

Forward, upward and into the future.





FURTHER WITH FORD
2022

Forward, upward and into the future.

To commemorate the 10th anniversary of the annual *Looking Further with Ford Trend Report*, we turn our attention to the distant future. Our previous reports explored how *micro* trends might shape the next few years; this report explores how *macro* trends might shape the next few decades.

Contemplating a world that is dramatically different from today is not for the faint-hearted. Change that's beyond our control or influence may make us uncomfortable, but it also can make us better. How well we adapt hinges on our ability to anticipate – and prepare.

Ford Motor Company is leaning into change. Our leaders at all levels are driving disruption. As we work to build a better world for generations to come, we seek to understand global citizens' attitudes, aspirations, and anxieties about the future – so we can help them be free to move and free to dream, in this decade and beyond.

Please join us in imagining new horizons, discovering new possibilities, and embracing the power and potential of change.

Enjoy.

Sheryl Connelly

Chief Futurist, Ford Motor Company





FURTHER WITH FORD
2022

TABLE OF CONTENTS

- 2 Welcome letter
- 4 The Future of Our Planet
- 16 The Future of Mobility
- 29 The Future of Productivity
- 44 The Future of Information & Knowledge
- 53 The Future of Identity & Belonging
- 65 The Future of Family
- 74 Previous Trends
- 75 Methodology



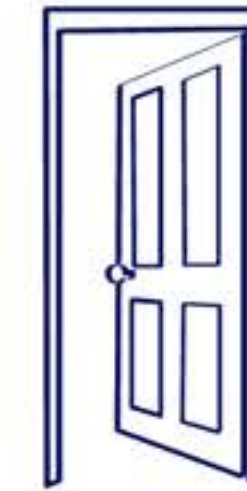
PRODUCTIVITY



INFORMATION &
KNOWLEDGE



MOBILITY



IDENTITY &
BELONGING



PLANET

*Want a glimpse
of the future?
Check out the pages
that follow.*

(CLICK A TREND TO SKIP AHEAD)



FAMILY

The Future of Our Planet

Imagine a world where demand for food, water, and energy are outpacing supply, fueling widespread scarcity and suffering across the globe. That's the likely scenario as we know it: Experts project the global population will grow to 10 billion by 2050, and climate change has become so severe that the question now is no longer simply how to sustain this planet, but how to exit it. But perhaps we could create a different future – one where food is bio- engineered, water is extracted from the atmosphere, and climate change has been blunted by dramatically altering the way we produce energy. To do this, we must think and act differently at all levels – and close the gap between what humans are willing to do to combat climate change and what's needed to reverse the effects.



In November 2021, Ford announced the largest green bond in U.S. corporate history, to the tune of \$2.5 billion. Proceeds from sales of these bonds are aimed at initiatives to benefit the environment, including designing, developing and manufacturing zero-emissions transportation solutions. This and other initiatives outlined in Ford's sustainable financing framework are intended to help the company become carbon neutral no later than 2050, in line with its commitment to the Paris Agreement.



81% of adults globally say climate change makes them worried for their children's future. In Canada, 40% of women cite concerns about climate change as a reason for not wanting to have children; nearly one-third of women in France and India say the same, while one-fourth of women in Mexico and Germany agree. And yet there's hope that technology can mitigate the effects of climate change.



“By 2035, we will have technology in place to reverse the effects of climate change.”

GLOBAL AVERAGE  PERCENT WHO AGREE

Gen Z

52%

Millennials

53%

Gen X

43%

Baby Boomers

39%



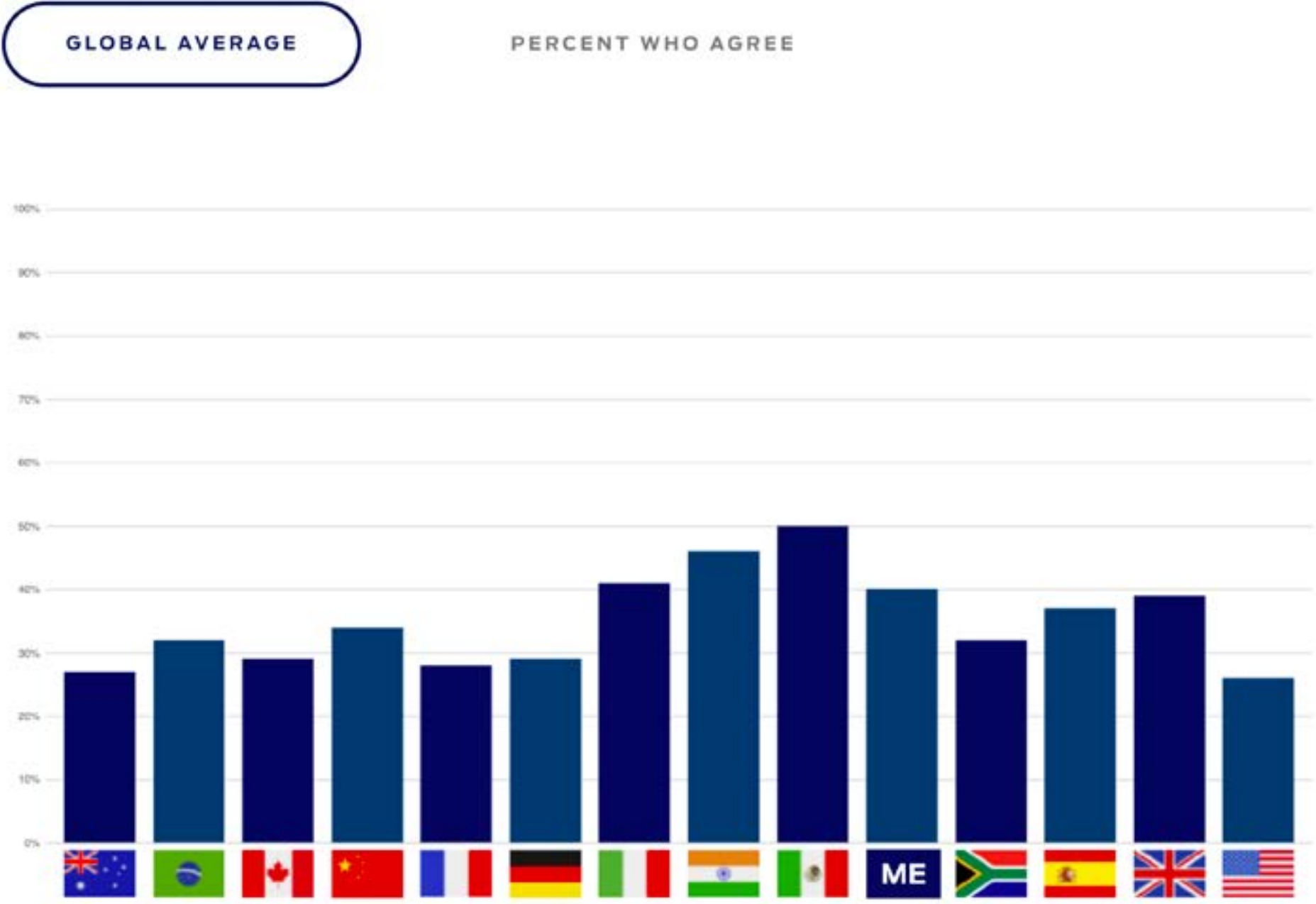
We're entering an era of radical climate transparency in which everyday citizens can track exactly what they're emitting. Climate TRACE uses sensory data from satellites and artificial intelligence to monitor CO₂ emissions – especially those that never get reported by governments and businesses. The startup Planet provides daily satellite data to help us more clearly understand what's happening in the physical world – from bushfires to forest degradation to lake pollution – and take action.



In its latest report on the state of the planet, the United Nations intergovernmental panel on climate change observed that atmospheric concentrations of methane are now higher than any time in at least 800,000 years. Methane is 80 times more potent than carbon dioxide, and younger generations are taking note: **41% of Gen Z and Millennials say it is environmentally irresponsible to eat meat.**



“In my lifetime, the majority of people will no longer eat meat/animal-based protein.”



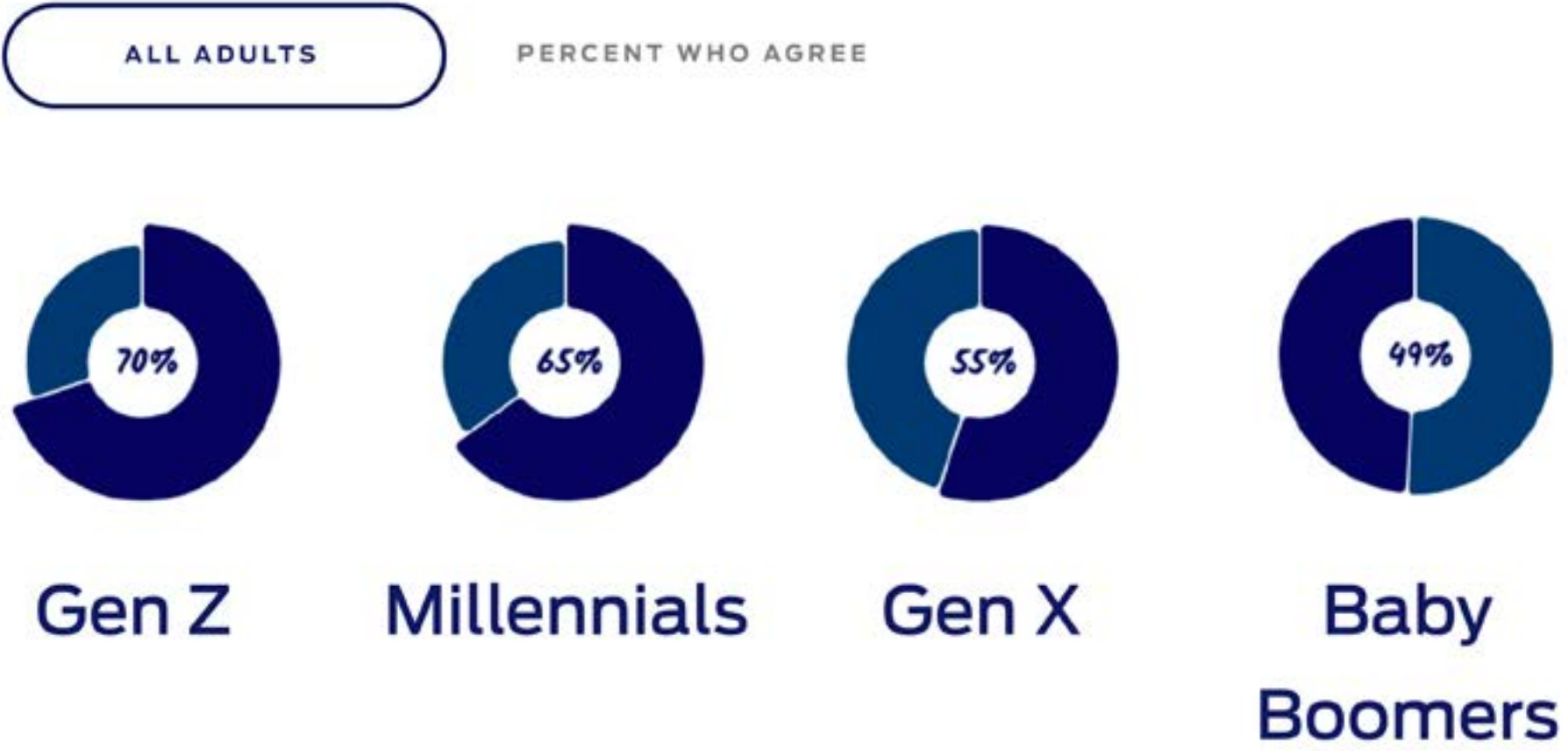
70% of Gen Z + Millennials agree that by 2035, scientists will have engineered a way to get most of the nutrients we need into any food we want.



Heinz has created a prototype ketchup, called “Marz Edition,” using tomatoes grown in a biodome that replicates Mars’s harsh soil and environment. Conducted by scientists at the U.S.’s Aldrin Space Institute, the two-year experiment adds fuel to ambitions of colonizing other planets – and using them to harvest our favorite foods.



“Humans will tap into resources from other planets to sustain mankind in the future.”



“Many times, our team has succeeded in inventing entirely new materials – because we were willing to TRY things in the lab. I’d like to see sustainability as a consideration in every aspect of everything we do as humans, and be something we are always willing to try. It is tempting to think something won’t work or not even try. If we could change that, we can do anything!”

Debbie Mielewski

Ford’s Technical Fellow of Sustainability



“We know what’s good for the planet is good for our customers and our business. What makes me hopeful is that we have all of the tools we need to make a difference for generations to come. We now need to enact the right policies to use these tools effectively and consistently. At the same time, all of us need to do our part to make sure that no one is left behind as we move towards our electric future.”

