



— Building a More Sustainable Future of Flight

— June 2023

Study Details

Objectives:

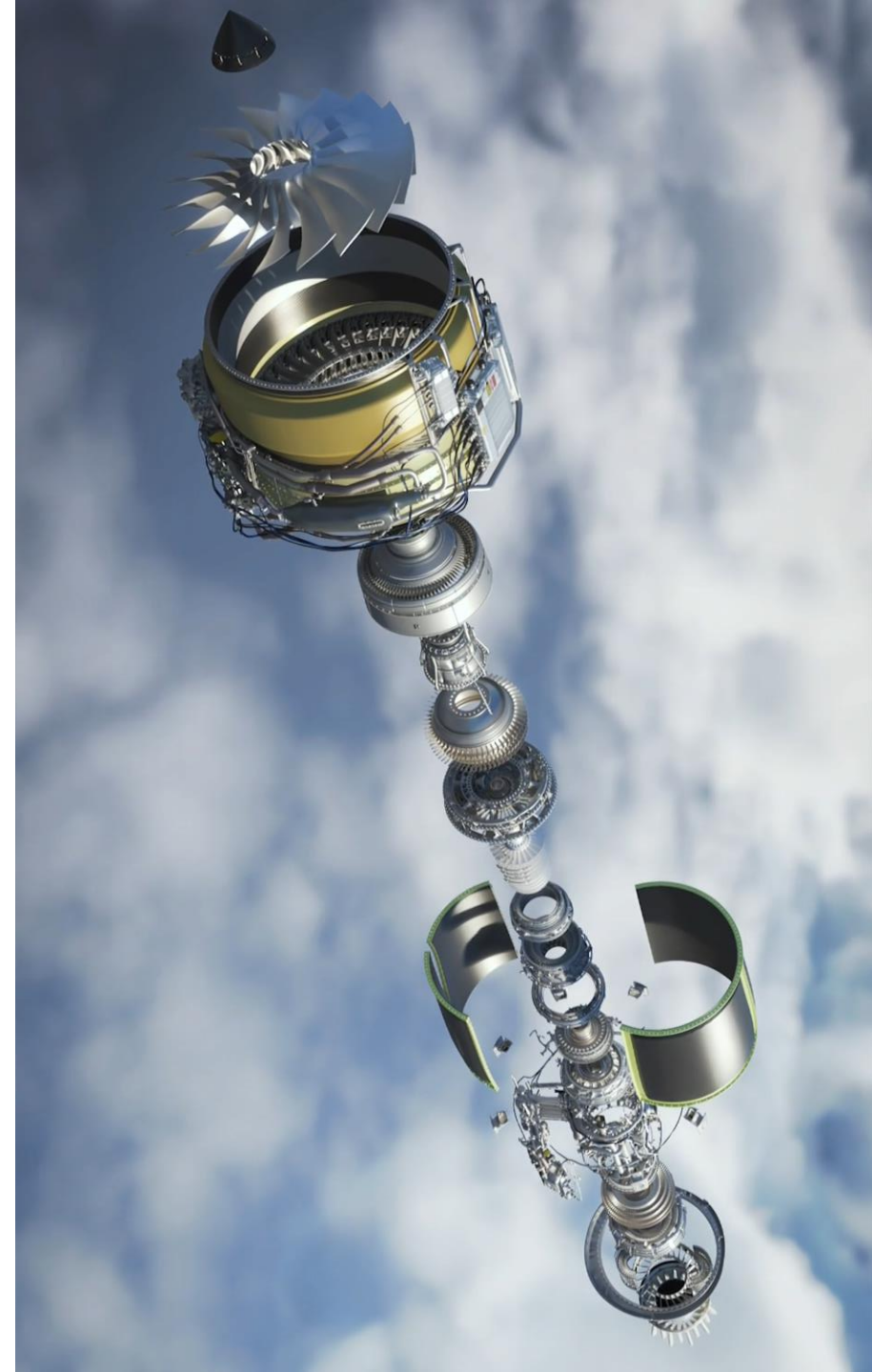
This study was designed to examine the industry's progress toward and reveal stakeholder perspectives on sustainability challenges, goals, and strategies within the aviation industry.

Audience:

Aviation decision makers

Methodology:

- 10-minute survey
- n=325 respondents
- China (n=50), France (n=52), India (n=55)
UAE (n=55), UK (n=56), USA (n=57)
- Fielding Dates: May 2 - May 11
- Survey fieldwork was supplemented by eight in-depth interviews with sustainability executives within the industry



Building A More Sustainable Future of Flight

Two years since setting its decarbonization target, global survey of 325 aviation decision makers shows a united commitment and real investment in sustainability goal, but concern industry efforts need accelerated support.*

Amidst myriad of issues, aviation leaders identified sustainability as the top challenge TODAY.

- 30% say meeting aviation's sustainability goal is the #1 current challenge, even over supply chain and labor issues.
- 67% agree that the aviation industry is united in its focus on implementing sustainability solutions.
- Respondents are split as to whether progress is happening at the right pace, with 51% saying it is too slow, adding a sense of urgency to a longer-term target.

Companies report they are putting their money where their mouth is on sustainability...

- 76% say the focus on sustainability has fundamentally changed the way the industry operates.
- 88% of companies already have a sustainability strategy in place.
- More than 70% say their sustainability strategy is having an impact on how they invest and operate.
- 74% say their company sustainability investments will be maintained or grow even in the face of inflation or recession.

...But accelerated support is needed to reach net zero by 2050.

