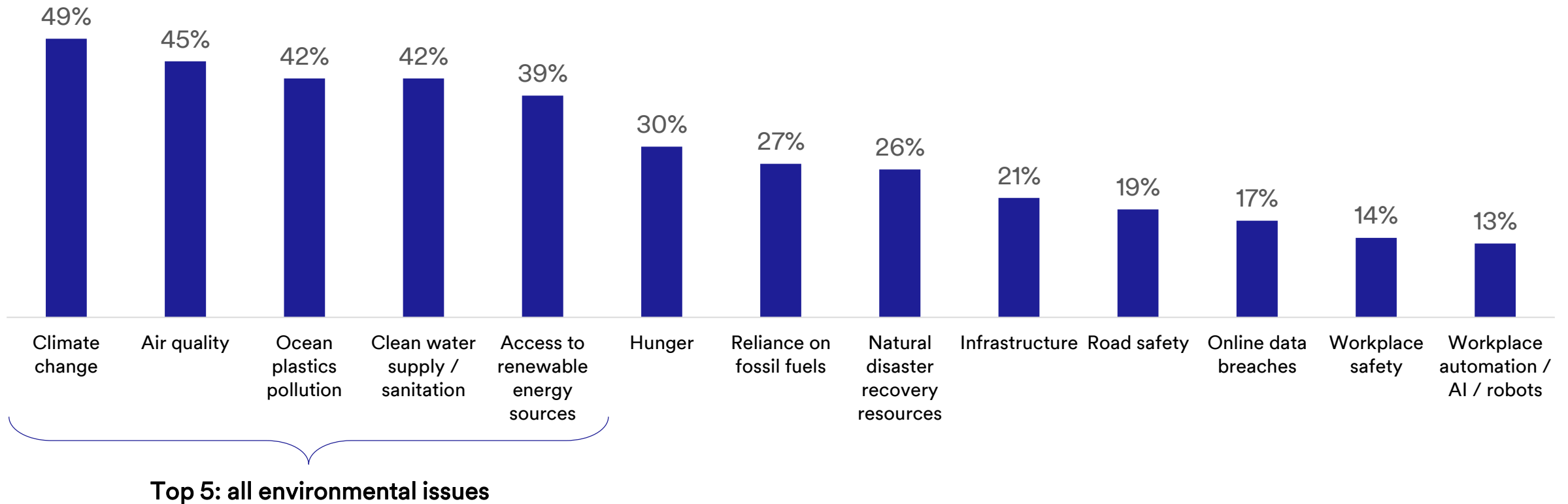
## Theme 2:

**Sustainability**  
**Sustainable solutions remain an important focus.**



# Before the pandemic, climate change was the number one issue for science to solve apart from healthcare

Beyond healthcare, which of the following issues do you most want science to help solve?\*



\*2020 Pre-Pandemic Survey

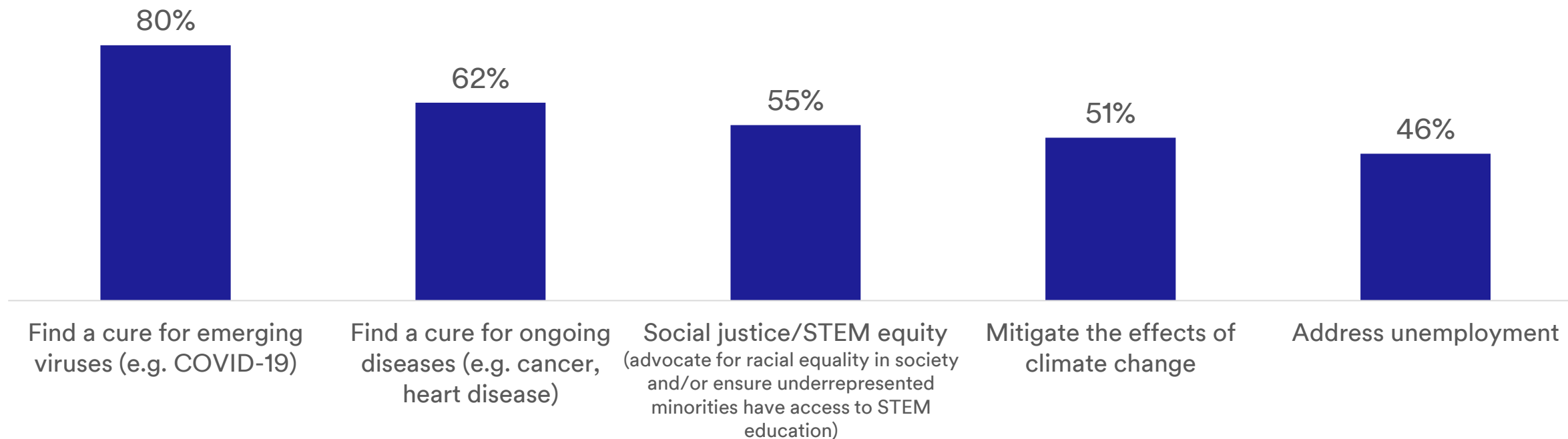
2020 Pre-Pandemic Q46. Thinking beyond healthcare now, which, if any, of the following issues do you most want science to help solve? Select top four. Base= 2020 Pre-Pandemic 14-Country Average (14,105) Fielded Aug-Oct 2019

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# Unsurprisingly, healthcare issues remain top priority in 2020—followed by social justice/STEM equity and the environment

Amid major public health, economic and social challenges in 2020, top issues people want the world to solve include...