Bob Holycross

Ford's Chief Sustainability Officer

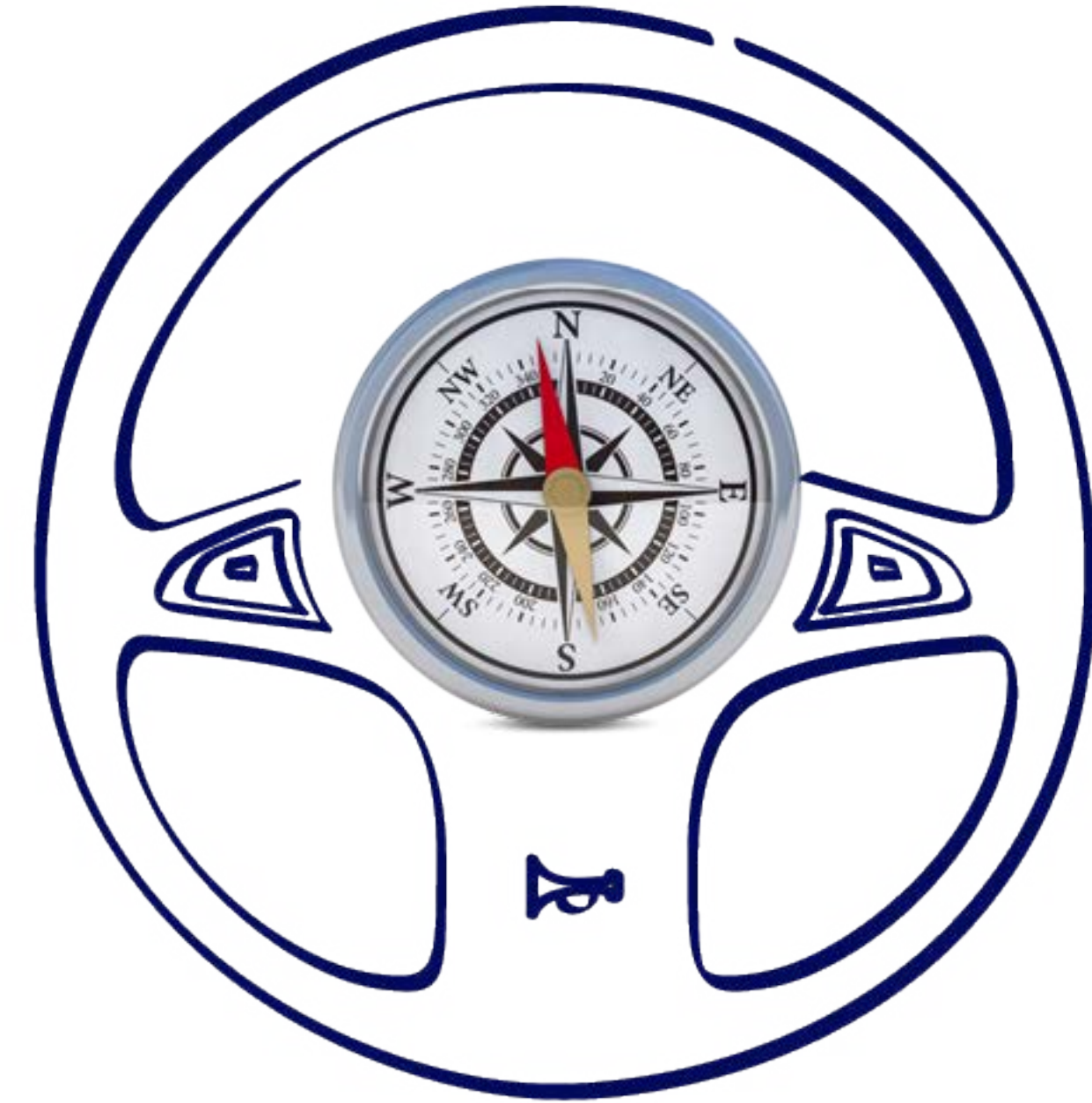


The Future of Mobility

Imagine a world in which there's no need for driver's licenses – or even drivers at all. A world where gas stations are as antiquated as compact disc players – and where traffic jams occur in the skies. In the not-so-distant future, transportation of people and goods will increasingly be defined by electric vehicles, autonomous driving, drones and, yes, space travel. Nearly half of adults in our survey say they expect that people will travel to other planets for leisure and entertainment in the decades ahead.



“Today’s children will not need to learn how to drive.” – **31% of Gen Z and Millennials agree**

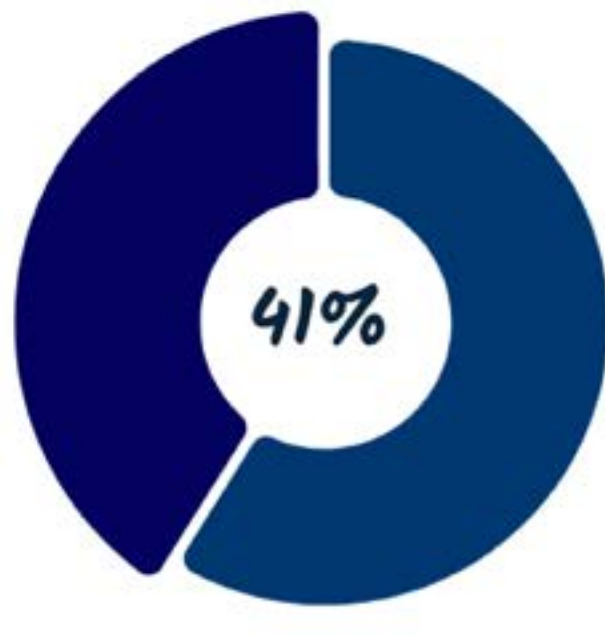


“By 2035, I think I’ll feel safer in a self-driving vehicle than a human-driven vehicle.”

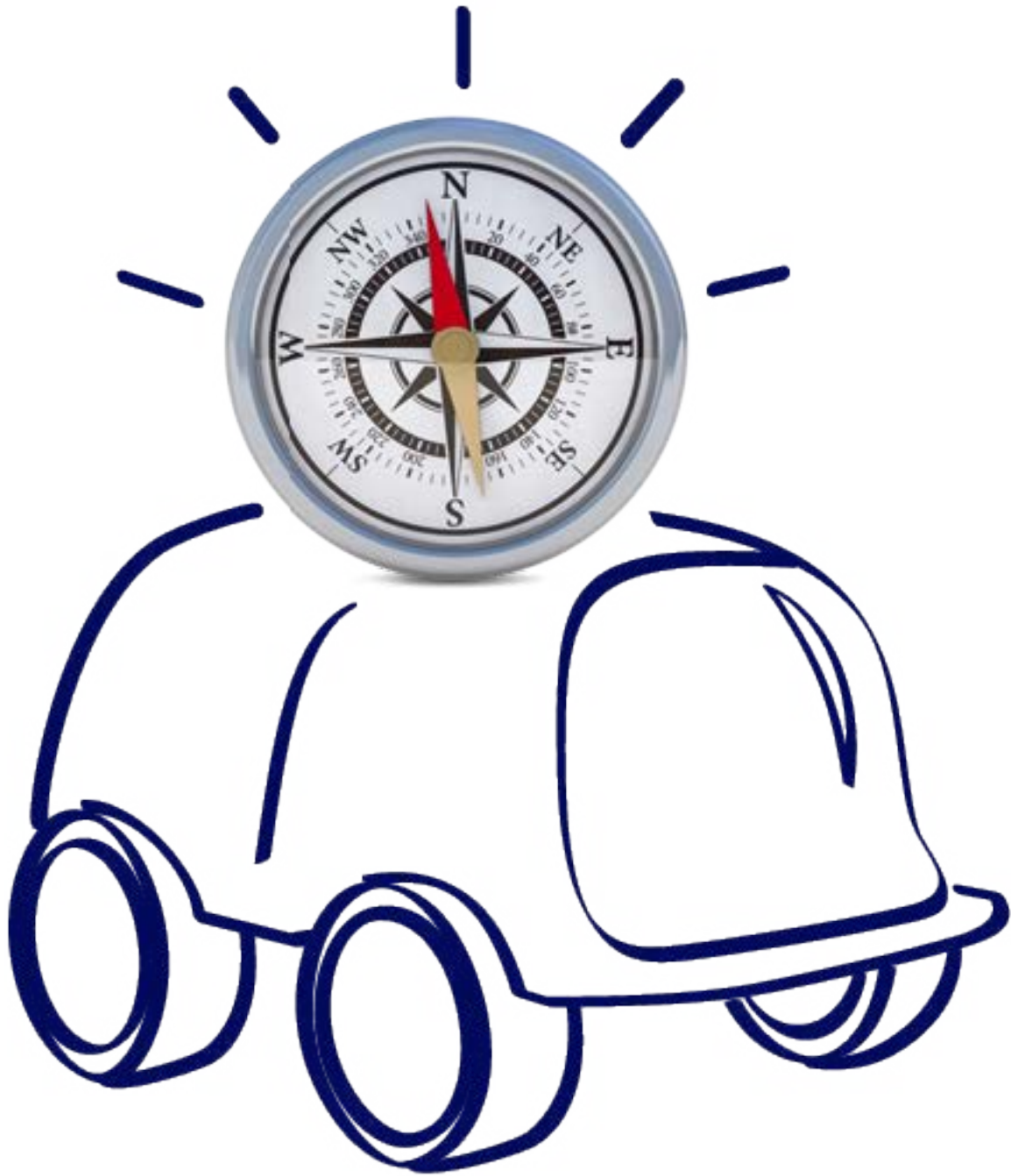
GLOBAL AVERAGE  PERCENT WHO AGREE



Males



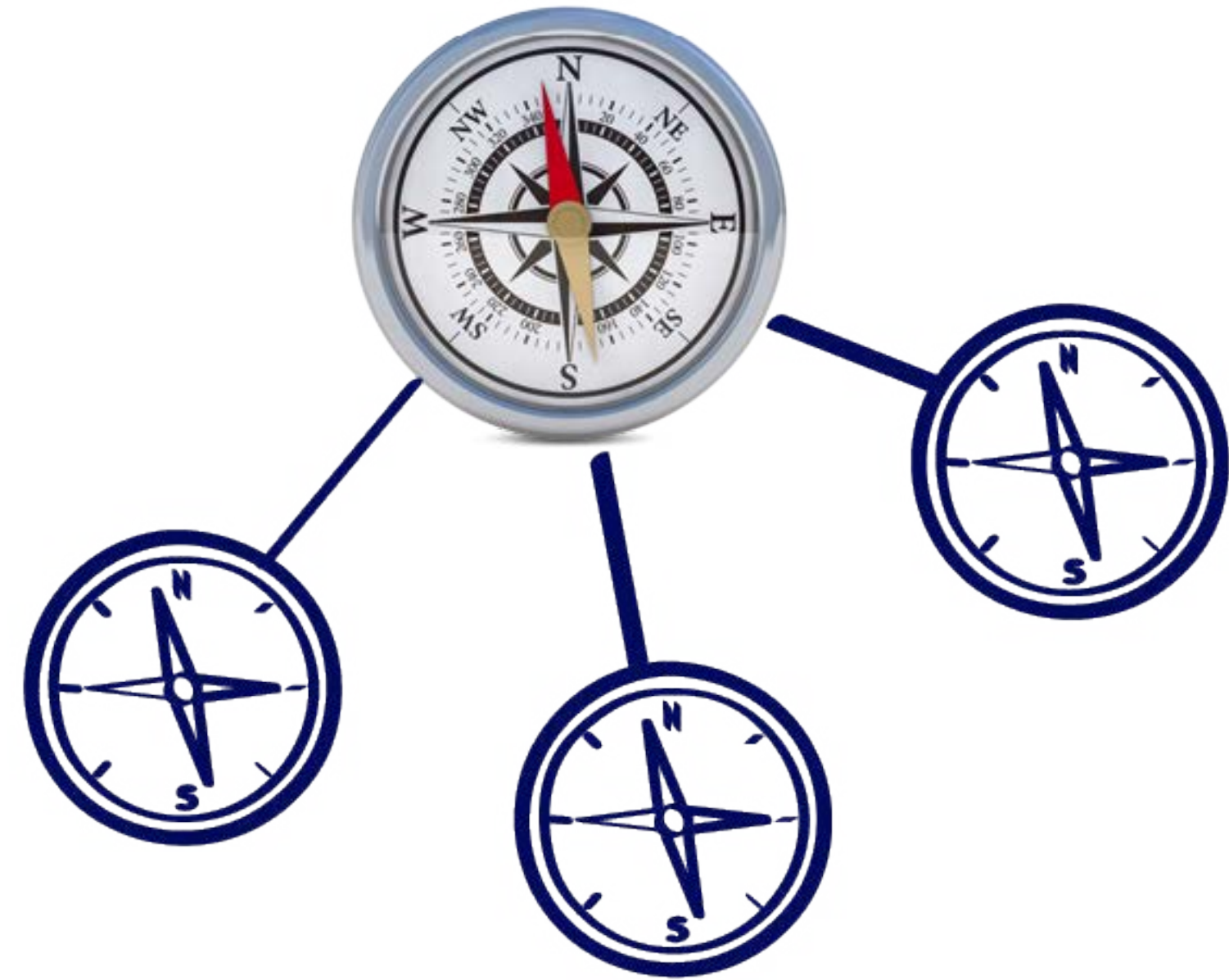
Females



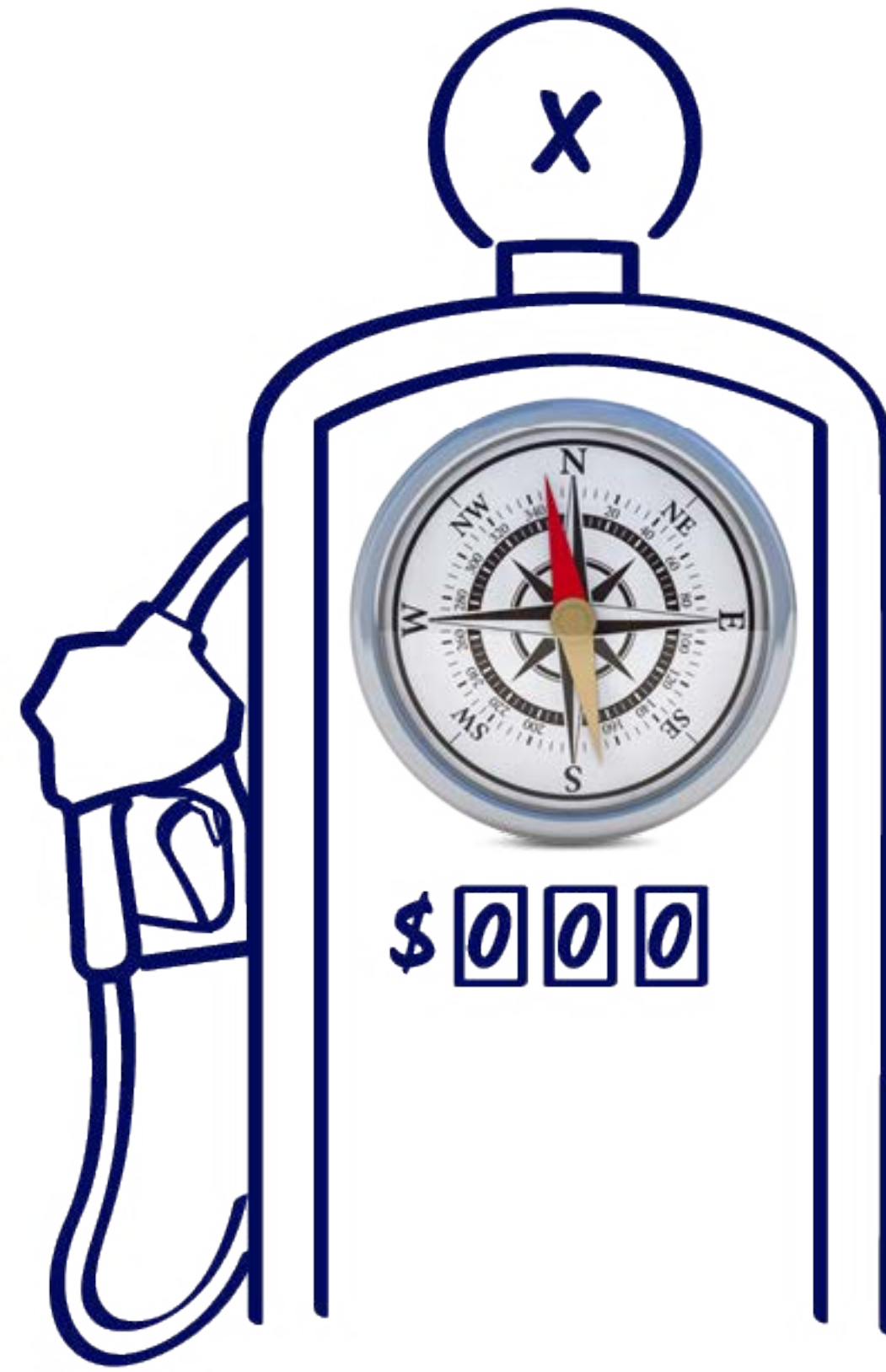
Ford has partnered with Argo AI and Lyft to deploy self-driving cars in select cities. Beginning in Miami (in December 2021) and Austin (in early 2022), Lyft users can select a Ford self-driving vehicle as an option for ride hailing. These three companies believe that autonomous vehicles will be instrumental in providing cleaner, safer and more efficient urban mobility – and together they aim to offer at least 1,000 autonomous vehicles on the Lyft network over the next five years.



