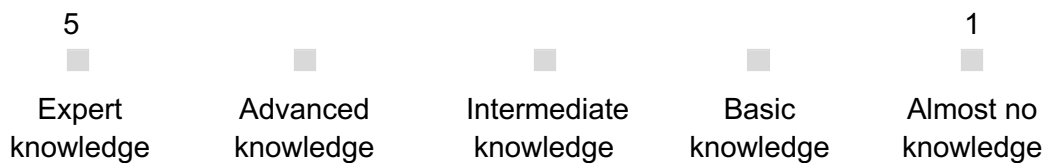


## Perceptions on AI by the Citizens of Europe questionnaire (PAICE)

Let's talk about Artificial Intelligence.

Consider a simple definition: Artificial intelligence (AI) refers to computer systems that can perform tasks that usually require intelligence (e.g. making decisions, achieving goals, planning, learning, reasoning, etc.). AI systems can perform these tasks based on objectives set by humans with a few explicit instructions.

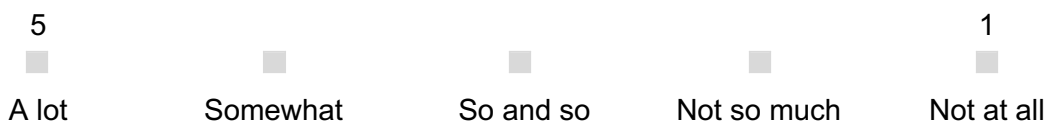
**Q1.** When it comes to Artificial Intelligence (AI) and its impact on society, I feel my competency on the subject would be:



**Q2.** How would you describe your attitude towards Artificial Intelligence (AI) and its applications?



**Q3.** To what extent do you feel Artificial Intelligence (AI) and its applications impact your daily life already?



**Q4.** Have you ever heard about the following European initiatives regarding AI?

**Q4\_1.** General Data Protection Regulation (GDPR).



**Q4\_2.** Ethics Guidelines for Trustworthy AI.



**Q4\_3.** Proposal for a Regulation on AI.

☐ Yes ☐ No

**Q5.** How often are you aware of interacting with a product/service based on or including AI?

5 ☐ ☐ ☐ ☐ 1 ☐ I don't know

Always Often Sometimes Seldom Never

**Q6.** Consider the following list of applications. Please select which ones you think may incorporate AI.

- Q6\_1.** ☐ Ride sharing apps (e.g. Uber, Lyft, Blabla car).  
**Q6\_2.** ☐ Calculators.  
**Q6\_3.** ☐ Contents and products product recommendations (e.g. Youtube, Amazon, Netflix).  
**Q6\_4.** ☐ Accommodation booking sites (e.g. Tripadvisor, Trivago, Airbnb).  
**Q6\_5.** ☐ Phone camera.  
**Q6\_6.** ☐ Messaging apps (e.g. WhatsApp, Telegram).  
**Q6\_7.** ☐ Email spam filters.  
**Q6\_8.** ☐ Search engines (e.g. Google, Bing).  
**Q6\_9.** ☐ Drones.  
**Q6\_10.** ☐ Social media (e.g. Facebook, Twitter).  
**Q6\_11.** ☐ Traffic navigation apps (e.g. Google Maps, Waze, TomTom).  
**Q6\_12.** ☐ Facial recognition apps (e.g. face unlock in phones).  
**Q6\_13.** ☐ Text editor (e.g. Word, Open Office).  
**Q6\_14.** ☐ Calendar app (e.g. Google Calendar, iCal).  
**Q6\_15.** ☐ Internet browser (e.g. Chrome, Firefox).  
**Q6\_16.** ☐ Teleconferencing app (e.g. Zoom, Skype, Google Meet).  
**Q6\_17.** ☐ Others \_\_\_\_\_ [fill-in option]  
**Q6\_18.** ☐ None of the above.

**Q7.** To what extent do you think AI is used in each of the following sectors in Europe? Please use the five-point scale to plot your answer.

