Special Report: Trust in Technology





2022 EDELMAN TRUST BAROMETER SPECIAL REPORT

TRUST IN TECHNOLOGY

Methodology

Online survey

Fieldwork conducted: Aug 31 – Sept 12, 2022

15

15,000

1,000

markets

respondents

respondents/market*

Data collected is representative across age, gender and regions within each market.

For full details, please refer to the Technical Appendix *Total sample for Saudi Arabia (n=972)

Australia

Brazil

Canada

China

France

Germany

maia

B.4 .

Saudi Arabia

S. Africa

O. 7 tillo

S. Korea

UAE

Ul

U.S.

Margin of error

+/- 0.8 pts for global 15 (n=14,972) +/- 3.1 pts per market (n=972 to 1,000)



FORCES PUTTING PRESSURE ON TRUST IN TECH

MORE EXPANSIVE DEFINITION



Nine in ten respondents see technology as not just traditional computing and software, but the digital apps and social media they use to run and share their lives.

POLITICIZATION OF TECH



As the guardians of national security and the public square, tech companies are inevitably affected by nationalist currents, geopolitical dynamics, and domestic polarization.

SPLIT GEOGRAPHIES



Developed and developing markets present two different trust landscapes — either skeptical of the impact or enthusiastic about the promises of tech innovation.

LACK OF SOCIETAL LEADERSHIP

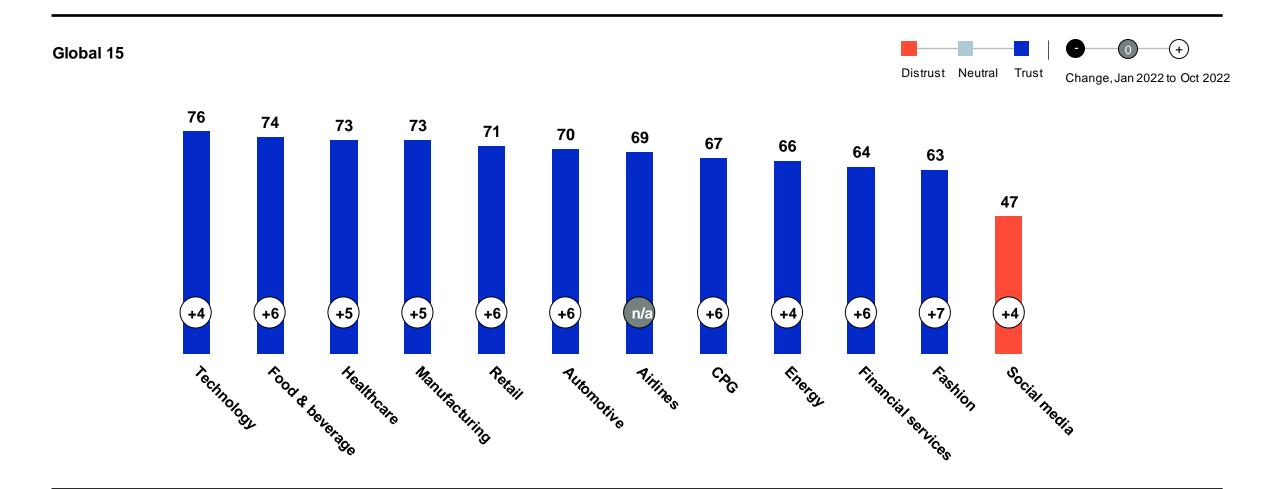


People want more than iterative product updates. They want solutions to climate change and economic dislocation and for CEOs to act with genuine concern.

TRUST IN TECH FALTERS

OCTOBER 2022: TECH MOST TRUSTED SECTOR

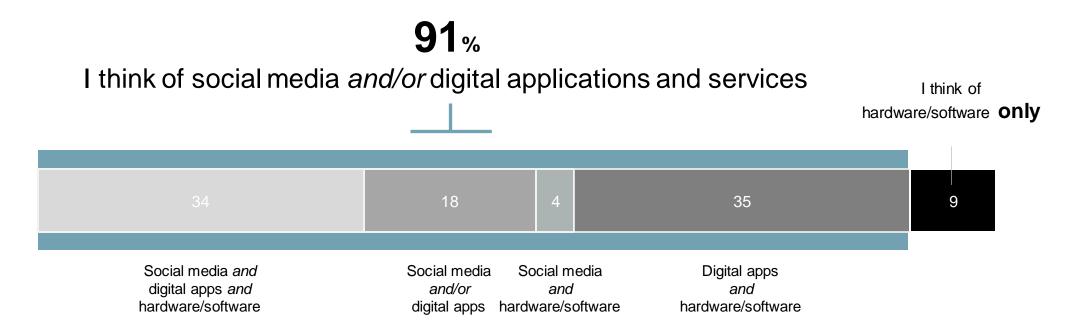
Percent trust



SOCIAL MEDIA AND DIGITAL APPLICATIONS NOW SEEN AS PART OF "TECH"

Percent who say

When I think of businesses in the "tech sector,"



WHEN PEOPLE ASSOCIATE TECH WITH SOCIAL MEDIA, TRUST IN TECH DECLINES

Percent increased likelihood to trust the tech sector, among respondents with different definitions of "tech companies"

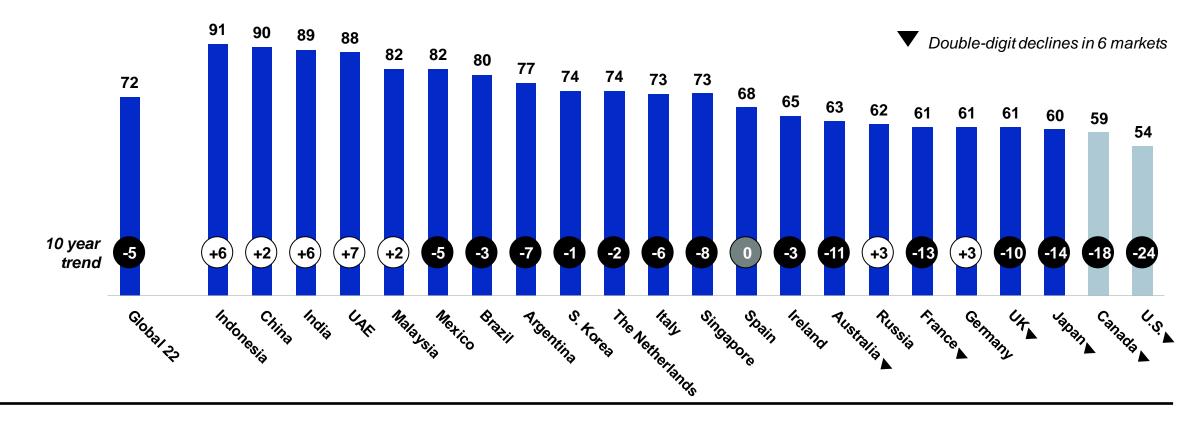
When I think of a tech company, I think of	Social media	Digital apps and services	Hardware, software
and this makes me more or less likely to trust the tech sector	-4.3%	+14.0%	+10.4%
Strength of impact in			
Developed markets	-9.8	+12.3	+12.5
Developing markets	no statistical significance	+7.6	+6.6



10 YEAR TREND: TRUST IN THE TECH SECTOR DECLINES IN 14 OF 22 MARKETS

Percent trust in the technology sector

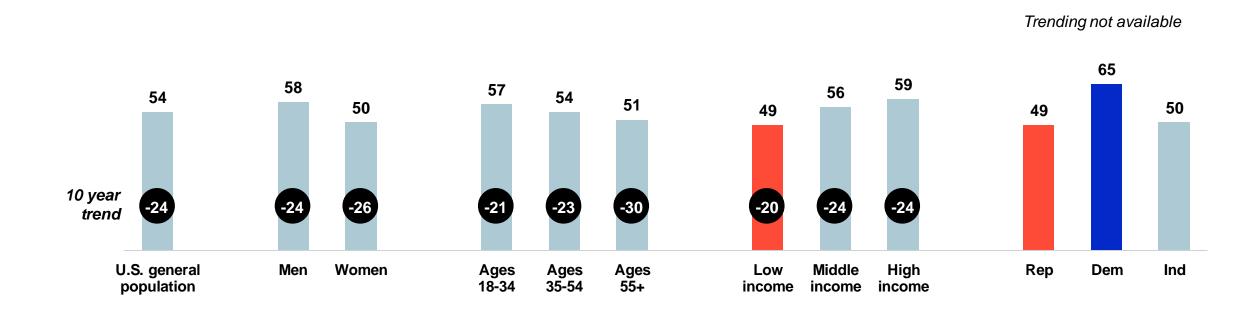




10 YEAR TREND: U.S. TRUST IN TECH PLUMMETS ACROSS DEMOGRAPHICS

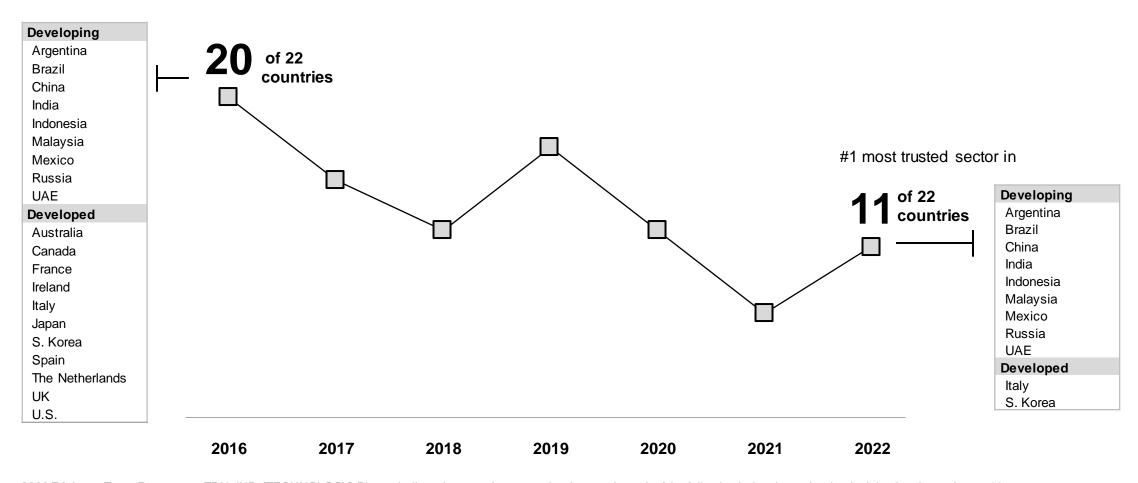
Percent trust in the technology sector, in the U.S.