For a growing number of young people, owning a vehicle is less preferable than using a vehicle-sharing service. When asked to choose between a vehicle-sharing service that provides access to many different vehicles for a set monthly fee, or owning a vehicle at a comparable cost, **1 in 4 Gen Zers** said they'd choose a vehicle-sharing service.



In March of 2021, Petaluma, California became the first city in the U.S. to ban future gas station construction or any new pumps on existing sites.



Ford expects 40% of its global vehicle mix to be fully electric by 2030, with European markets leading the way: 100% of Ford passenger vehicles sold in Europe will be all-electric by 2030, and two-thirds of commercial vehicle sales will be all-electric or plug-in hybrid. Consumers are ready: 60% of Americans and 68% of Brits say they care about the environmental impact of vehicles used by delivery services.



If electric vehicle charging stations become as common as gas/petrol stations, which of the following issues would still concern you?



38% of men globally think flying cars will become a reality by 2050.



“In my lifetime, traffic jams will be more likely to occur in the skies (e.g., drone collisions, flying vehicles) than on the ground.”

GLOBAL AVERAGE  PERCENT WHO AGREE

All Adults **42%** Gen Z **51%**

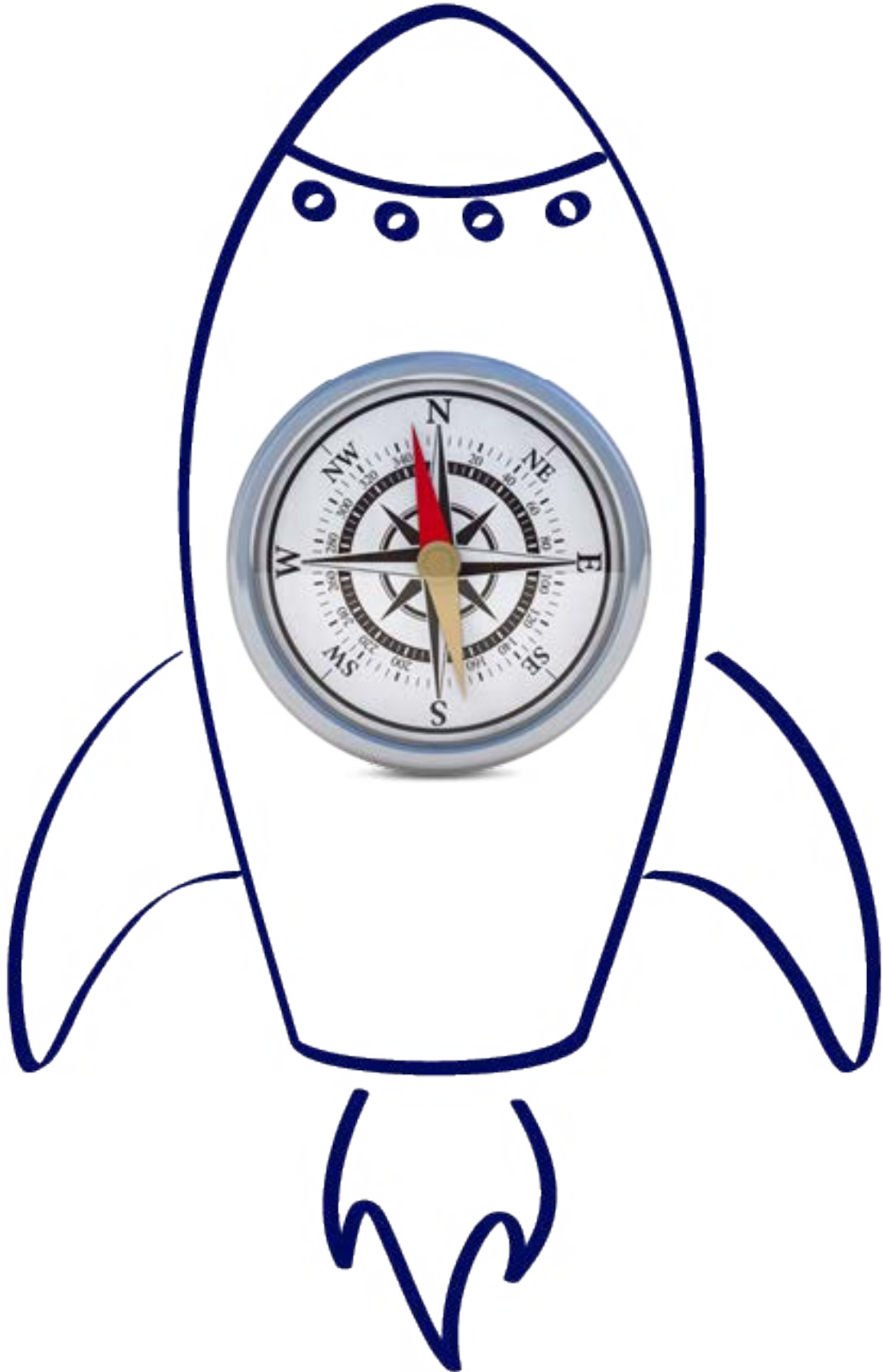


“In my lifetime, humans will travel to other planets for leisure and entertainment.”

GLOBAL AVERAGE  PERCENT WHO AGREE

All Adults
47%

Gen Z
57%



In the U.S., the Federal Aviation Administration has begun increasing regulation of recreational drone flying with a law that limits recreational flying to very few designated areas and recreational events and requires Remote ID, a technology that helps track and transmit the location of drones in the air. The law is slated to go into effect in 2023 and paves the way for low altitude commercial space use, such as Amazon drone deliveries.



“Access to affordable, reliable and autonomous transportation will unlock possibilities – like the ability to travel more easily to new places, having greater access to quality education and jobs, and the ability to make our commute time more productive and more meaningful. There is hope and excitement that the future of mobility will ultimately help build a better world for all.”

Donna Bell

Ford's Director of AV & Mobility Strategy



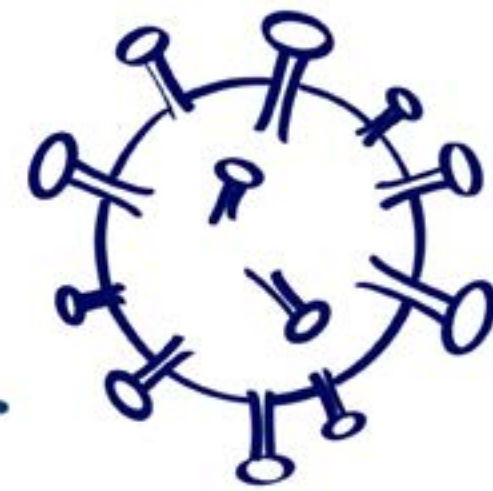
The Future of Productivity

Imagine a world where the global GDP is machine-powered, rather than human-powered. COVID changed work at an unprecedented speed. In the context of a year, we accomplished more than we ever imagined. So as we look to the future, we need to push our imaginations to the point of discomfort. 36% of adults say they fear artificial intelligence. What will it take for us to overcome these fears – as consumers, workers and humans? What will it take for businesses to increase productivity and meet consumer demands for convenience and service – delighting people along the way? And how will workers, the human kind, challenge entrenched expectations of work to find relevance and fulfillment?



When will life return to normal
(e.g., be like it was pre-
COVID-19) for work?

– **13% of adults globally say
work “will never return to
normal.”**



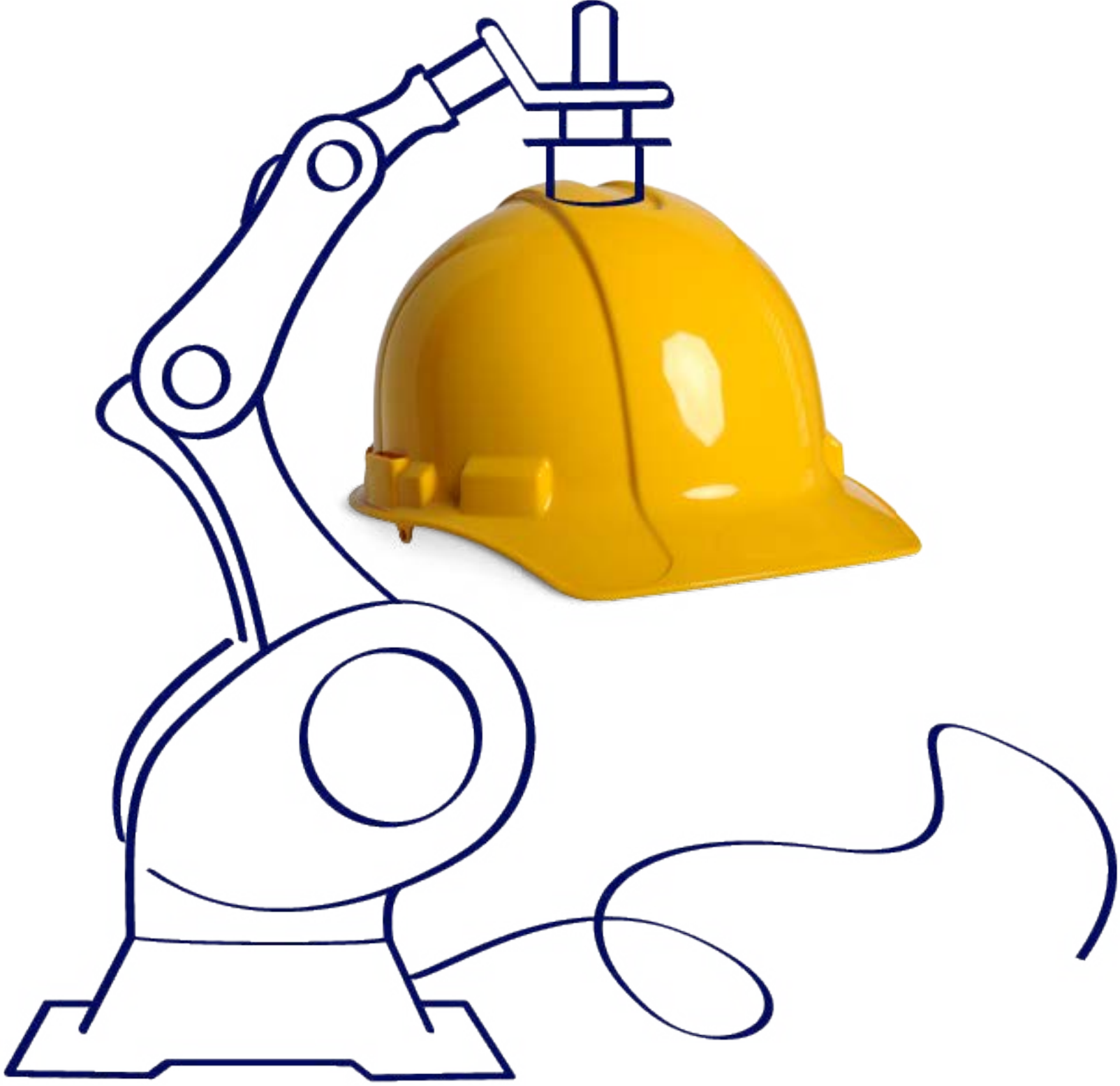
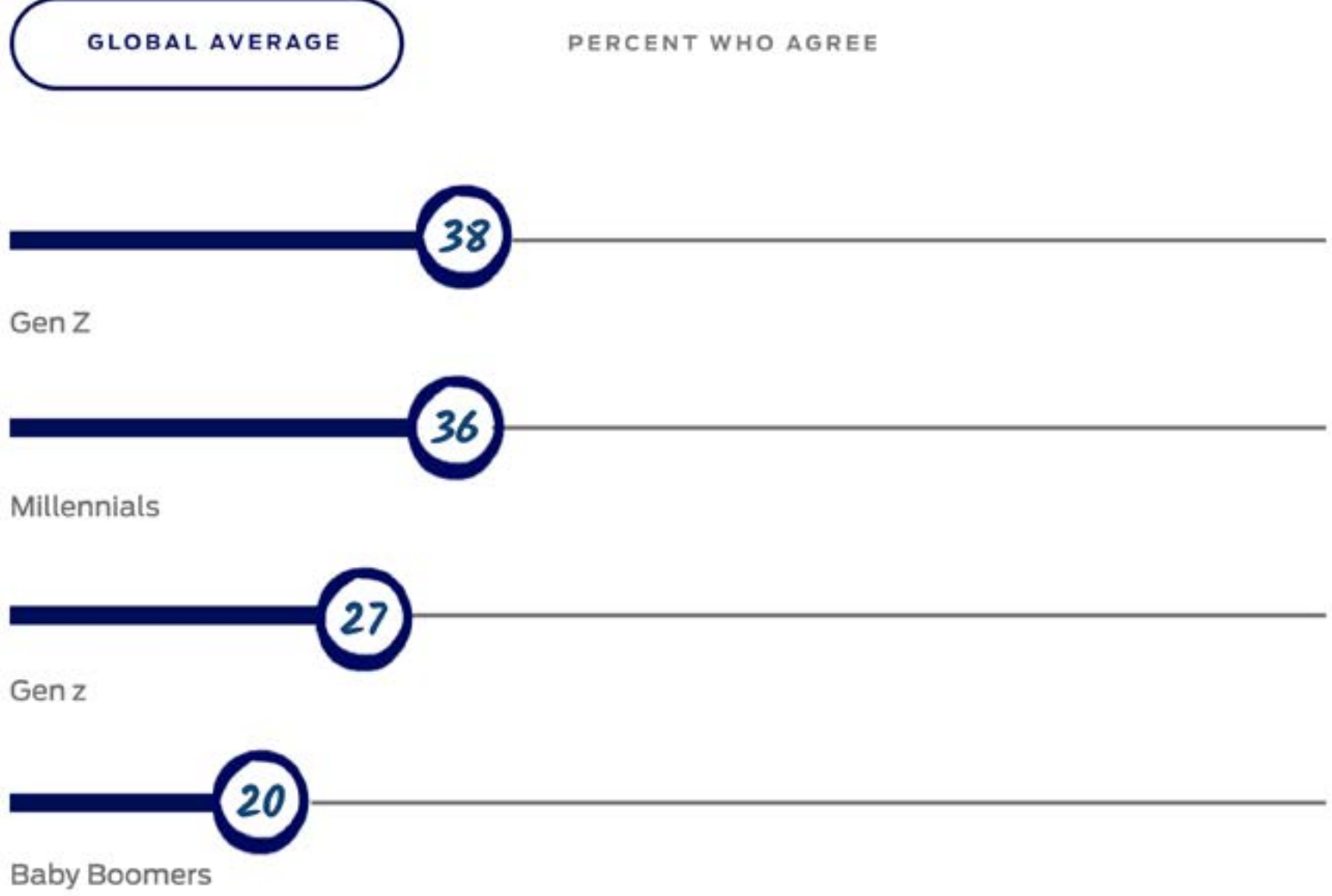
21% of Gen Z say that by 2035,
the workforce will be
predominantly free agents.