- While a plurality (46%) believe the industry will meet its net zero goal by 2050, 32% say it will not, and 22% are unsure.
- On average, respondents believe the target will be met by 2055.
- The biggest hurdles are a mix of rising costs, funding, supply issues, and energy resources.
- Respondents believe advancements in both fuels and engines will play the biggest role in reaching the 2050 goal.

Government has a key role to play.

- 29% of respondents identified government as providing the most pressure to decarbonize, followed by investors at 17%.
- There is a clear role for government to play in support of these efforts, with 61% showing a preference for incentives and policy support over mandates and regulation.
- Respondents rank increased sustainable aviation fuel (SAF) investment as the number one most important role for government to play in reaching the 2050 goal.

Respondents say sustainability is the biggest challenge facing the aviation industry today.

Top Challenges Facing the Aviation Industry



Meeting sustainability goals (30%)



Ongoing supply chain challenges (19%)

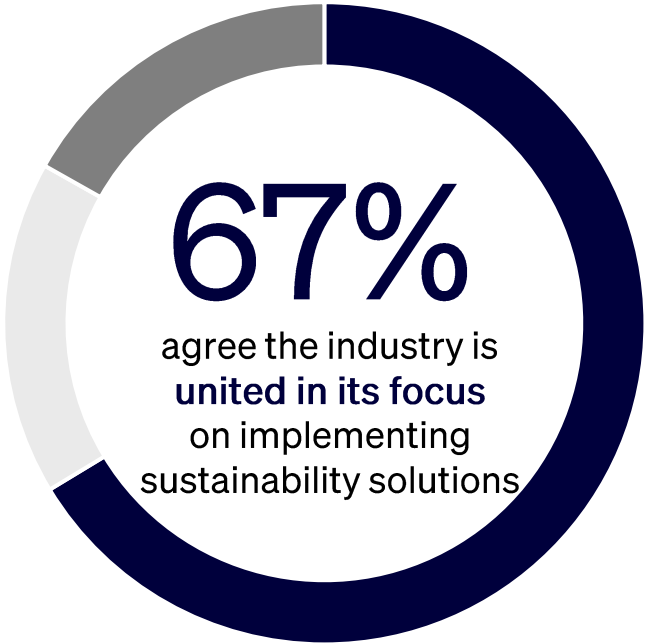


Labor Issues (11%)



Infrastructure challenges (10%)

Industry Alignment on Sustainability



■ Agree ■ Neutral ■ Disagree

Q2: Which of the following would you say is the biggest challenge facing the aviation industry currently?
Q4: How much do you agree or disagree with the following statement...?

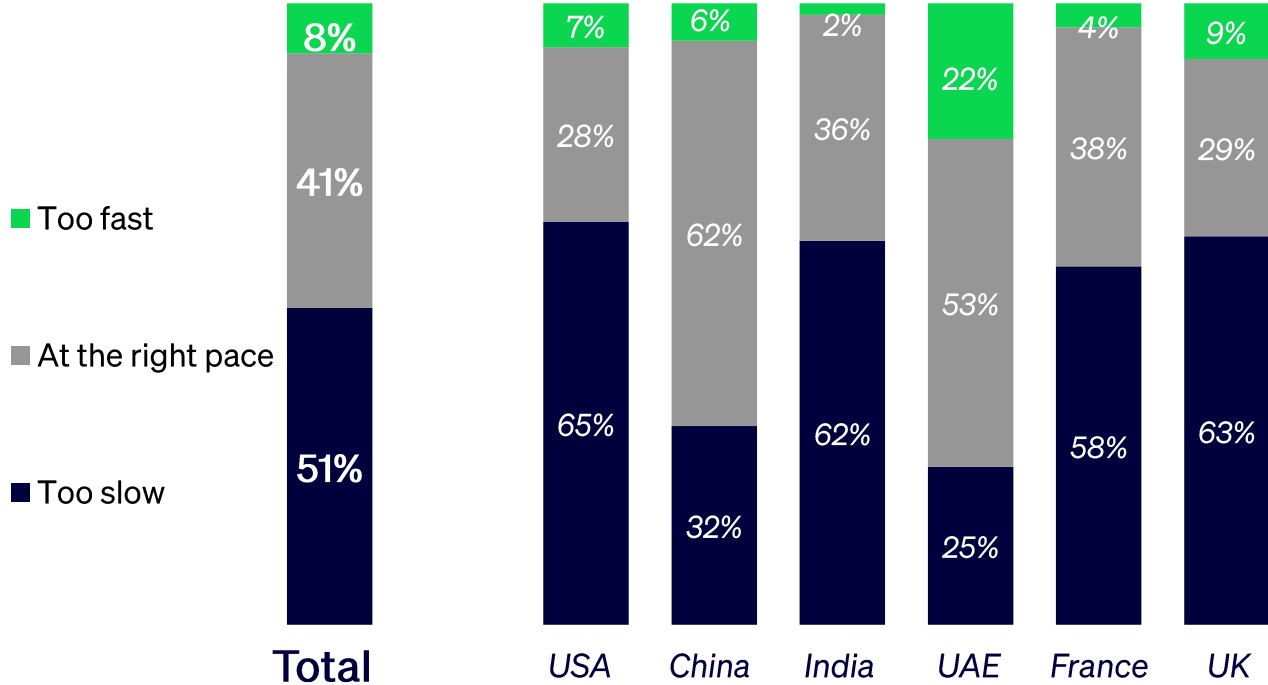
Respondents are split as to whether progress is happening at the right pace, adding a sense of urgency to a longer-term target.

51%

feel the pace at which sustainability strategies are being implemented is **too slow**

Q3b: Do you feel the sustainability strategies being implemented in the aviation industry are happening [ROTATE: too slow, too fast] or at the right pace

Are Sustainability Strategies Being Implemented at the Right Pace?

