European Commission

Standard Eurobarometer 92
Autumn 2019

Report

Europeans and Artificial Intelligence

Fieldwork
November 2019

Survey requested and co-ordinated by the European Commission,
Directorate-General for Communication

Standard Eurobarometer 92 – Wave EB92.3 – Kantar

Standard Eurobarometer 92

Report

Europeans and Artificial Intelligence

Fieldwork: November 2019

Survey conducted by Kantar Public Brussels for Kantar Belgium
on request of the European Commission, Directorate-General for Communication

Survey coordinated by the European Commission, Directorate-General for Communication
(DG COMM "Media monitoring and Eurobarometer" Unit)

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INTRODUCTION

The Standard Eurobarometer 92 (EB92) survey was conducted from 14 to 29 November 2019[1] in 34 countries or territories: the 28 Member States of the European Union (EU)[2], the five candidate countries (Albania, Montenegro, North Macedonia[3], Serbia and Turkey), and the Turkish Cypriot Community in the part of the country not controlled by the Government of the Republic of Cyprus.

The full report of the Standard Eurobarometer 92 survey consists of several volumes. The first volume presents the results of general questions about the state of public opinion in the European Union. Five other volumes present Europeans' opinions about the following topics: the European Union's priorities; European citizenship; media habits in the European Union; the European Union budget; and artificial intelligence.

The present volume analyses European citizens' opinions about artificial intelligence[4]. Artificial intelligence (AI) can prove beneficial in a broad range of sectors, such as healthcare, energy consumption, vehicle safety, agriculture, climate change and financial risk management. It can also help to detect fraud and threats to cybersecurity and allows authorities to fight crime more effectively. Nevertheless, it brings new challenges for the future of work and raises legal and ethical questions. In order to respond to these challenges, the European Commission has launched an AI strategy[5], in order to build trust in AI and make it human-centric[6].

This volume approaches the topic of AI through the following issues:

- The desire for information when artificial intelligence is used in digital and mobile services: under what circumstances do Europeans want to know when a digital service or mobile application uses AI?
- The best uses for AI: in what fields do Europeans think that the use of AI seems particularly appropriate?
- Concerns about the use of AI: do Europeans have fears about the use of AI? Do they think it could lead to discrimination, lack of accountability, or even to dehumanisation?
- How to ensure ethical AI applications: do Europeans believe that public policy intervention is needed to ensure the ethical development of AI applications?

[1] Please consult the technical specifications for the exact dates of the interviews in each country.
[2] The survey was conducted in Member States of the European Union at the time of the survey, including the United Kingdom.
[3] Since the Prespa agreement came into force on 12 February 2019, the former Yugoslav Republic of Macedonia is now called 'Republic of North Macedonia' or 'North Macedonia'.
[4] These questions were asked only in European Union Member States.
[5] European Commission communication *'Building Trust in Human-Centric Artificial Intelligence'* 8 April 2019 – COM (2019) 168
[6] https://ec.europa.eu/commission/news/artificial-intelligence-2019-apr-08_en

The methodology employed is that of the Standard Eurobarometer surveys of the Directorate-General for Communication ("Media monitoring and Eurobarometer" Unit)[7]. The same methodology has been applied in all countries and territories covered by the survey. A technical note relating to the interviews carried out by institutes of the Kantar Public Brussels network is included as an appendix to this report. It also specifies the confidence intervals[8].

Following the introduction of the new General Data Protection Regulation[9] (GDPR) in the European Union, respondents were asked whether they agreed to be asked questions about subjects which could be considered 'sensitive' or if they declined to answer them.

This report refers to countries by their official abbreviations, as indicated in the table below:

Belgium	BE	Lithuania	LT
Bulgaria	BG	Luxembourg	LU
Czechia	CZ	Hungary	HU
Denmark	DK	Malta	MT
Germany	DE	Netherlands	NL
Estonia	EE	Austria	AT
Ireland	IE	Poland	PL
Greece	EL	Portugal	PT
Spain	ES	Romania	RO
France	EN	Slovenia	SI
Croatia	HR	Slovakia	SK
Italy	IT	Finland	FI
Republic of Cyprus	CY*	Sweden	SE
Latvia	LV	United Kingdom	UK
Turkish Cypriot Community			CY (tcc)
Albania	AL	Turkey	TR
Montenegro	ME	Serbia	RS
North Macedonia	MK		
European Union - weighted average for the 28 Member States of the European Union			EU28
European Union - weighted average for the 27 Member States of the European Union without the data from the United Kingdom			EU27
BE, FR, IT, LU, DE, AT, ES, PT, IE, NL, FI, EL, EE, SI, CY, MT, SK, LV, LT			Euro area
BG, CZ, DK, HR, HU, PL, RO, SE, UK			Outside euro area

* Cyprus as a whole is one of the Member States of the European Union. However, the 'Community acquis' is suspended in the part of the country not controlled by the Government of the Republic of Cyprus. For practical reasons, only interviews carried out in the part of the country controlled by the Government of the Republic of Cyprus are included in the category 'CY' and in the average of the EU28 (and EU27). Interviews carried out in the part of the country not controlled by the Government of the Republic of Cyprus are included in the category 'CY (tcc)' [tcc: *Turkish Cypriot Community]*

We would like to thank all respondents

across the European Union who took the time to take part in this survey.

