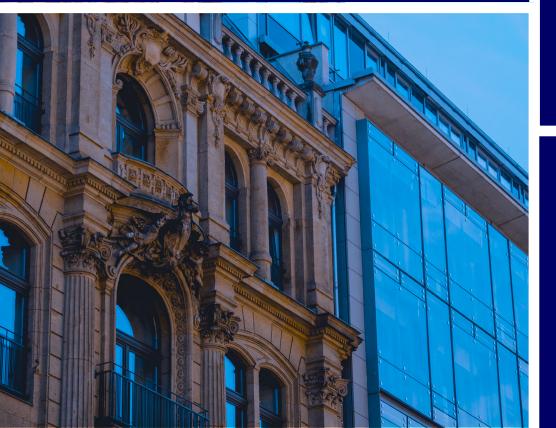


CENTER FOR THE GOVERNANCE OF CHANGE





INTRODUCTION

In the fast-paced digital era, the act of accepting Terms and Conditions has become nearly automatic. While this action may seem like the granting of simple individual consent, it in fact calls for deeper societal discussion.

The granting of access to our data is more a more consequential and this needs to be understood. More broadly, it is necessary to examine and understand the implications technology poses in terms of agency, privacy, and security for the collective future of European citizens.

European society is at a point where the integration of key principles like privacy, accountability, transparency, or equity into our digital interactions is not just necessary but urgent. True to its commitment to reduce digital gaps and encourage innovation, IE University stands for a wellrounded approach to technology integration, as stated in our AI Manifesto. Creating a strong and flexible digital governance that aligns with the societal values we hold is vital.

The annual European Tech Insights survey brings this conversation to the public, acting as a guide on the complex relationship between society and emerging technologies. This year's key areas include Generative AI, Data Economy, Biotechnology, and European values, introducing a conversation that is necessary in guiding our common futures.

In the year of the introduction of OpenAl's Chat GPT and other groundbreaking generative AI products, a notable shift has occurred in businesses, labs, classrooms, or public institutions. Society is actively testing the potential benefits of using automation, while also acknowledging the concerns associated with its integration in other processes.

Europeans express a tangible sense of hope, particularly regarding the healthcare applications of technology, where scientists are using biotech advancements to save lives. However, this enthusiasm is nuanced by concerns over the negative economic and social externalities of the data economy and the fast adoption of AI in the workplace

and beyond. The focus on security and accountability by a significant part of the European population also indicates a prevailing sense of caution.

As we approach a new era characterized by increasing synergies between society and technology, it is vital for public and private institutions to embrace innovation and responsibility at the same time. If we are able to foster conversations that bring together different perspectives and to promote an active involvement with technology, we will be effectively equipping ourselves to tackle and influence the complex challenges that the next 50 years are set to bring.

Diego del Alcázar Benjumea CEO of IE University, *Chair of the IE Center for the Governance of Change*

Manuel Muñiz Provost of IE University, *Chair of the IE Center for the Governance of Change*



KEY HIGHLIGHTS









EUROPEANS LOOK TO THE EU FOR TECH GOVERNANCE LEADERSHIP

88% of Europeans hope that the European Union will play an active role in guiding the course of technological innovation, and trust more the EU than in their own governments to regulate Artificial Intelligence.

2

FEAR OF NEGATIVE EXTERNALITIES OF DATA AND ARTIFICIAL INTELLIGENCE

78% of Europeans think the data economy will exacerbate economic inequalities and that the elderly and low-income individuals are at risk of facing discrimination by the adoption of Artificial Intelligence algorithms.

3

SAFETY AND COMFORT AT THE COST OF PRIVACY

Around 60% of the population is willing to give away their privacy rights to counter global threats, and up to a third of Europeans would use apps that pose a risk for their privacy, disregarding advice against their usage.

4

UNCERTAINTY OVER GENERATIVE AI CONTENT

Most citizens express a lack of confidence in discerning between Al-generated content and authentic content, and **72% believe that artwork** created by Al should not be classified as "art".

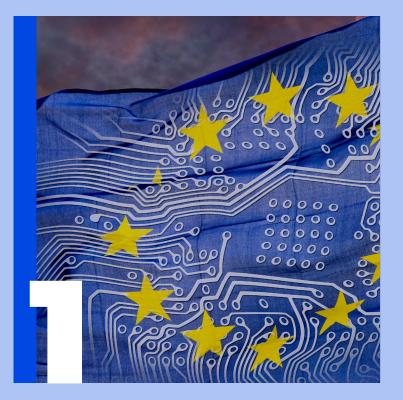


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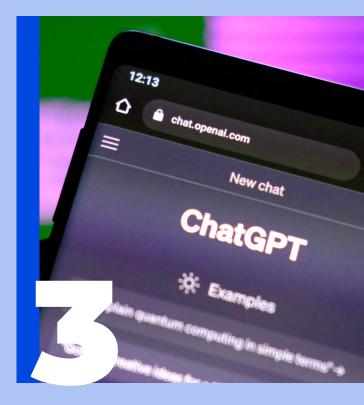
EUROPEANS EMBRACE BIOTECH ADVANCEMENTS

More than a third of Europeans are open to getting a brain implant to augment their cognitive faculties and **58%** of citizens believe CRISPR will bring positive outcomes, welcoming the era of genomic advancements.

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QUESTION: What role should the European Union play in technological development?

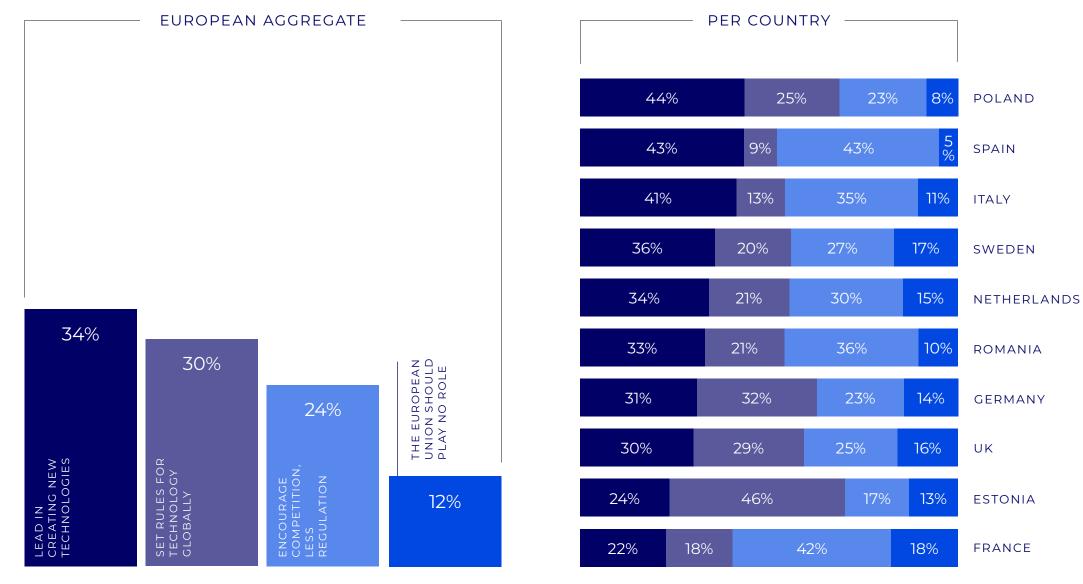
LEAD IN CREATING NEW TECHNOLOGIES

ENCOURAGE COMPETITION, LESS REGULATION

THE EUROPEAN UNION SHOULD PLAY NO ROLE

 An overwhelming majority of Europeans, amounting to 88%, believe that the EU should have an active role in the domain of technological development, with over one-third (34%) thinking that the EU should lead in the creation of new technologies.

 Spain stands out as the country with the highest percentage of respondents holding this sentiment, with only
5% stating that the EU should abstain from influencing technological advancements.