**Q7\_1.** Healthcare (e.g. diagnostic support, personalised medicine).

5 ☐ ☐ ☐ ☐ 1 ☐

A lot Somewhat So and so Not so much Not at all

**Q7\_2.** Insurance (e.g. fraud detection, personalized risk assessment).

☐ ☐ ☐ ☐ ☐

A lot                      Somewhat                      So and so                      Not so much                      Not at all

**Q7\_3.** Agriculture (e.g. robotic harvesting, crop optimization).

☐                      ☐                      ☐                      ☐                      ☐  
A lot                      Somewhat                      So and so                      Not so much                      Not at all

**Q7\_4.** Finance (e.g. fraud detection, loan decision support systems).

☐                      ☐                      ☐                      ☐                      ☐  
A lot                      Somewhat                      So and so                      Not so much                      Not at all

**Q7\_5.** Military (e.g. automated weapons, cybersecurity for data protection).

☐                      ☐                      ☐                      ☐                      ☐  
A lot                      Somewhat                      So and so                      Not so much                      Not at all

**Q7\_6.** Law enforcement (e.g. predictive policing to forecast areas where crime is likely and dispatch police units, face recognition in public places).

☐                      ☐                      ☐                      ☐                      ☐  
A lot                      Somewhat                      So and so                      Not so much                      Not at all

**Q7\_7.** Environmental (e.g. climate prediction, energy harvesting forecast).

☐                      ☐                      ☐                      ☐                      ☐  
A lot                      Somewhat                      So and so                      Not so much                      Not at all

**Q7\_8.** Transportation (e.g. self-driving vehicles).

☐                      ☐                      ☐                      ☐                      ☐  
A lot                      Somewhat                      So and so                      Not so much                      Not at all

**Q7\_9.** Manufacturing industry (e.g demand forecasting, robotics).

☐                      ☐                      ☐                      ☐                      ☐  
A lot                      Somewhat                      So and so                      Not so much                      Not at all

**Q7\_10.** Human resource management (e.g. CV screening, workforce planning).

**Q8.** How would you describe your attitude towards the use of AI in the following sectors in Europe?  
Please use the five-point scale to plot your answer.

**Q8\_1.** Healthcare (e.g. diagnostic support, personalised medicine).

5		3		1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly approve	Approve	Indifferent	Disapprove	Strongly disapprove

**Q8\_2.** Insurance (e.g. fraud detection, personalized risk assessment).

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly approve	Approve	Indifferent	Disapprove	Strongly disapprove

**Q8\_3.** Agriculture (e.g. robotic harvesting, crop optimization).

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly approve	Approve	Indifferent	Disapprove	Strongly disapprove

**Q8\_4.** Finance (e.g. fraud detection, loan decision support systems).

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly approve	Approve	Indifferent	Disapprove	Strongly disapprove

**Q8\_5.** Military (e.g. automated weapons, cybersecurity for data protection).

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly approve	Approve	Indifferent	Disapprove	Strongly disapprove

**Q8\_6.** Law enforcement (e.g. predictive policing to forecast areas where crime is likely and dispatch police units, face recognition in public places).

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly approve	Approve	Indifferent	Disapprove	Strongly disapprove

**Q8\_7.** Environmental (e.g. climate prediction, energy harvesting forecast).

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly approve	Approve	Indifferent	Disapprove	Strongly disapprove

**Q8\_8.** Transportation (e.g. self-driving vehicles).

☐ Strongly approve
 ☐ Approve
 ☐ Indifferent
 ☐ Disapprove
 ☐ Strongly disapprove

**Q8\_9.** Manufacturing industry (e.g demand forecasting, robotics).

☐ Strongly approve
 ☐ Approve
 ☐ Indifferent
 ☐ Disapprove
 ☐ Strongly disapprove

**Q8\_10.** Human resource management (e.g. CV screening, workforce planning).

☐ Strongly approve
 ☐ Approve
 ☐ Indifferent
 ☐ Disapprove
 ☐ Strongly disapprove

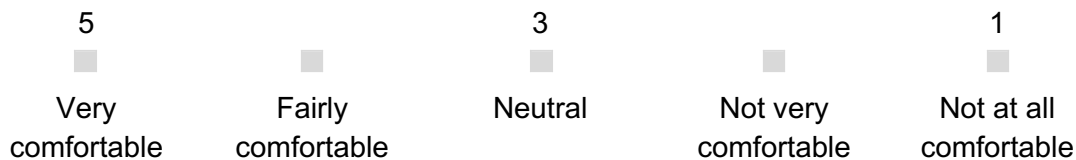
**Q9.** Read carefully the following scenario:

Imagine that you are applying for a job in a large company and the recruitment process consists of two steps. The first step is based on an AI software which scans your resume and your answers to a set of questions on strategic competencies. The software assigns you a score which is used to select those candidates who can move on to the second stage (the interview). The company claims that the software makes the process faster and more objective. Also, the company says that the data is anonymised, and no personal information is used. To what extent would you feel comfortable or uncomfortable with this process?