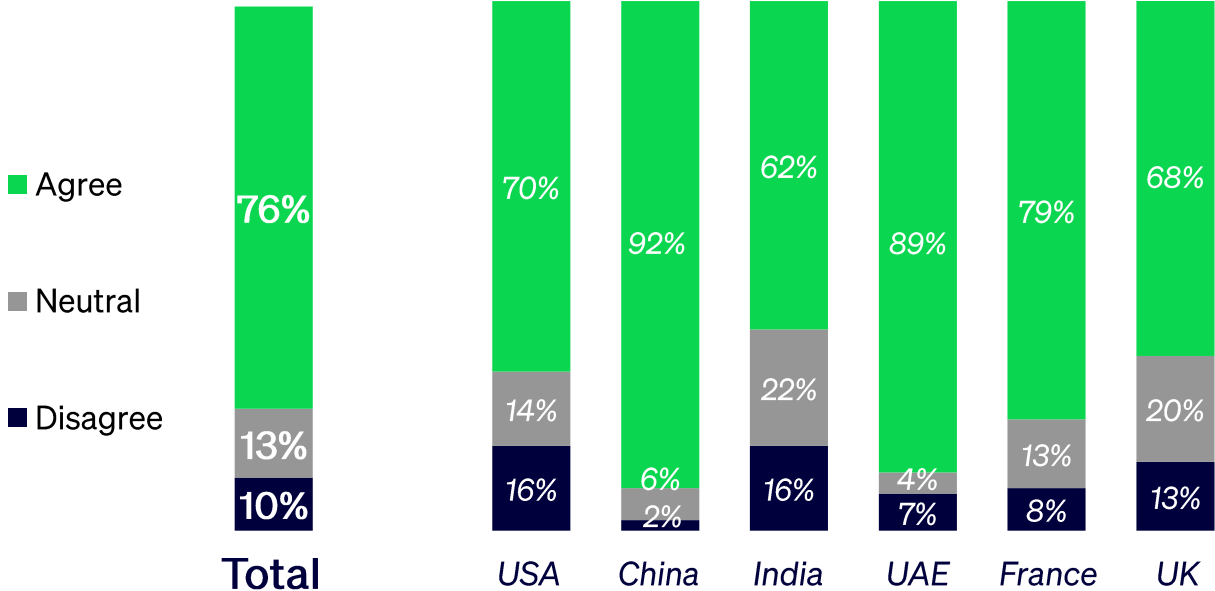


But change is evident with most saying this focus on sustainability has already fundamentally changed the industry.

76%

agree that the focus on **sustainability** has **fundamentally** changed the way the aviation industry operates

Sustainability has Fundamentally Changed the Way the Aviation Industry Operates



Q4: How much do you agree or disagree with the following statement...?

Companies
report they are
putting their
money where
their mouth is
on sustainability

More than

70%

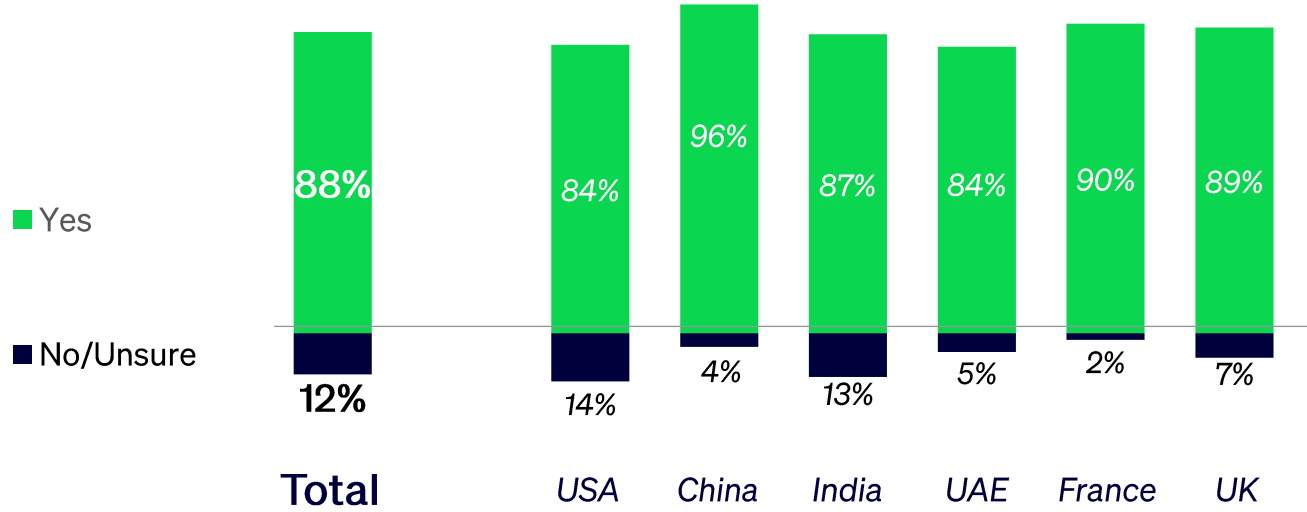
say their sustainability
strategy is having an impact
on how they invest and
operate.

Most respondents indicate their company currently has a sustainability strategy in place.

88%

say their company **currently has a sustainability strategy** in place

Does Your Company Currently Have a Sustainability Strategy?



Q5: Does your company currently have a sustainability strategy?

These strategies are already impacting how companies operate, invest, and hire.