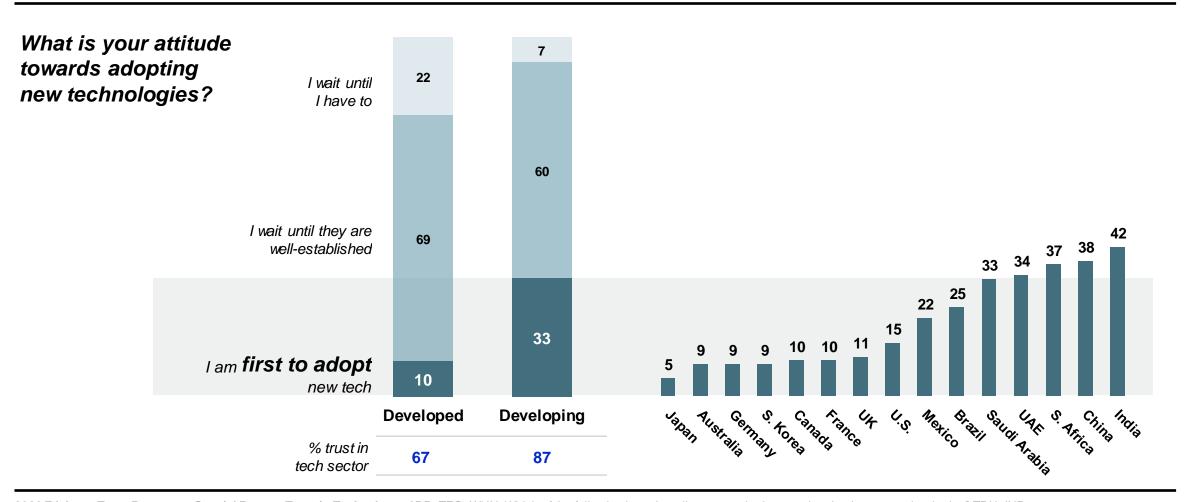


TECHNOLOGY SECTOR LOSING TRUST LEADERSHIP

Number of countries in which technology is the **#1 most trusted sector**



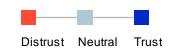
WHERE TRUST IS LOWER, SO IS ADOPTION

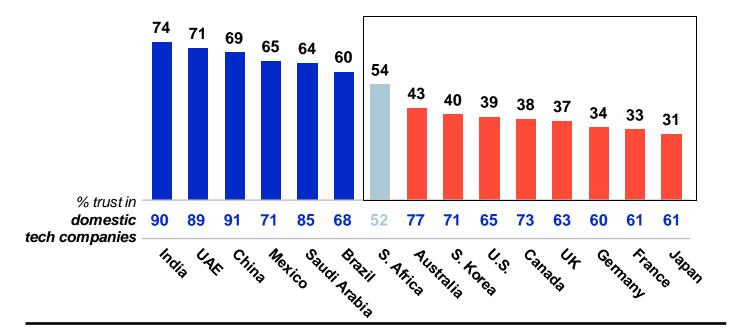


TECH DEEPENS SOCIETAL FAULT LINES

CONCERNS OVER FOREIGN GOVERNMENTS LIMIT TRUST IN FOREIGN TECH

Average percent trust in **foreign tech companies** among respondents in each market





PRODUCT CONCERNS NOT AMONG TOP 3 REASONS FOR DISTRUSTING FOREIGN TECH COMPANIES

Among those who **distrust** tech companies headquartered in foreign countries, top 3 reasons why

I don't trust their governments	54
I don't trust their data protection laws	44
Their governments might use data against us	42

2022 Edelman Trust Barometer Special Report: Trust in Technology. TEC_TRU_NAT. Now we would like to focus on global tech companies headquartered in specific markets. Please indicate how much you trust global tech companies headquartered in the following countries to do what is right. 9-points cale; top 4 box, trust. TEC_NAT_WHY. You just said you don't trust tech companies that are headquartered in one or more foreign countries. Why don't you trust those companies? Pick all that apply. Question asked of those who distrust tech companies HQ'd in foreign countries (TEC_TRU_NAT/1-4 for any). General population, 15-mkt avg. Data on the left is showing a market's average trust rating of foreign tech companies (excl. Russia), as well as trust in the home market's tech companies.

FEARS OVER PERSONAL AND NATIONAL DATA SECURITY

Percent who worry

I worry about my data privacy (avg)

My online behavior being tracked without consent My data used against me My data used to deny me a job, insurance, or credit

I worry about **cybersecurity** (avg)

Hackers, cyber-attacks, cyber-terrorism

Foreign tech companies compromising our national security

Domestic tech companies providing military products to others



2022 Edelman Trust Barometer Special Report: Trust in Technology. POP_EMO. Some people say they worry about many things while others say they have few concerns. We are interested in what you worry about. Specifically, how much do you worry about each of the following? 9-point scale; top 4 box, worry. Attributes shown to half of the sample. General population, 15-mkt avg., and by developed and developing markets. Data privacy concern is an average of attributes 42, 43, and 51; Cybers ecurity concern is an average of attributes 14, 40, and 41.

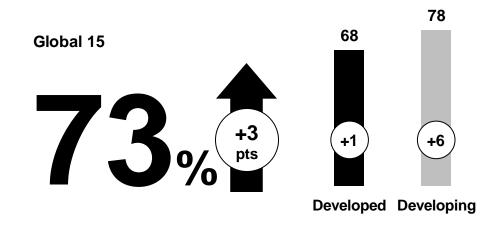
FEARS OF MISINFORMATION AND DEEPFAKES **CONTINUE TO RISE OVER LAST 18 MONTHS**

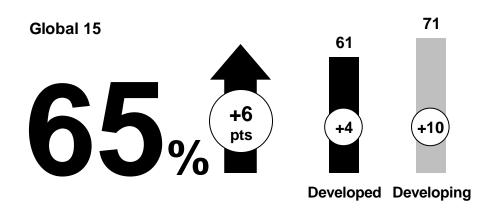
Percent who agree



I worry about false information or fake news being used as a weapon

I worry technology will make it **impossible to know** if what people are seeing or hearing is real



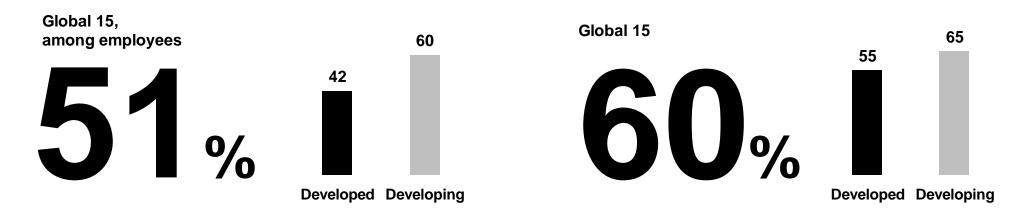


FEARS JOB AUTOMATION WILL WORSEN JOB LOSS AND INCOME INEQUALITY

Percent who agree

I worry that **technology or AI can do the type of work I do** as well as
or even better than I can

The use of technology to replace human workers will **increase income inequality**



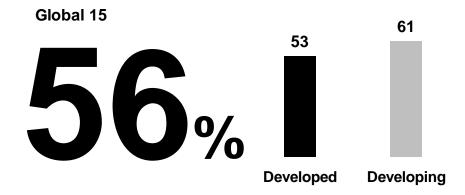


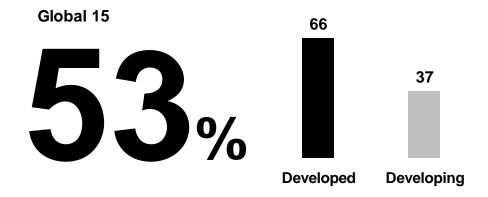
NEITHER GOVERNMENT NOR TECH PLATFORMS TRUSTED AS WATCHDOG

Percent who agree

Government regulators do not have adequate understanding of emerging technologies to regulate them effectively

I do not trust platforms to regulate their online content (avg)