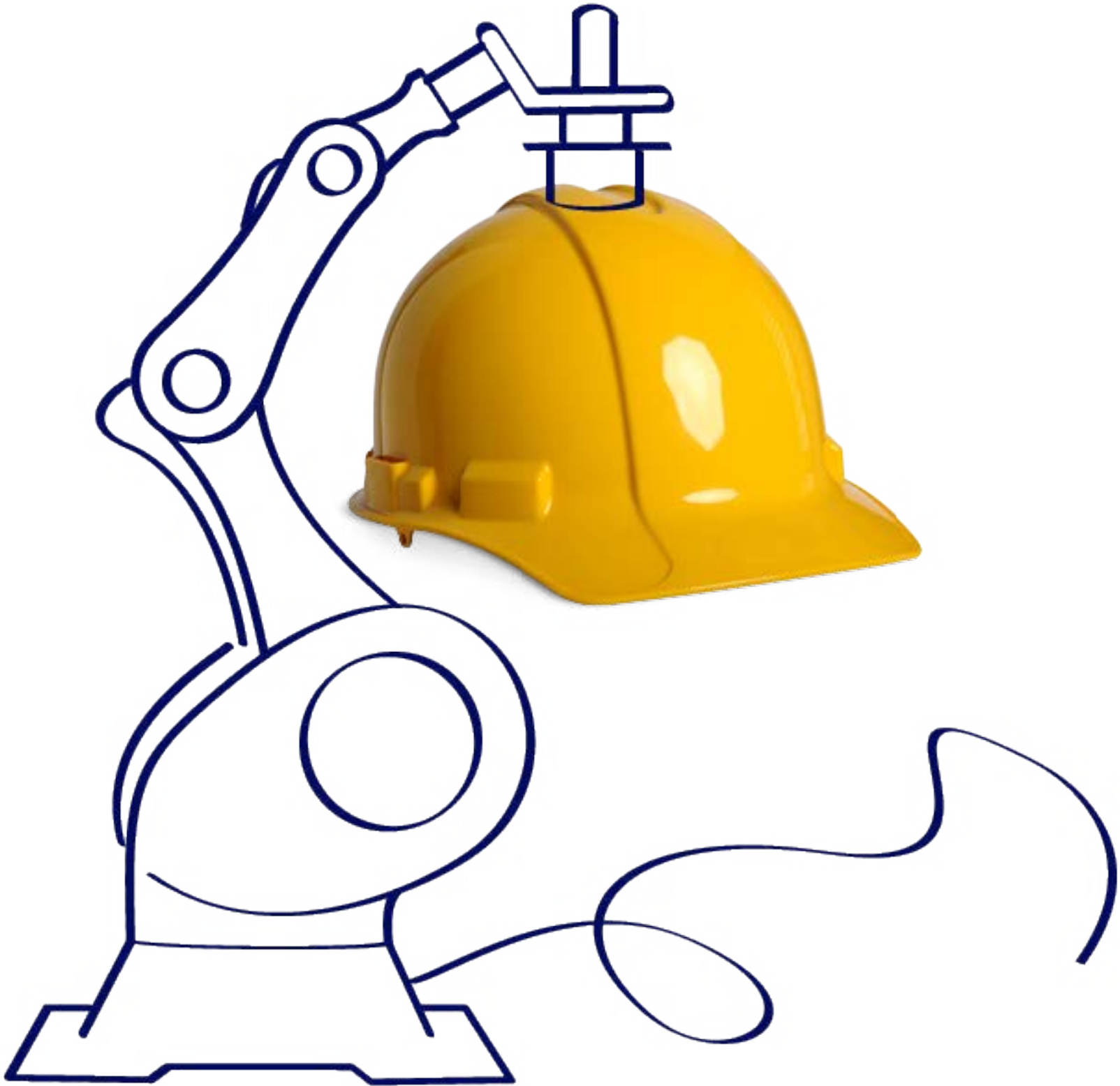
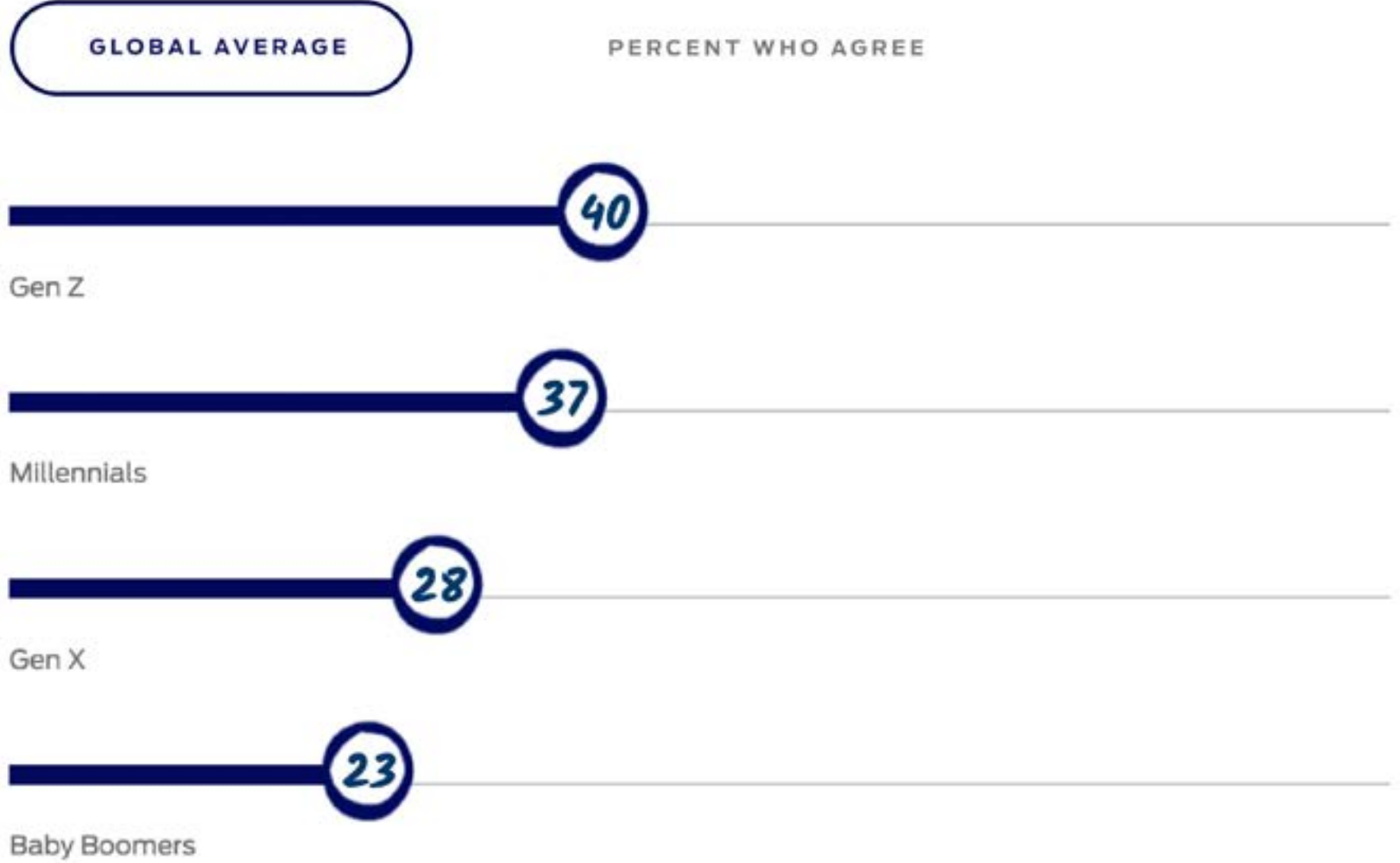
The artificial intelligence robot market is expected to grow from \$6.9 billion U.S. in 2021 to \$35.3 billion by 2026.



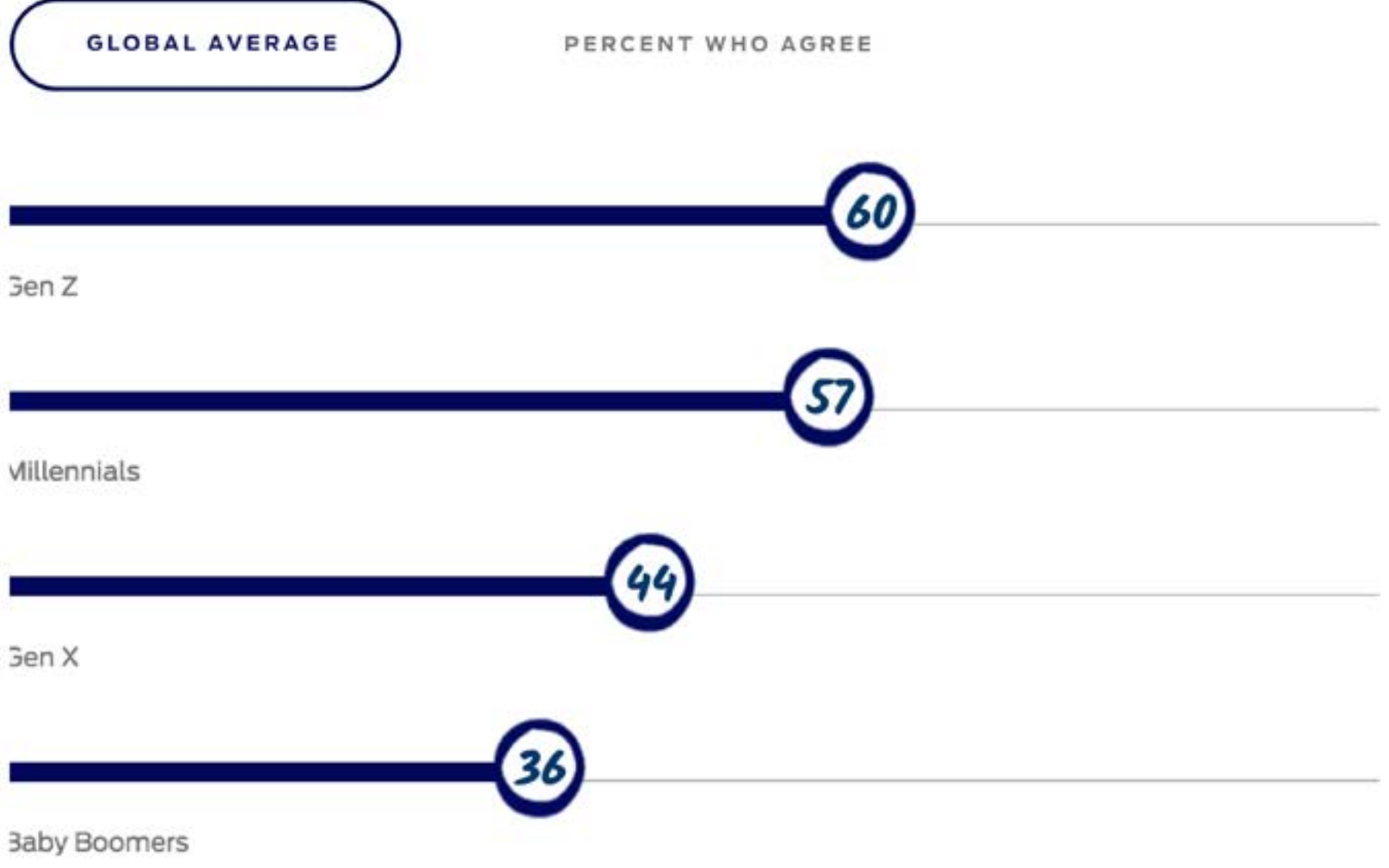
“In my lifetime, robots will replace the majority of healthcare workers.”



“In my lifetime, robots will replace the majority of teachers.”



“In my lifetime, robots will replace the majority of food service workers.”



“In my lifetime, robots will replace the majority of retail workers.”



When it comes to robot density, there are now 113 units per 10,000 workers globally. In many countries, that figure is far higher. South Korea, for example, has more than 800 industrial robots per 10,000 employees – one of the highest density rates on the planet. The top 10 most automated countries in the world are South Korea, Singapore, Germany, Japan, Sweden, Denmark, U.S., Italy, Belgium and Taiwan.