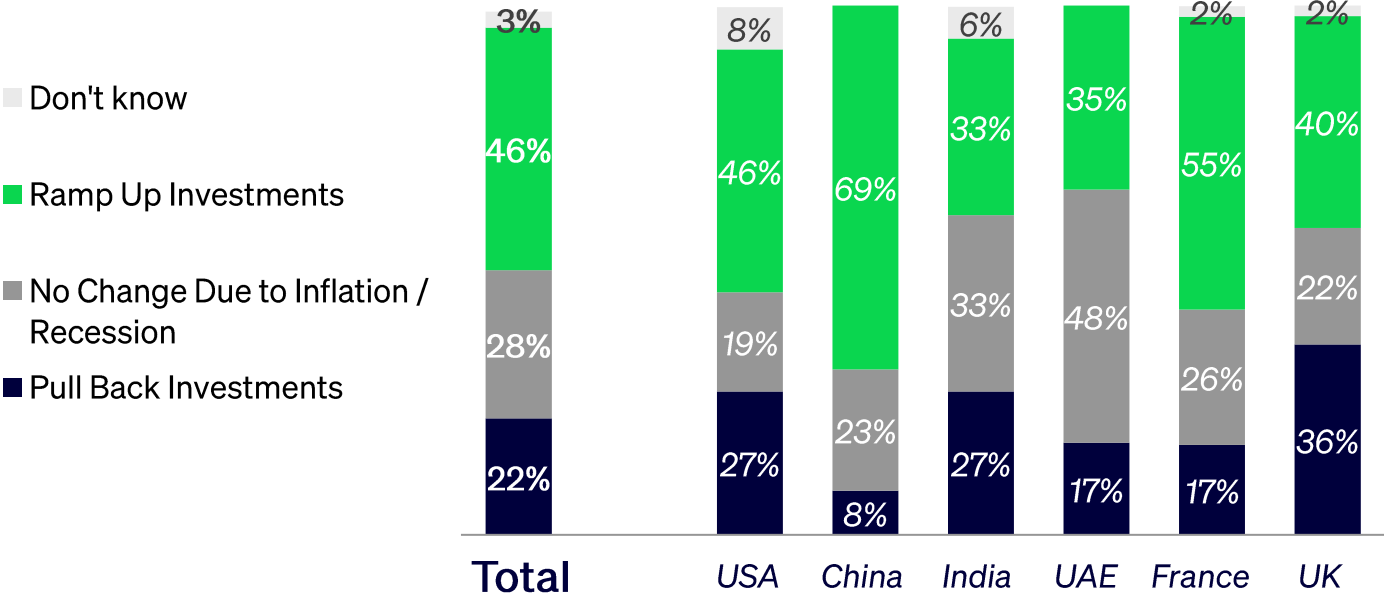
Our Sustainability Strategies Have Impacted How My Company...

<i>T2B (Major/moderate impact)</i>	Operates	Is investing	Is hiring
Total	74%	73%	62%
<i>USA</i>	<i>75%</i>	<i>65%</i>	<i>56%</i>
<i>China</i>	<i>69%</i>	<i>65%</i>	<i>63%</i>
<i>India</i>	<i>46%</i>	<i>54%</i>	<i>42%</i>
<i>UAE</i>	<i>93%</i>	<i>98%</i>	<i>78%</i>
<i>France</i>	<i>83%</i>	<i>85%</i>	<i>70%</i>
<i>UK</i>	<i>78%</i>	<i>72%</i>	<i>62%</i>

Q7. How, if at all, has your company’s sustainability strategy impacted the way your company...? (Top 2 Box, “Major Impact”, “Moderate Impact”)

74% say their company sustainability investments will be maintained or grow even in the face of inflation or recession.


Will Rising Inflation / Risk of Recession Change Sustainability Investments?



"I think the industry is pretty committed to finding the solutions. I suppose [risk of recession] could always affect the timing to some degree. But I think you can't do everything equally as fast. That's true recession or not. So that's why I think it's important for the industry to line up on some of the things we need to try to do in the nearer term – 10 to 20 years – and where to put that focus so we can make a difference and then people can allocate their capital a little more efficiently..."

– US Aviation Sustainability Executive

Q6: Do you anticipate that rising inflation and the risk of recession, will change your sustainability investment in the next 3 years?



*“Even if you have something you think can be technically possible, it takes a while to prototype that and test it. Then, you have to start to think about how you safely certify it, and then you have to answer all the business questions... And then you have to answer the ultimate question we started with, which is does it have the environmental impact we were after in the first place? I just think that going through **that process takes time in aviation.***

So, it'll feel fast to some, probably fast if you're inside of [the industry] like I am and probably slow if you're sitting outside of it.”

-US Aviation Sustainability Executive

But accelerated support is needed to reach net zero by 2050.

46%

believe the industry will meet its net zero goal by 2050, 32% say it will not, and 22% are unsure.

On average, respondents believe the target will be met by 2055, citing costs, supply issues, and energy resources as the biggest challenges.