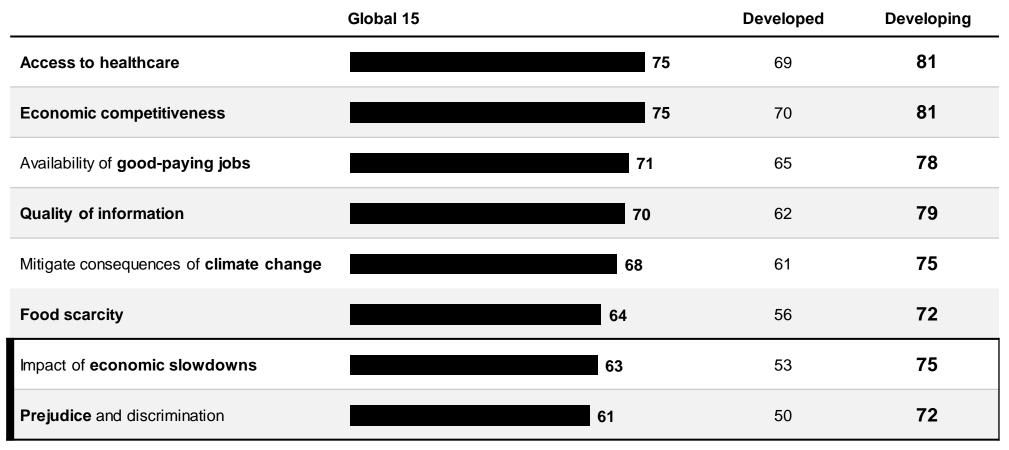




WHAT'S AT STAKE: A BETTER FUTURE

MAJORITY CONVINCED TECHNOLOGY CAN SOLVE URGENT SOCIETAL CHALLENGES

Percent who say technological innovations will have a positive impact on solving each challenge



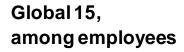
20+ point gaps between developed and developing countries

2022 Edelman Trust Barometer Special Report: Trust in Technology. TEC_BST. Which of the following best describes the impact you believe that technological innovation will have in solving each of the following problems or challenges? 5-point scale; codes 3-5, positive impact. Question asked of half of the sample. General population, 15-mkt avg., and by developed and developing markets.



EMPLOYEES ACROSS SECTORS AGREE: TECHNOLOGY MAKES WORK BETTER

Among those employed in each sector



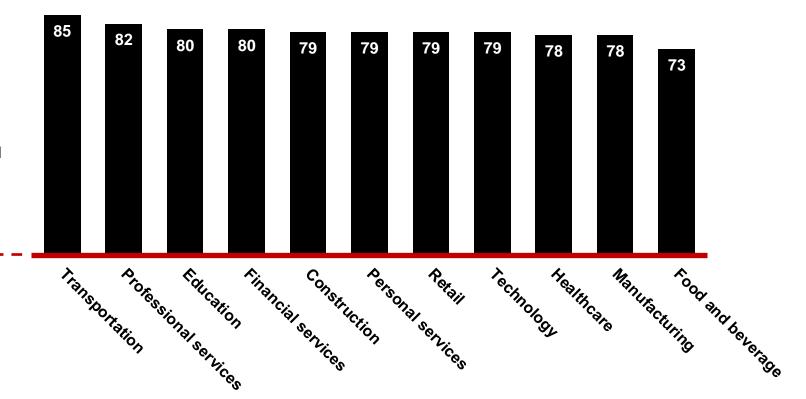
79%

Which do you agree with more?

Technology is having an overall positive impact on the workplace

01

Technology is having an overall negative impact on the workplace

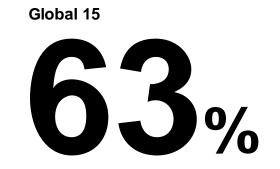


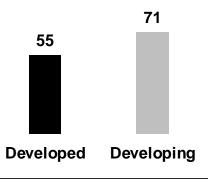
TECHNOLOGY MAKES WORK MORE ACCESSIBLE AND MEANINGFUL

Percent who agree

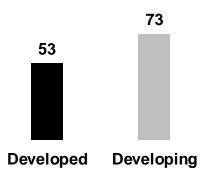
Technology in the workplace frees people to do more meaningful work

Technology has **enabled more people to find jobs** despite disabilities or care responsibilities









TECH COMPANIES FAIL TO DELIVER IMPACT BEYOND PERFORMANCE

Percent who say

Technology companies are doing this well

Less than majority say tech is doing well on...

Business and product performance (avg)

58%

Workforce treatment and diversity (avg)

Data security and privacy (avg)

Societal impact (avg)

47%

45%

43%

BEYOND PERFORMANCE: TECH MUST DO MORE

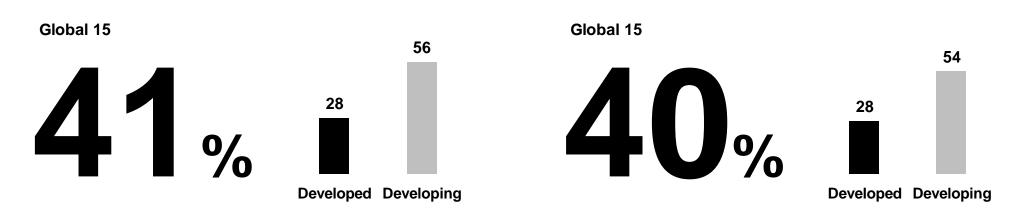
DEMONSTRATE COMMITMENT TO CLIMATE AND LABOR

Percent who say technology companies are doing this well

The company is doing what it should to reduce its impact on climate change

Their suppliers have fair labor practices and protect the environment

Only 4 in 10 say tech companies are doing well on addressing climate or labor



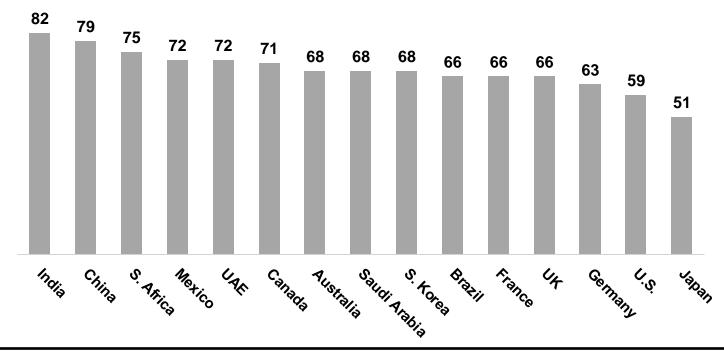
TRAIN WORKERS YOUR TECHNOLOGY DISPLACES

Percent who agree

Technology companies should be required to contribute resources to the reskilling of workers displaced by their technologies

Global 15

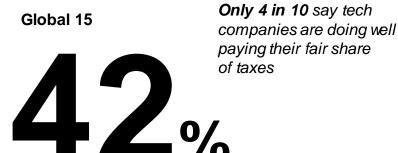
68%

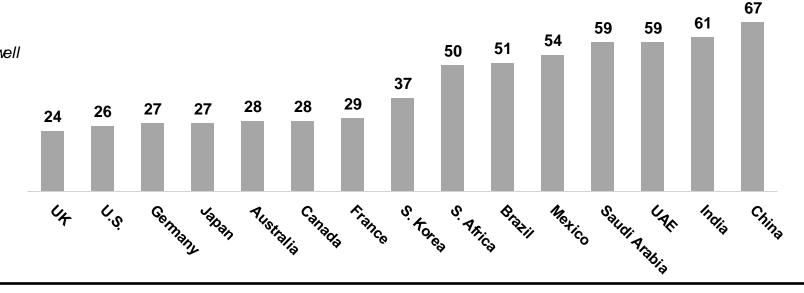


PAY YOUR FAIR SHARE OF TAXES

Percent who say technology companies are doing this well

Technology companies pay their fair share of taxes



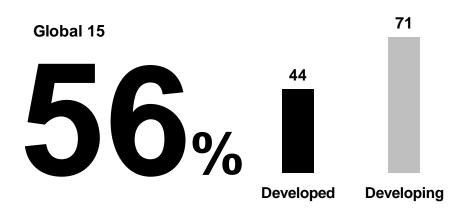


CEOS: SHOW EMPATHY AND LEADERSHIP

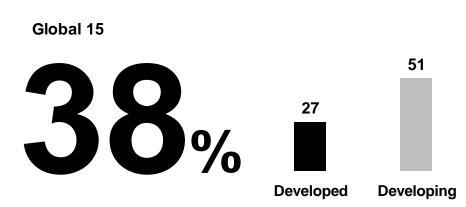
Percent who agree

Technology companies are led by people who genuinely care about the welfare of people and society

Tech CEOs are doing well on using their power to **benefit society as a whole** and not just to enhance their self-image or indulge their personal fantasies



Only 4 in 10 say tech CEOs are doing this well



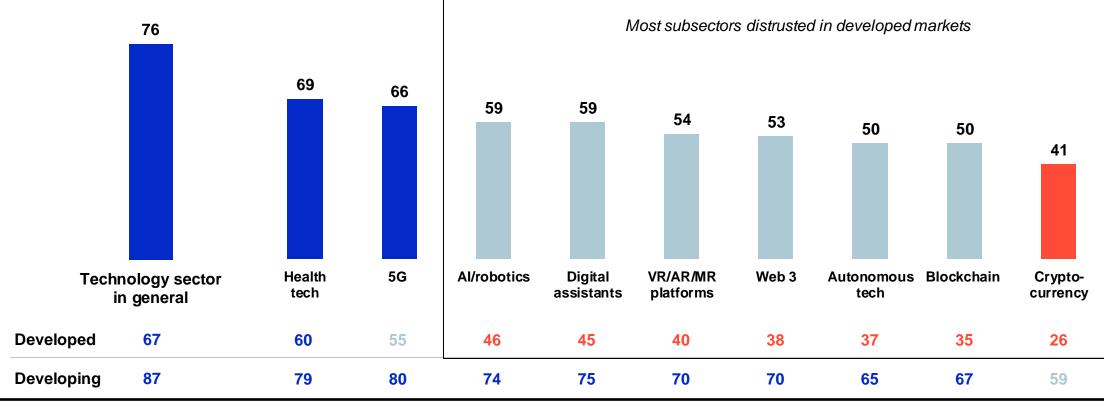
CONVINCE ME I CAN TRUST YOU WITH OUR FUTURE

EMERGING TECHNOLOGY SUBSECTORS DO NOT BENEFIT FROM HIGH TRUST IN TECH SECTOR



Percent trust

Global 15



2022 Edelman Trust Barometer Special Report: Trust in Technology. TRU_IND. Please indicate how much you trust businesses in each of the following industries to do what is right. 9-point scale; top 4 box, trust. Industries shown to half of the sample (except Technology which was shown to everyone). TRU_SUB_TEC. Now thinking about specific sectors within the technology industry, please indicate how much you trust businesses in each of the following sectors to do what is right. 9-point scale; top 4 box, trust. Question asked of half of the sample. General population, 15-mkt avg., and by developed and developing markets.