Source: European Tech Insights 2023. Center for the Governance of Change, IE University. Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

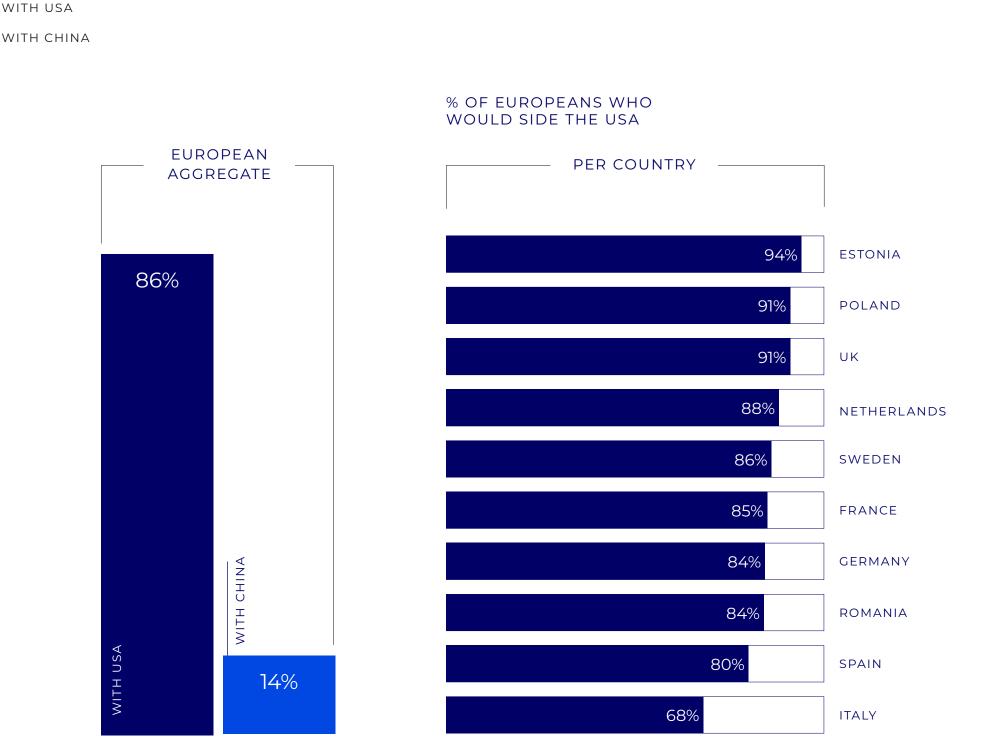




QUESTION: There is increasing confrontation between the US and China, who are competing for economic and technological dominance. Who would you prefer the EU to side with?

• The great majority of Europeans (86%) express a preference for aligning with the US in the midst of growing economic and technological competition, with particularly strong sentiments in Estonia (94%), the UK (91%), and Poland (91%).

• Support for siding with China is notably present in Italy, where onethird (32%) of respondents harbor this preference.



Source: European Tech Insights 2023. Center for the Governance of Change, IE University. Source: European Tech Insights 2023. Center for the Governance of Change, IE University.



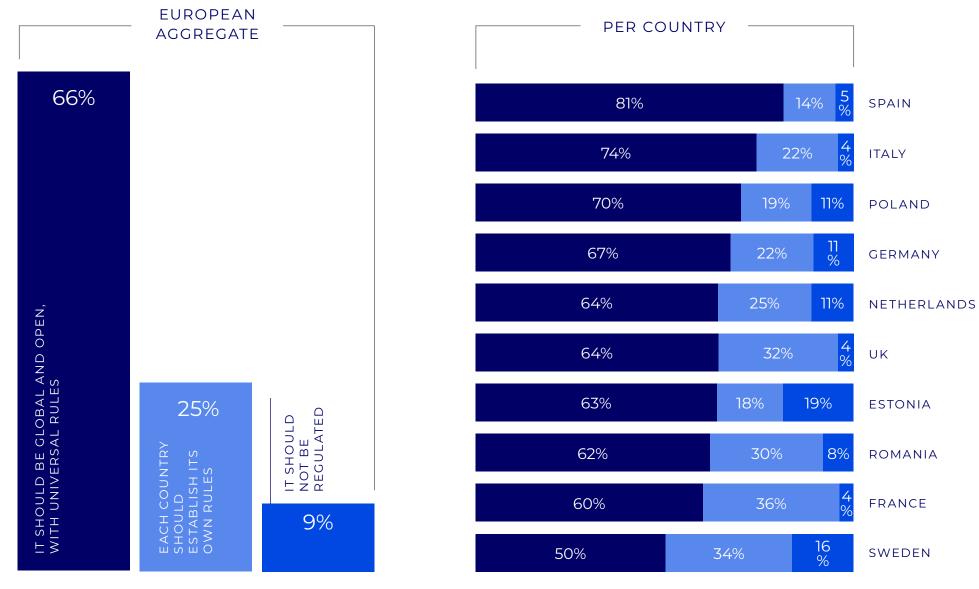


IT SHOULD BE GLOBAL AND OPEN, WITH UNIVERSAL RULES

EACH COUNTRY SHOULD ESTABLISH ITS OWN RULES



- A significant majority of Europeans (66%) advocate for global internet regulation, a stance particularly prominent in Spain, where 81% support this position.
- Estonia and Sweden stand as the foremost anti-regulation nations, with only 19% and 16% supporting it, respectively.
- Only a quarter of Europeans (25%) hold the view that internet governance should be a national affair, except in France where up to 36% endorse this perspective.



Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

QUESTION: How do you think the internet should be regulated?

7

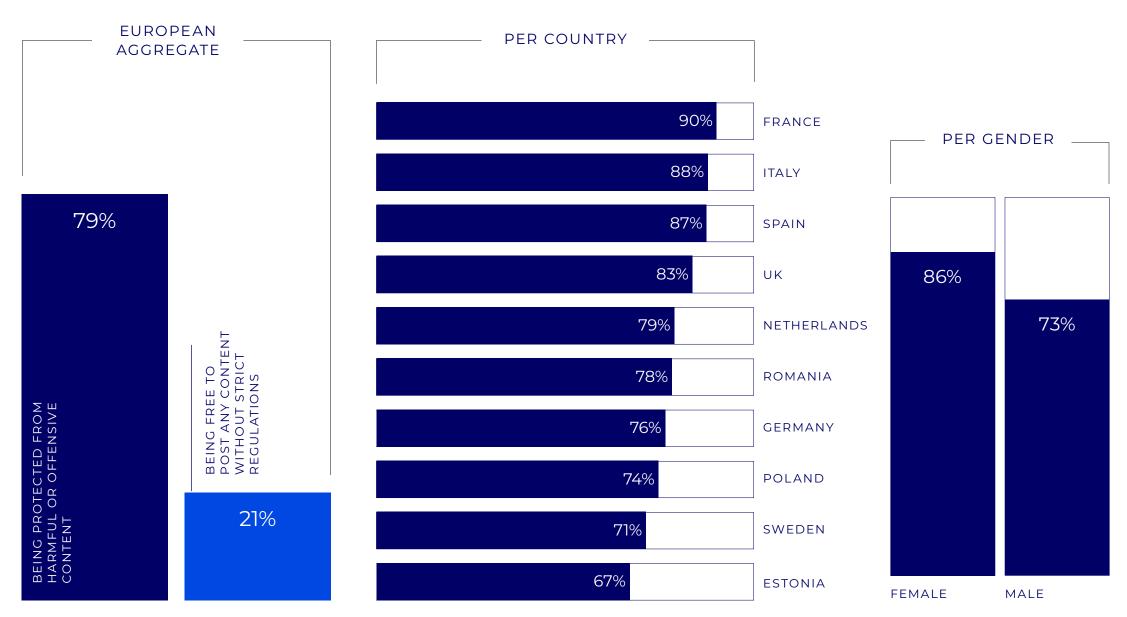


QUESTION: When it comes to internet content, what do you think is more important?

BEING PROTECTED FROM HARMFUL OR OFFENSIVE CONTENT

BEING FREE TO POST ANY CONTENT WITHOUT STRICT REGULATIONS

- Europeans prioritize being protected from harmful content on the internet (79%) over the freedom to post anything online (21%).
- This position is notably more prevalent among women (86%) than among men (73%).
- Despite a broader preference for online safety, Estonia (33%) and Sweden (29%) stand out as the countries with higher support for posting freedom.



Source: European Tech Insights 2023. Center for the Governance of Change, IE University. Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

% OF EUROPEANS FAVORING PROTECTION FROM HARMFUL OR OFFENSIVE CONTENT

Source: European Tech Insights 2023. Center for the Governance of Change IE University.