Without their active participation, this survey would not have been possible.

[7] http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm

[8] Tables of results can be found as an appendix. Please note that the total of percentages shown in the tables of this report may exceed 100% when the respondent was able to give multiple answers to a single question.

[9] 2016/679

I. THE DESIRE FOR INFORMATION WHEN ARTIFICIAL INTELLIGENCE IS USED IN DIGITAL AND MOBILE SERVICES

Eight in ten Europeans think they should be informed when a digital service or mobile application is using artificial intelligence

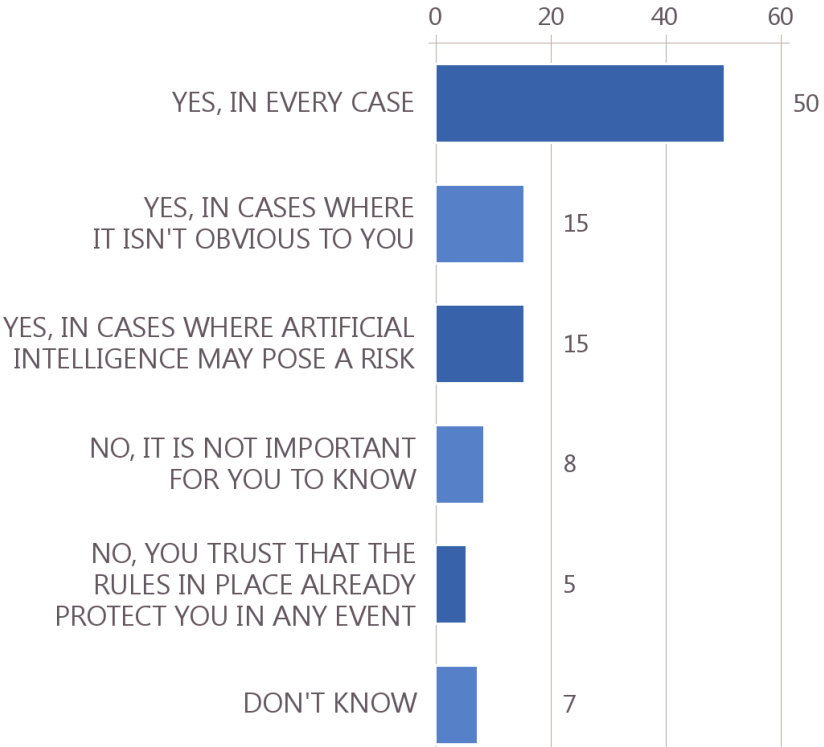
When a digital service or mobile application is using artificial intelligence, 80% of respondents think they should be informed (total 'yes')[10], while 13% hold the opposite opinion (total 'no') and 7% 'don't know'. More specifically:

- More than half of Europeans (51%) think they should be informed 'in every case';
- More than one in ten respondents believe they should be informed 'in cases where it isn't obvious' to them (15%) or 'in cases where artificial intelligence may pose a risk' (14%);
- Conversely, fewer than one in ten Europeans say that 'it is not important' for them to know (8%) or that they 'trust that the rules in place already protect [them] in any event' (5%).

QF1 Do you think that you should be informed when a digital service or mobile application is using artificial intelligence?
(% - EU)

[10] QF1. Do you think that you should be informed when a digital service or mobile application is using Artificial Intelligence?

QF1 Do you think that you should be informed when a digital service or mobile application is using artificial intelligence?
(% - EU27)



A national analysis shows that at least seven in ten respondents across the 28 EU Member States (80% in EU27) would like to be informed when a digital service or mobile application is using artificial intelligence. This proportion is highest in the Netherlands (92% total 'yes'), Greece (88%) and Sweden (87%), and lowest in Latvia, Lithuania and Romania (all 70%).

In more detail, the most frequent answer in 27 EU Member States is 'yes, in every case', mentioned by more than six in ten respondents in France (62%) and in Spain and the United Kingdom (both 61%). It is far less frequent in Romania (22%), the only country where this is not the most common answer, and in Hungary (30%) and Bulgaria (37%).