ACCEPTANCE OF AUTONOMOUS TECHNOLOGY: GIVE ME A VISION THAT INCLUDES ME

Percent increased likelihood to feel accepting of autonomous technologies (top 4 drivers shown), and percent who say...

Tech companies	When this is true, I am more likely to feel accepting of autonomous technologies		
Have a vision for the future I believe in	+12.5%	52	Biggest driver of acceptance, but only 1 in 2 buy into tech's vision for the future
Are good at what they do	+7.1	78	
Are effective agents of positive change	+5.6	61	
Fairly serve the interests of everyone	+4.2	49	-

²⁰²² Edelman Trust Barometer Special Report: Trust in Technology. Data shown on left is a regression analysis. For more information on how this data was calculated please refer to the Technical Appendix. TEC_PER_DIM. In thinking about why you do or do not trust technology companies, please specify where you think they fall on the scale between the two opposing descriptions. 11-points cale; top 5 box, positive. TRU_3D_TEC. To what extent do you agree with the following statements in regard to technology companies? 7-points cale; top 3 box, agree. General population, 15-mkt avg.

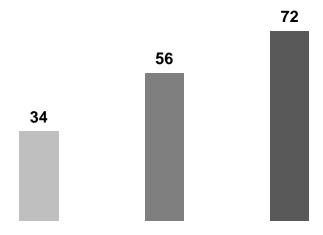
THE PROMISE OF AUTONOMOUS TECHNOLOGY: IF I FEEL JUST A LITTLE IN THE KNOW, I'M SOLD

Percent who say

When it comes to autonomous technology, I know...

A moderate
Almost nothing A little bit amount / a lot

Autonomous technology will have a positive impact on society (avg)



TELL ME THE BENEFITS AND THE DOWNSIDES

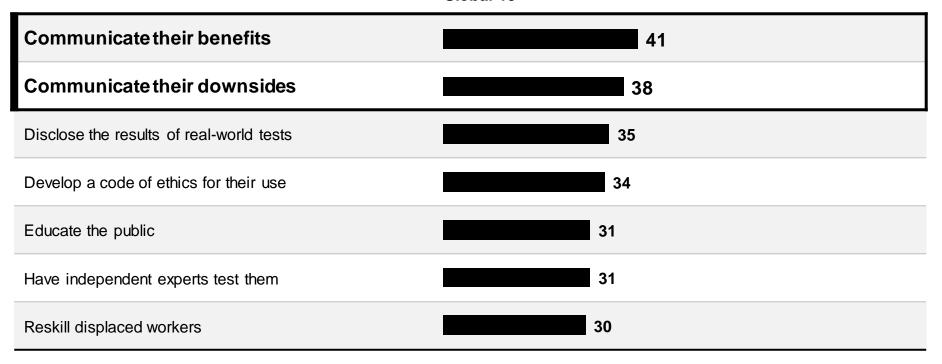
Percent who say

To increase my trust in new technologies,

tech companies must...

(showing actions with 30% or higher agreement)

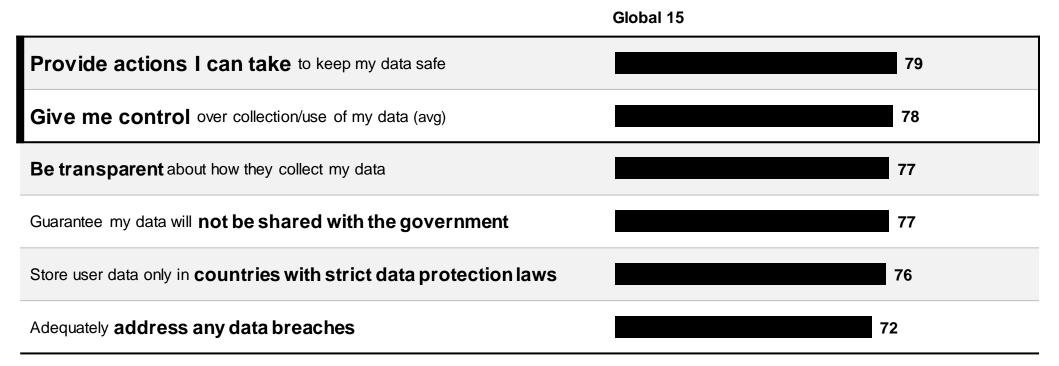
Global 15



LET ME MAKE THE CHOICES ABOUT MY DATA

Percent who say

For me to feel **comfortable sharing my data**, companies must ...



USE THE VOICES AROUND ME

Percent who say

I feel that each is a **credible source of truth** on technology/innovations

	Global 15	Developed	Developing
Friends and family	63	55	73
Workplace IT support	62	51	72
Technology industry experts	60	49	72
Experts at technology companies	55	42	69
Technology company employees	48	35	62
Consumers who leave reviews on websites	45	31	60
Technology company CEOs	45	31	60

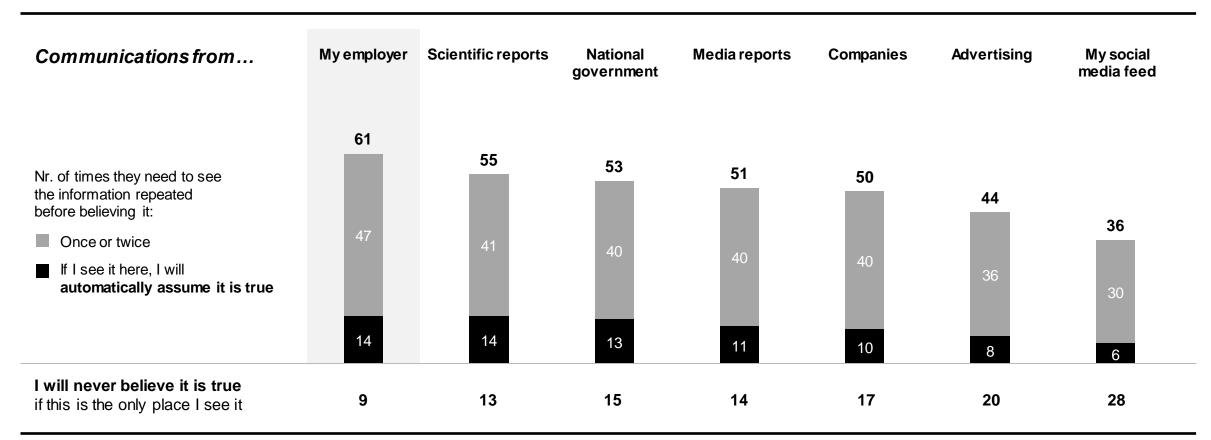
Tech CEOs not seen as credible voices

2022 Edelman Trust Barometer Special Report: Trust in Technology. TEC_SPL. How credible do you feel each of the following are when it comes to telling you the truth about technology products, new technologies, and tech product innovations? 4-pointscale; top 2 box, credible. Question asked of half of the sample. General population, 15-mkt avg., and by developed and developing markets. "Workplace IT support" was asked only of employees of an organization (Q43/1).



TALK TO ME AT MY WORKPLACE

Percent who believe information about technology and its impact on society from each source automatically, or after seeing it twice or less



2022 Edelman Trust Barometer Special Report: Trust in Technology. TEC_HEAR_TIME. When you see a new piece of information or a news story about technology or technology's impact on people and society in each of the following information sources, how many times do you need to see it or hear it repeated in that same type of information source before you believe it is really true? "Once or twice" is a sum of codes 2 and 3. Question asked of half of the sample. General population, 15-mkt avg. "My employer" was only asked of those who are an employee of an organization or corporation (Q43/1).