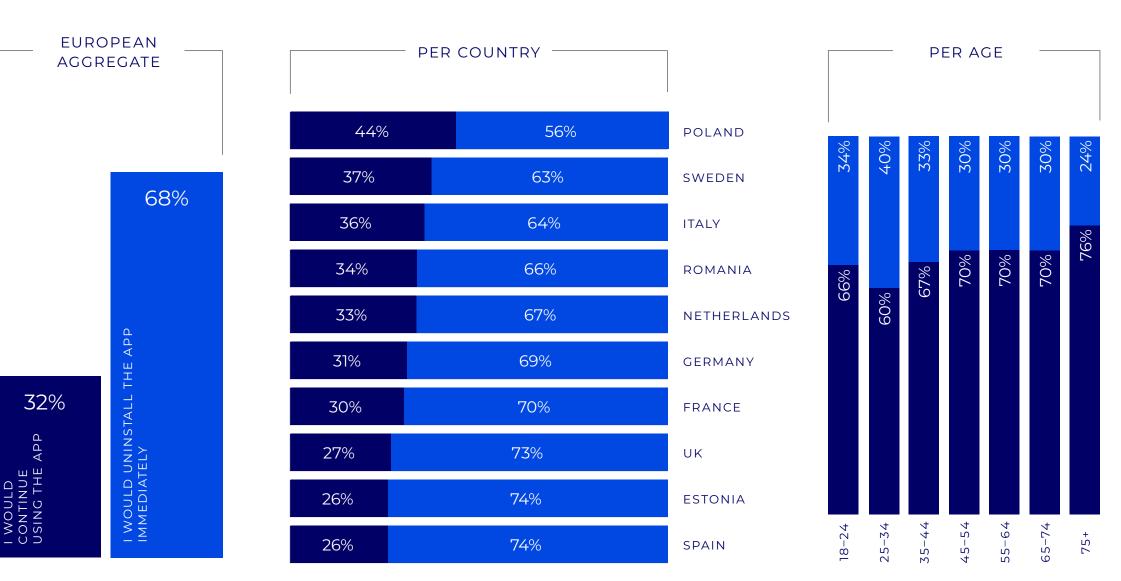


QUESTION: The European Union has asked its employees to delete the social media app TikTok from their work-phones, to avoid potential spying. How would you react if the EU advised to uninstall one of the apps you use on your phone due to privacy concerns?

WOULD CONTINUE USING THE APP

WOULD UNINSTALL THE APP IMMEDIATELY

- Nearly a third of Europeans (32%) are willing to continue using apps that may pose a risk for their privacy, even if the EU advises against using them.
- Poland (44%), Sweden (37%) and Italy (36%) are the countries where its citizens are the least concerned.
- The prioritization of privacy tends to increase with advancing age, as 76% of those above 75 years old would uninstall the app.



Source: European Tech Insights 2023. Center for the Governance of Change, IE University. Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

Source: European Tech Insights 2023. Center for the Governance of Change, IE University.



• A vast majority (74%) of Europeans hold the creators and users of AI algorithms responsible if harm or problems occur, dividing the blame between the creator (44%) and the users (31%).

Around one third of respondents from Italy (33%) and France (27%) believe that the Government should held responsible in such cases.

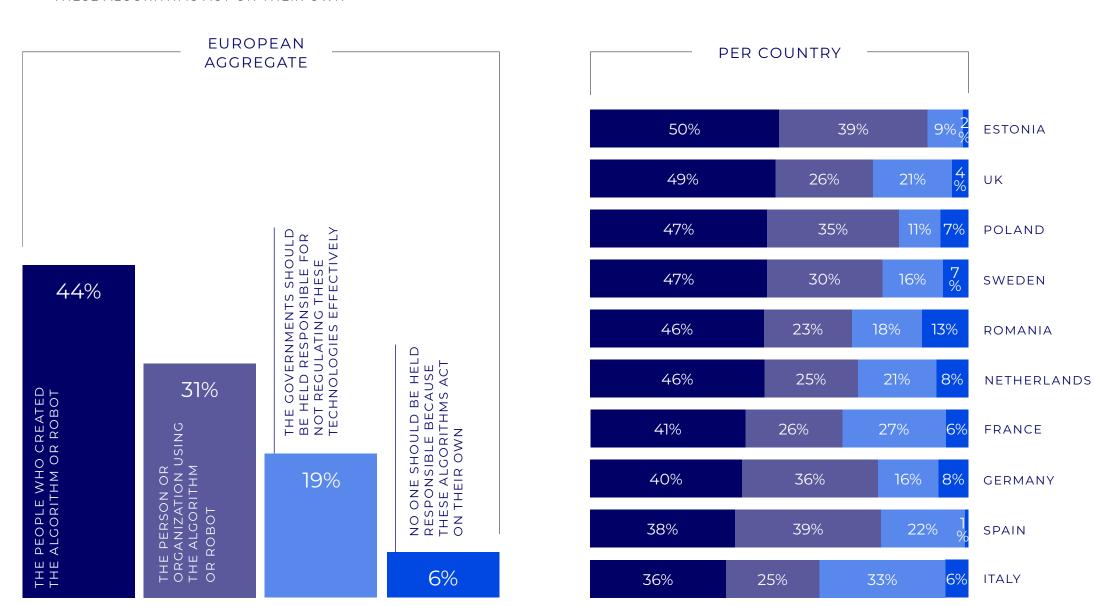
QUESTION: Who should be held responsible if an AI algorithm or a robot causes harm or problems?

THE PEOPLE WHO CREATED THE ALGORITHM OR ROBOT

THE PERSON OR ORGANIZATION USING THE ALGORITHM OR ROBOT

THE GOVERNMENTS SHOULD BE HELD RESPONSIBLE FOR NOT REGULATING THESE TECHNOLOGIES EFFECTIVELY

NO ONE SHOULD BE HELD RESPONSIBLE BECAUSE THESE ALGORITHMS ACT ON THEIR OWN



Source: European Tech Insights 2023 Center for the Governance of Change, IE University. Source: European Tech Insights 2023.

5 2023 EUROPE



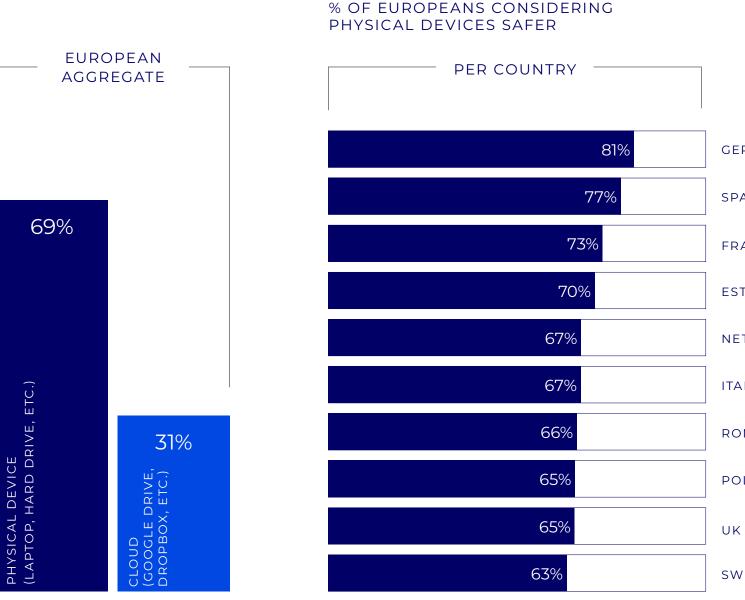


QUESTION: When it comes to storing personal files such as documents or photos, where do you consider to be the most secure?

PHYSICAL DEVICE (LAPTOP, HARD DRIVE, ETC.)

CLOUD (GOOGLE DRIVE, DROPBOX, ETC)

- The majority of Europeans (69%) favor storing their personal data on physical devices over storing them on the cloud.
- The countries with the highest trust on the cloud are Sweden (37%), UK (35%) and Poland (35%).
- Germany is the country with lowest trust on the cloud, with less than onefifth of individuals (19%) trusting the digital space to store personal files.



Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

GERMANY

SPAIN

FRANCE

ESTONIA

NETHERLANDS

ITALY

ROMANIA

POLAND

SWEDEN



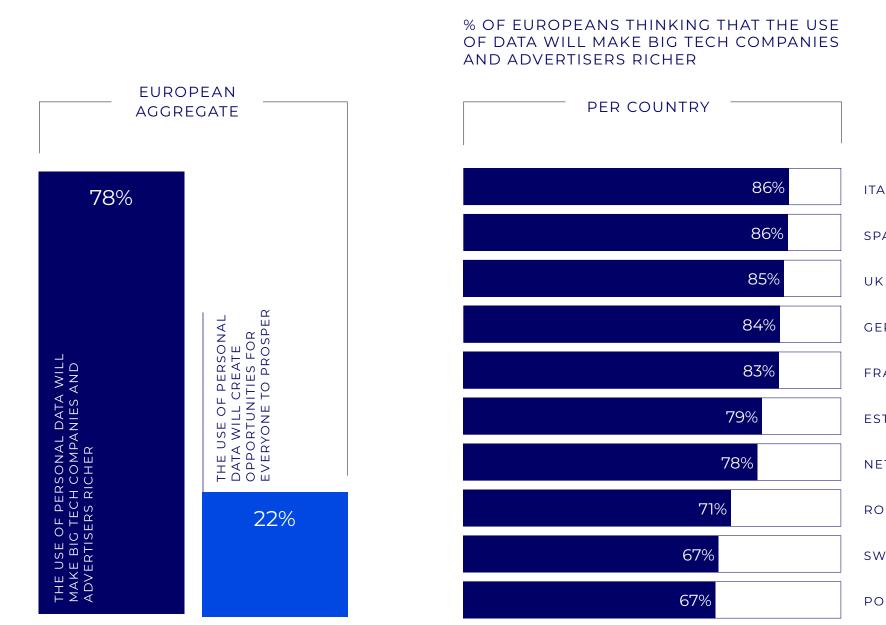


QUESTION: How do you think the use of data will affect the distribution of wealth in the digital economy?