5  
☐ Very comfortable
 ☐ Fairly comfortable
 ☐ Neutral
 ☐ Not very comfortable
 ☐ 1  
 Not at all comfortable

**Q10.** Read carefully the following scenario:

Imagine that you are looking for a smart meter to reduce energy consumption in your house, cut the cost of utilities, and adopt a more sustainable lifestyle. You are offered a smart meter that uses AI to analyse home energy consumption and make recommendations for more efficient usage. Among functionalities, this system can give you the opportunity to receive personalised offers from energy suppliers which can help you save money. The company producing the smart meter says that your data is anonymised, and no personal information is shared with third parties without your consent. To what extent would you feel comfortable or uncomfortable with this application?

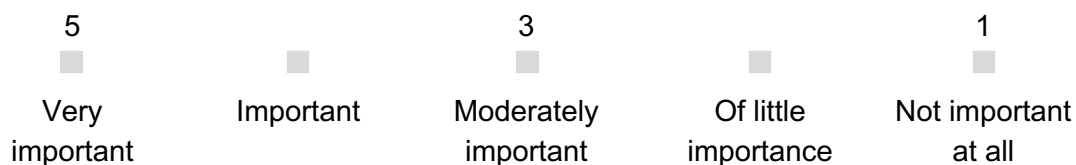


**Q11.** With respect to the previous scenarios, which of the following aspects should an organisation developing or using AI consider more? Please select three items and rank them.

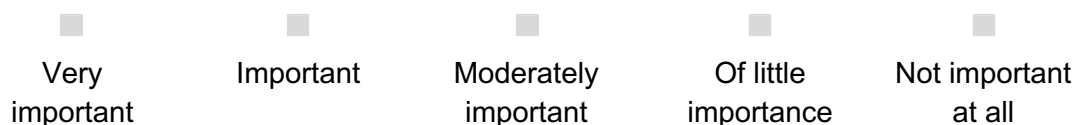
- ☐ Security and accurate results.
- ☐ Fair treatment and equitable access to the AI application for all members of society.
- ☐ Privacy and data protection.
- ☐ Human supervision over the AI outcome and process.
- ☐ Clear communication about the AI application's purpose and limitations.
- ☐ Risk management and identification of responsibility.
- ☐ Societal and environmental impact of the AI application.

**Q12.** How important are the following measures to increase your trust in AI? Please use the five-point scale to plot your answer.

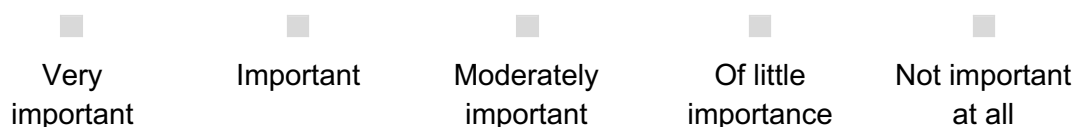
**Q12\_1.** A set of laws enforced by a national authority which guarantees ethical standards and social responsibility in the application of AI.



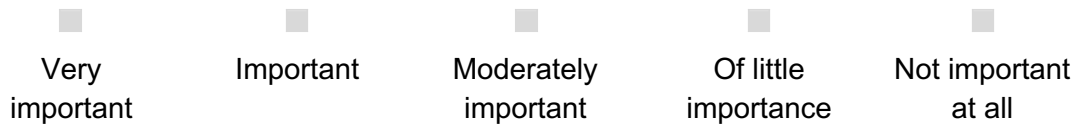
**Q12\_2.** Voluntary certifications released by trusted and competent agencies which guarantee ethical standards and social responsibility in the application of AI.