Q18. Considering current events over the past six months (e.g. the coronavirus/COVID-19 outbreak, Black Lives Matter movement, progress in mitigating the effects of climate change, global economic recession, etc.), which THREE global challenges from the list below should the world prioritize solving today? Select top three. Base=2020 Pandemic Pulse 11-Country Average (11,082) Fielded Jul-Aug 2020

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# Even during COVID-19, environmental issues remain as a top consequence to a world without science

Top negative consequences of concern if people do not value science include:

*Among those who agree there are negative consequences to a world that does not value science*



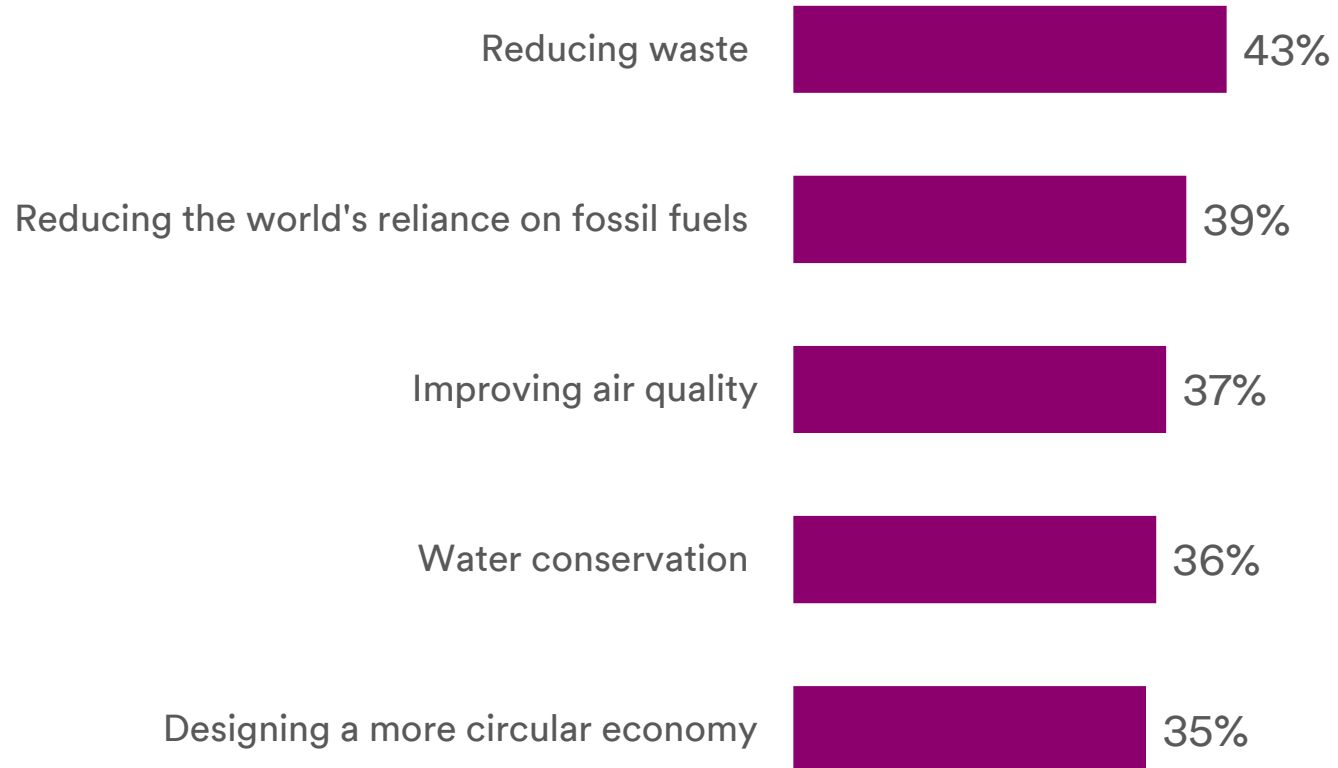
**82%**

there are negative consequences to society if people do not value science

Q13. Which of the following negative consequences are you MOST concerned about? Please select the top TWO negative consequences you are most concerned about. Select top two. Base=2020 Pandemic Pulse, those who agree there are negative consequences if people do not value science (9,089) Fielded Jul-Aug 2020