THE USE OF PERSONAL DATA WILL MAKE BIG TECH COMPANIES AND ADVERTISERS RICHER

THE USE OF PERSONAL DATA WILL CREATE OPPORTUNITIES FOR **EVERYONE TO PROSPER**

- A considerable majority of Europeans (78%) believe that the digital economy will exacerbate economic inequality, with a mere 22% viewing it as a potential equal ground of opportunities for universal prosperity.
- 86% of Italians and Spaniards and 85% of Britons believe the use of personal data will mainly make big tech companies and advertisers richer to store personal files.





ITALY

SPAIN

GERMANY

FRANCE

ESTONIA

NETHERLANDS

ROMANIA

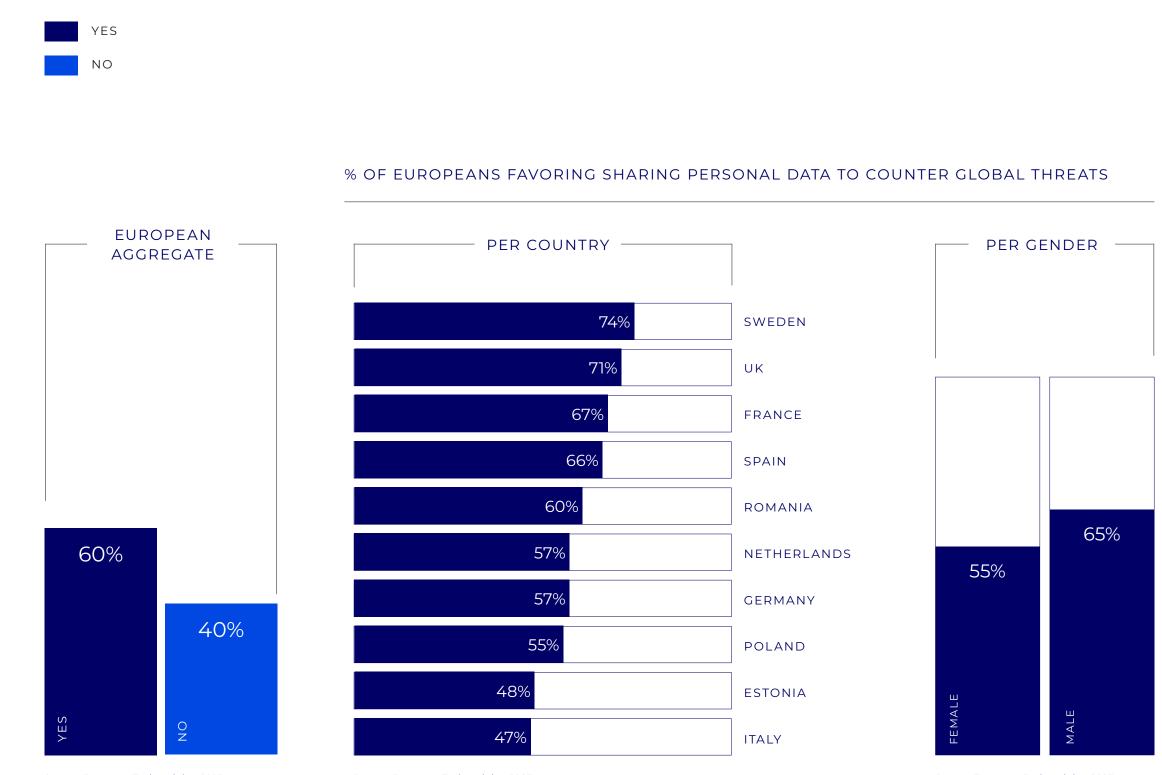
SWEDEN

POLAND





QUESTION: Should European countries and tech companies share personal data to combat global threats (like terrorism, cyber-attacks), even if it infringes on individual privacy rights?



- A majority of Europeans (60%) are willing to give away their privacy rights by sharing their data with companies and governments to combat global threats.
- Italy (53%) and Estonia (52%) are the only countries where a slight majority of their citizens refuse to share personal data to combat global threats.
- A discernible gender gap is present, as a higher percentage of men (65%) are willing to share personal data, compared to 55% of women.

Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

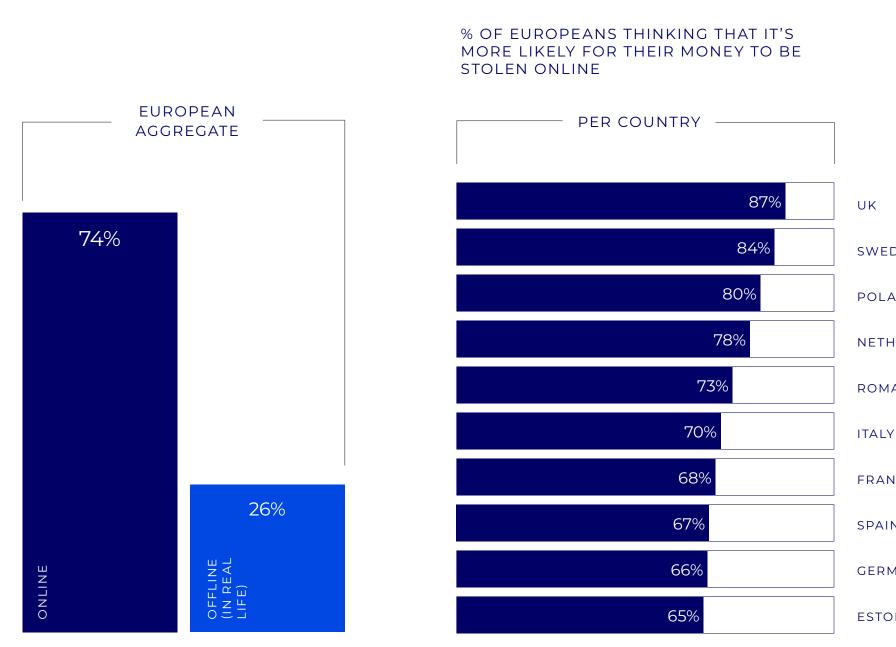




QUESTION: Where do you think it is more likely that your money could be stolen: online (hacking, fraud, etc.) or offline (pickpocketing, burglary, etc.)?

ONLINE OFFLINE (IN REAL LIFE)

- An ample majority (74%) of Europeans believe that it is easier for their money to be stolen online rather than offline.
- The UK stands out as the country where a higher percentage of people (87%) believe it is easier to be hacked or experience online fraud than to have their money stolen offline.



Source: European Tech Insights 2023. Center for the Governance of Change, IE University. Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