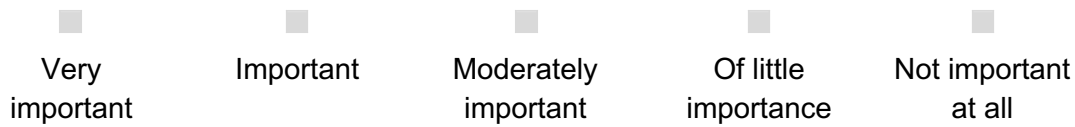
**Q12\_3.** Having independent expert entities that monitor the use and misuse of AI in society, including the public sector, and inform citizens.



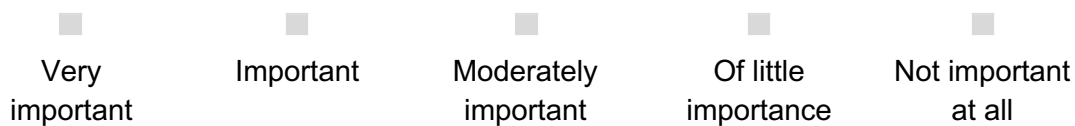
**Q12\_4.** The adoption and application of a self-regulated code of conduct or a set of ethical guidelines when developing or using AI products.



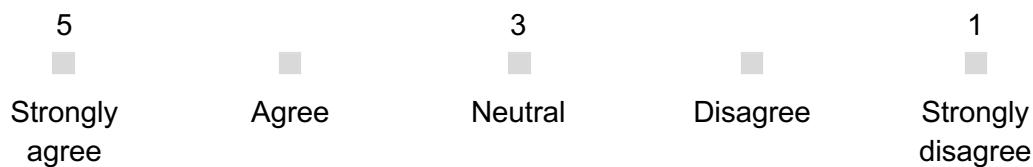
**Q12\_5.** The provision of clear and transparent information by the provider that describes the purpose, limitations and data usage of the AI product.



**Q12\_6.** The creation of design teams promoting diversity and social inclusion (e.g. gender wise, different expertise, ethnicity, etc) and the consultation of different stakeholders throughout the entire lifecycle of the AI product.

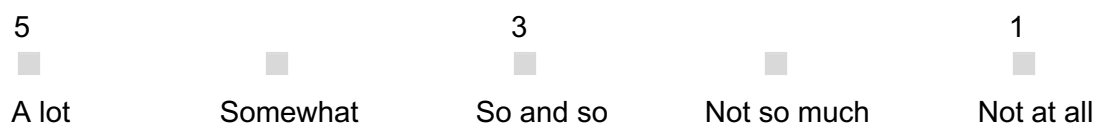


**Q13.** To what extent do you agree that having a better education on what AI is, as well as its current and future uses, would improve your trust in it?

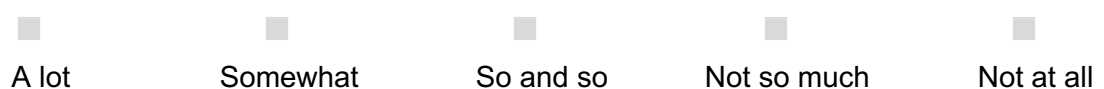


**Q14.** How much do you trust the following entities in ensuring that AI is in the best interest of the public? Please use the five-point scale to plot your answer.

**Q14\_1.** National Governments and public authorities.



**Q14\_2.** European Union (including European Commission/European Parliament).



**Q14\_3.** Universities and research centres.

☐ A lot
 ☐ Somewhat
 ☐ So and so
 ☐ Not so much
 ☐ Not at all

**Q14\_4.** Consumer associations, trade unions and civil society organisations.

☐ A lot
 ☐ Somewhat
 ☐ So and so
 ☐ Not so much
 ☐ Not at all

**Q14\_5.** Tech companies developing AI products.

☐ A lot
 ☐ Somewhat
 ☐ So and so
 ☐ Not so much
 ☐ Not at all

**Q14\_6.** Social media companies.

☐ A lot
 ☐ Somewhat
 ☐ So and so
 ☐ Not so much
 ☐ Not at all

**Q15.** Now that you have answered several questions about AI, to what extent do you feel AI and its applications impact your daily life already?