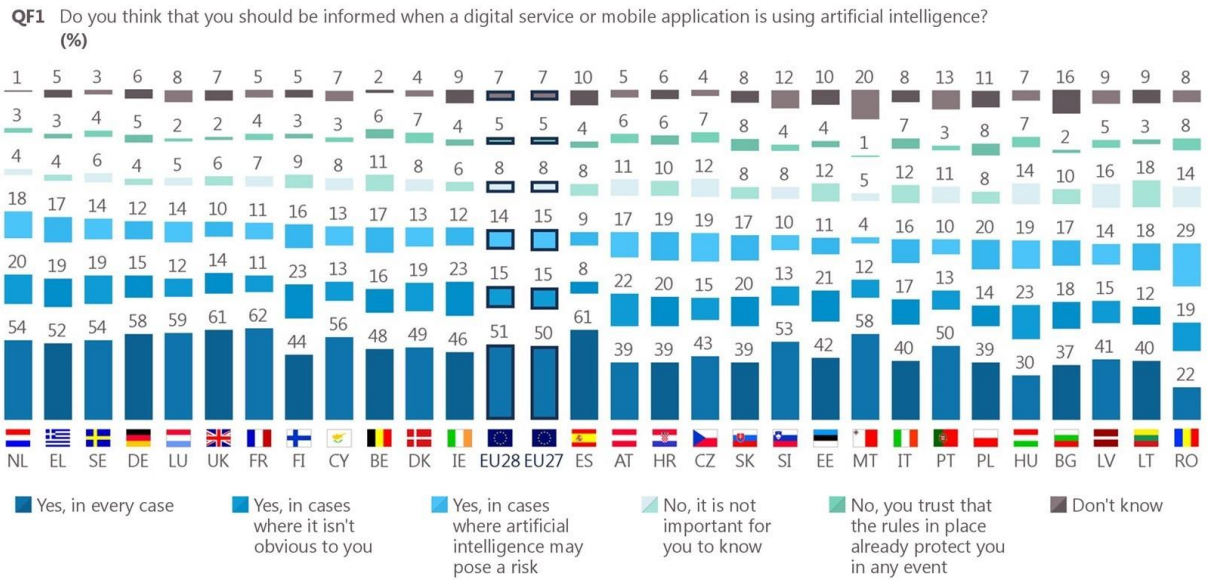
The share of respondents who would like to be informed in cases where the use of artificial intelligence is not obvious to them ranges from 23% in Hungary, Finland and Ireland to 8% in Spain, 11% in France and 12% in Lithuania, Malta and Luxembourg.

A majority of respondents in Romania think they should be informed 'in cases where artificial intelligence may pose a risk' (29%). This answer is also mentioned by one in five respondents in Poland (20%), but by fewer than one in ten in Malta (4%) and Spain (9%).

The proportion of respondents who say it is not important to know whether a digital service or mobile application is using artificial intelligence is highest in Lithuania (18%), Latvia (16%), and Hungary and Romania (both 14%), and lowest in Germany, Greece and the Netherlands (all 4%).

In all 28 EU Member States, fewer than one in ten respondents think that the rules in place already protect them in any event, with proportions ranging from 8% in Slovakia, Poland and Romania to 1% in Malta.

Finally, 20% of respondents say they 'don't know' in Malta.



QF1 Do you think that you should be informed when a digital service or mobile application is using artificial intelligence?

(%)

	Yes, in every case	Yes, in cases where it isn't obvious to you	Yes, in cases where artificial intelligence may pose a risk	No, it is not important for you to know	No, you trust that the rules in place already protect you in any event	Don't know	Total 'Yes'	Total 'No'
EU28	51	15	14	8	5	7	80	13
EU27	50	15	15	8	5	7	80	13
BE	**48**	16	17	11	*6*	2	81	17
BG	**37**	18	17	10	*2*	16	72	12
CZ	**43**	15	19	12	*7*	4	77	19
DK	**49**	19	13	8	*7*	4	81	15
DE	**58**	15	12	*4*	5	6	85	9
EE	**42**	21	11	12	*4*	10	74	16
IE	**46**	23	12	6	*4*	9	81	10
EL	**52**	19	17	4	*3*	5	88	7
ES	**61**	8	9	8	*4*	10	78	12
FR	**62**	11	11	7	*4*	5	84	11
HR	**39**	20	19	10	*6*	6	78	16
IT	**40**	17	16	12	*7*	8	73	19
CY	**56**	13	13	8	*3*	7	82	11
LV	**41**	15	14	16	*5*	9	70	21
LT	**40**	12	18	18	*3*	9	70	21
LU	**59**	12	14	5	*2*	8	85	7
HU	**30**	23	19	14	*7*	7	72	21
MT	**58**	12	4	5	*1*	20	74	6
NL	**54**	20	18	4	*3*	1	92	7
AT	**39**	22	17	11	*6*	5	78	17
PL	**39**	14	20	*8*	*8*	11	73	16
PT	**50**	13	10	11	*3*	13	73	14
RO	22	19	**29**	14	*8*	8	70	22
SI	**53**	13	10	8	*4*	12	76	12
SK	**39**	20	17	*8*	*8*	8	76	16
FI	**44**	23	16	9	*3*	5	83	12
SE	**54**	19	14	6	*4*	3	87	10
UK	**61**	14	10	6	*2*	7	85	8

Highest percentage per country *Lowest percentage per country*

Highest percentage per item | Lowest percentage per item

Analysis of the socio-demographic data shows that, across all categories, a majority of respondents believe that they should be informed in every case when a digital service or mobile application is using artificial intelligence. This proportion is highest among Europeans who remained in education until the age of 20 or beyond (57%), managers (58%), the self-employed (55%), the unemployed (55%) and people who use the internet every day (55%). In contrast, it is lowest, although still representing the majority, among Europeans who finished education aged 15 or earlier (42%), people who have difficulty paying their bills from time to time (45%) and those who do not use the internet every day (34% among those who never use the internet and 42% among those who do so often or sometimes).

QF1 Do you think that you should be informed when a digital service or mobile application is using artificial intelligence?