UK

SWEDEN

POLAND

NETHERLANDS

ROMANIA

FRANCE

SPAIN

GERMANY

ESTONIA

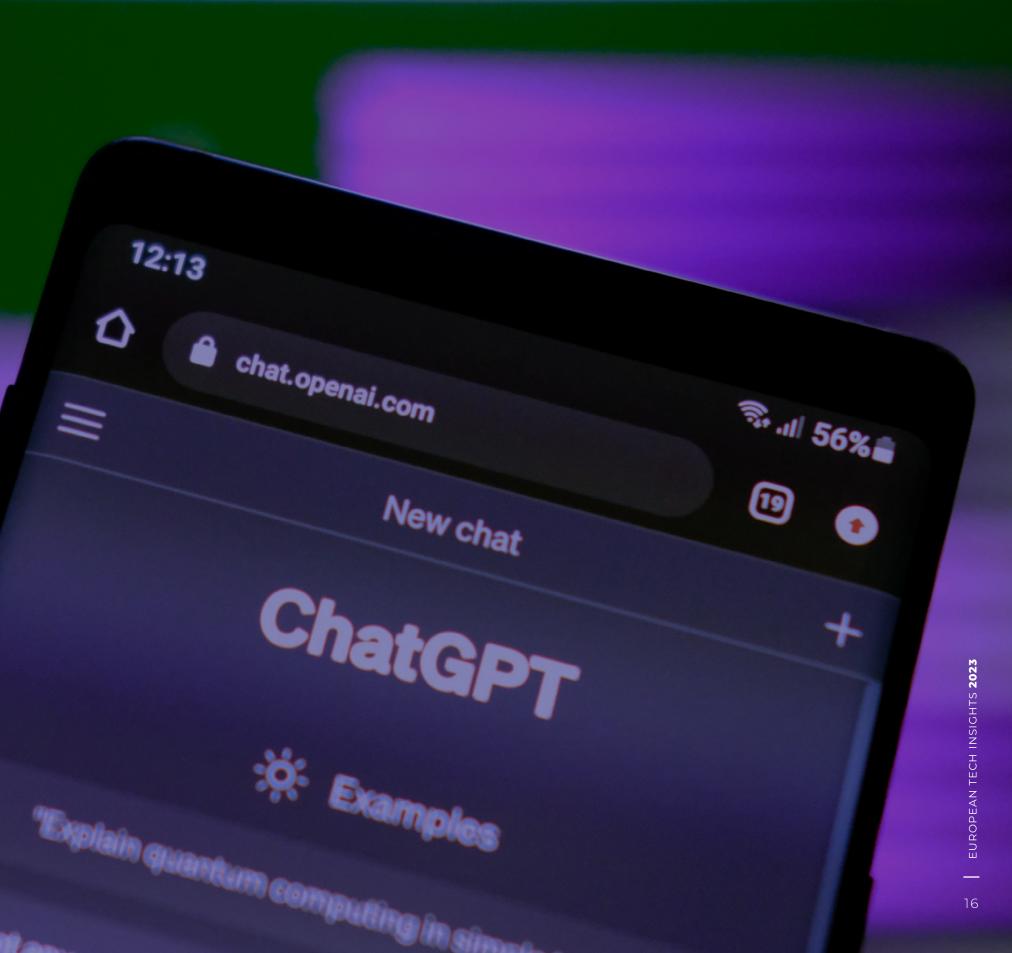
chat.openai.com

12:13

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11

ChatGPT







• 44% of Europeans trust the **European Union more than** their own countries to regulate Artificial Intelligence, a view strongly held in Spain with 64% agreement.

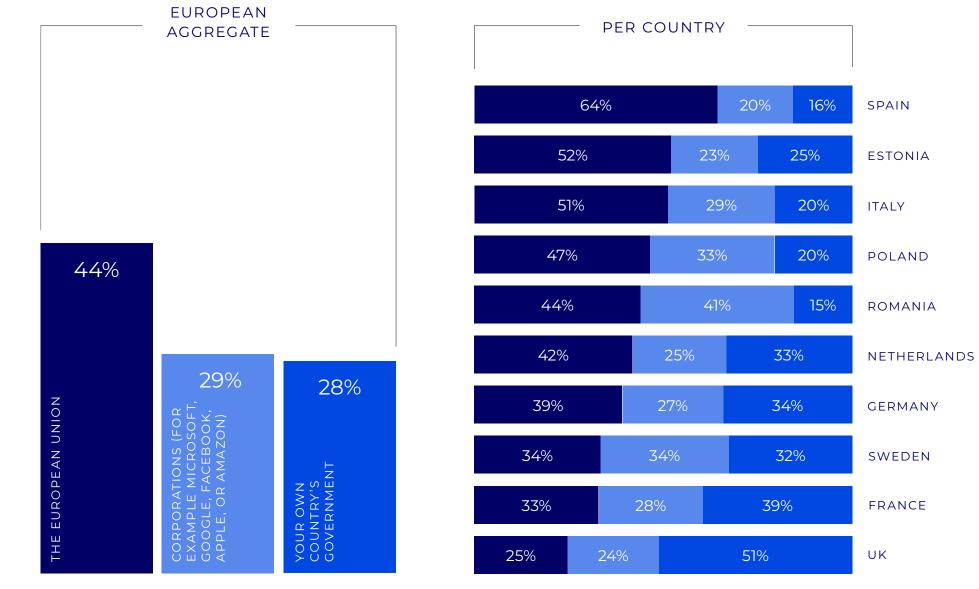
The United Kingdom is the only country where a majority (51%) trust more their government than the EU to regulate AI. Still, a notable 25% of Britons would prefer EU oversight.

QUESTION: Who do you trust most to regulate Artificial Intelligence?

THE EUROPEAN UNION

CORPORATIONS (FOR EXAMPLE MICROSOFT, GOOGLE, FACEBOOK, APPLE, OR AMAZON)

YOUR OWN COUNTRY'S GOVERNMENT



Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

Source: European Tech Insights 2023. Center for the Governance of Change, IE University.





- European citizens believe that fostering transparency and accountability should be at the forefront of AI regulation.
- However, French (49%), German (40%), and Dutch (40%) citizens think that prioritizing privacy should be the primary goal of AI regulation.
- Protecting human rights is also viewed as a vital focus of AI regulation by one-third of respondents, especially in Romania (34%), Spain (33%), and Italy (32%).

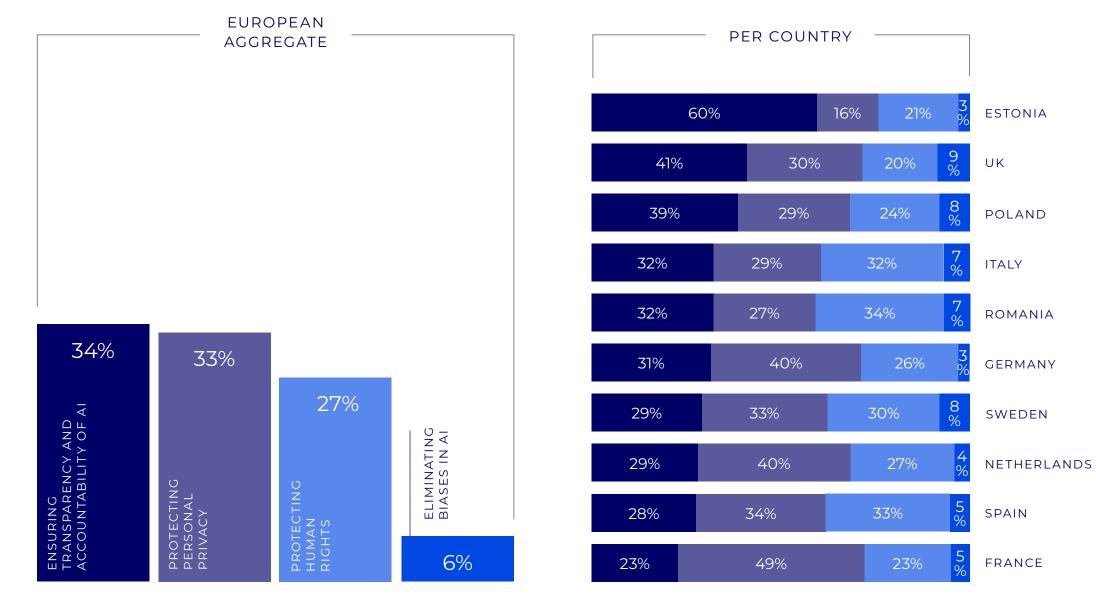
QUESTION: In your opinion, what should be the main goal of AI regulation?

ENSURING TRANSPARENCY AND ACCOUNTABILITY OF AI

PROTECTING PERSONAL PRIVACY

PROTECTING HUMAN RIGHTS





Source: European Tech Insights 2023. Center for the Governance of Change, IE University. Source: European Tech Insights 2023.

EUROPEAN TECH INSIGHTS 2023

Center for the Governance of Change, IE University.