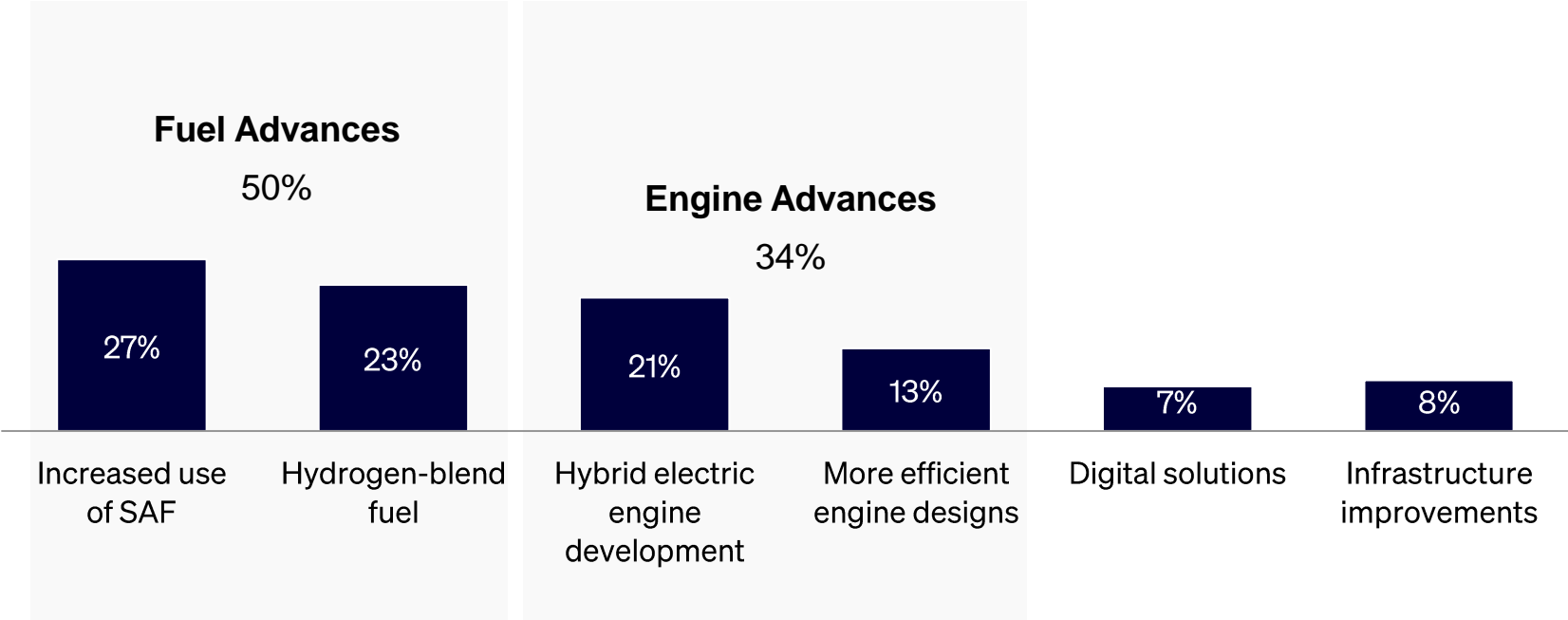
What are the Biggest Hurdles to Meeting the 2050 Net Zero goal?



Q11. What do you see as the biggest hurdle to meeting the aviation industry's 2050 net zero goal?
Base: Respondents who do not believe the aviation industry will meet its 2050 net zero goal (n = 176)
Q12. When, if ever, do you think would be a realistic timeline to meet the aviation industry's net zero goal?

Reaching this goal will require advances in both fuels and engine technology.

What Technology is Likely to Play the Biggest Role in Meeting the 2050 Goal?



Q13: What technology do you think is likely to play the biggest role/be most effective in helping the aviation industry meet its 2050 net zero goal?

Government has a
key role to play

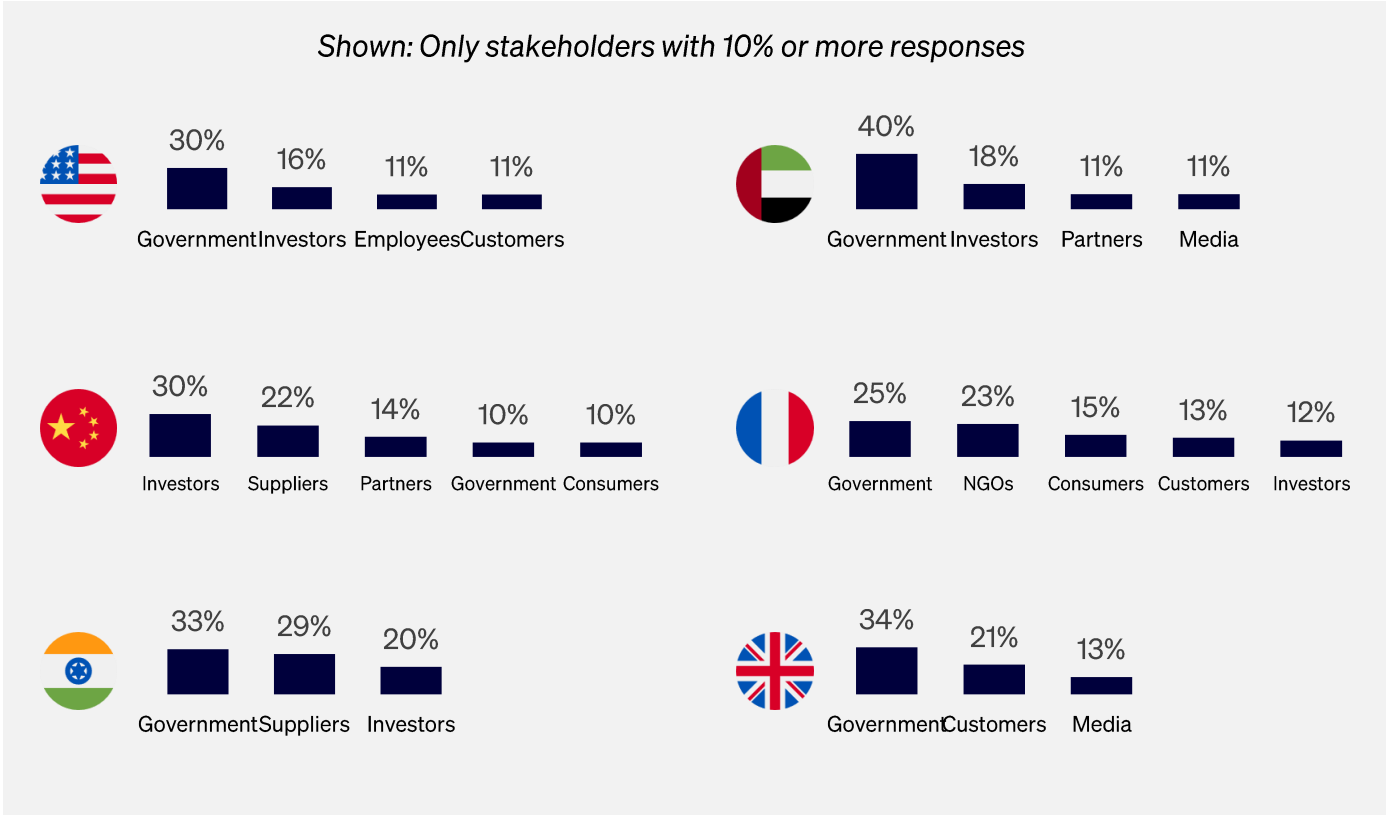
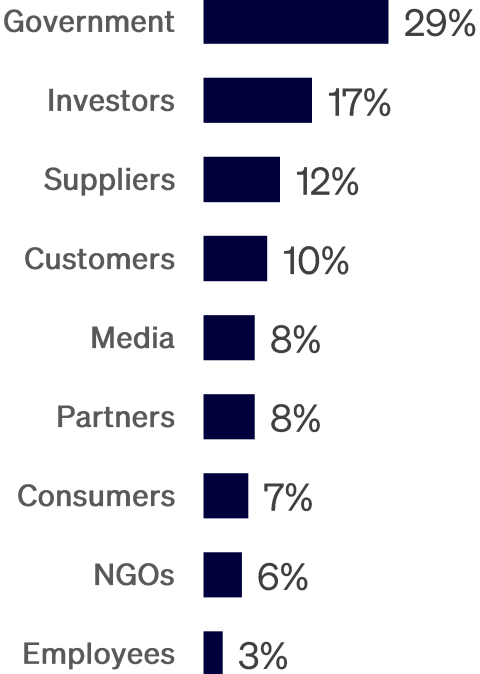
There's a clear role for
government to play in
support of these efforts,
with