	Yes, in every case	Yes, in cases where it isn't obvious to you	Yes, in cases where artificial intelligence may pose a risk	No, it is not important for you to know	No, you trust that the rules in place already protect you in any event	Don't know
EU28	51	15	14	8	5	7
Gender						
Man	52	15	15	8	5	5
Woman	51	14	13	8	5	9
Age						
15-24	53	18	16	6	4	3
25-39	52	18	16	7	4	3
40-54	53	17	14	7	5	4
55 +	48	11	12	10	6	13
Education (End of)						
15-	42	8	10	14	8	18
16-19	51	15	15	8	5	6
20+	57	17	14	6	3	3
Still studying	52	17	16	7	5	3
Socio-professional category						
Self-employed	55	16	14	8	4	3
Managers	58	18	14	5	3	2
Other white collars	48	20	18	6	4	4
Manual workers	52	15	14	8	5	6
House persons	50	13	12	9	6	10
Unemployed	55	15	12	7	6	5
Retired	46	10	12	11	6	15
Students	52	17	16	7	5	3
Difficulties paying bills						
Most of the time	50	14	13	9	5	9
From time to time	45	17	16	10	6	6
Almost never/ Never	54	14	13	7	5	7
Consider belonging to						
The working class	51	11	11	9	6	12
The lower middle class	50	16	14	9	5	6
The middle class	52	16	16	7	4	5
The upper middle class	53	19	16	7	3	2
The upper class	49	12	15	14	7	3
Use of the Internet						
Everyday	55	16	15	7	4	3
Often/ Sometimes	42	14	18	11	6	9
Never	34	7	10	16	9	24

QF1 Do you think that you should be informed when a digital service or mobile application is using artificial intelligence?

(% - EU)

	Yes, in every case	Yes, in cases where it isn't obvious to you	Yes, in cases where artificial intelligence may pose a risk	No, it is not important for you to know	No, you trust that the rules in place already protect you in any event	Don't know
EU27	50	15	15	8	5	7
Gender						
Man	50	15	16	8	5	6
Woman	49	14	14	8	6	9
Age						
15-24	53	17	16	7	4	3
25-39	51	18	17	7	4	3
40-54	52	17	15	7	5	4
55 +	47	11	12	11	6	13
Education (End of)						
15-	41	8	11	14	8	18
16-19	49	15	15	9	6	6
20+	56	16	15	6	4	3
Still studying	51	18	16	7	5	3
Socio-professional category						
Self-employed	53	17	16	7	4	3
Managers	56	18	15	6	3	2
Other white collars	47	20	19	6	5	3
Manual workers	50	15	15	9	6	5
House persons	49	12	13	10	6	10
Unemployed	55	13	12	8	6	6
Retired	45	10	12	11	7	15
Students	51	18	16	7	5	3
Difficulties paying bills						
Most of the time	49	14	13	9	6	9
From time to time	43	17	18	10	6	6
Almost never/ Never	52	14	14	8	5	7
Consider belonging to						
The working class	47	11	12	10	7	13
The lower middle class	49	15	14	10	6	6
The middle class	51	16	16	7	5	5
The upper middle class	54	19	16	7	3	1
The upper class	50	13	15	11	7	4
Use of the Internet						
Everyday	54	17	15	7	4	3
Often/ Sometimes	40	15	19	11	6	9
Never	34	7	10	16	9	24

II. THE BEST USES FOR ARTIFICIAL INTELLIGENCE

The healthcare sector is by far the area where the use of artificial intelligence is seen as most appropriate

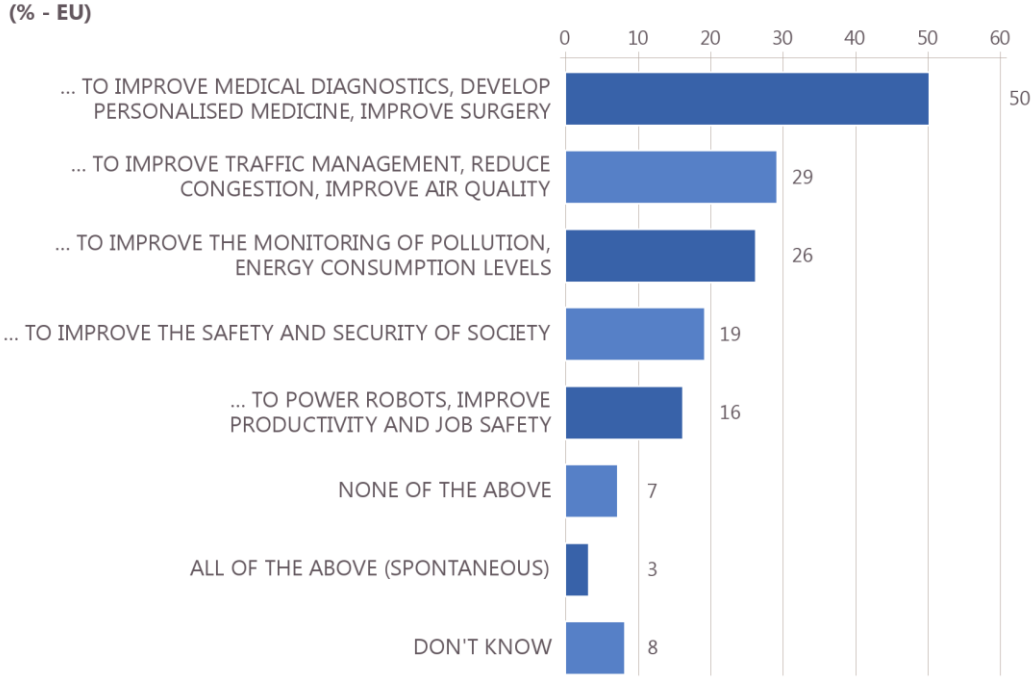
Choosing up to two items from a list of five, respondents could name the sectors where they see the use of Artificial Intelligence as most appropriate[11]:

- In first position, half of Europeans (50%) think that artificial intelligence has a role to play 'to improve medical diagnostics, develop personalised medicine, improve surgery';
- More than a quarter believe that artificial intelligence is appropriate 'to improve traffic management, reduce congestion, improve air quality' (29%) and 'to improve the monitoring of pollution, energy consumption levels' (26%);
- Fewer than one in five respondents say that the use of artificial intelligence is appropriate 'to improve the safety and security of society' (19%) and 'to power robots, improve productivity and job safety' (16%).