# People expect science to solve sustainability issues

Top 5 issues science should prioritize to create a sustainable future\*



*\*2020 Pre-Pandemic Survey*

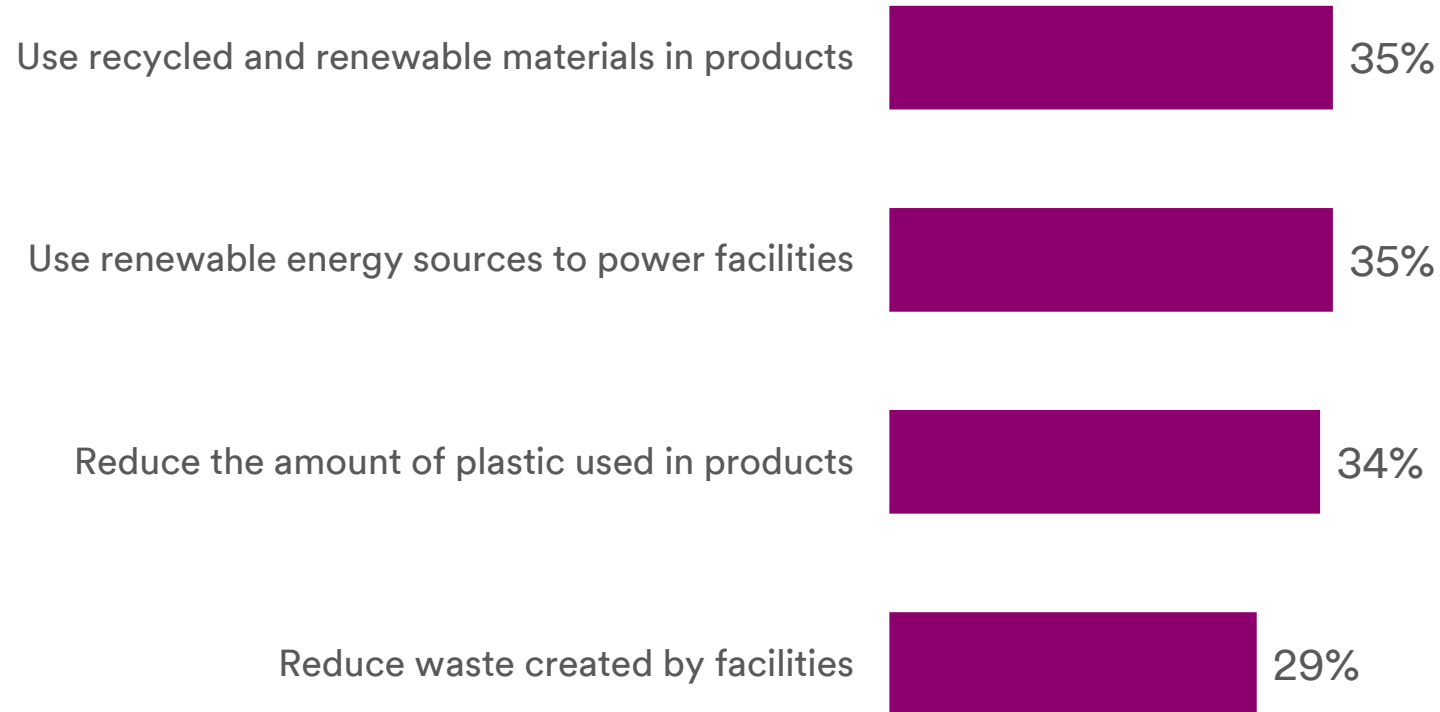
2020 Pre-Pandemic Q47. When it comes to creating a sustainable future, which, if any, of the following do you think science should prioritize solving? Select top two. Base=2020 Pre-Pandemic 14-Country Average (14,105) Fielded Aug-Oct 2019

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# Companies can take action to help secure a sustainable future

Top 4 actions companies should prioritize to build a sustainable future for all\*



*\*2020 Pre-Pandemic Survey*

2020 Pre-Pandemic Q48. Which, if any, of the following actions do you think companies should prioritize in building a more sustainable future for all? Select top two. Base= 2020 Pre-Pandemic 14-Country Average (14,105) Fielded Aug-Oct 2019

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## Theme 3:

### STEM equity

**STEM equity and gender/race inequality are barriers that impact our future.**

# The pandemic has pulled into focus the importance of a STEM education

*The pandemic has made global citizens more likely to agree...*

**74%**

The world needs more people pursuing STEM related careers to benefit society's future

**73%**

A strong STEM education for students is crucial

*And before the pandemic, people recognized a need for science-based work skills*

**85%**

The workforce needs more skilled trade workers\*

*\*2020 Pre-Pandemic Survey*

Q17. Has the coronavirus/COVID-19 outbreak made you more or less likely to agree with each of the following statements? - More likely to agree. Base= 2020 Pandemic Pulse 11-Country Average (11,082) Fielded Jul-Aug 2020  
2020 Pre-Pandemic Q49. How much do you agree or disagree with the following? - The workforce needs more skilled trade workers (e.g. welders, electricians, mechanics, etc.) Base= 2020 Pre-Pandemic 14-Country Average (14,105) Fielded Aug-Oct 2019

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# Too many students have already been discouraged from STEM

We must act now: The trend has gained momentum over time



**28%**

Gen Z  
(18-23)



**24%**

Millennials  
(24-39)

vs.



**15%**

Gen X  
(40-55)



**9%**

Boomers  
(56+)

Q10. Were you ever discouraged from pursuing science when you were a student in school (not including university)? Base= Gen Z (1,096), Millennials (3,101), Gen X (3,290), Boomers (3,595) Fielded Jul-Aug 2020