LOCALIZE YOUR STRATEGY

Playbooks for engagement, trust building, and societal leadership must vary across geographies

In developed markets		In developing markets
Skeptical of impact	Tech Sentiment	Enthusiastic about the promise
Updates to familiar favorites	Product Strategy	Test new innovations
Family, friends, workplace	Effective Spokespeople	Experts
Sustainability, misinformation	Societal Impact	Jobs, data security, misinformation
Show societal leadership	CEO Remit	Show societal leadership

CEO expected to show genuine concern across geographies

A NEW WAY TO BUILD TRUST IN TECH

1

Broadcast integrity through action

Tech CEOs face an empathy optics issue.
Address that through actions like paying your fair share of taxes, running a sustainable supply chain, and reskilling workers

2

Take on the biggest challenges of our time

Competence and product innovation have powered tech's trust, but now tech leaders need to address climate, inequality, and misinformation head on

3

Fill the policy vacuum

Tech companies can lend credibility to public conversations with governments and NGOs, using their expertise to build confidence in data policies, whether in domestic or international contexts

4

Communicate a vision that I can opt into

I need to feel included in the vision, and in order to endorse it, I need to know that I won't lose control or agency. Do that and I'm more open to innovation

SUPPLEMENTAL DATA

10 YEAR TREND: TRUST IN TECH BY MARKET

Distrust Neutral Trust

Percent trust in the technology sector

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Oct 2022
China	88	88	87	84	90	88	91	91	90	77	90	92
India	83	87	91	89	88	92	89	89	92	87	89	92
UAE	81	79	85	84	85	83	81	88	83	80	88	89
Mexico	87	87	86	84	90	87	89	90	85	78	82	87
Brazil	83	80	82	81	83	82	86	87	85	75	80	86
Saudi Arabia	-	-	-	•	•	-	-	81	79	80	83	83
S. Africa	-	-	80	80	78	79	76	79	76	73	75	82
S. Korea	75	72	75	67	69	68	75	76	81	71	74	74
Australia	74	65	73	71	72	71	68	72	66	61	63	71
Canada	77	71	74	73	72	72	71	76	68	60	59	68
Germany	58	60	62	61	63	63	64	68	64	60	61	67
Japan	74	67	68	63	62	63	60	66	68	56	60	65
U.S.	78	70	75	73	73	75	74	73	66	57	54	65
UK	71	71	74	72	69	69	64	69	64	56	61	64
France	74	68	69	65	71	70	67	73	63	57	61	60

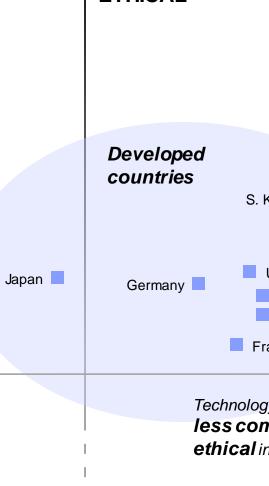
HEADWINDS FOR TECH STRONGEST IN DEVELOPED **COUNTRIES**

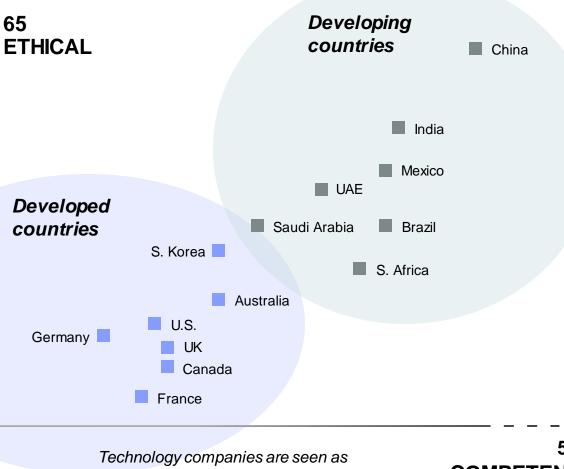
Rating for technology companies by respondents in each market:

(competence score, net ethical score)

Competence and ethics are the two primary dimensions of trust

LESS COMPETENT







50 COMPETENT

▼ UNETHICAL

OCT 2022: TRUST IN TECH SUBSECTORS BY MARKET

Percent trust

Distrust Neutral Trust	Global 15	Australia	Brazil	Canada	China	France	Germany	India	Japan	Mexico	Saudi Arabia	S. Africa	S. Korea	UAE	UK	U.S.
Health technology	69	66	79	61	89	51	53	84	59	81	76	65	65	79	58	64
5G	66	57	83	49	90	47	54	86	51	79	75	63	65	81	55	62
Internet of Things	60	45	71	45	89	36	42	85	50	74	71	61	65	76	42	46
Al/robotics	59	41	69	39	88	38	42	84	59	72	76	53	69	76	38	42
Digital assistants	59	45	71	41	86	39	41	83	38	81	68	60	62	73	45	49
Voting technology	59	52	67	53	87	42	47	79	45	60	67	48	57	69	50	57
VR/AR/MR platforms	54	40	65	38	85	32	34	82	35	67	64	54	61	71	36	43
Web 3	53	35	63	36	89	34	36	83	37	69	68	50	59	70	33	37
Self-driving vehicles	52	35	51	28	84	30	36	80	52	65	67	47	60	71	32	36
Autonomous technology	50	34	57	30	85	30	35	77	42	61	67	43	58	67	31	34
Blockchain technology	50	34	59	33	83	31	31	78	38	65	67	50	53	68	28	33
Cryptocurrency	41	27	47	27	76	24	23	66	21	57	56	47	32	62	27	30

CONCERNS LIMIT LICENSE TO SCALE

Global 15

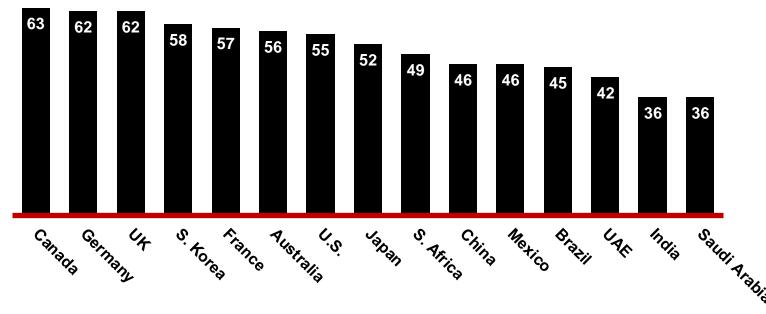
51

Which do you agree with more?

The potential for predatory behavior if technology companies get too big outweighs the potential advantages to users associated with greater scale

0

The advantages of allowing technology companies to get very big outweigh the potential problems associated with allowing a company to establish a monopoly



1 IN 2 AGREE: **BIG TECH COMPANIES STIFLE TECH ECOSYSTEM**

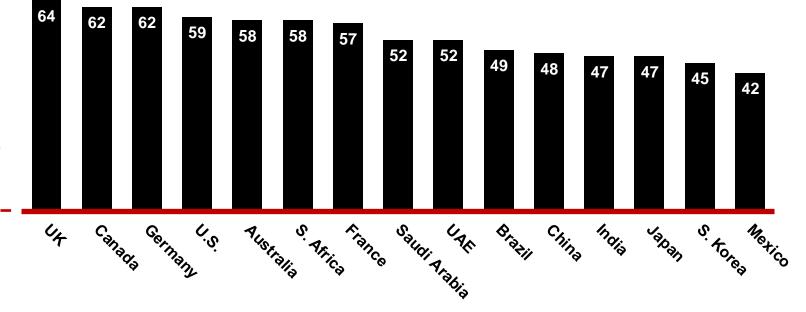
Which do you agree with more? Big tech companies...

Global 15

use their power and size to make it difficult for smaller tech companies to

be successful

create many new opportunities for smaller tech companies to get established and grow





TRUST IN SECTORS



Percent trust	Global 15		-	Australia	:: :	Draz II		Canada	9		L	France		Germany	:	India
+/- Jan 2022 to Oct 2022	%	+/-														
Technology	76	+4	71	+8	86	+6	68	+9	92	+2	60	-1	67	+6	92	+3
Food and beverage	74	+6	76	+7	80	+7	67	+7	88	+8	54	+1	60	+3	87	+4
Education	74	+6	77	+6	75	+17	76	+7	88	-2	61	+2	69	+7	88	+7
Healthcare	73	+5	78	+4	74	+17	72	0	89	+3	68	+5	66	+2	87	+5
Manufacturing	73	+5	71	+6	72	+14	66	+4	88	0	61	+1	69	+10	88	+5
Hotels and hospitality	73	n/a	73	n/a	79	n/a	68	n/a	83	n/a	60	n/a	67	n/a	85	n/a
Retail	71	+6	71	+5	73	+10	67	+5	85	-2	57	+1	67	+6	85	+5
Transportation	71	+6	74	+8	70	+18	69	+4	86	-2	64	+6	64	+9	85	+2
Automotive	70	+6	68	+9	77	+10	58	+5	90	+6	52	+4	50	+7	89	+4
Professional services	70	+5	67	+4	74	+11	68	+3	89	+1	57	+2	62	+4	84	+3
Telecommunications	69	+6	64	+11	72	+10	58	+9	88	+3	53	+4	56	+6	88	+3
Airlines	69	n/a	66	n/a	75	n/a	58	n/a	88	n/a	57	n/a	53	n/a	84	n/a
Consumer packaged goods	67	+6	69	+10	69	+6	61	+6	84	+5	50	0	54	+3	84	+3
Entertainment	67	+5	67	+8	79	+10	56	+5	81	+9	58	+1	53	+5	85	+2
Energy	66	+4	63	+12	79	+17	60	+6	90	+6	51	+4	45	+1	93	+8
Financial services	64	+6	58	+10	68	+10	62	+7	85	+6	42	+2	46	+7	86	+6
Fashion	63	+7	55	+2	66	+13	52	+8	84	+1	48	+6	52	+11	81	+1
Social media	47	+4	35	+1	53	+10	28	+1	85	+4	27	+5	34	+6	74	+6