Furthermore, 7% of respondents believe that none of the examples require the use of artificial intelligence, while 3% *spontaneously* answered that all five of these examples justify the use of artificial intelligence.

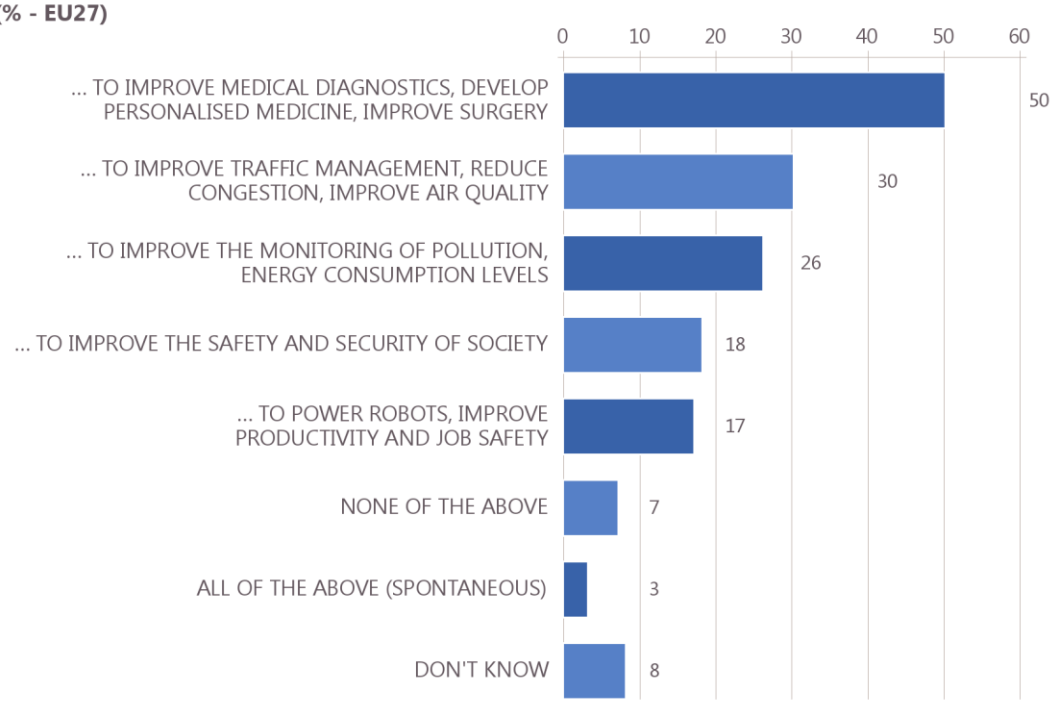
Finally, nearly one in ten Europeans (8%) express no opinion.

QF2 Which statements below, if any, would you select to finish the statement: Artificial intelligence can be best used ... (MAX. 2 ANSWERS)
(% - EU)



[11] QF2. Which statements below, if any, would you select to finish the statement: Artificial Intelligence can be best used... (MAX. 2 ANSWERS)

QF2 Which statements below, if any, would you select to finish the statement: Artificial intelligence can be best used ... (MAX. 2 ANSWERS)
(% - EU27)



A national analysis shows that improvement of medical diagnostics, development of personalised medicine, improvement in surgery is the most widespread answer in all EU Member States except Malta. This item is mentioned most in the Netherlands (74%), Cyprus (72%) and Sweden (60%), and least in Romania (31%), Malta (33%) and Hungary (35%).

In Malta, respondents are most likely to believe that the use of artificial intelligence is particularly appropriate 'to improve traffic management, reduce congestion, improve air quality' (37%). Although not in first position, this item receives high scores in Belgium (39%), Germany (36%) and Luxembourg (35%). It is mentioned least in Spain (20%), Czechia (23%) and Lithuania (25%).

At least three in ten respondents mention improving the monitoring of pollution, energy consumption levels in Italy (34%), Hungary (31%) and Romania (30%). Fewer than one in five do so in Bulgaria (15%), Latvia (16%), Slovenia (18%) and Lithuania (19%).

The share of respondents who say that artificial intelligence should play a role 'to improve the safety and security of society' exceeds 30% in the Netherlands (35%), Belgium (32%) and Portugal (31%). It is lowest in Hungary (10%) and Malta, Austria and Romania (all 11%).

The proportion of respondents who think artificial intelligence is useful 'to power robots, improve productivity and job safety' is highest in Finland (38%), Denmark (33%) and Hungary (27%), but is below 10% in Malta (7%), Portugal (8%) and the Netherlands (9%).