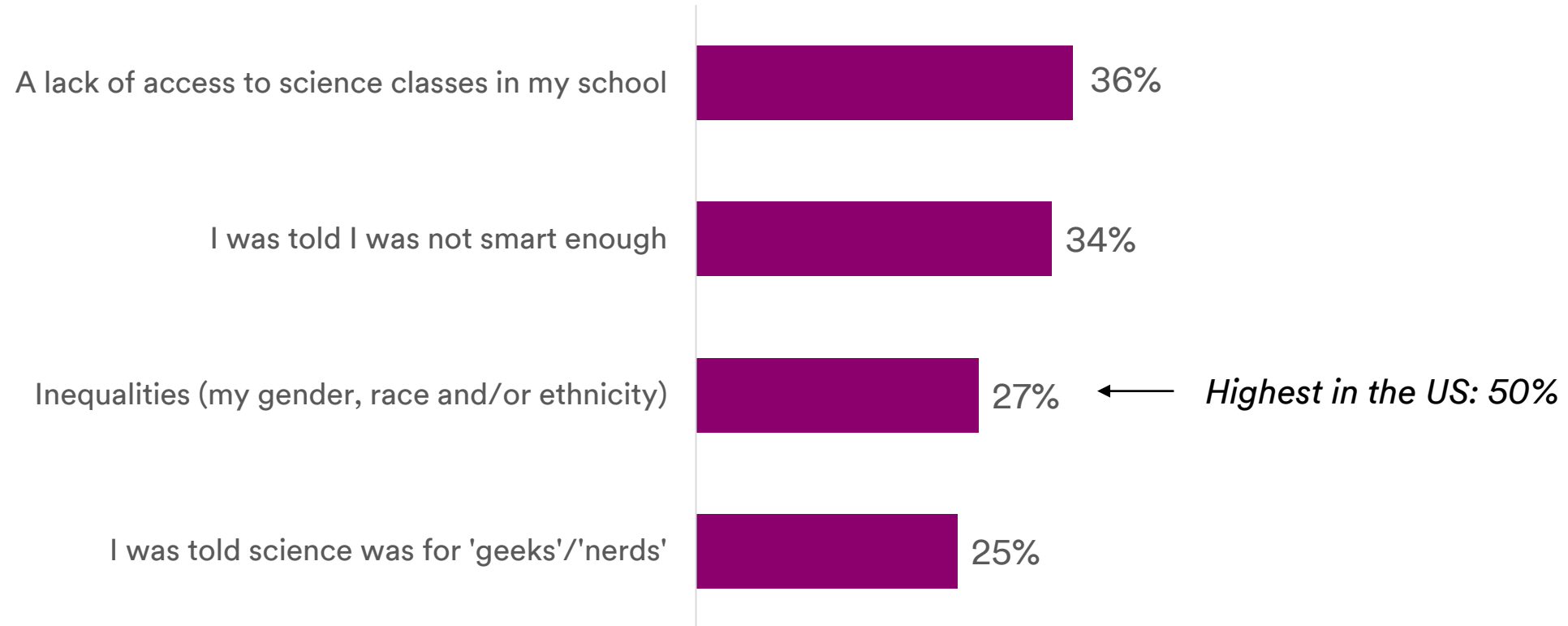
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# Barriers to STEM education are holding students back

## Inequality and a lack of access are major obstacles to securing the next generation of scientists

Reasons why students felt discouraged from pursuing science  
*Among those who were discouraged*

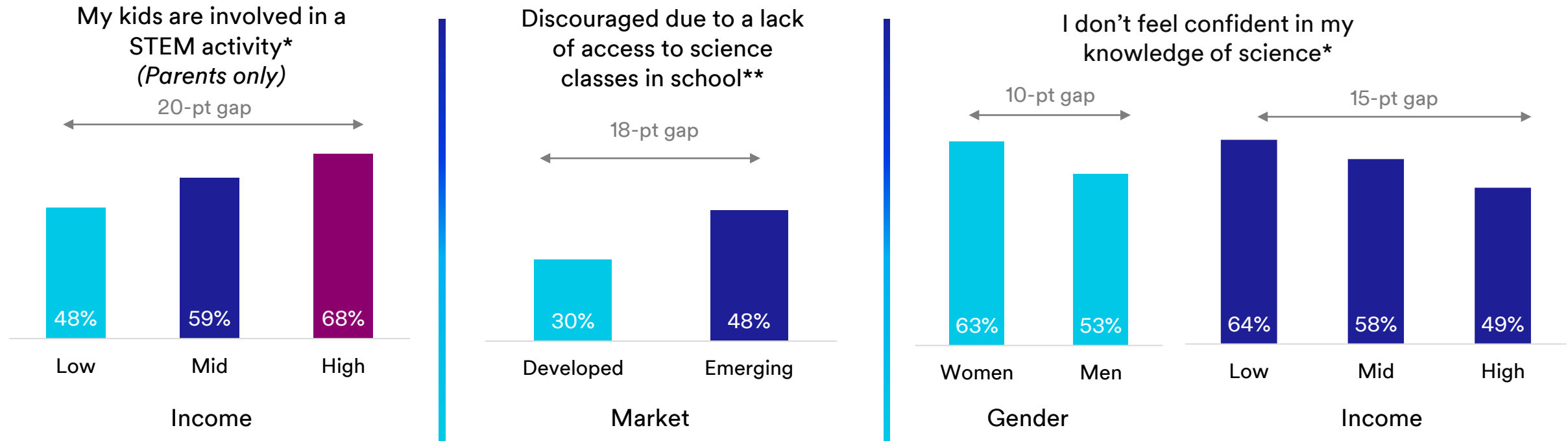


Q11. Why do you think you were discouraged from pursuing science when you were a student in school (not including university)? I think I was discouraged from pursuing science in school because.... Select all that apply. Base= 2020 Pandemic Pulse, those discouraged from pursuing science as a student (1,865) Fielded Jul-Aug 2020

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# Opportunities are slipping away from the underserved and underrepresented



\*2020 Pre-Pandemic Survey

\*\*Among those who were discouraged from pursuing science as a student (not college/university)

2020 Pre-Pandemic Q28. Is your child involved in any of the following science, technology, engineering or math (STEM) initiatives or activities? Select all that apply.