TRUST IN SECTORS



Percent trust +/- Jan 2022 to Oct 2022		Japan		Mexico	Saudi	Arabia	3	o. Arrica	2	S. Norea	L S	J A	È	4	(U.S.
Technology	65	+5	87	+5	83	0	82	+7	74	0	89	+1	64	+3	65	+11
Food and beverage	66	+5	85	+11	79	+2	75	+7	66	+5	84	+3	71	+11	71	+12
Education	57	+7	79	+12	87	+5	73	+11	62	+1	87	+2	72	+7	66	+8
Healthcare	53	+7	73	+11	84	0	66	+6	59	+9	84	-3	73	+1	67	+7
Manufacturing	64	+8	78	+4	78	-3	78	+10	65	+6	85	+2	63	+3	69	+13
Hotels and hospitality	64	n/a	80	n/a	79	n/a	78	n/a	55	n/a	88	n/a	66	n/a	71	n/a
Retail	61	+12	79	+6	76	0	75	+9	56	+8	83	+4	61	+2	63	+8
Transportation	64	+7	74	+12	80	-1	65	+12	58	+8	87	0	63	+6	67	+11
Automotive	62	+3	76	+8	80	-1	72	+7	67	+2	85	+2	54	+4	63	+9
Professional services	55	+8	75	+6	78	0	76	+9	59	+6	81	+2	59	+5	66	+9
Telecommunications	61	+7	79	+10	79	-2	66	+4	63	0	85	+3	60	+9	58	+10
Airlines	67	n/a	76	n/a	84	n/a	70	n/a	60	n/a	86	n/a	57	n/a	59	n/a
Consumer packaged goods	55	+7	78	+13	71	-2	69	+8	63	+4	80	+5	59	+7	64	+12
Entertainment	51	+5	82	+7	73	-2	67	+4	50	-2	81	+1	62	+4	54	+10
Energy	53	+5	78	+8	77	-3	53	0	67	+2	87	+1	34	-10	59	+8
Financial services	50	+8	78	+15	78	+2	63	+7	63	+8	76	0	48	0	57	+9
Fashion	52	+13	71	+11	75	-1	72	+12	56	+4	83	+9	46	+3	55	+13
Social media	36	+7	61	+6	70	+4	40	+6	42	+7	64	+2	26	-1	36	+6

REASONS FOR NOT TRUSTING FOREIGN TECH COMPANIES

Among those who do not trust tech companies from at least one foreign market, reasons why	Global 15	Australia	Brazil	Canada	China	France	Germany	India	Japan	Mexico	Saudi Arabia	S. Africa
I do not trust the governments of those countries	54	65	60	66	40	53	61	43	53	50	39	59
I don't trust the data security/protection laws and procedures in those countries	44	55	42	56	32	46	50	41	36	42	37	45
If our country had a conflict with those countries, I worry that their governments would use the data their technology companies have collected against us	42	49	39	50	36	40	38	46	38	35	30	46

I believe the technology companies in these countries share user data with the government

The technology companies in these countries have unfair and exploitative labor practices

The technology companies in these countries are known to steal product ideas and technologies from other companies I don't think the companies in these countries offer good, reliable products and services 23 31 22 | 29 The technology companies in these countries do not have good environmental practices 35 | 26 | 12 | 28 17 | 23 The technology produced by companies in these countries isn't leading edge 15 21 17 27 None of the above

22 | 37

TECH COMPANIES' PERFORMANCE

Percent who say tech companies are doing each well each				Canada	China	France	Germar	India	Japan	Mexico	Saudi Arabia	S. Afric	S. Kore	UAE	ž	U.S.
BUSINESS AND PRODUCT PERFORMANCE (avg)	Global 88	G Austral	9 Brazil	52	70	53	52	68	31	74	66	67	46	69	50	49
Their technology is always up-to-date and innovative	66	62	75	64	72	62	61	74	41	82	68	74	53	76	62	60
Their products and services are reliable and do what they are supposed to do	61	61	70	58	70	54	61	69	32	77	66	71	50	68	56	54
The company is financially healthy	60	59	74	55	69	55	57	69	28	72	70	70	41	70	57	50
Their products and services are easy to use	56	52	67	52	71	52	45	68	28	71	64	65	44	69	48	46
Their customer service support is helpful, competent, and user-friendly	53	44	58	47	68	47	42	67	29	68	64	66	48	66	38	43
Their products and services are affordable and accessible to people like me	51	49	53	37	69	49	44	63	27	72	61	58	38	65	40	41
SOCIETAL IMPACT (avg)	43	32	52	31	65	32	30	59	23	59	59	49	37	59	28	31
Their products and service are not biased or discriminatory	50	42	60	41	67	42	37	65	24	67	65	58	40	65	39	41
The company addresses any potential negative societal or personal impacts they might have	43	30	52	31	64	31	33	55	23	63	55	50	40	56	28	32
The company pays its fair share of taxes	42	28	51	28	67	29	27	61	27	54	59	50	37	59	24	26
The company thinks and acts beyond its own business success	42	32	54	29	64	29	28	58	23	57	59	47	34	58	28	31
The company is doing what it should to reduce its impact on climate change	41	31	50	27	65	30	27	58	18	57	58	45	35	57	25	28
Their suppliers have fair labor practices and protect the environment	40	31	45	28	63	28	26	54	20	53	57	46	36	58	26	27
EMPLOYEES AND SUPPLIERS (avg)	47	41	53	38	70	40	37	65	23	60	61	48	41	66	33	37
Employees at all levels reflect the diversity of their communities	48	41	52	39	70	44	37	63	22	65	62	49	39	67	33	37
They treat their employees fairly and with respect	46	40	53	37	69	36	36	67	24	54	60	47	42	64	32	36
DATA SECURITY/PRIVACY (avg)	45	35	55	32	67	35	33	58	23	61	60	50	36	60	34	33
They use state-of-the-art technologies to ensure their data/software is safe from hackers	53	42	64	43	73	47	51	63	27	65	69	58	42	63	43	43
They clearly explain how they collect, store, and use my data	45	34	52	32	68	34	32	60	23	62	59	50	42	62	32	32
They give me adequate control over how they use my data	43	30	54	28	63	34	28	59	20	60	58	49	31	60	32	30
They give me adequate control over what data they collect about me	42	34	57	28	65	31	28	57	21	63	59	47	29	59	32	28
The company has adequately addressed past data breaches	41	34	50	31	65	31	26	53	22	56	56	45	35	55	29	32
CEOS (avg)	41	28	51	26	64	31	27	58	25	54	55	41	35	55	28	29
Their CEO is willing to speak out on important social and societal issues	43	29	54	28	66	31	28	62	25	59	55	46	37	58	29	29
Their CEO uses their influence to benefit society as a whole	38	26	47	24	62	31	25	53	25	49	54	36	32	52	26	29

2022 Ede Iman Trust Barometer Special Report: Trust in Technology. TEC_TRU_PER. How well do you feel technology companies, in general, are doing each of the following? 5-point scale; top 2 box, doing well. Question asked of half of the sample. General population, 15-mkt avg. "Business and product performance" is an average of attributes 4, 7, 8, 10, 14, and 15; "Workforce treatment and diversity" is an average of attributes 11 and 12; "Data security and privacy" is an average of attributes 5, 6, 16, 17, and 18; "Societal impact" is an average of attributes 3, 9, 13, 19, 20, and 21; "CEOs" is an average of attributes 1 and 2.



TECHNICAL APPENDIX

2022 EDELMAN TRUST BAROMETER SPECIAL REPORT: TRUST IN TECHNOLOGY – SAMPLE SAMPLE SIZE, QUOTAS AND MARGIN OF ERROR

Market	Weighed Sample Size ¹	Unweighted Sample Size	Quotas Set On ³	Margin of Error ²
Global 15	15,000	14,972	Quotas set at the market level	+/- 0.8 percentage points total sample
	· ·			+/- 1.1 percentage points half sample +/- 3.1 pct pts. total sample
Australia	1,000	1,000	Age, Gender, Region	+/- 4.4 pct pts. half sample
	4.000	4.000		+/- 3.1 pct pts. total sample
Brazil	1,000	1,000	Age, Gender, Region	+/- 4.4 pct pts. half sample
Canada	1,000	1,000	Ago Condor Rogion	+/- 3.1 pct pts. total sample
Canada	1,000	1,000	Age, Gender, Region	+/- 4.4 pct pts. half sample
China⁴	1,000	1,000	Age, Gender, Region	+/- 3.1 pct pts. total sample
	.,,,,,	.,000	rige, Geriaer, region	+/- 4.4 pct pts. half sample
France	1,000	1,000	Age, Gender, Region	+/- 3.1 pct pts. total sample
	,	,	rigo, condot, region	+/- 4.4 pct pts. half sample
Germany	1,000	1,000	Age, Gender, Region	+/- 3.1 pct pts. total sample
				+/- 4.4 pct pts. half sample +/- 3.1 pct pts. total sample
India	1,000	1,000	Age, Gender, Region	+/- 4.4 pct pts. half sample
				+/- 3.1 pct pts. total sample
Japan	1,000	1,000	Age, Gender, Region	+/- 4.4 pct pts. half sample
	4.000	4.000	4 0 1 5 :	+/- 3.1 pct pts. total sample
Mexico	1,000	1,000	Age, Gender, Region	+/- 4.4 pct pts. half sample
Saudi Arabia	1,000	972	Ara Candar Danian	+/- 3.1 pct pts. total sample
Saudi Arabia	1,000	912	Age, Gender, Region	+/- 4.5 pct pts. half sample
S. Africa	1,000	1,000	Age, Gender, Region	+/- 3.1 pct pts. total sample
3. Allica	1,000	1,000	Age, Gender, Region	+/- 4.4 pct pts. half sample
S. Korea	1,000	1,000	Age, Gender, Region	+/- 3.1 pct pts. total sample
5. No. 64	.,,,,,	1,000	/igo, Condor, region	+/- 4.4 pct pts. half sample
UAE	1,000	1,000	Age, Gender, Region	+/- 3.1 pct pts. total sample
		·	1 92, 221.001, 1109.011	+/- 4.4 pct pts. half sample
UK	1,000	1,000	Age, Gender, Region	+/- 3.1 pct pts. total sample
				+/- 4.4 pct pts. half sample
U.S.	1,000	1,000	Age, Gender, Region	+/- 3.1 pct pts. total sample
			1	+/- 4.4 pct pts. half sample

^{1.} Data reported on slides is weighted to the same total base size to ensure each market has an equal effect on the global total. Some questions were asked of only half of the sample. Please refer to the footnotes on each slide for details.