“By 2035, robots will generate more revenue for businesses than humans.”

GLOBAL AVERAGE



PERCENT WHO AGREE

Gen Z

63%

Millenials

64%

Gen X

57%

Baby Boomers

53%



Hundreds of little robots, 20 centimeters tall, are rolling around colleges and cities in the United States, Britain and elsewhere – bringing pizza and other food to hungry students. Estonia-based Starship Technologies has deployed more than 1,000 robots, up from just 250 in 2019, with hundreds more ready to roll. They are delivering food at 20 U.S. colleges, with 25 more to be added soon.

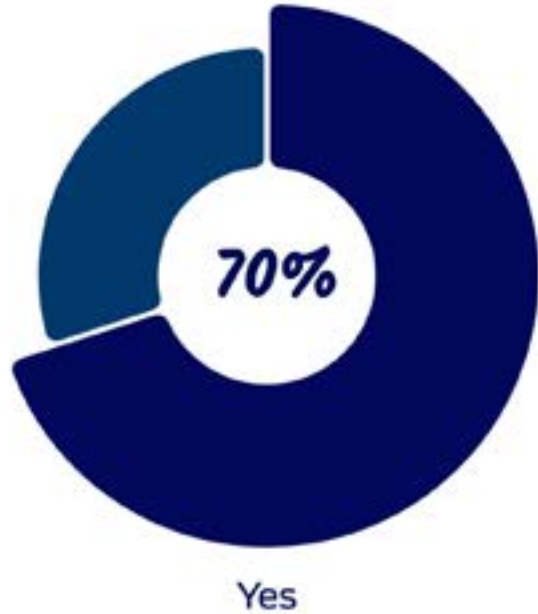


Do you think humans will still be delivering goods (packages, food, etc.) in 2035?

GEN Z, GLOBAL AVERAGE



PERCENT WHO AGREE



Ford and Salesforce have teamed up to launch VIIZR, a digital tool designed to help small businesses – such as plumbers, electricians, landscapers and more – by simplifying and streamlining tasks like invoicing, scheduling and managing requests. For a vocational business of less than 20 employees, VIIZR could reduce back-office work by more than 25 hours a week.



When do you think women will achieve equal pay with men?



“With Ford Pro we’re creating solutions to help small businesses to large enterprises improve productivity of their vehicles and workforce with cloud-based digital solutions for both internal combustion, electric and charging solutions.”

Ted Cannis

CEO of Ford Pro



The Future of Information & Knowledge

Imagine a world where there are no limits to what the brain can comprehend – and where humans feel empowered to act decisively and confidently with accurate information at hand. It's hard to imagine: 65% of adults globally believe that in 2035, distinguishing whether information is true or false will be more difficult than it is today. But what if they're wrong? What if man and machine fuse together to give us not just more information – but also more wisdom? And to what lengths will people be willing to go to achieve this? Would you be willing to get a chip implant if it made you healthier, safer or more productive? If embedded technology meant you could communicate telepathically or live forever virtually, with whom, or with what, would you entrust your personal information and deepest thoughts?

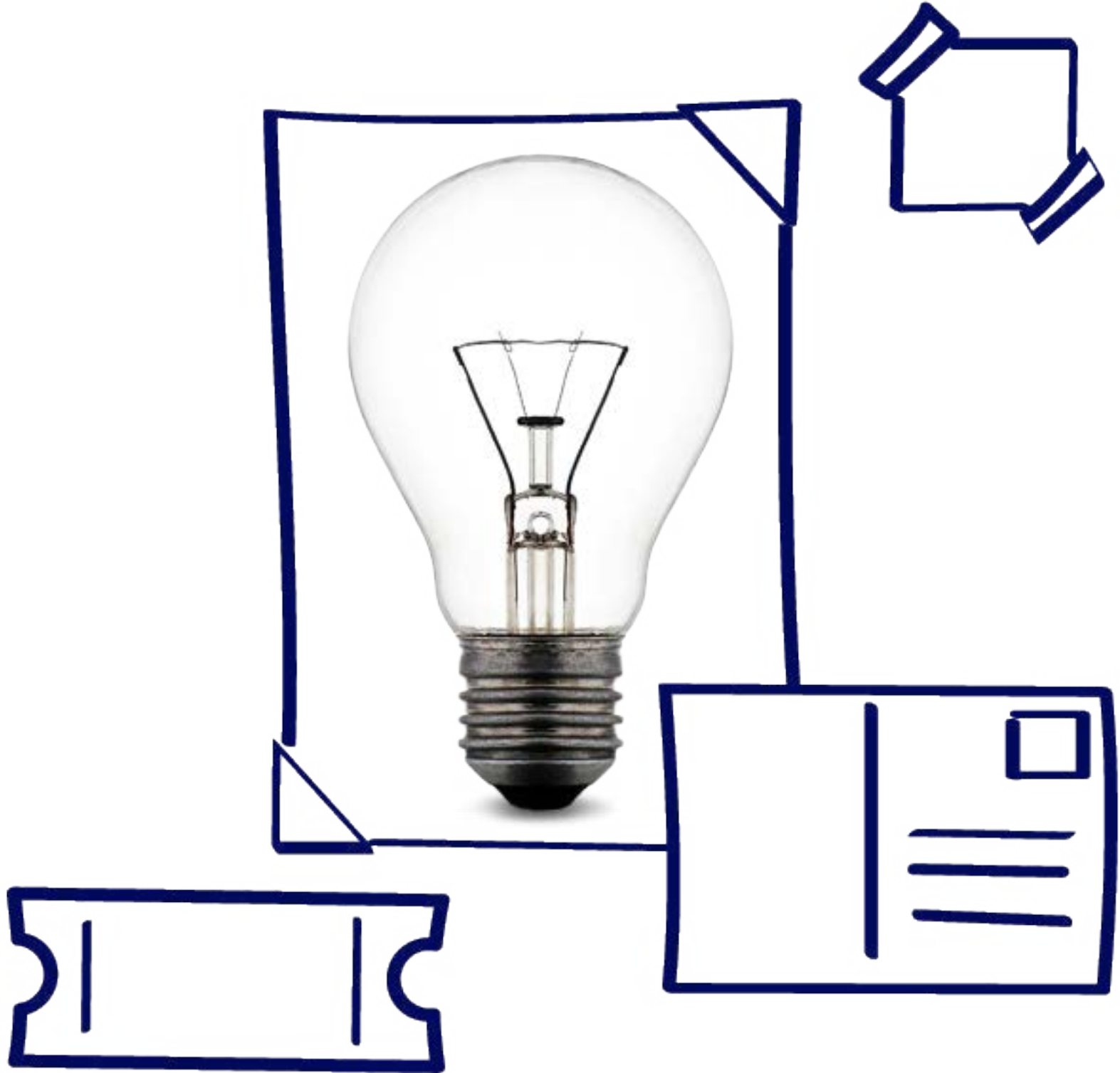


Would you be willing to have your entire life captured digitally and stored, so your loved ones and future generations could feel a connection to you?

GLOBAL AVERAGE  PERCENT WHO AGREE

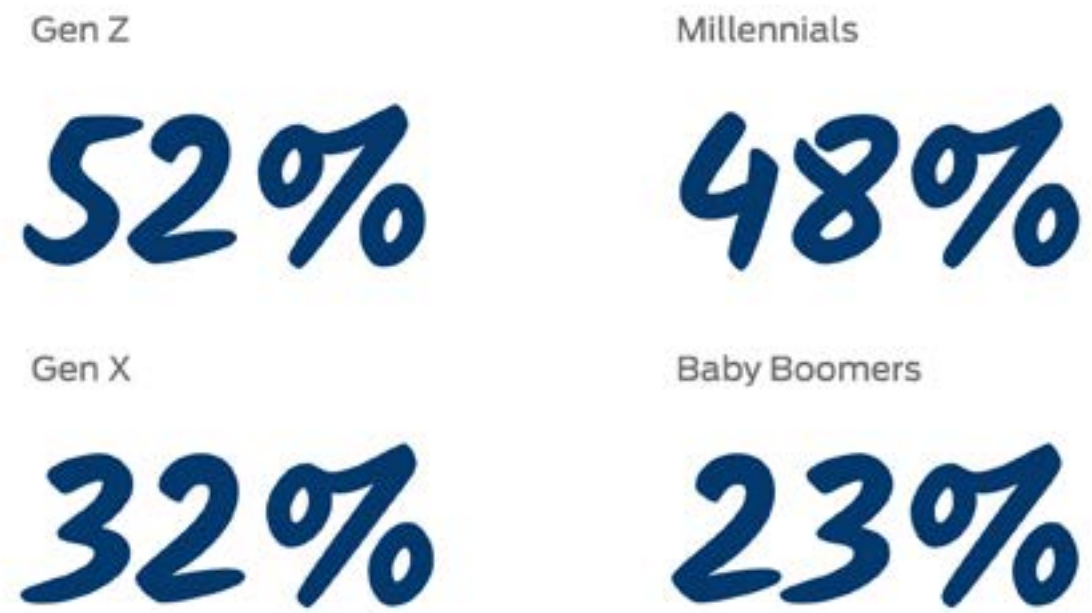
Males
50%

Females
40%



“In my lifetime, I expect that technology will make it possible to communicate with others via telepathy.”

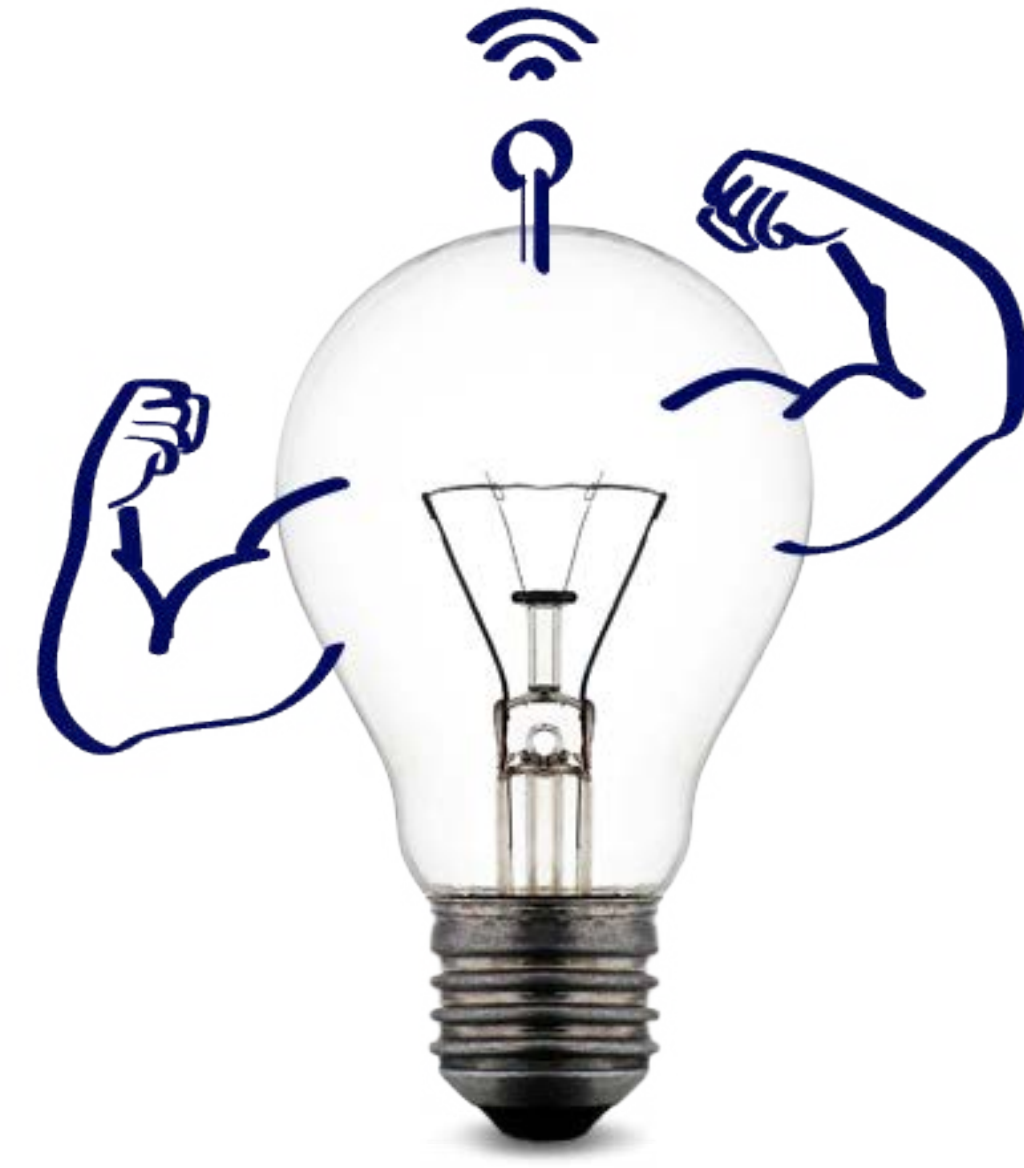
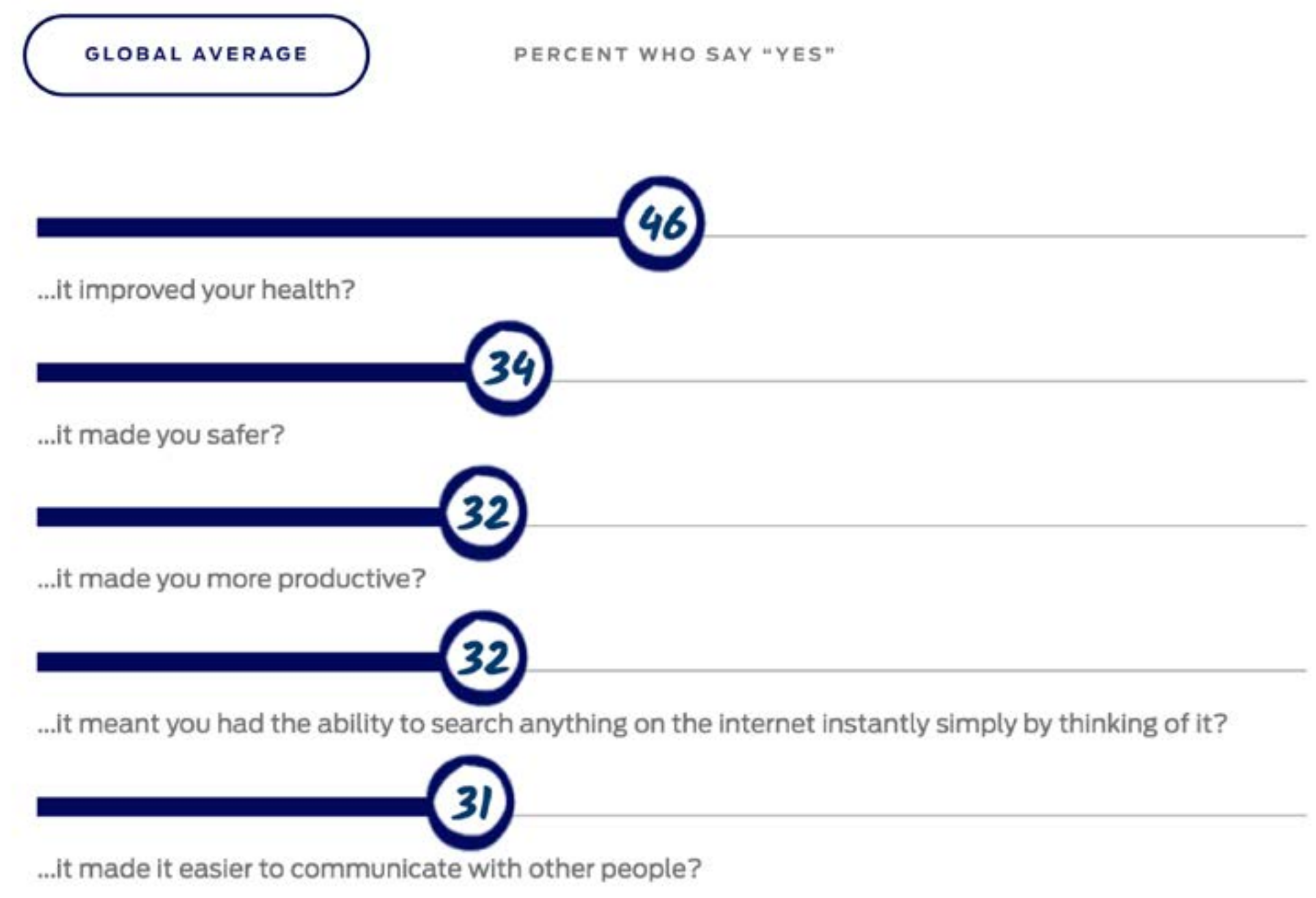
GLOBAL AVERAGE  PERCENT WHO AGREE