At least one in ten respondents say that none of the examples justifies the use of artificial intelligence in Austria (11%) and Czechia (10%), while only 3% of respondents share this opinion in Portugal, the Netherlands and Sweden.

Finally, respondents in Malta stand out once again on this issue: they are proportionally most likely to say *spontaneously* that the use of artificial intelligence is particularly appropriate in all the examples (10%), but also the most likely to give no opinion (20%).

QF2 Which statements below, if any, would you select to finish the statement: Artificial intelligence can be best used …

(%)

	… to improve medical diagnostics, develop personalised medicine, improve surgery	… to improve traffic management, reduce congestion, improve air quality	… to improve the monitoring of pollution, energy consumption levels	… to improve the safety and security of society	… to power robots, improve productivity and job safety	None of the above	All of the above (SPONTANEOUS)	Don't know
EU28	50	29	26	19	16	7	3	8
EU27	50	30	26	18	17	7	3	8
BE	**48**	39	26	32	*12*	7	0	2
BG	**45**	28	*15*	17	18	5	5	17
CZ	**50**	23	20	24	*19*	10	1	5
DK	**41**	32	28	*19*	33	4	3	5
DE	**51**	36	22	*12*	22	8	3	6
EE	**41**	27	20	22	*17*	8	7	9
IE	**43**	33	26	19	*14*	5	2	10
EL	**56**	32	28	20	*14*	5	7	5
ES	**57**	20	21	*17*	*17*	6	2	13
FR	**59**	27	27	25	*12*	8	0	8
HR	**49**	29	20	*13*	14	8	2	6
IT	**43**	29	34	17	*15*	8	3	7
CY	**72**	27	22	20	*15*	4	3	6
LV	**52**	34	*16*	23	18	6	1	11
LT	**55**	25	19	*18*	19	7	3	9
LU	**52**	35	24	20	*10*	6	2	9
HU	**35**	28	31	*10*	27	8	2	8
MT	33	**37**	22	11	*7*	8	10	20
NL	**74**	30	27	35	*9*	3	1	1
AT	**41**	34	25	*11*	23	11	5	7
PL	**37**	32	23	*14*	15	5	5	11
PT	**53**	27	25	31	*8*	3	6	11
RO	**31**	30	30	*11*	14	6	4	8
SI	**53**	32	18	15	*13*	8	4	11
SK	**40**	34	24	*13*	17	8	5	8
FI	**42**	33	25	*14*	38	6	0	5
SE	**60**	32	27	*26*	*26*	3	1	2
UK	**54**	26	26	25	*12*	6	3	7

Highest percentage per country *Lowest percentage per country*

Highest percentage per item | Lowest percentage per item

Analysis of the socio-demographic data shows that a majority of respondents across all categories think that the use of artificial intelligence is particularly appropriate for improving medical diagnostics, developing personalised medicine, improving surgery. This belief is particularly widespread among Europeans who continued education until the age of 20 or beyond (56%), managers (56%) and people who consider themselves upper middle (58%) and upper class (56%). It is also the majority view, although to a lesser extent, among Europeans who finished education aged 15 or earlier (43%), people who have difficulty paying their bills most of the time (44%) and those who never use the internet (37%, with 23% saying they 'don't know').

QF2 Which statements below, if any, would you select to finish the statement: Artificial intelligence can be best used ...

(% - EU)

	... to improve medical diagnostics, develop personalised medicine, improve surgery	... to improve traffic management, reduce congestion, improve air quality	... to improve the monitoring of pollution, energy consumption levels	... to improve the safety and security of society	... to power robots, improve productivity and job safety	None of the above	All of the above (SPONTANEOUS)	Don't know
EU28	50	29	26	19	16	7	3	8
Gender								
Man	51	32	25	18	19	6	3	6
Woman	49	27	26	20	14	7	3	10
Age								
15-24	49	29	32	19	20	4	4	5
25-39	49	33	28	18	19	6	3	4
40-54	53	32	26	19	18	7	2	5
55 +	50	26	22	19	13	9	2	13
Education (End of)								
15-	43	21	20	18	12	11	2	19
16-19	50	30	23	20	15	8	3	7
20+	56	33	29	19	19	5	2	4
Still studying	49	31	34	17	22	4	4	3
Socio-professional category								
Self-employed	52	33	26	19	19	6	3	3
Managers	56	37	28	17	21	4	3	2
Other white collars	49	34	31	18	18	4	3	4
Manual workers	49	30	24	20	16	8	3	5
House persons	46	26	23	20	14	8	2	11
Unemployed	51	27	25	20	16	8	3	8
Retired	50	24	20	20	12	9	2	15
Students	49	31	34	17	22	4	4	3
Difficulties paying bills								
Most of the time	44	28	25	19	15	9	2	9
From time to time	46	30	28	19	15	8	3	6
Almost never/ Never	53	30	25	19	17	6	3	8
Consider belonging to								
The working class	48	25	21	19	13	8	3	13
The lower middle class	49	29	25	21	17	8	3	6
The middle class	52	32	28	18	17	6	2	5
The upper middle class	58	38	31	18	21	3	1	2
The upper class	56	35	27	20	34	4	1	0
Subjective urbanisation								
Rural village	49	28	22	19	17	7	2	10
Small/ mid size town	51	28	26	20	16	7	3	7
Large town	49	33	29	18	16	6	2	7
Use of the Internet								
Everyday	53	32	28	20	18	5	3	4
Often/ Sometimes	47	30	22	19	14	9	2	9
Never	37	17	17	15	10	13	3	23

QF2 Which statements below, if any, would you select to finish the statement: Artificial intelligence can be best used ...