61%

showing a preference for
incentives and policy
support over mandates
and regulation

Government is seen as applying the most pressure to decarbonize, followed by investors.

From Where is there the Most Pressure to Implement Sustainable Strategies?



Q9: From where are you seeing the most pressure to develop more sustainable strategies?

Respondents rank increased sustainable aviation fuel (SAF) investment as the number one most important role for government to play in reaching the 2050 goal.

Government Role in 2050 Goal

<i>% Rank 1</i>	Total	USA	China	India	UAE	France	UK
Increased investment in SAF	32%	30%	48%	22%	35%	38%	23%
Increased R&D funding	18%	25%	4%	7%	20%	19%	32%
Continued public-private partnerships to develop new tech	14%	9%	14%	24%	13%	8%	14%
More Infrastructure investment	15%	23%	14%	13%	11%	13%	16%
Policy certainty	13%	9%	10%	22%	15%	15%	5%
Improved regulatory oversight	8%	5%	10%	13%	7%	6%	9%

“We've got to **overcome the scale of the production of alternative fuels like SAF** that we're going to need to decarbonize. To roll out that sort of scale of production is going to be a very energy feedstock intensive exercise, and we are in an environment where so many other areas of our economy are competing for that renewable energy.”

-Asia-Pacific Aviation Sustainability Executive

Q14: What role do you believe government should play in helping reach the 2050 goal? Please rank from most important (1) to least important (6) role for government to play



Building a world that works

About the Study

These are the findings of a GE/Ipsos poll conducted between May 2-11, 2023. For this survey, a sample of 325 aviation business decision makers ages 26+ from the U.S., U.K., China, India, UAE, and France were interviewed in English, Chinese, Arabic, or French. Respondents in the U.S., U.K., China, and France were interviewed online, while those in the UAE and India interviewed by telephone. To qualify, respondents needed to work full-time at or own a company with 100+ employees in the aviation/aerospace, transport and logistics, or travel sector, have a role as a middle manager or more senior and have all, part or some of the decision-making responsibility or input in the aviation/aerospace, transport, or logistics areas. For those in the U.S., the company needed to have an annual revenue of \$5 million or more. For those in the U.K., the company needed to have an annual revenue of £5 million or more. For those in China, the company needed to have an annual revenue of 4.5 million yuan or more. For those in India, the company needed to have an annual revenue of ₹30 crore or more. For those in the UAE, the company needed to have an annual revenue of 37.5 million dirham or more. For those in France, the company needed to have an annual revenue of €5 million or more. The sample includes 57 respondents from the U.S., 56 respondents from the U.K., 50 respondents from China, 55 respondents from India, 55 respondents from the UAE, and 52 respondents from France.