Base=2020 Pre-Pandemic Parents – Low income (1,184), Mid income (1,882), High income (1,689) Fielded Aug-Oct 2019

Q11. Why do you think you were discouraged from pursuing science when you were a student in school (not including university)? I think I was discouraged from pursuing science in school because.... Select all that apply. Base=2020 Pandemic Pulse, discouraged from pursuing science – Emerging (649), Developed (1,216) Fielded Jul-Aug 2020

2020 Pre-Pandemic Q3. How much do you agree or disagree with the following statements? – I don't feel confident in my knowledge of science. Base=2020 Pre-Pandemic

Men (6,839), Women (7,266), Low income (5,027), Mid income (5,039), High income (3,559) Fielded Aug-Oct 2019

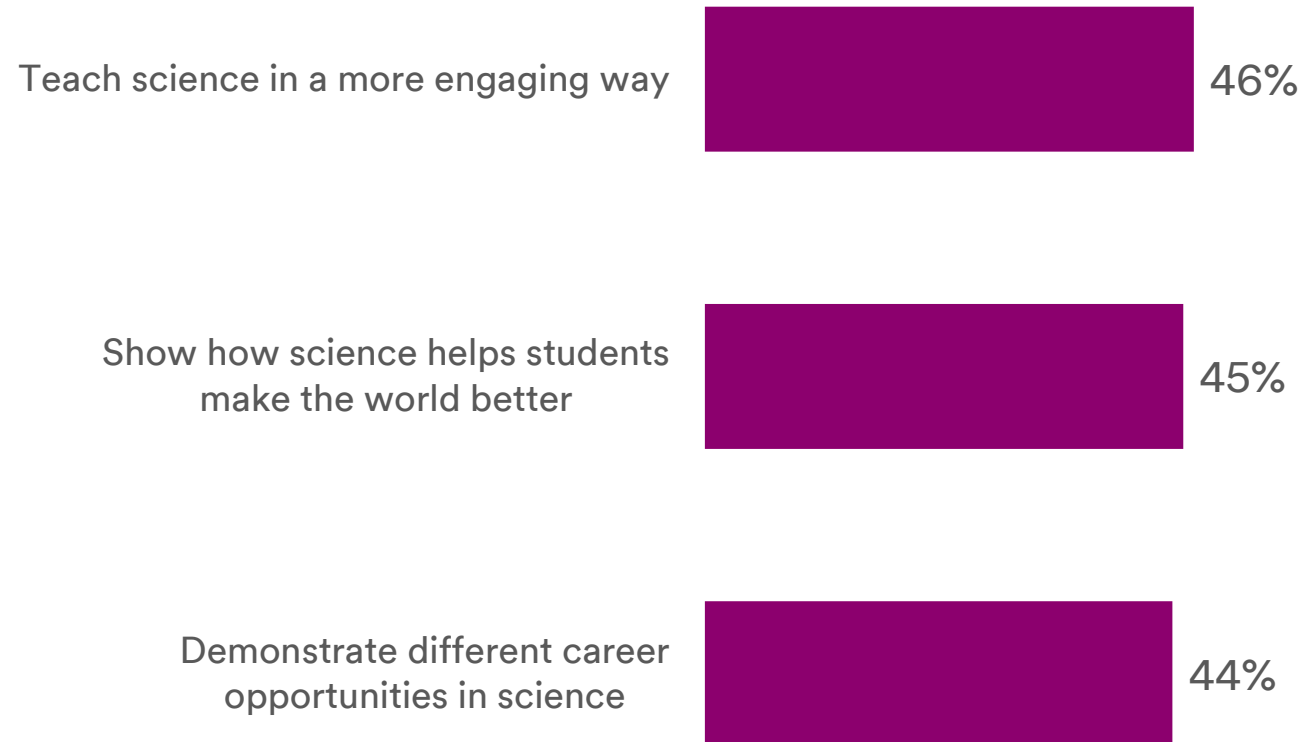
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# How do we inspire more students to pursue science?

Top 3 ways to inspire students to pursue science\*



*\*2020 Pre-Pandemic Survey*

2020 Pre-Pandemic Q36. Students would be more inspired to pursue a science career if...Select top three. Base=2020 Pre-Pandemic 14-Country Average (14,105) Fielded Aug-Oct 2019  
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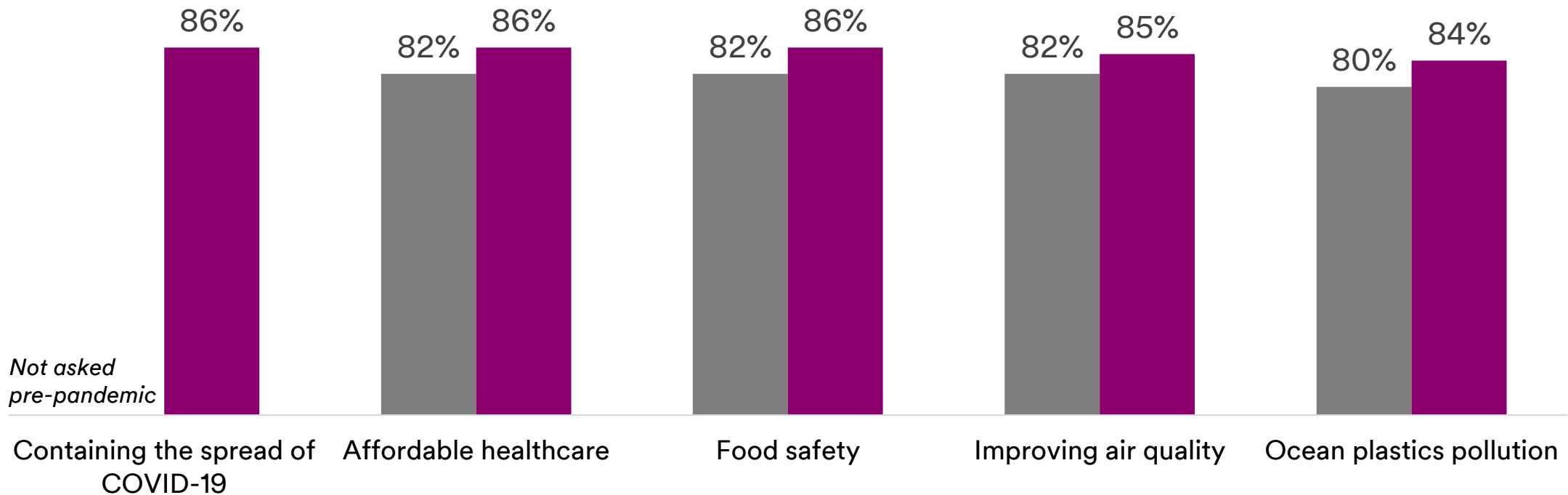
## Theme 4:

Leadership & responsibility  
**Science leadership: There's  
an opportunity for  
collaboration and shared  
responsibility.**

# Expectations for government involvement in key issues was already high pre-pandemic—today, they're even higher

Governments should be more involved in...  
Top 5 responses

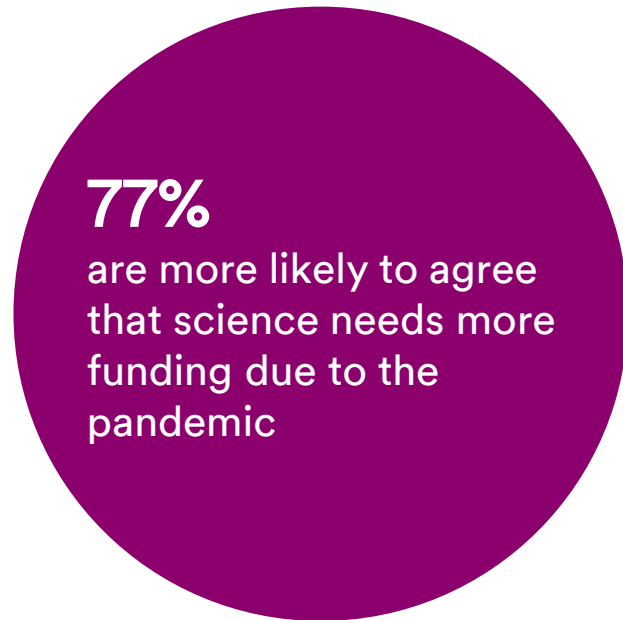
■ 2020 Pre-Pandemic ■ 2020 Pandemic Pulse



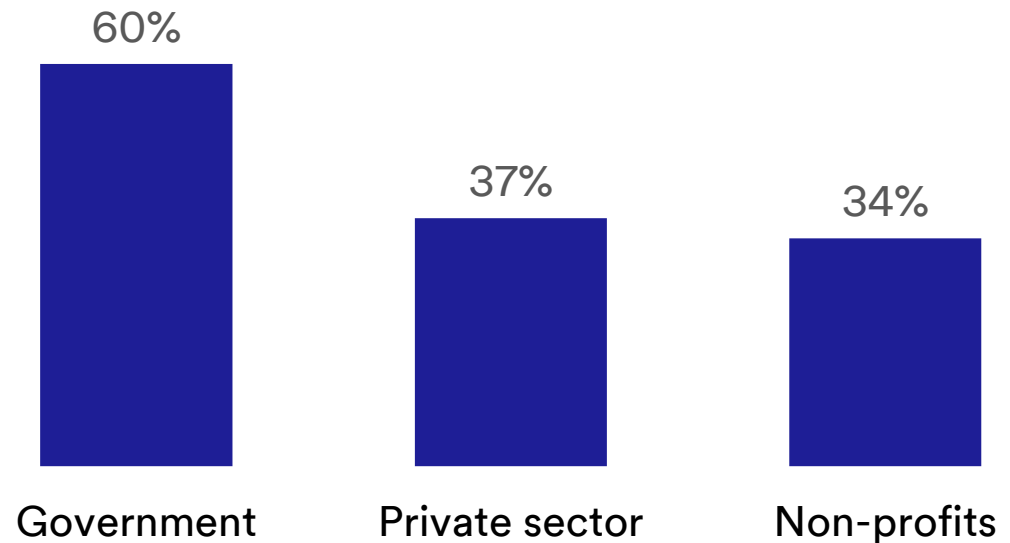
Q8. Do you think governments should be more or less involved in the following issues? - More involved Summary Base= 2020 Pandemic Pulse 11-Country Average (11,082) Fielded Jul-Aug 2020; 2020 Pre-Pandemic 11-Country Average (11,079) Fielded Aug-Oct 2019  
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# The world agrees that science needs more funding amidst the pandemic, especially from government



Responsible for deciding how funding for scientific research/advancements is allocated\*



*\*2020 Pre-Pandemic Survey*

Q17. Has the coronavirus/COVID-19 outbreak made you more or less likely to agree with each of the following statements? - More likely to agree. Base= 2020 Pandemic Pulse 11-Country Average (11,082) Fielded Jul-Aug 2020  
2020 Pre-Pandemic Q48. Which, if any, of the entities below should be responsible for deciding how funding for scientific research and advancements is allocated? Select all that apply. Base=2020 Pre-Pandemic 14-Country Average (14,105) Fielded Aug-Oct 2019