(% - EU)

	... to improve medical diagnostics, develop personalised medicine, improve surgery	... to improve traffic management, reduce congestion, improve air quality	... to improve the monitoring of pollution, energy consumption levels	... to improve the safety and security of society	... to power robots, improve productivity and job safety	None of the above	All of the above (SPONTANEOUS)	Don't know
EU27	50	30	26	18	17	7	3	8
Gender								
Man	51	33	25	18	20	6	3	5
Woman	49	27	26	19	15	7	2	10
Age								
15-24	49	29	32	18	21	4	4	5
25-39	48	34	28	17	20	6	3	4
40-54	52	33	25	19	18	7	2	5
55 +	49	26	22	18	14	8	2	13
Education (End of)								
15-	43	21	20	18	12	11	2	18
16-19	49	30	24	19	16	8	3	7
20+	55	34	29	18	19	5	2	4
Still studying	49	30	34	17	22	4	4	4
Socio-professional category								
Self-employed	51	34	26	18	20	6	3	3
Managers	57	39	29	15	22	4	2	2
Other white collars	48	34	32	17	19	5	3	4
Manual workers	48	30	24	20	17	8	3	5
House persons	46	26	23	19	15	8	2	12
Unemployed	51	27	25	19	17	8	3	8
Retired	49	24	20	19	12	9	2	16
Students	49	30	34	17	22	4	4	4
Difficulties paying bills								
Most of the time	44	27	23	20	15	10	2	10
From time to time	45	31	29	18	15	8	3	6
Almost never/ Never	52	30	25	18	18	6	3	8
Consider belonging to								
The working class	46	24	20	17	14	9	3	15
The lower middle class	50	28	25	21	17	8	2	6
The middle class	51	32	28	18	18	6	2	5
The upper middle class	58	39	31	17	20	3	1	2
The upper class	58	36	25	20	32	4	1	0
Subjective urbanisation								
Rural village	49	28	22	19	17	8	2	10
Small/ mid size town	50	29	26	19	17	7	3	7
Large town	49	33	30	16	18	6	2	7
Use of the Internet								
Everyday	53	33	28	19	19	5	3	4
Often/ Sometimes	47	30	22	18	14	10	2	9
Never	37	17	17	15	10	13	3	23

III. CONCERNS ABOUT THE USE OF ARTIFICIAL INTELLIGENCE

The main concern of Europeans is a lack of clarity as to who is responsible for the use of artificial intelligence

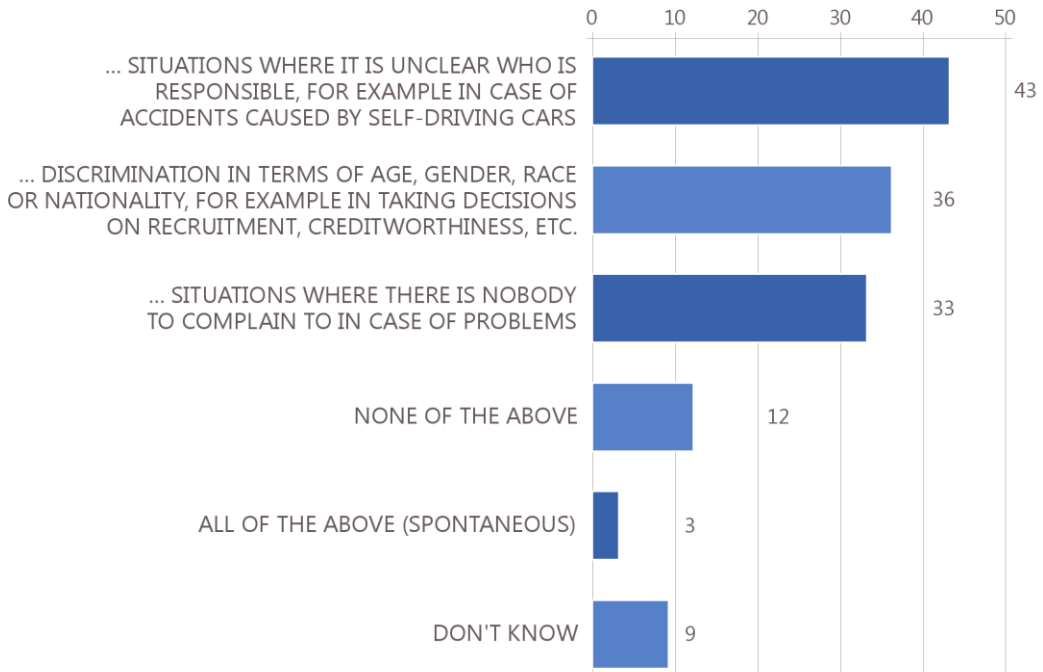
Respondents had to say whether they felt concerned about three situations which could result from the use of artificial intelligence. They could choose up to two of the three statements[12]:

- More than four in ten respondents (43%) say they are concerned that the use of artificial intelligence could cause 'situations where it is unclear who is responsible, for example in case of accidents caused by self-driving cars';
- The other two statements are mentioned by around one in three respondents: 36% fear that artificial intelligence could cause 'discrimination in terms of age, gender, race or nationality, for example in taking decisions on recruitment, creditworthiness, etc.' and 33% worry that it may lead to 'situations where there is nobody to complain to in case of problems'.