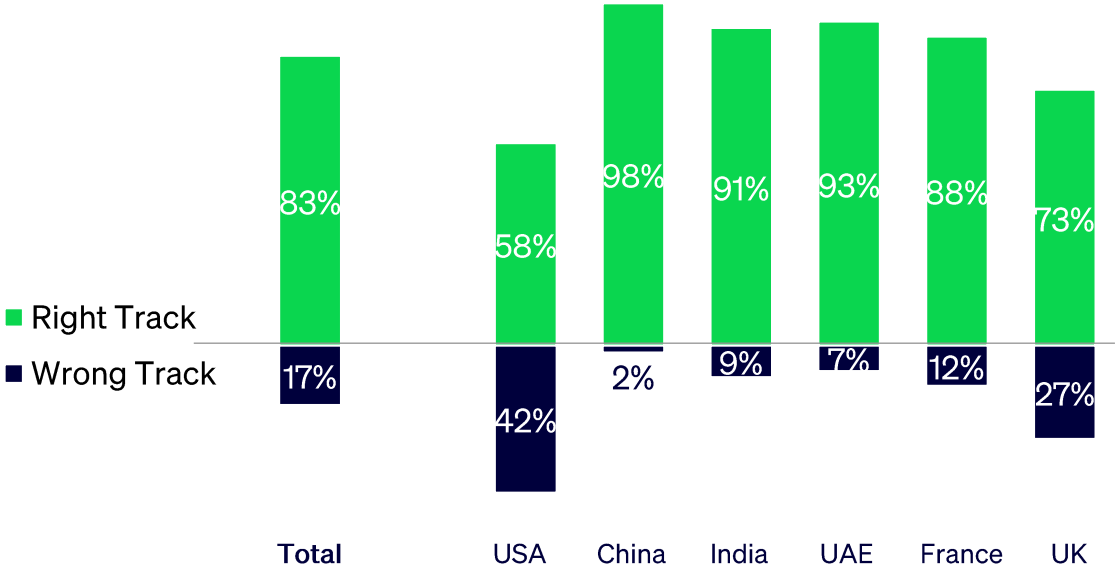
The online sample was randomly drawn from opt-in partner online panel sources. The phone sample was drawn from partner proprietary databases as well as online third-party sources. Overall, the study's sample does not rely on a population frame in the traditional sense. No post-hoc weights were applied to the data and the findings reflect the opinion of these respondents.

Statistical margins of error are not applicable to online non-probability polls. All sample surveys and polls may be subject to other sources of error, including, but not limited to coverage error and measurement error. Where figures do not sum to 100, this is due to the effects of rounding. The precision of Ipsos online polls is measured using a credibility interval. In this case, the poll has a credibility interval of plus or minus 6.7 percentage points for all respondents. Ipsos calculates a design effect (DEFF) for each study based on the variation of the weights, following the formula of Kish (1965). This study had a credibility interval adjusted for design effect of the following (n=325 , DEFF=1.5, adjusted Confidence Interval=+/-8.2 percentage points).

– Appendix

Sustainability Strategies – Right/Wrong Track

Are Sustainability Strategies on the Right / Wrong Track?



Those who say things are on the wrong track are more likely to feel the pace of implementing sustainability strategies is “too slow” and are less likely than others to see SAF as the technology that will have the biggest impact.

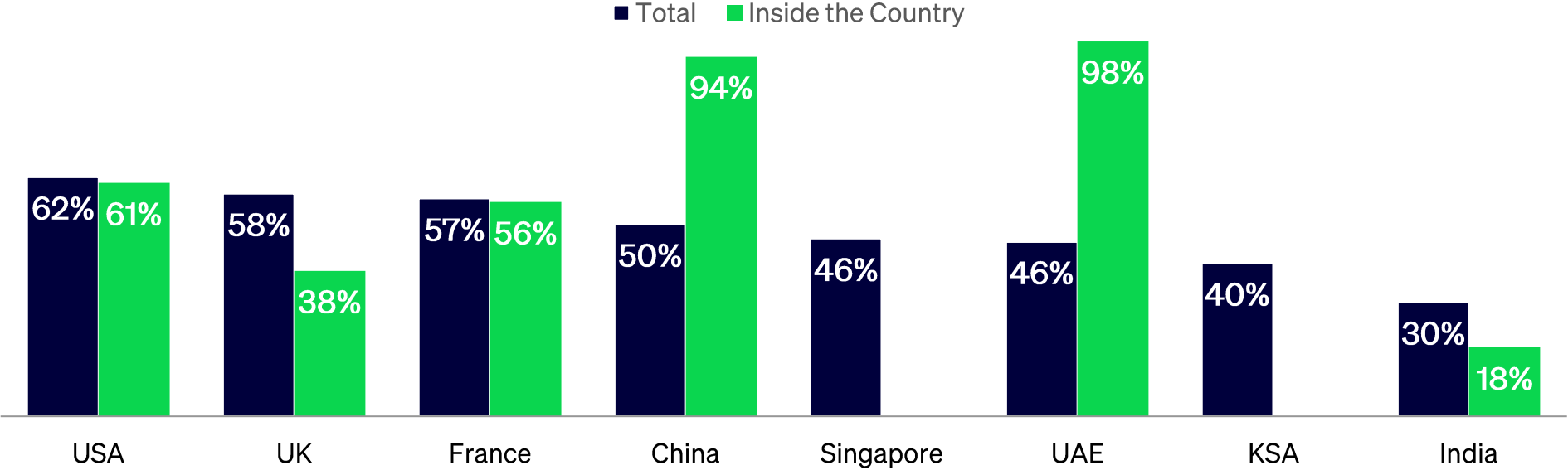


“Data drives the conversation... what are you tracking and what form, which standard are we going to follow? And I think within the aviation industry, there isn't necessarily standardization around that, especially around ESG. So I think definitely we're in the right direction that conversations are happening and people are looking at change. But what is that change?”
 – US Aviation Sustainability Executive

Q3a: Do you believe the sustainability strategies being implemented in the aviation industry are...?

Country Conduciveness

How Conducive are Each of the Following Countries to Supporting the Aviation Industry's Decarbonization Goals?