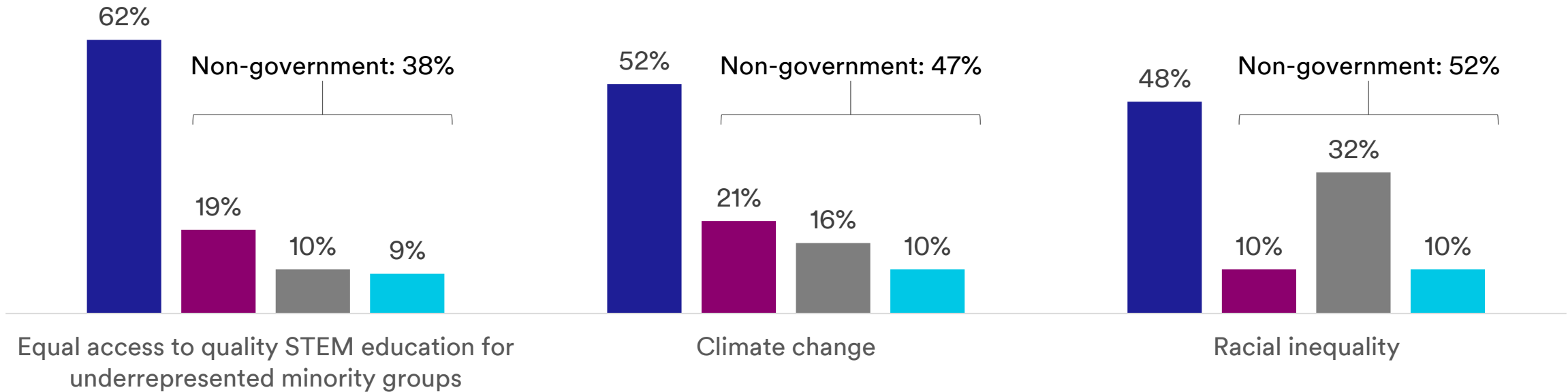
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# While government is ascribed most responsibility to solve societal issues, collaboration from other entities is optimal

Entities most responsible for solving societal issues

■ Government ■ Corporations ■ Individual citizens ■ Non-profits



Percentages may not add up to exactly 100% due to rounding

Q21. Now, which entity would you say is MOST responsible for solving each of the following societal issues today? Base= 2020 Pandemic Pulse 11-Country Average (11,082) Fielded Jul-Aug 2020

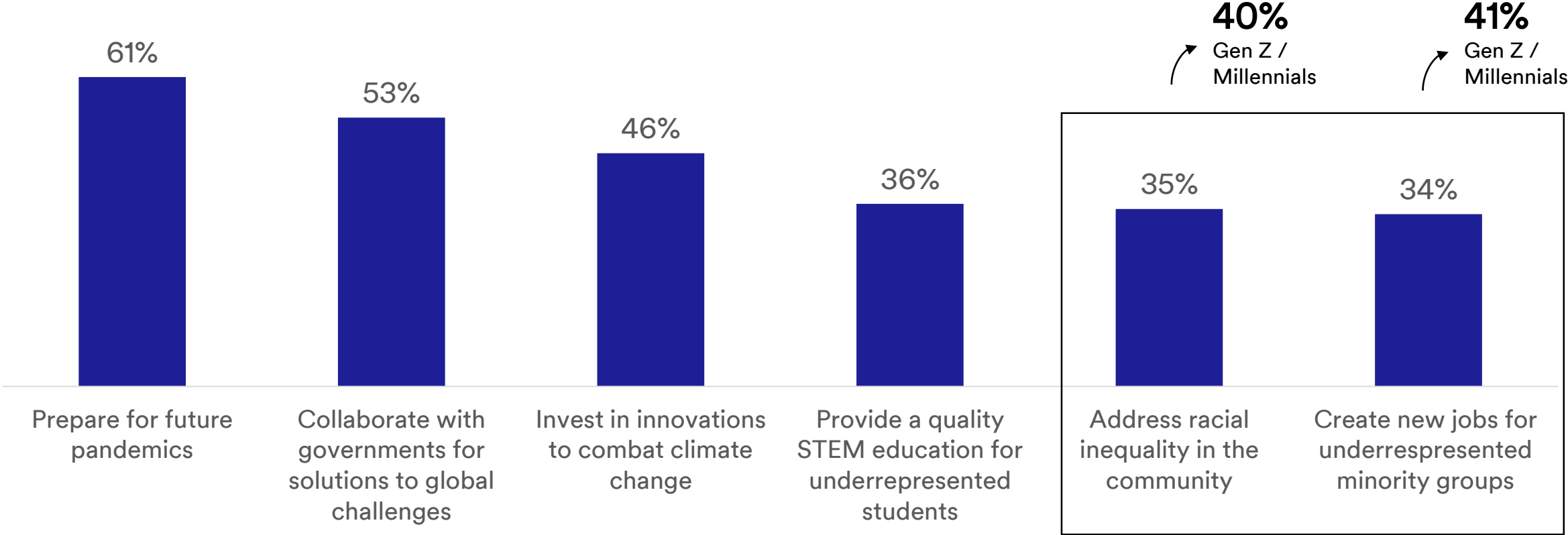
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# Corporations have a license to lead on important priorities

## Younger generations expect corporations to be more involved in combatting social injustices

Amid 2020's public health, economic and social challenges, corporations should prioritize...