5 ☐ A lot
 ☐ Somewhat
 3 ☐ So and so
 ☐ Not so much
 1 ☐ Not at all

**Q16.** Would you be interested in attending a free course on AI to improve your knowledge?

☐ Yes
 ☐ No

## DEMOGRAPHICS

**QA)** Please indicate where you live in your country: *[answer options based on the country]*

**QA\_I) Italy**

- ☐ Nord Ovest
- ☐ Nord Est
- ☐ Centro
- ☐ Sud

**QA\_S) Spain**

- ☐ Noroeste (Galicia, Principado de Asturias, Cantabria)
- ☐ Noreste (País Vasco, Navarra, La Rioja, Aragón)



- Comunidad de Madrid o Munidad de Madrid (Madrid)
- Centro (Castilla y León, Castilla La Mancha, Extremadura)
- Este (Cataluña, Comunidad Valenciana, Islas Baleares)
- Sur (Andalucía, Región de Murcia, Ceuta, Melilla)
- Canarias (Islas Canarias)

#### **QA\_F )France**

- Auvergne-Rhône-Alpes
- Bourgogne-Franche-Comté
- Bretagne
- Centre-Val de Loire
- Corse
- Grand Est
- Hauts-de-France
- Île-de-France
- Normandie
- Nouvelle-Aquitaine
- Occitanie
- Pays de la Loire
- Provence-Alpes-Côte d'Azur

#### **QA\_G) Germany**

- Hamburg, Bremen, Schleswig-Holstein, Niedersachsen
- Baden-Württemberg
- Bayern
- Berlin, Mecklenburg-Vorpommern, Brandenburg, Sachsen-Anhalt
- Hessen, Rheinland-Pfalz, Saarland
- Nordrhein-Westfalen
- Thüringen, Sachsen

#### **QA\_SV) Sweden**

- Mellersta norrland
- Övre norrland
- Sydsverige
- Norra mellansverige
- Småland med öarna
- Västsverige
- Östra mellansverige
- Stockholm

**QA\_N) Netherlands**

- ☐ Noord & Oost Nederland
- ☐ West-Nederland
- ☐ Zuid-Nederland

**QA\_P) Poland**

- ☐ Centralny (Central)
- ☐ Polnocno-Zachodni (North-West)
- ☐ Polnocny (North)
- ☐ Poludniowo-Zachodni (South-West)
- ☐ Poludniowy (South)
- ☐ Wschodni (East)

**QA\_R) Romania**

- ☐ Bucuresti - Ifov
- ☐ Centru
- ☐ Nord Est
- ☐ Nord-Vest
- ☐ Sud-Muntenia
- ☐ Sud-Est
- ☐ Sud-Vest Oltenia
- ☐ Vest

**QB) You are:**

- ☐ Female
- ☐ Male
- ☐ Other

**QCB) Please indicate your age:**

- ☐ 18-34
- ☐ 35-54
- ☐ 55-75

**QD) Please indicate your job:**

- ☐ Entrepreneur / employer
- ☐ Self-employed / freelance professional
- ☐ Manager, officer

- ☐ White collar / employee
- ☐ Craftsman
- ☐ Shop owner, retailer
- ☐ Teacher, professor, writer, journalist, artist
- ☐ Manual or technical worker
- ☐ Student
- ☐ Retired
- ☐ Homemaker
- ☐ Unemployed
- ☐ Other \_\_\_\_\_ [fill-in option]

**QE)** What is your highest level of formal education?

- ☐ Lower secondary education or lower education
- ☐ Upper secondary education
- ☐ Post-secondary non-tertiary education
- ☐ Short-cycle tertiary education
- ☐ Bachelor's or equivalent level
- ☐ Master's or equivalent level
- ☐ Doctoral or equivalent level
- ☐ NN

**QG)** Please the size of the town where you live:

- ☐ Up to 5000
- ☐ Between 5000 and 10000
- ☐ Between 10000 and 30000
- ☐ Between 30000 and 100000
- ☐ Between 100000 and 250000
- ☐ Over 250000

**QH)** If you were to describe your digital skills, how would you define yourself:

- ☐ Very expert: I am sure of my digital skills, I am always attentive to innovation, I have no difficulty in moving in the digital world for everything I need, and I am interested in.
- ☐ Expert: I am quite sure of my digital skills, I try to exploit the potential it can offer and to be updated on the news.
- ☐ Enough expert: I'm not entirely sure of my skills, but I manage to do the best I can when I need to do something online and I try to learn new skills when I need them.
- ☐ Not very expert: I'm not sure of my skills and I have to get someone to help me with new things I don't understand
- ☐ Not at all expert: I use digital tools only if it is strictly necessary (e.g. email, messages).