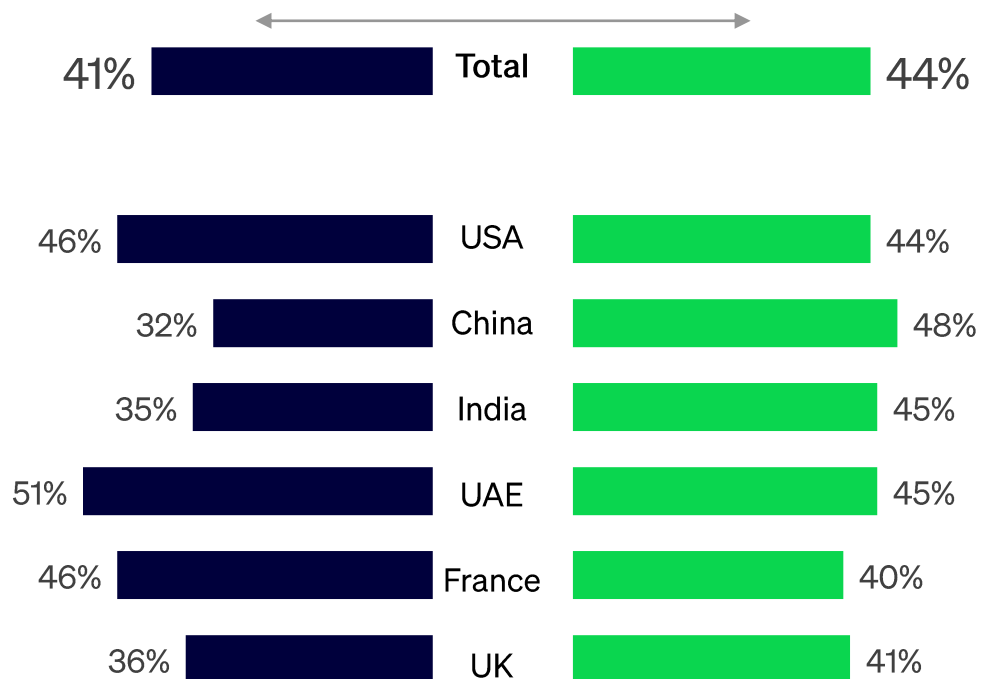
Q8: How conducive are each of the following countries to supporting the aviation industry's decarbonization goals? (Top 3 Box on 0 to 10 scale)

Improvements Needed to Reach Goal



Solving sustainability challenges in the aviation industry must focus on **aircraft and fuel improvements**

Infrastructure improvements are a critical part of solving sustainability challenges in the aviation industry



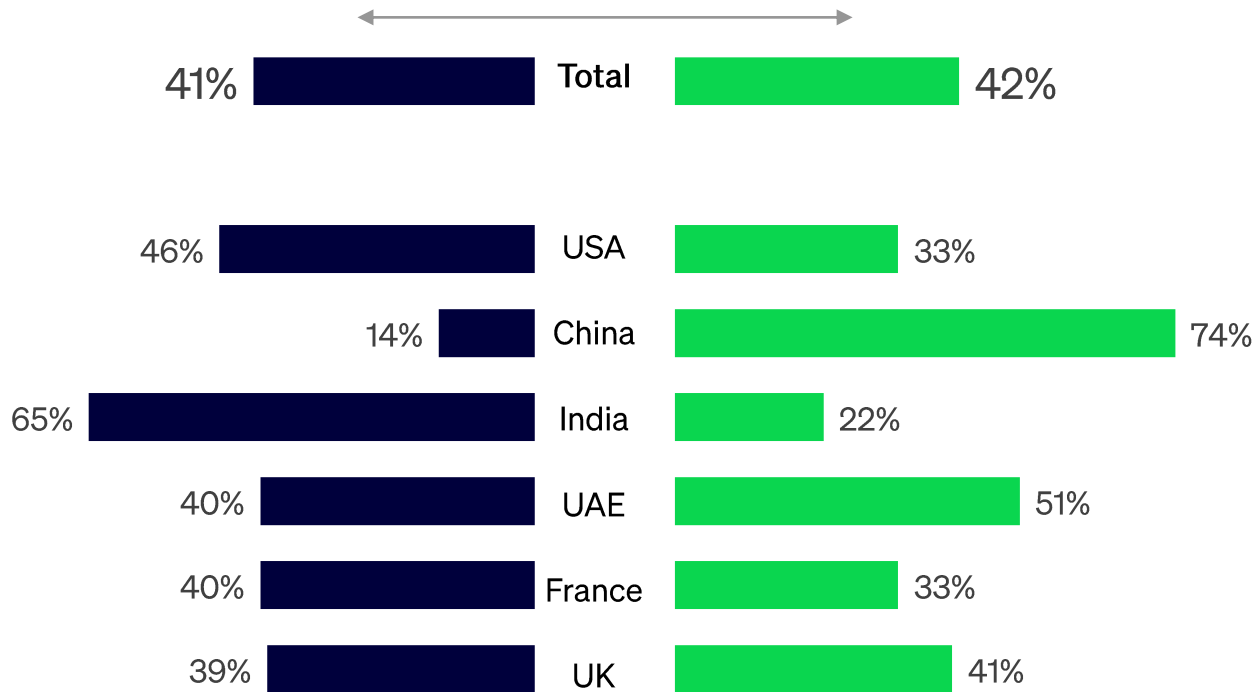
Q16. Please read through the following statements and indicate which aligns more with your opinion

Consumer Willingness to Pay More



The industry can't rely on consumers' willingness to pay more for a more sustainable flight

Consumers **are willing to pay more** for a more environmentally sustainable flight



Q16. Please read through the following statements and indicate which aligns more with your opinion