Q19. As you continue thinking about current events over the last six months (e.g. the coronavirus/COVID-19 outbreak, Black Lives Matter movement, progress in mitigating the effects of climate change, global economic recession, etc.), which, if any, of the following actions should corporations prioritize in the future (beyond their core business purpose)? Select top three. Base= 2020 Pandemic Pulse 11-Country Average (11,082) Fielded Jul-Aug 2020





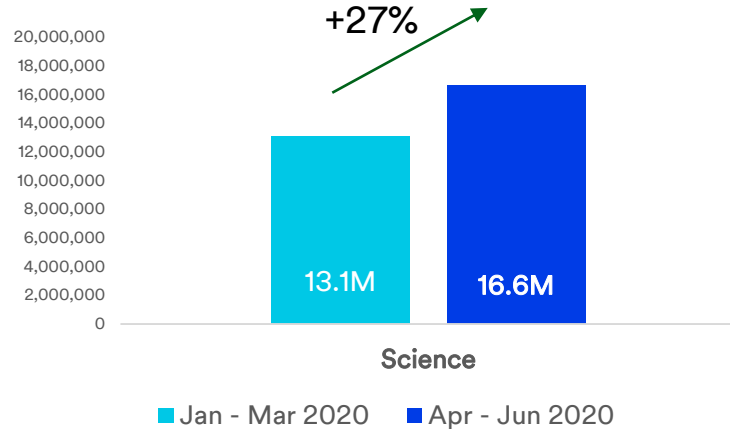


# Appendix

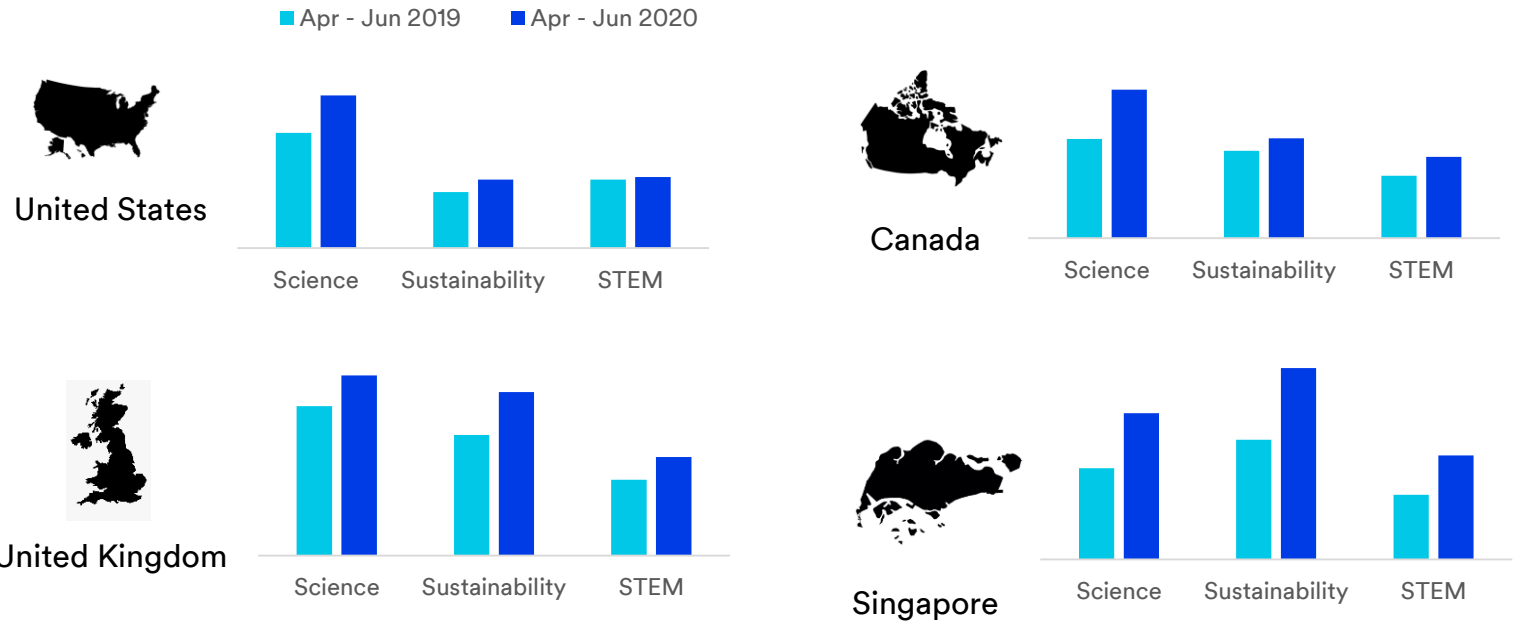
# Science is having its moment

Global conversation and search interest around science is on the rise, propelled by COVID-19, sustainability and STEM equity.

Global social media conversation  
2020 Rise



Search volume across sample of different countries  
Year over Year Rise



**Daily Mail**  
Hopes rise for a coronavirus vaccine 'by Christmas': First trial results of Oxford's Covid-19 jab reveal it is safe and provokes an immune reaction

**Forbes**  
Diversity Is Essential In STEM. Here's How People Are Organizing 'Good Trouble' To Make A Change.

**IT'S SCIENCE!**  
Women And People of Color "Woefully Underrepresented" In Science Textbooks

**SCIENTIFIC AMERICAN 75**  
Science and Scientific Expertise Are More Important Than Ever

**USA TODAY**  
#BlackBirdersWeek, #BlackInNeuro: Black scientists, physicians are using hashtags to uplift