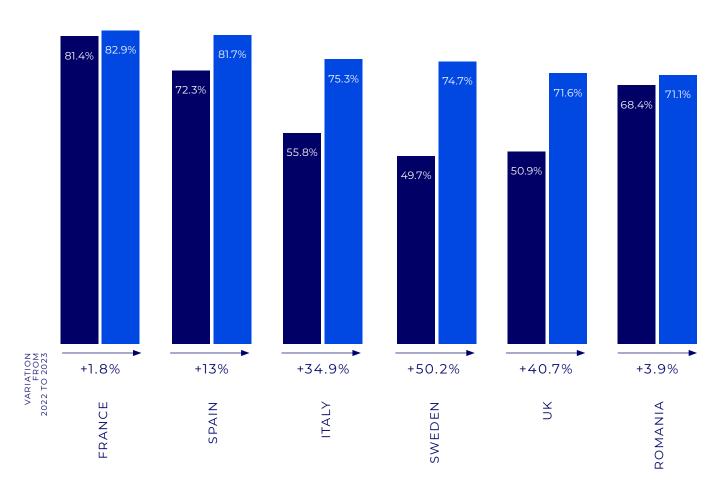






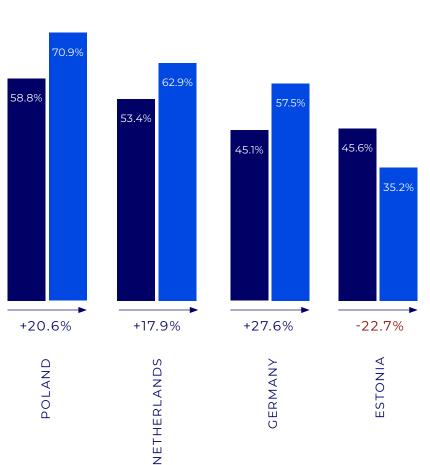
- **68% of Europeans believe** governments should restrict automation to safeguard jobs from being replaced by new technologies.
- This view has spiked by 18% within a year, possibly due to the introduction of popular Generative AI tools (ChatGPT, BART, Midjourney), rising from 58% in 2022 to 68% in 2023.
- Estonia is the only country where this view decreased (-23%) from last year, bringing the percentage of citizens that want to limit automation down to only 35%.

EVOLUTION OF "YES" IN 2023 COMPARED TO 2022



Source: European Tech Insights 2023. Center for the Governance of Change, IE University

QUESTION: Should UK and European governments limit automation by law in order to save jobs and prevent technological unemployment?



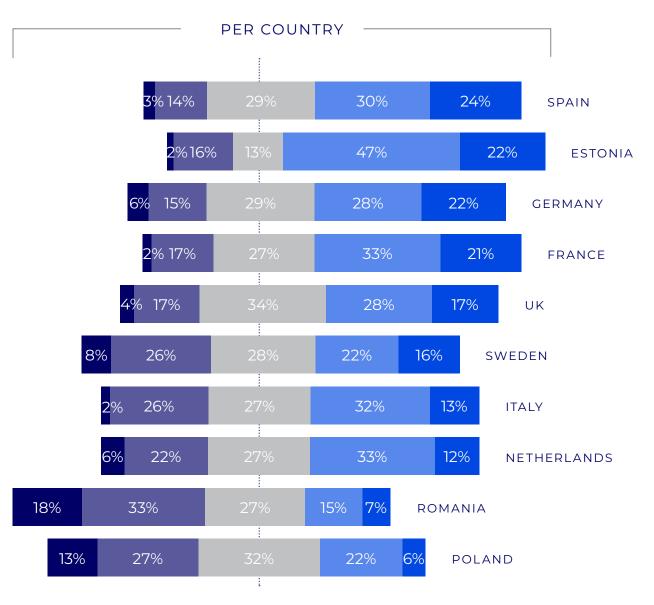




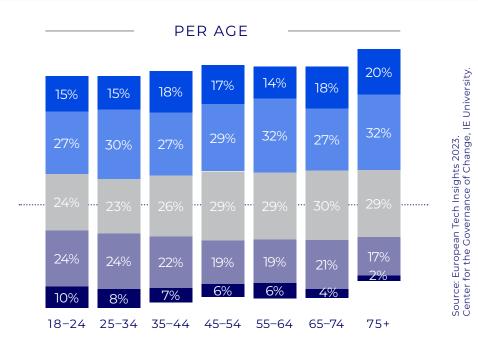
- Most Europeans state that they do not feel confident in distinguishing whether content is AI-generated or genuine. Only 27% of Europeans believe they would be able to spot AI-generated fake content.
- Older citizens express a higher percentage of doubt regarding their ability to discern between AI-generated and authentic content, with 52% not feeling confident.

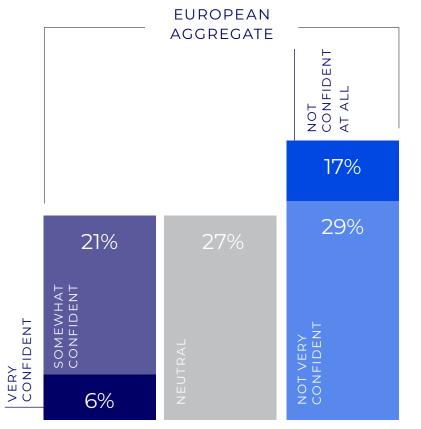
QUESTION: Generative AI has the ability to generate human-like interactions and convincing fake content, such as deepfake videos. How confident are you in your ability to discern between AI-generated fake content and genuine human-created content?

VERY CONFIDENT SOMEWHAT CONFIDENT NEUTRAL NOT VERY CONFIDENT NOT CONFIDENT AT ALL



Source: European Tech Insights 2023. Center for the Governance of Change, IE University.





Source: European Tech Insights 2023. Center for the Governance of Change, IE University. 20





- The majority of respondents believe elderly individuals (35%) are the group most likely to face discrimination from AI, followed by low-income individuals (22%).
- Only 8% of respondents think that women could be the group that is most discriminated against by AI. This is also the case amongst female respondents, with only 11% believing so.

QUESTION: Many AI experts have raised concerns about AI's potential to discriminate against certain groups. In your opinion, which of the following groups do you think could be the most discriminated against by AI systems?

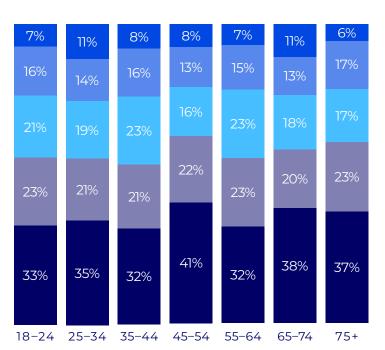
ELDERLY INDIVIDUALS LOW-INCOME INDIVIDUALS ETHNIC MINORITIES INDIVIDUALS WITH DISABILITIES WOMEN PER COUNTRY 45% 25% ITALY 45% 18% 13% 7% UK 41% 23% 11% 8% SPAIN 17% 23% 38% 11% 10% POLAND 36% 23% 12% 8% 21% GERMANY 33% 17% 22% 12% SWEDEN 33% 20% ESTONIA 59 30% 22% 21% ROMANIA 11% 27% 19% NETHERLANDS 9% 10% 27% FRANCE 25% 17% 8%

35%

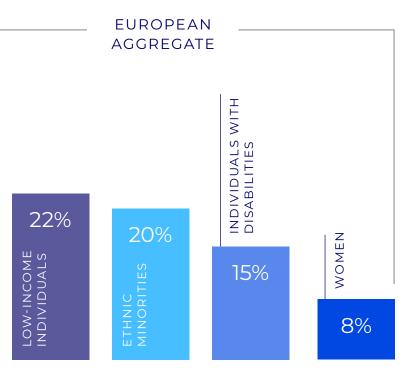
Source: European Tech Insights 2023.

Source: European Tech Insights 2023.

Center for the Governance of Change, IE University.



PER AGE



Center for the Governance of Change, IE University.

EUROPEAN TECH INSIGHTS 2023

Source: European Tech Insights 2023. Center for the Governance of Change, IE Un

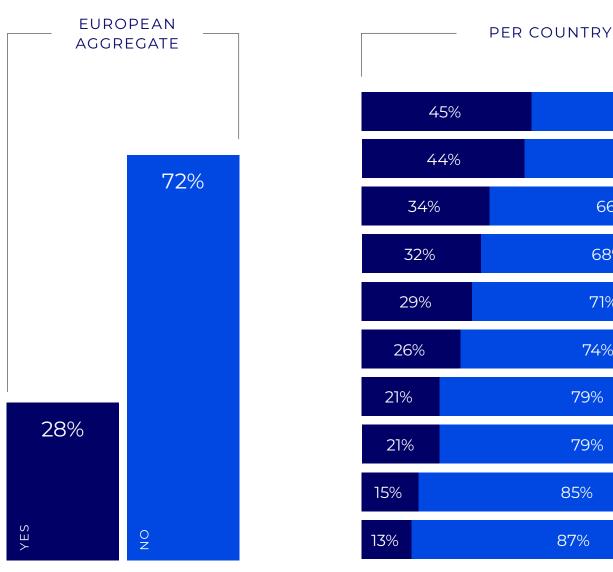




QUESTION: Algorithms that generate images (such as Midjourney) are competing and winning art competitions. Do you consider creations by AI (painting, music, writing etc.) to be art?



- A clear majority of Europeans (72%) do not regard creations by AI as art.
- Nonetheless, nearly half of Swedish (45%) and Romanian (44%) citizens embrace AI creations as a form of art.