Brain implants could be the new way to control your computer mouse. Researchers with BrainGate have deciphered the brain activity associated with trying to write letters by hand. They implanted sensors into the brain of a participant with paralysis, using an algorithm to identify letters as he attempted to write them – then produced the text on a screen, which unfolded letter by letter in real time.



Would you get a chip implant if...



If technology is implanted in our brains and bodies, which word would better describe people – “human” or “robot”?

GLOBAL AVERAGE

PERCENT WHO AGREE

44%

of adults say “human”

56%

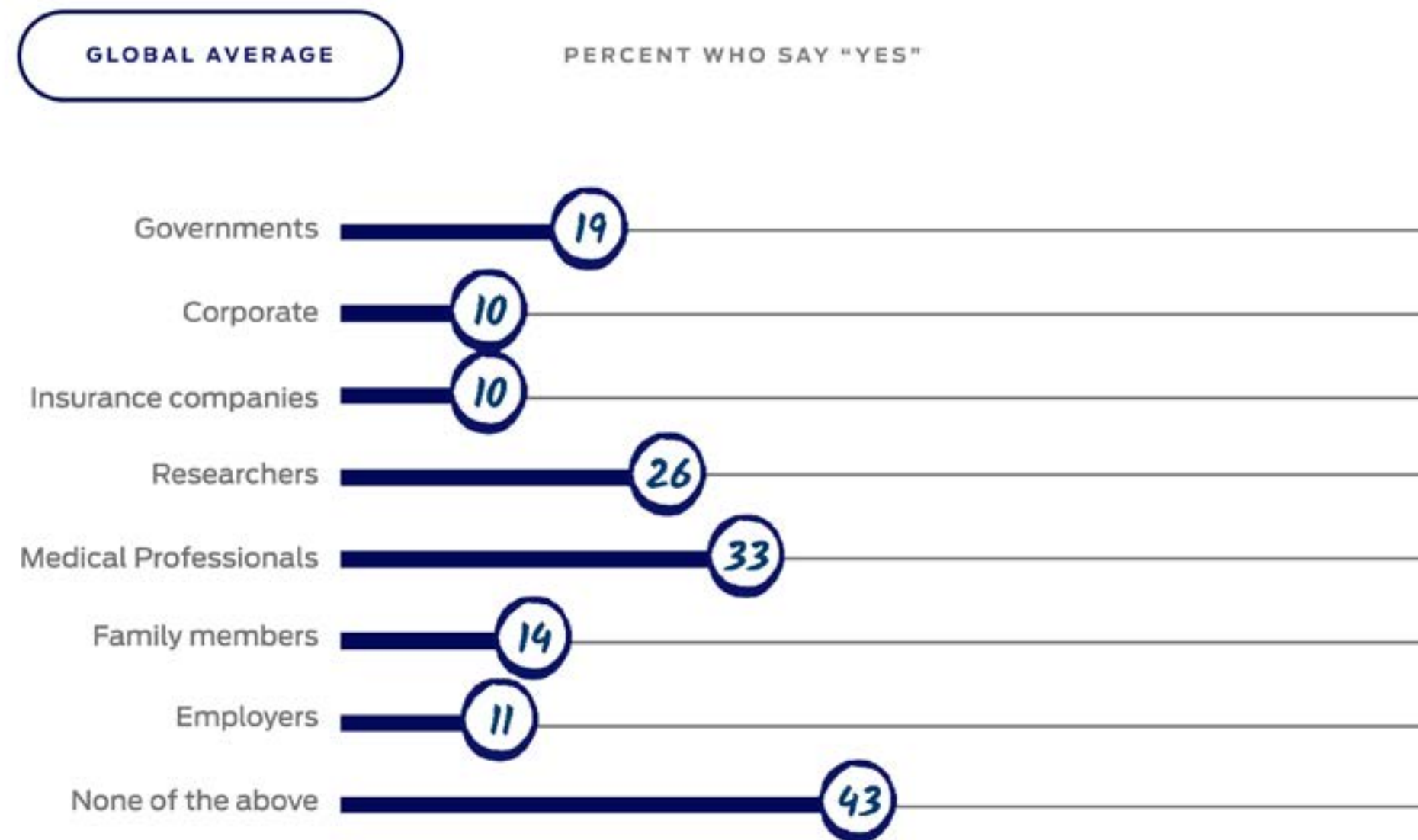
of adults say “robot”



Scientists in the U.S. reported in 2021 that they'd produced a device that could read a person's mind. Funded in part by Facebook (now Meta), the device connects the brain of a stroke victim directly to a computer, using software to interpret his thoughts. Scientists believe this technology – neuroprosthetics – will be used to replace broken connections in the brain, spinal cord and nerves to help people who've suffered strokes and other debilitating injuries.



Do you think mindreading devices could be used ethically by any of the following?



“The biggest challenge for consumers and businesses is the tension between sharing more personal information and the ability to create more personalized, awesome experiences. This tension will remain, but I’m optimistic that through technology, we will find a way to protect information and share information at the same time.”

Jim Buczkowski

Henry Ford Technical Fellow and Ford’s Interim
VP/Leader Research & Advanced Engineering



The Future of Identity & Belonging

Imagine a world where labels have become meaningless – where institutionalized ideas about age, gender, race, ethnicity, religion, sexual orientation and disability are rooted out in favor of greater inclusivity. To get there, do we begin by reexamining the language and social constructs that divide us? Do we shelve judgment and preconceived perceptions in favor of curiosity, empathy and understanding? People of all ages across the globe seek solidarity in their values – but in the future, real belonging and inclusion will require a genuine willingness to appreciate those who see the world through a different lens.



“Gender assignments will be gone in my lifetime.”



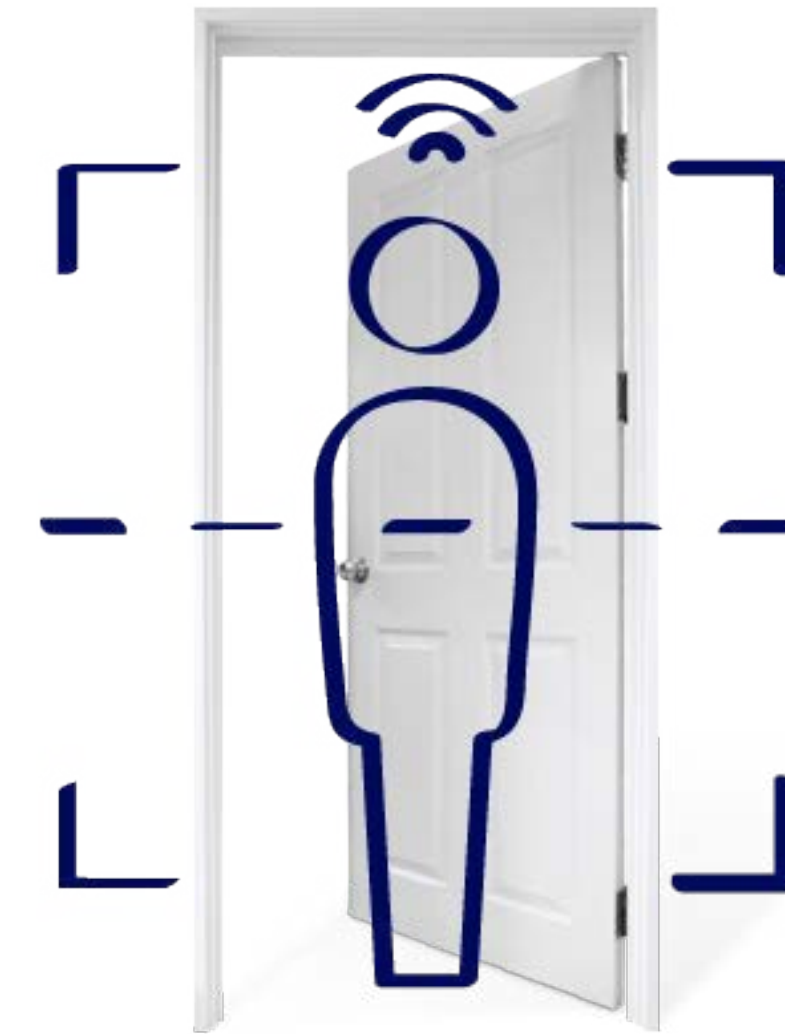
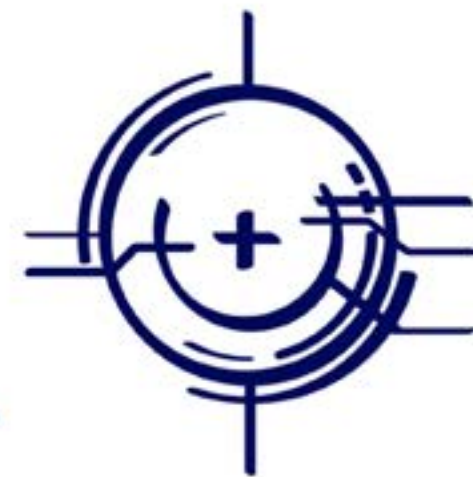
The Netherlands issued its first gender-neutral passport in 2018. Since then, 15 other countries have allowed people to amend their gender to a legalized nonbinary or third gender identifier on their passport.



“Racial/ethnic equality will be achieved in my lifetime.”



Artificial intelligence tools like facial recognition can be rife with human bias. For example, when a U.S.-based startup tried to teach A.I. software how to recognize indecent images, the firm sent photos to workers in India to tag explicit material – yet this came with inherent bias: The workers had labeled the images of same-sex couples as “indecent.” A growing number of startups now offer services to identify and remove bias from artificial intelligence systems.



“I live in a community that shares my values (e.g., political and/or religious beliefs).”