^{2.} Margin of error is calculated on the unweighted sample sizes collected.

^{3.} There were additional quotas on ethnicity in the UK and U.S., and on nationality in the UAE and Saudi Arabia.

^{4.} All data collected in China is from the mainland. Regions of Greater China were not surveyed.

2022 EDELMAN TRUST BAROMETER SPECIAL REPORT: TRUST IN TECHNOLOGY – SAMPLE DEFINITION OF DEVELOPED AND DEVELOPING COUNTRIES

Countries were classified as "developed" or "developing" based on the International Monetary Fund's <u>2022 World Economic Outlook</u>.

Developed	Developing
Australia	Brazil
Canada	China
France	India
Germany	Mexico
Japan	Saudi Arabia
S. Korea	S. Africa
UK	UAE
U.S.	

HOW WE CREATED TECH SECTOR DEFINITION SEGMENTS

To explore how respondents conceptualize the technology sector, we provided a list of 13 company types and allowed them to pick all that applied in response to this question:

TEC_CMP: When you were answering the previous questions about your trust in technology companies and businesses in the tech sector, which of the following types of companies were you thinking about?

The chart on the right shows each of the company-type choices respondents were given nested underneath their respective pre-defined groupings – social media, hardware/software, and digital apps and services.

For each respondent, we determined which of these three groupings were represented in their definition of a tech company. A respondent was considered to define the tech sector as including a particular grouping if they picked at least one company type within that grouping. Finally, we assigned respondents to mutually exclusive segments based on which combination of company types they selected. Below is a table showing the percentage of respondents that picked at least one company type within each of the groupings listed, but no companies outside those groupings. The data was then re-based to exclude respondents who selected "None of the above" (8%).

Segments	Percent
Social media only	2%
Hardware/software only	9%
Digital apps only	11%
Digital apps + social media	5%
Digital apps + hardware/software	35%
Hardware/software + social media	4%
All 3 groups	34%

TEC_CMP: Mapping of items onto tech company groupings

Social media

Social media companies

Hardware/software

Telecoms and connectivity services providers

Companies that sell computing devices, e.g., phones, PCs, tablets

Companies that offer digital services e.g., search engines, email, online storage

Companies that sell the software that you use on your personal computer or tablet

Companies that sell software to businesses, e.g., data analysis programs, cloud computing

Digital applications and services

Companies that offer online banking, investing, and other financial services

Entertainment services that offer streaming content like movies, videos, and music

Companies that offer devices and portals that help you track your health and fitness

Physical retailers that sell their goods both online and in stores

Digital retailers that sell their goods only online

Online delivery services for food, groceries, and other household items

Companies that create and develop video games

LIKELIHOOD TO TRUST THE TECH SECTOR AS A FUNCTION OF HOW IT IS DEFINED

To investigate the impact of how a respondent defines the technology sector on their tendency to trust the sector, we provided a list of 13 company types and allowed them to pick all that applied in response to this question:

TEC_CMP: When you were answering the previous questions about your trust in technology companies and businesses in the tech sector, which of the following types of companies were you thinking about?

The chart on the right shows each of the company-type choices respondents were given nested underneath their respective pre-defined groupings – social media, hardware/software, and digital apps and services. For each respondent, we determined which of these three groupings were represented in their definition of a tech company. A respondent was considered to define the tech sector as including a particular grouping if they picked at least one company type within that grouping.

How respondents defined technology was then incorporated into a discrete choice analysis to determine the impact of the presence of each tech grouping in a respondent's definition of tech on their overall tech sector trust. The table below shows the marginal effect on the likelihood to trust the tech sector associated with incorporating each of the three company groupings into one's definition of a technology company.

Audience	Significant drivers of tech sector trust	Increased likelihood of trust
	Digital apps and services	14.0%
Global 15	Hardware/software	10.4%
	Social media	-4.3%
	Hardware/software	12.5%
Developed markets	Apps	12.3%
markets	Social media	-9.8%
	Digital apps and services	7.6%
Developing markets	Hardware/software	6.6%
markets	Social media	0.7%*

TEC_CMP: Mapping of items onto tech company groupings
Social media
Social media companies
Hardware/software
Telecoms and connectivity services providers
Companies that sell computing devices, e.g., phones, PCs, tablets
Companies that offer digital services e.g., search engines, email, online storage
Companies that sell the software that you use on your personal computer or tablet
Companies that sell software to businesses, e.g., data analysis programs, cloud computing
Digital applications and services
Companies that offer online banking, investing, and other financial services
Entertainment services that offer streaming content like movies, videos, and music
Companies that offer devices and portals that help you track your health and fitness
Physical retailers that sell their goods both online and in stores
Digital retailers that sell their goods only online
Online delivery services for food, groceries, and other household items

Companies that create and develop video games

HOW WE DETERMINED THE IMPACT OF TRUST-ORIENTED PERCEPTIONS OF TECH COMPANIES ON THE LIKELIHOOD TO ACCEPT AUTONOMOUS TECHNOLOGIES

In order to analyze the impact of trust-relevant tech industry perceptions on the acceptance of autonomous technologies, we first measured respondents' perceptions of tech companies' along seven dimensions using the following two questions.

Respondents were asked:

In thinking about why you do or do not trust technology companies, please specify where you think they fall on the scale between the two opposing descriptions. (Please use the slider to indicate where you think technology companies fall between the two extreme end points of each scale.)

Respondents were asked:

To what extent do you agree with the following statements in regard to technology companies?

TEC_PER_DIM attributes Asked on an 11-point semantic differential scale									
NEGATIVE PERCEPTION POSITIVE PERCEPTION (top 5 box)									
Do not have a vision for the future that I believe in	Have a vision for the future that I believe in								
Completely ineffective agents of positive change	Highly effective agents of positive change								
Serve the interests of only certain groups of people	Serve the interests of everyone equally and fairly								

TRU_3D_TEC attributes Asked on a 7-point likert scale		
NEGATIVE PERCEPTION (bottom 3 box, disagree) POSITIVE PERCEPTION (top 3 box, agree)		
Technology companies in general are good at what they do		
Technology companies in general are aligned with my personal values and beliefs		
Technology companies in general are led by people who genuinely care about the welfare of people and society		
Technology companies in general are honest		

HOW WE DETERMINED THE IMPACT OF TRUST-ORIENTED PERCEPTIONS OF TECH COMPANIES ON THE LIKELIHOOD TO ACCEPT AUTONOMOUS TECHNOLOGIES, CONT. (2 OF 3)

Next, we measured respondents' general acceptance of, or comfort with, autonomous technologies.

Acceptance of autonomous technologies was defined as having an average score below 2 based on the 5-point scale displayed below across all 16 items in the question displayed to the right.

Respondents were asked:

Here is a list of ways automation and Al-based technology can be used in products and services and by businesses and government institutions. For each, please select the statement that best describes your feelings about this use of technology.

DAT CRP scale text

- 1. This does not bother me at all
- 2. This makes me a little uncomfortable
- 3. This makes me moderately uncomfortable
- 4. This makes me very uncomfortable
- 5. I consider this to be totally unacceptable
- 99. Don't know

DAT CRP attribute text

Mobile devices sending you reminders or recommendations of places you need to go or products you need to buy based on your current location

An appliance automatically purchasing a household item for you when it determines that you are close to running out based on the last time you purchased that item or your level of usage

A personal monitoring device alerting you when you need to tend to your health (e.g., take medication, stand up, or do something to reduce your stress or anxiety) based on its reading of your biometric data

Your GPS system suggesting a route for you to take based on accessing the appointments in your online calendar

A digital personal assistant suggesting products, brands, or services to you based on what it has passively overheard you talking about

Investment companies using bots (automated programs or applications) to suggest which mutual funds and other investments are right for you

Healthcare companies using bots (automated programs or applications) to screen your symptoms and suggest treatment options, including whether or not you should see a doctor

A mobile device determining which ads you are exposed to based on your social media posts, online activity, or purchase history

A home security system determining whether or not to unlock your front door for someone based on their facial features, voice, or other biometric characteristics

Financial services bots (i.e., automated programs or applications) managing your money for you by doing things such as automatically rebalancing your retirement portfolio, paying your bills, and moving money into your savings account

Medical organizations using Al and automated technology to diagnose patients and suggest treatments

Organizations using Al and automated technology to make hiring decisions

Financial institutions using Al and automated technology to determine if you are creditworthy

Governments using Al and automated technology to make social policy decisions such as where to build schools, how to allocate tax dollars, and determining how much public housing needs to be built

Governments using Al and automated technology instead of people to deliver information and basic services to people

Governments using Al and automated technology to manage and monitor elections

HOW WE DETERMINED THE IMPACT OF TRUST-ORIENTED PERCEPTIONS OF TECH COMPANIES ON THE LIKELIHOOD TO ACCEPT AUTONOMOUS TECHNOLOGIES, CONT. (3 OF 3)

As the final step in the analysis, we performed a discrete choice analysis to determine which behaviors, if displayed or done well, would provide the greatest boost to being accepting of autonomous technologies.

The marginal effects on the likelihood to accept autonomous technologies associated with the technology sector displaying, or performing well on, the indicated behavior are displayed in the chart to the right.