Source: European Tech Insights 2023. Center for the Governance of Change, IE University. Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

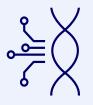
55%	SWEDEN
56%	ROMANIA
66%	POLAND
68%	NETHERL
71%	ESTONIA
74%	SPAIN
9%	FRANCE
9%	ITALY
6	UK
	GERMANY

ROMANIA
POLAND
NETHERLANDS
ESTONIA
SPAIN
FRANCE
ITALY
UK

GERMANY

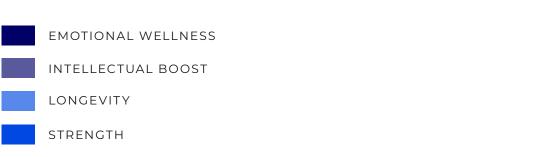


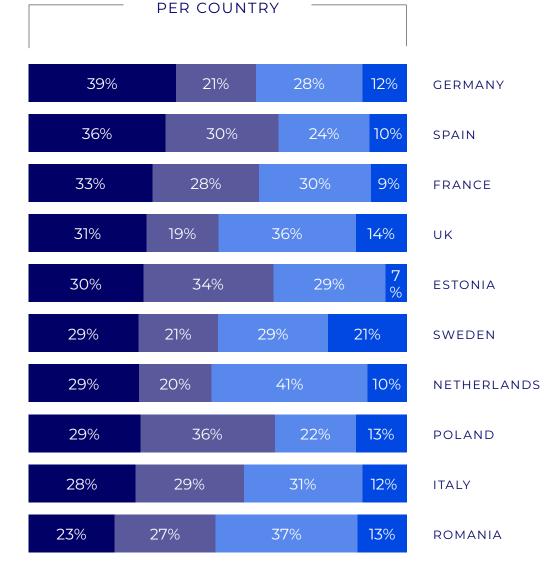




- Europeans would predominantly choose to improve their life expectancy (31%) and emotional wellness (31%) through technology, closely followed by boosting their intellect (26%).
- Only 12% of Europeans would opt to increase their strength using technology.
- Germany and Spain would prefer to enhance their emotional wellness at 39% and 36% respectively, while the Dutch stand out for their preference for longevity (41%).
- 38% of women prioritize boosting emotional wellness through technology, while men clearly favor extending their lifespan (37%).

QUESTION: If you had the opportunity to enhance your physical capabilities using technology, for which purpose would you do it?





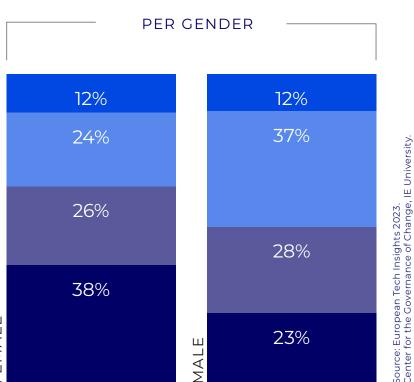
FEMALE

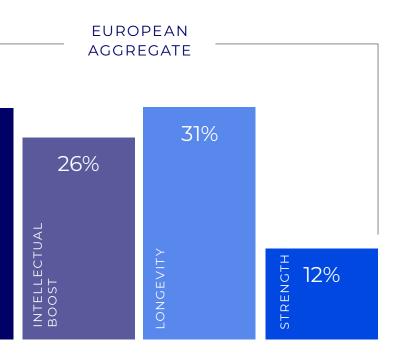
31%

Source: European Tech Insights 2023.

E MOTIONAL WELLNESS

Source: European Tech Insights 2023. Center for the Governance of Change, IE University.





Center for the Governance of Change, IE University.





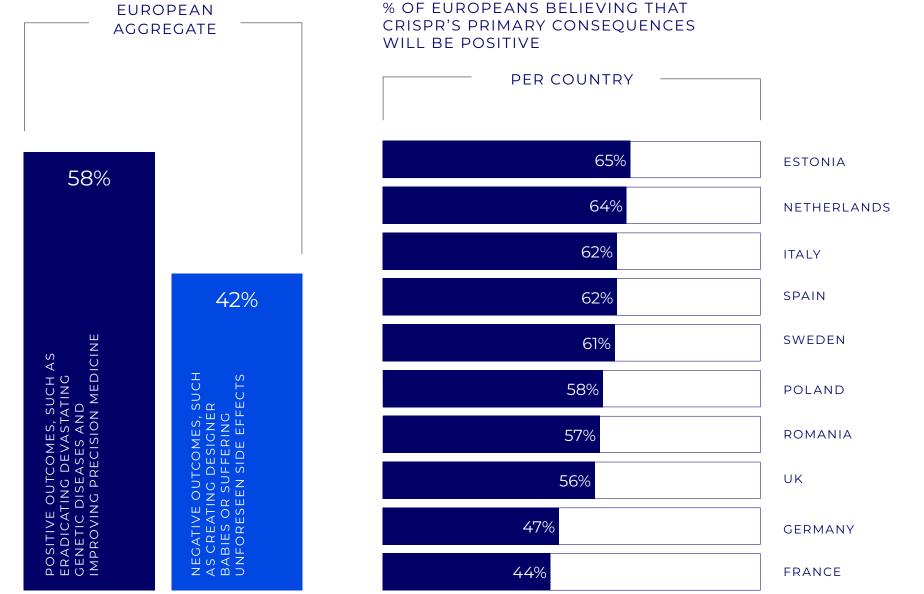
The majority of Europeans (58%) believe that gene-editing technology will be positive for humankind and bring positive outcomes.

The only two countries where a majority believes that CRISPR will predominantly yield negative outcomes are France (56%) and Germany (53%).

QUESTION: CRISPR is a revolutionary gene-editing technology that allows to modify DNA with unprecedented precision. If this technology is utilized, what do you believe would be the primary consequences?

POSITIVE OUTCOMES, SUCH AS ERADICATING DEVASTATINGGENETIC DISEASES AND IMPROVING PRECISION MEDICINE

NEGATIVE OUTCOMES, SUCH AS CREATING DESIGNER BABIES OR SUFFERING UNFORESEEN SIDE EFFECTS



Source: European Tech Insights 2023. Center for the Governance of Change, IE University. Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

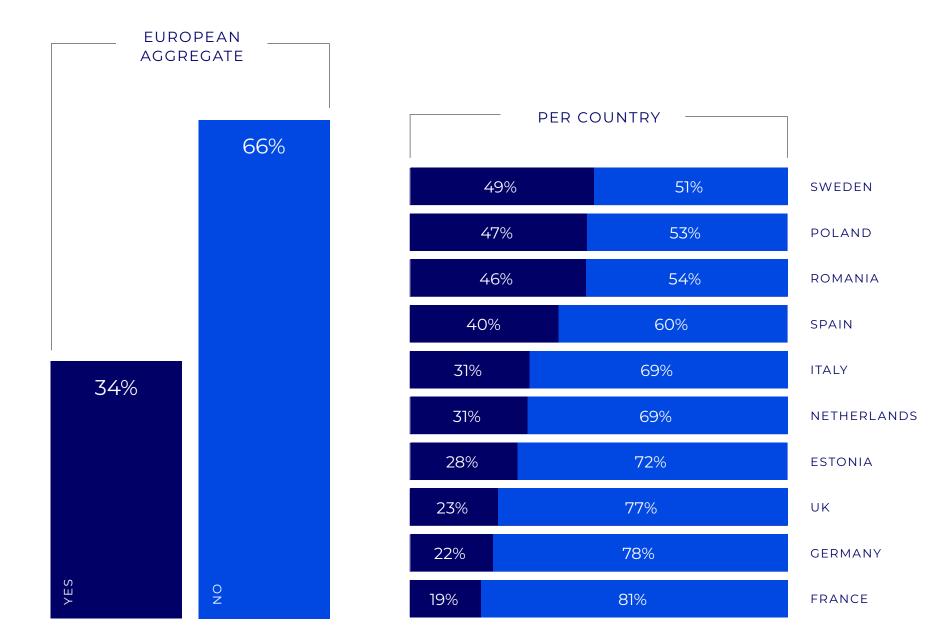




- More than a third of Europeans (34%) would be willing to get a brain implant to augment cognitive abilities.
- This sentiment reaches nearly half of the population in Sweden (49%), Poland (47%) and Romania (46%).

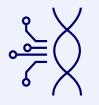
QUESTION: Some experts argue that brain implants will be able to help enhance cognitive abilities, such as improving memory, problem-solving, or learning capabilities. If this was possible, would you consider getting a brain implant for those purposes?





Source: European Tech Insights 2023. Center for the Governance of Change, IE University. Source: European Tech Insights 2023. Center for the Governance of Change, IE University.