GLOBAL AVERAGE

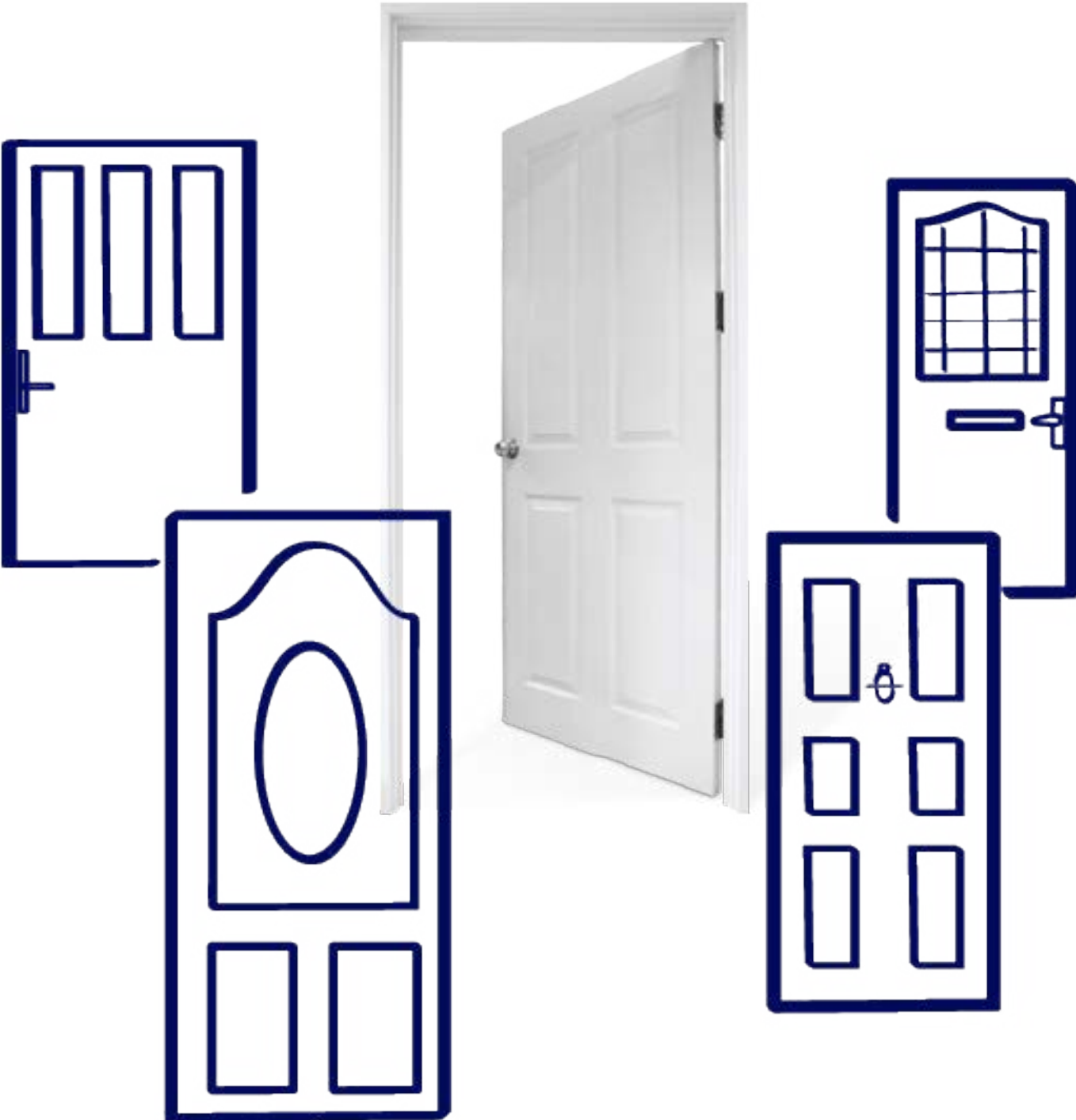
PERCENT WHO AGREE

Gen Z

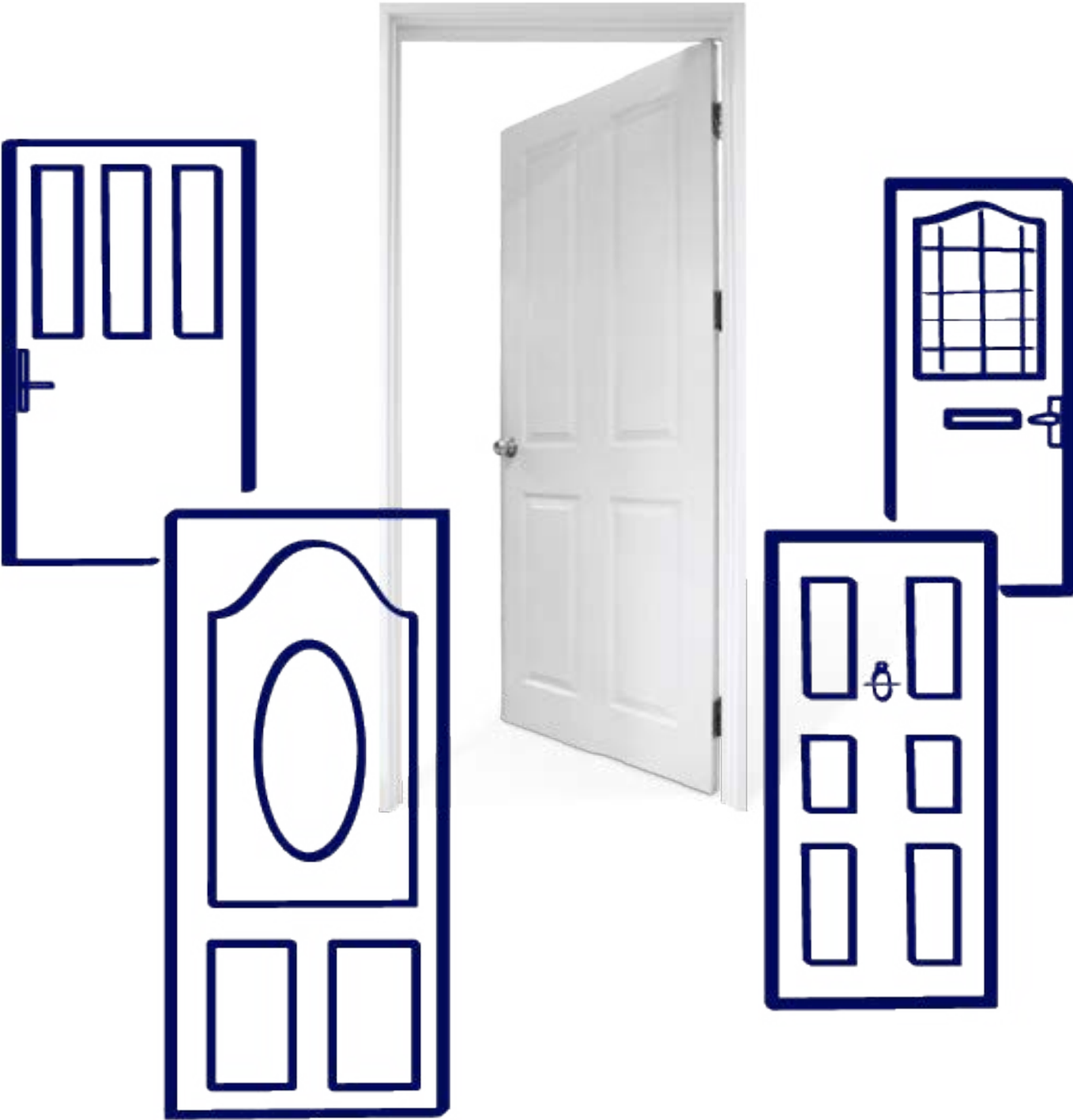
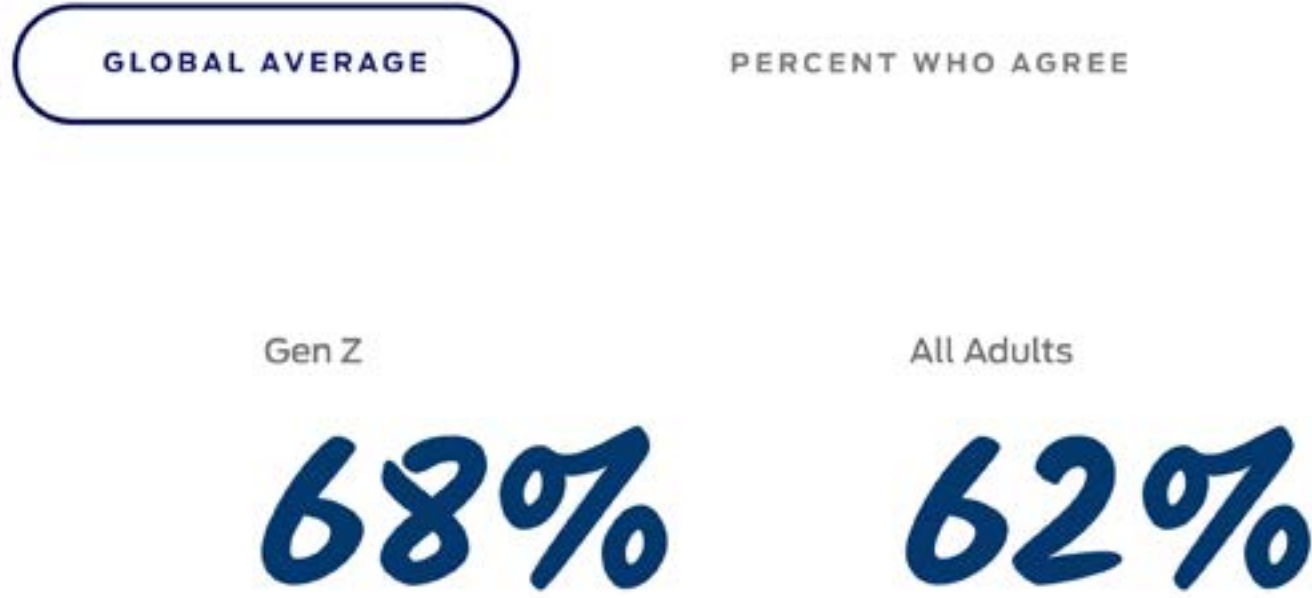
60%

All Adults

61%



“If you don’t currently live in a community that shares your values, would you like to?”



“I don't tell people my opinion if I think they'll disagree.”

GLOBAL AVERAGE

PERCENT WHO AGREE

Gen Z

48%

Millennials

44%

Gen X

39%

Baby Boomers

38%



“In the future, people will be less tolerant of opposing viewpoints than they are today.”

– **64% of adults globally agree**



In late 2021, Charlotte Valeur, former chair of the U.K.'s Institute of Directors, launched the Institute of Neurodiversity in the U.K., Europe and Australia “to give a voice in the world to all neurodiverse individuals.” Valeur, who was diagnosed with autism in her fifties, founded the institute to campaign for inclusion for neurodivergent people – and to reject the idea that neurodiversity is a problem to overcome, arguing that this approach leads to institutional discrimination. Several companies are leading the push for neurodiversity, too. IBM has adapted the interview process to meet the needs of a neurodiverse candidate and has created adaptive work environments where employees with autism and other neurodifferences can thrive.



“Just as the meaning of diversity has evolved, so has belonging. For example, belonging once meant that “everyone gets a trophy” — and that mentality perpetuated an inability to be accountable for individual efforts. I hope belonging changes to be more about being seen, heard and valued for who we are, and what and how we individually contribute.”

Angela Henderson

Ford's Racial Equity Director



“I hope technology will enhance belonging by making physical distance ‘disappear’ and helping us feel like we’re in the same room together, regardless where we live in the world. This feeling of proximity will help break down barriers, show our humanity, and make it much harder to have an ‘us versus them’ mentality.”

Lori Costew

Ford’s Chief Diversity Officer and Director of People Strategy



The Future of Family

Imagine a world where family is no longer defined by marriage or bloodline. Marriage rates are declining in advanced economies – and so are birthrates. Worldwide, nearly half of all young adults in our survey say they think marriage will become an outdated concept by 2035, and 24% say they don't want to have children. Perhaps family in the future will instead be defined by reliance, trust and intimate connections – be they with fellow humans, pets, organizations or even robots that are attuned to our physical, emotional and spiritual needs.



“By 2035, marriage will be an outdated concept in my country.”

GLOBAL AVERAGE



PERCENT WHO AGREE

Gen Z

44%

Gen X

45%

Millennials

47%

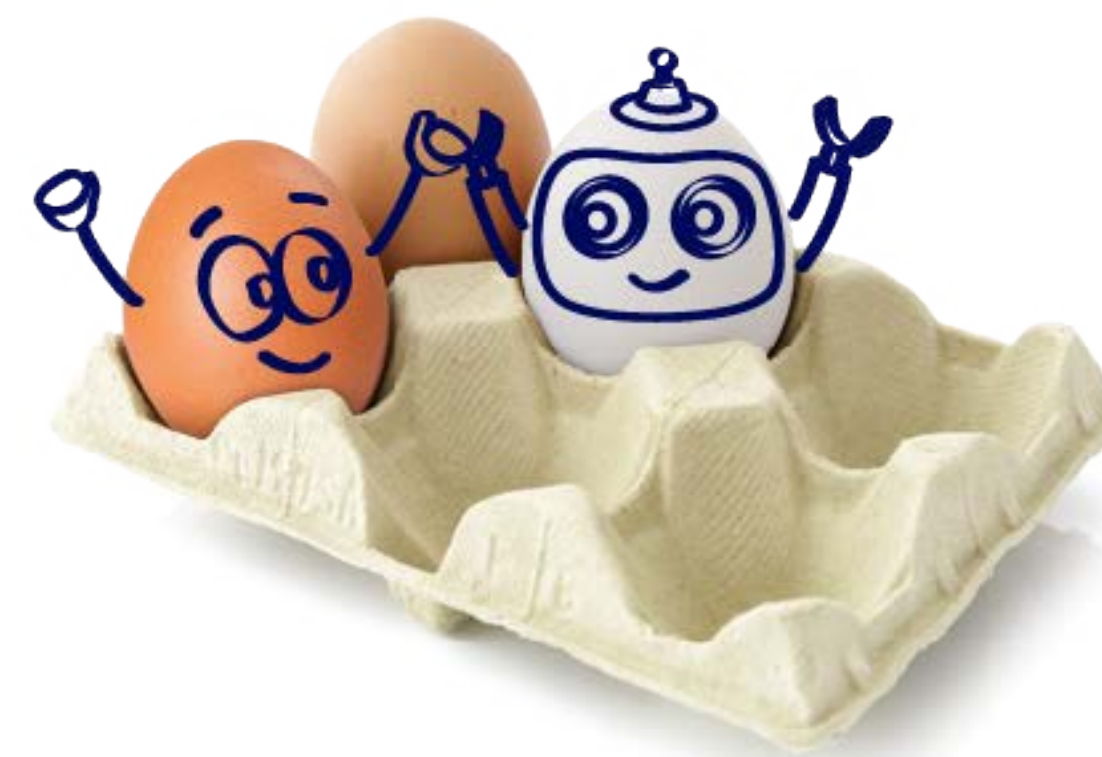
Baby Boomers

44%

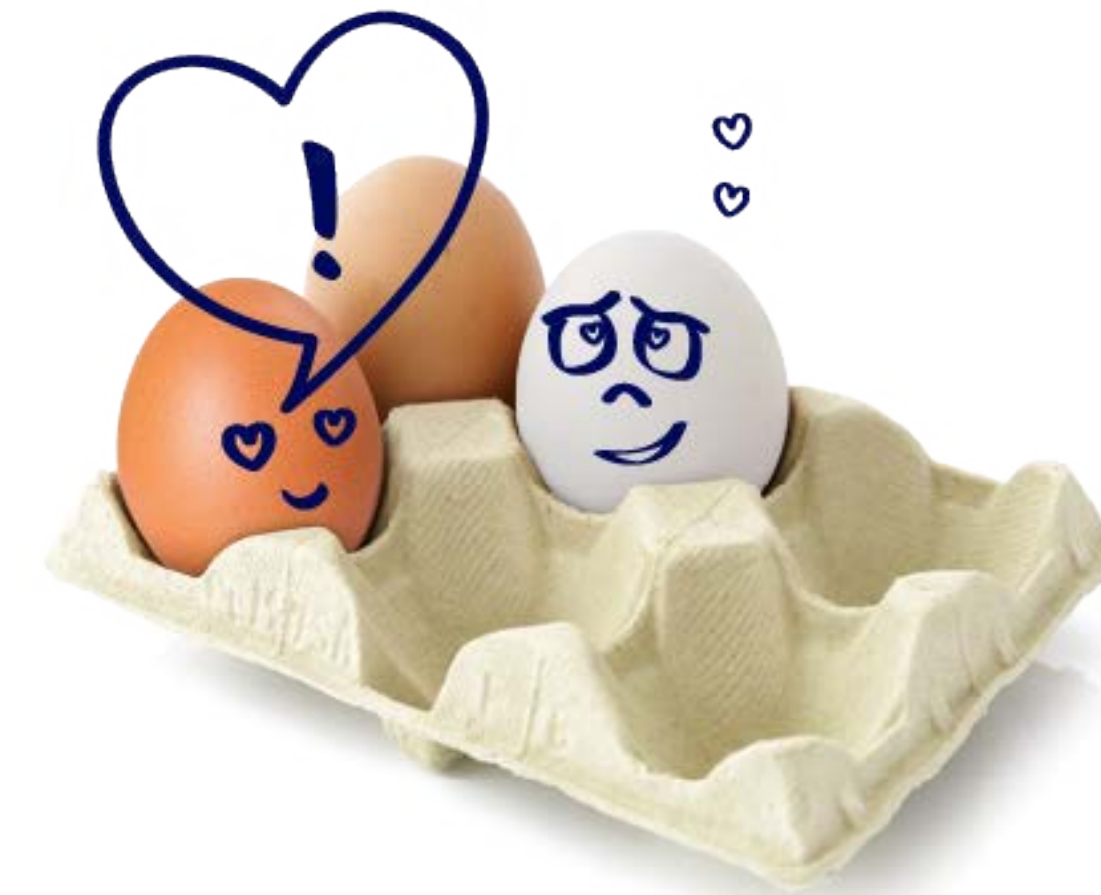


“In my lifetime, it will become common to use robots as companions. (e.g., to provide comfort to the elderly).”