Full list of acceptance drivers	Increased likelihood to accept
Have a vision for the future that I believe in (TEC_PER_DIM)	12.5%
Good at what they do (TRU_3D_TEC)	7.1%
Highly effective agents of positive change (TEC_PER_DIM)	5.6%
Serve the interests of everyone equally and fairly (TEC_PER_DIM)	4.2%
Aligned with my personal values and beliefs (TRU_3D_TEC)	2.4%
Led by people who genuinely care about the welfare of people and society (TRU_3D_TEC)	2.2%
Are honest (TRU_3D_TEC)	0.2%*

*Non-significant effect.

HOW WE PLOTTED THE COMPETENCE AND ETHICS SCORES

The competence score (the x-axis of the plot): The competence score is a net of the top 3 box (AGREE) minus the bottom 3 box (DISAGREE) responses to the question "To what extent do you agree with the following statement in regard to technology companies? *Technology companies in general are good at what they do*". The resulting net score was then subtracted by 50 so that the dividing line between more competent and less competent scores crossed the y-axis at zero.

The net ethical score (the y-axis of the plot): The ethics dimension is defined by four separate items. For each item, a net score was calculated by taking the top 5 box percentage representing a positive ethical perception minus the bottom 5 box percentage representing a negative ethical perception. The y-axis value is an average across those 4 net scores. Scores higher than zero indicate technology companies in general are perceived as ethical.

Respondents were asked:

In thinking about why you do or do not trust technology companies, please specify where you think they fall on the scale between the two opposing descriptions. (Please use the slider to indicate where you think technology companies fall between the two extreme end points of each scale.)



DIMENSION	ETHICAL PERCEPTION	UNETHICAL PERCEPTION
Purpose-Driven	Highly effective agents of positive change	Completely ineffective agents of positive change
Honest	Honest and fair	Corrupt and biased
Vision	Have a vision for the future that I believe in	Do not have a vision for the future that I believe in
Fairness	Serve the interests of everyone equally and fairly	Serve the interests of only certain groups of people

FULL TEXT FOR ANSWER CHOICES ABBREVIATED: SOCIETAL FEARS

POP_EMO. Some people say they worry about many things while others say they have few concerns. We are interested in what you worry about. Specifically, how much do you worry about each of the following? Please indicate your answer using a nine-point scale where one means "I do not worry about this at all" and nine means "I am extremely worried about this".

Shortened	Full	
I worry about my data privacy	Your online behavior being tracked by companies without your knowledge or consent Companies or individuals collecting data and other information about you from the data cloud and using it to exploit or hurt you in some way Organizations examining your online behavior and even seeing who your friends are and using that information to deny you a job, insurance, or credit opportunities	
I worry about cybersecurity	Hackers, cyber-attacks, cyber-terrorism Technology companies headquartered in other countries compromising the national security of your country Technology companies headquartered in your country providing military or defensive products and services to other countries	

FULL TEXT FOR ANSWER CHOICES ABBREVIATED: REGULATING ONLINE CONTENT

WHO_REG_SM. To what extent would you trust each of the following to review and police online content? Please indicate your answer using a 9-point scale where one means "I would not trust them at all" and nine means "I would trust them a great deal".

Shortened	Full
I do not trust platforms to regulate their online content	Teams of people hired by individual content platforms Algorithms or Al created and managed by individual content platforms

FULL TEXT FOR ANSWER CHOICES ABBREVIATED: TECHNOLOGY SOLVING SOCIETAL PROBLEMS

TEC_BST. Which of the following best describes the impact you believe that technological innovation will have in solving each of the following problems or challenges?

Shortened	Full	
Access to healthcare	Increasing access to high-quality healthcare and improving health outcomes	
Economic competitiveness	Increasing our country's economic competitiveness	
Availability of good-paying jobs	Increasing the availability of good-paying jobs	
Quality of information	Increasing the quality and trustworthiness of information available on important issues	
Mitigate consequences of climate change	Helping us avoid or mitigate the worst potential consequences of climate change	
Food scarcity	Reducing food scarcity and famine	
Impact of economic slowdowns	Easing the impact of economic slowdowns or recessions on people like me	
Prejudice and discrimination	Ending prejudice and discrimination	

FULL TEXT FOR ANSWER CHOICES ABBREVIATED: TECH COMPANIES' PERFORMANCE

TEC_TRU_PER. How well do you feel technology companies, in general, are doing each of the following?

Shortened	Full	
Their technology is always up-to-date and innovative	Their technology is always up-to-date and innovative	
Their products and services are reliable and do what they are supposed to do	The products and services they produce are reliable and do what they are supposed to do	
The company is financially healthy	The company is financially healthy, making a profit and delivering good financial returns to its investors/owners	
Their products and services are easy to use	Their products and services are easy to set up and use, even for people who are not tech experts	
Their customer service support is helpful, competent, and user-friendly	The company's customer service support is helpful, competent, and user-friendly	
Their products and services are affordable and accessible to people like me	Their products and services are affordable and accessible to people like me	
Their products and service are not biased or discriminatory	Their products and service are not biased or discriminatory against certain groups of people	
The company addresses any potential negative societal or personal impacts they might have	The company acknowledges and addresses any potential negative societal or personal impacts their technology might have	
The company pays its fair share of taxes	The company pays its fair share of taxes	
The company thinks and acts beyond its own business success	The company thinks and acts beyond its own business success and is actively engaged in addressing social and societal problems	

FULL TEXT FOR ANSWER CHOICES ABBREVIATED: TECH COMPANIES' PERFORMANCE, CONT.

TEC_TRU_PER. How well do you feel technology companies, in general, are doing each of the following?

Shortened	Full	
The company is doing what it should to reduce its impact on climate change	The company is doing what I believe it should to reduce the impact of its products, manufacturing processes, and business operations on climate change	
Their suppliers have fair labor practices and protect the environment	Their suppliers (the companies they use in manufacturing their products or to deliver their customer service) engage in fair labor practices and work to protect the environment	
Employees at all levels reflect the diversity of their communities	Their employees, at all levels within the organization, reflect the diversity of the communities in which they operate	
They treat their employees fairly and with respect	They treat their employees fairly and with respect	
They use state-of-the-art technologies to ensure their data/software is safe from hackers	The company employs state-of-the-art technologies to ensure that its data and software is safe from hackers	
They clearly explain how they collect, store, and use my data	They explain in concise, clear, and understandable language how they collect, store, and use my data	
They give me adequate control over what data they collect about me	They give me adequate control over what data the company is and is not able to collect about me	
They give me adequate control over how they use my data	They give me adequate control over how my data is used once it is collected by the company	
The company has adequately addressed past data breaches	The company has adequately addressed past data breaches by being transparent in their communications, quickly fixing the exposed weakness in their security, and offering help or compensation to those affected	
Their CEO is willing to speak out on important social and societal issues	Their CEO is willing to speak out on important social and societal issues	
Their CEO uses their influence to benefit society as a whole	Their CEO uses their wealth, power, and influence to benefit society as a whole and not just to enhance their self-image or to indulge their personal fantasies	

FULL TEXT FOR ANSWER CHOICES ABBREVIATED: EARNING TRUST IN NEW TECHNOLOGIES

TEC_ERN_TRU. What, if anything, can technology companies do to increase your trust in their new technologies and innovations?

Shortened	Full
Communicate their benefits	Clearly and fully communicate their benefits
Communicate their downsides	Clearly and fully communicate their potential dangers or downsides
Disclose the results of real-world tests	Test their new technologies in real-world circumstances and make the results public for anyone who wants to review them
Develop a code of ethics for their use	Develop a strict code of ethics to govern their development and use
Educate the public	Offer educational programs and informational resources to educate the public about them
Have independent experts test them	Make their new technologies available for independent experts to test and review
Reskill displaced workers	Retrain people whose jobs are affected by the new technologies they produce

FULL TEXT FOR ANSWER CHOICES ABBREVIATED:

HOW TO MAKE USERS COMFORTABLE WITH SHARING THEIR DATA

TEC_ERN_TRU. How important is it that a company does the following in order for you to feel comfortable sharing your data with them? Please indicate your answer using a 9-point scale where one means "not at all important" and nine means "extremely important".

Shortened	Full	
Provide actions I can take to keep my data safe	They provide me with steps and actions I can take on my own to ensure that my data is safe	
Give me control over collection/use of my data	They give me as much control as I want over what data the company is and is not able to collect about me They give me as much control as I want over how my data is used once it is collected by the company	
Be transparent about how they collect my data	They give me a clear, concise (no more than half a page), and easy to understand explanation of how they collect and store my data	
Guarantee my data will not be shared with the government	They guarantee that the user data they collect will not be accessed by, or shared with, any government or other legal authorities	
Store user data only in countries with strict data protection laws	The user data they collect is stored only in countries with strict data protection laws	
Adequately address any data breaches	They have adequately addressed past data breaches by being transparent in their communications, quickly fixing the exposed weakness in their security, and offering help or compensation to those affected	

FULL TEXT FOR ANSWER CHOICES ABBREVIATED: CREDIBLE SPOKESPEOPLE

TEC_SPL. How credible do you feel each of the following are when it comes to telling you the truth about technology products, new technologies, and tech product innovations?

Shortened	Full
Friends and family	Your friends and family
Workplace IT support	The IT support people at your workplace
Technology industry experts	Technology industry experts
Experts at technology companies	Product creators and technical experts at technology companies
Technology company employees	Technology company employees
Consumers who leave reviews on websites	Consumers who leave reviews on websites

COVER IMAGE CREDITS

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On Th	e Cover		7
	1	2	3
	8		4
	7	6	5

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MORE EXPANSIVE DEFINITION

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POLITICIZATION OF TECH

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SPLIT GEOGRAPHIES

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LACK OF SOCIETAL LEADERSHIP

Solar panels and wind turbines: P. Steeger via Getty Images