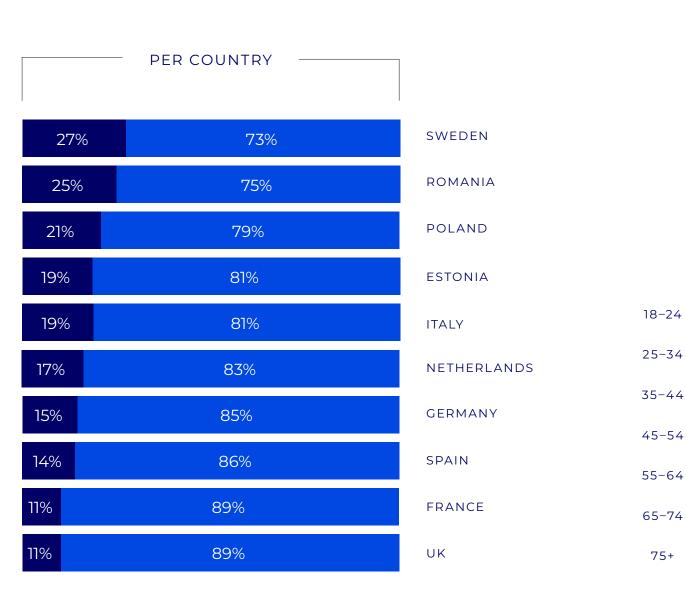




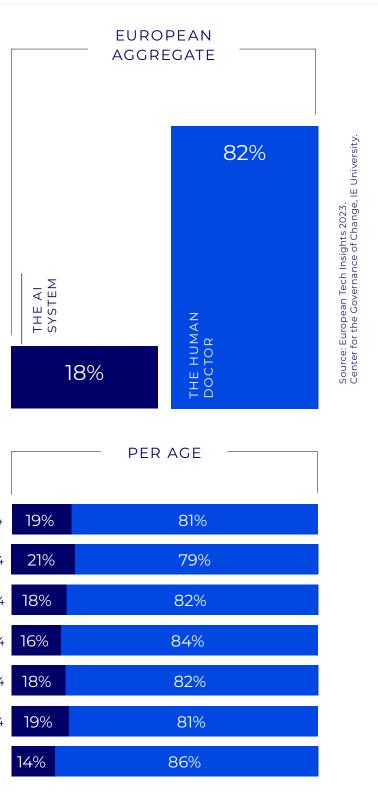
- 18% of Europeans would trust more a diagnosis by an AI system rather than one from a human doctor. This percentage increases to 27% in Sweden and 25% in Romania.
- The UK and France are the countries in which citizens would place greater trust in a diagnosis given by a human doctor (89%) compared to an AI system.

QUESTION: If you were in a situation where a human doctor gave you one diagnosis based on their observation, and an AI system gave you a different diagnosis based on its analysis, who would you trust more?

THE AI SYSTEM THE HUMAN DOCTOR



Source: European Tech Insights 2023. Center for the Governance of Change, IE University.



SURVEY METHODOLOGY

European Tech Insights 2023 was conducted in August 2023. In this study, we gathered responses from 3,003 adults spanning 10 countries: Estonia, France, Germany, Italy, the Netherlands, Poland, Romania, Spain, Sweden, and the United Kingdom. The samples maintained a representative balance with regards to age, gender, region and studies.

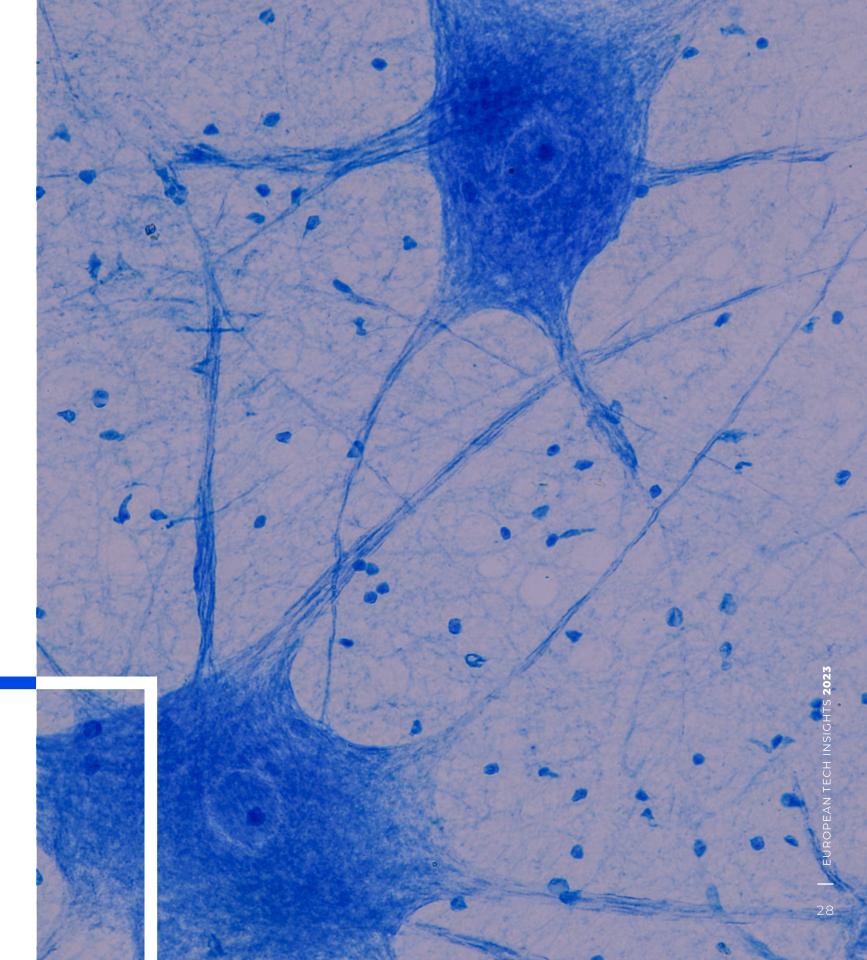
Since its inception in 2019, this survey has become a cornerstone project of IE University. Each year, we develop a new set of questions to delve into the emerging challenges at the intersection of society and technology. The exception is question 13, which is repeated annually to facilitate longitudinal analysis.

Respondents were part of recurrent panels recruited by Netquest or affiliated companies into panels via social media, direct mailing or through referrals from other respondents. They receive small in-kind incentives for responding to each survey. In the analysis, responses categorized as 'don't know' or left unanswered were treated as missing data.

In creating the graphs, all figures we rounded to the nearest whole number for simplicity, but we used the exact values to build the graphs. If graphs show the same rounded number but different volumes, it's because the precise values were different, but rounded to the same whole number.

Responses from **3,003 adults**

Spanning **10 countries**



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Carlos Luca de Tena Piera is the Executive Director of the Center for the Governance of Change at the Center for the Governance of Change at IE University.

A public policy specialist, Carlos has advised multilateral organizations and multinational companies in public affairs and technology governance. He previously worked as a Consultant at Llorente & Cuenca and APCO Worldwide and was in charge of European Affairs at the French Association of Town Mayors.

Carlos holds a master's degree in European Affairs from Sciences Po Paris and the University of Bath and studied as an undergraduate at Sciences Po Paris, Universidad Carlos III de Madrid and the London School of Economics. Darío García de Viedma, Associate Director



Darío García de Viedma works as Associate Director at the Center for the Governance of Change at IE University.

During his career in AI, he contributed to building Citibeats—an Ethical-AI software designed to help decision-makers prevent the next crisis.

He conceptualized machine learning models to measure complex aspects of public opinion such as Social Unrest, Distrust or Polarisation.

Darío has offered consulting services to public and private institutions in over 90 countries. In addition, he teaches at the Masters of Political Communication at the Universidad Camilo José Cela. He is also actively involved in public speaking and technological thought leadership.





ABOUT THE CGC

This study was conducted by the IE Center for the Governance of Change (CGC), an applied-research, educational institution that studies the political, economic, and societal implications of the current technological revolution and advances solutions to overcome its unwanted effects.

The CGC does so by producing pioneering, impact-oriented research that cuts across disciplines and methodologies to unveil the complexity of emerging technologies such as artificial intelligence, big data, blockchain, and robotics, and explores their potential threats and contributions to society.

Moreover, the CGC also runs a number of executive programs on emerging tech for public institutions and companies interested in expanding their understanding of disruptive trends, and a series of outreach activities aimed at improving the general public's awareness and agency over the coming changes.

All this for one purpose:

TO HELP BUILD A MORE PROSPEROUS AND SUSTAINABLE SOCIETY FOR ALL.



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