GLOBAL AVERAGE  PERCENT WHO AGREE



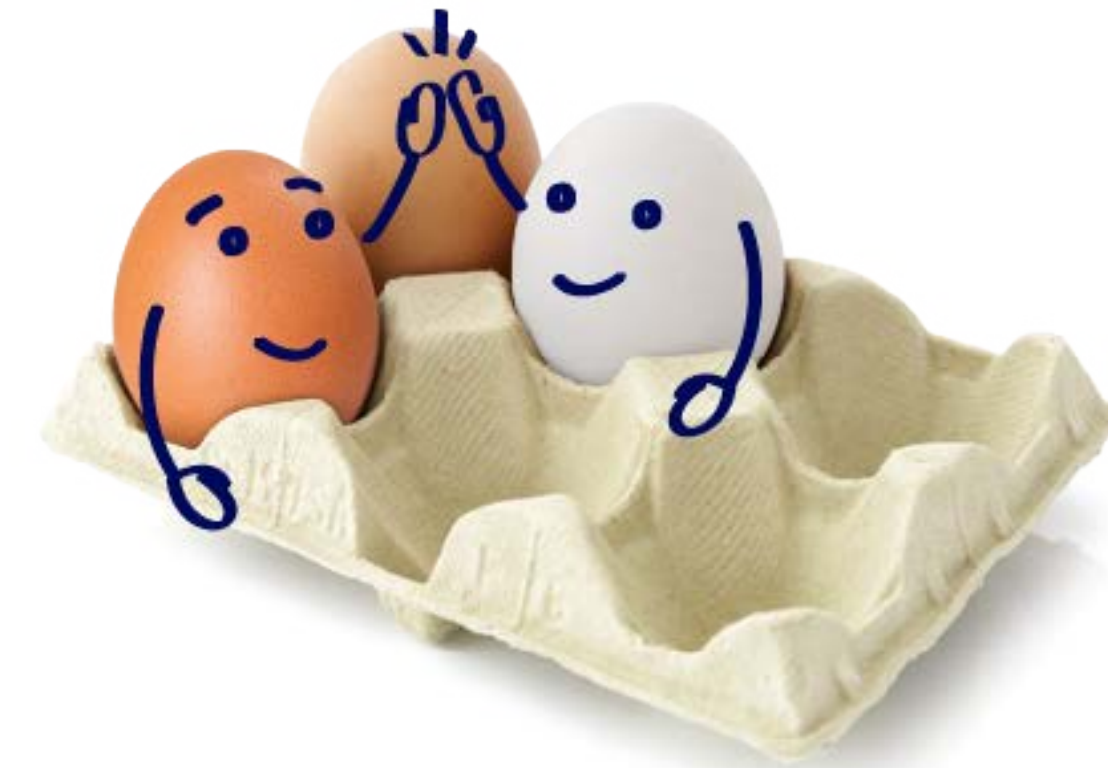
Chatbots are now a \$420 million market in China. The chatbot Xiaoice has more than 10 million active users in China and performs 14 human lifetimes' worth of interactions each day – she's busiest from 11:30 p.m. to 1 a.m. Replika, the U.S. company that created the popular chatbot Will, said it hit 55,000 downloads in China between January and July 2021 – more than double the number in all of 2020. For a fee, users can upgrade Will to the status of “romantic partner.”



Teaching children social-emotional skills has long been the domain of parents, teachers and other caregivers – but will that change as robots become more sophisticated? Meet Moxie, the robot companion designed for “empowering confident and mindful kids.” Moxie engages children in creative play – like drawing, storytelling, mindfulness practice and more – to help teach taking turns, emotion regulation, and conversation and friendship skills.



Platonic co-parenting is on the rise among heterosexual singles, fueled by subscription-based websites that make it easier to find a co-parenting partner. U.S.-based Modamily (tagline “a new way to family”), which launched in L.A. in 2012, now has 30,000-plus international members, of whom 80% are straight, while U.K.-based PollenTree.com has 53,000 members.



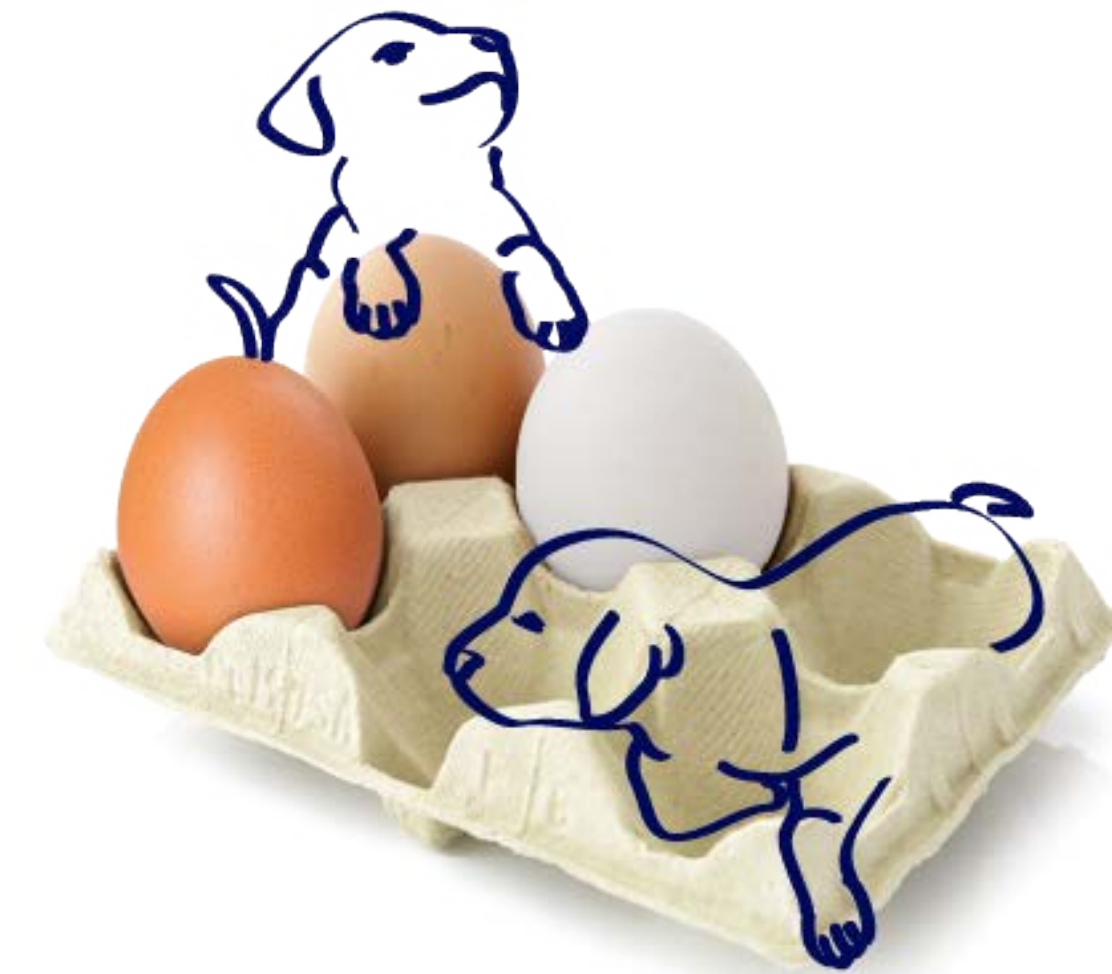
Do you want to have/raise kids of your own someday?

24% of Gen Z + Millennials who don't currently have children say, "No."

Why not?



With lower fertility rates come rising pet rates. Across the globe, more people are bringing pets into their households – aka, “furbabies.” Many pet owners are now pushing for workplace benefits usually reserved for traditional family members – including “pet-ernity,” also known as “pawternity.” In New Zealand, the financial services firm FlexiGroup allows up to five days of leave when a worker brings a new cat or dog home. If a pet dies, workers can take paid bereavement leave.



"As the definition of family continues to evolve, so do the needs of our customers. We're always listening, learning and adapting so that we can continue to provide our customers with products and services that earn their trust and make their lives better."

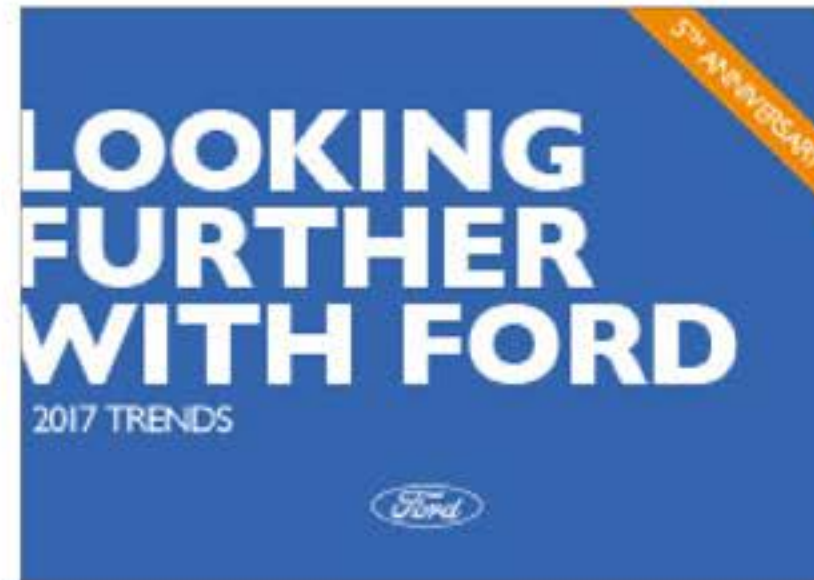
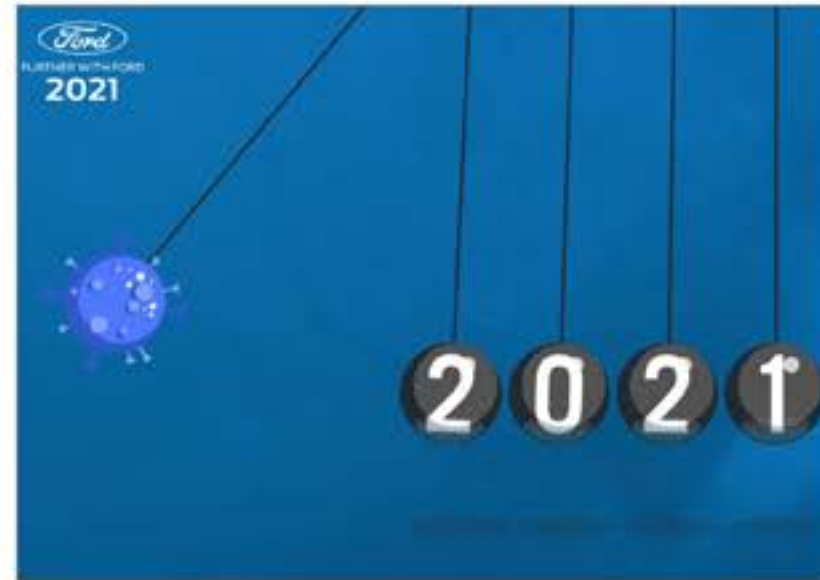
Elena Ford

Ford's Chief Customer Experience Officer



PREVIOUS TRENDS +

METHODOLOGY —



The results for Ford Trends 2022 are based on 14,025 online interviews across 15 countries, conducted under the direction of The Harris Poll. The survey was conducted among the general population, ages 18 years and older in the following countries: Australia, Brazil, Canada, China, France, Germany, India, Italy, Mexico, Saudi Arabia, South Africa, Spain, United Arab Emirates, the United Kingdom and the United States. Respondents from Saudi Arabia and United Arab Emirates were required to be nationals of their respective countries; data from these two countries were combined and analyzed in aggregate. All fieldwork took place Oct. 7 - 25, 2021. While the data within countries were weighted to be representative, the overall sample of 14,025 was not weighted across countries. That is, we do not claim that aggregated data is representative based on country population sizes across the participating countries.

COUNTRY	SAMPLE SIZE
Australia	1,000
Brazil	11,000
Canada	13,000
China	5,000
France	1,500
Germany	1,000
India	11,000
Italy	13,000
Mexico	5,000
Saudi Arabia	1,500
Spain	11,000
United Arab Emirates	13,000
United States	1,500

We have defined generational cohorts as follows: Gen Z (18-24), Millennials (25-40), Gen X (41- 56), Boomers (57-75).



The Future Is Here



FURTHER WITH FORD

2022