However, more than one in ten respondents (12%) are not concerned about any of the three situations, while only 3% *spontaneously* said that the use of artificial intelligence could lead to all three of these problems.

Finally, nearly one in ten Europeans (9%) say they 'don't know'.

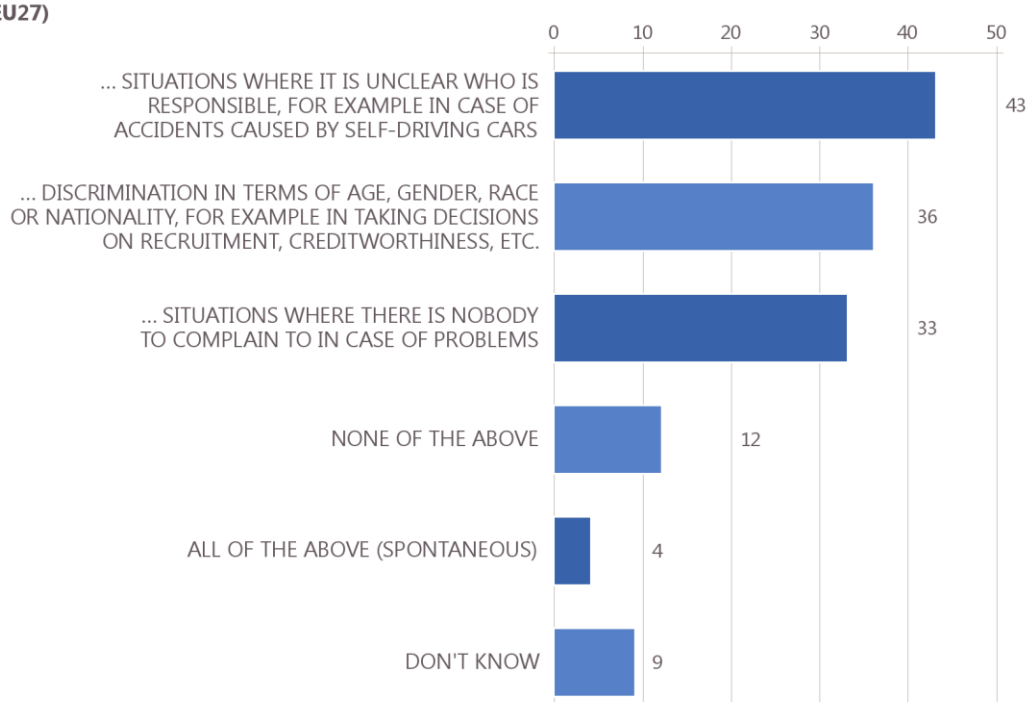
QF3 Which statements below, if any, would you select to finish the statement: You are concerned that the use of artificial intelligence could lead to ... (MAX. 2 ANSWERS)
(% - EU)



[12] QF3. Which statements below, if any, would you select to finish the statement: You are concerned that the use of Artificial Intelligence could lead to... (MAX. 2 ANSWERS)

QF3 Which statements below, if any, would you select to finish the statement: You are concerned that the use of artificial intelligence could lead to ... (MAX. 2 ANSWERS)

(% - EU27)



A national analysis shows that concern about the emergence of situations where it is unclear who is responsible is the most widespread answer in 21 EU Member States. It is mentioned most in Finland (59%), Hungary (55%) and Romania (49%), and least in Luxembourg (29%), Portugal (31%), and France and Malta (both 36%).

In four EU Member States, respondents are most concerned that the use of artificial intelligence could lead to discrimination in terms of age, gender, race or nationality: this is the most mentioned answer in the Netherlands (57%), Sweden (46%), Luxembourg (42%) and Spain (38%), and it is also cited by more than four in ten respondents in France (45%). It is mentioned significantly less in Estonia (17%), Lithuania (19%) and Hungary (21%).

In Sweden, concerns relating to a lack of clarity about who is responsible and the emergence of discrimination due to the use of artificial intelligence share first place (both 46%).

The fear that artificial intelligence leads to 'situations where there is nobody to complain to in case of problems' is the most mentioned in four EU Member States: France (50%), Portugal (47%), Cyprus (41%) and Lithuania (38%). It is also cited by more than four in ten respondents in Estonia (43%) and Latvia and Luxembourg (both 41%). However, the emergence of such situations due to the use of artificial intelligence concerns less than a quarter of respondents in Malta (18%), Croatia (23%) and Germany (24%).

The share of respondents who are not concerned by any of the three situations is highest in Czechia (18%), Sweden (17%) and Lithuania (16%), and lowest in Bulgaria (6%), Poland (7%), and Ireland and Greece (both 8%).

More than one in ten respondents in Greece (13%) *spontaneously* said they are concerned by all these situations.

At least one in five respondents say they 'don't know' in Malta (28%) and Bulgaria (20%).

QF3 Which statements below, if any, would you select to finish the statement: You are concerned that the use of artificial intelligence could lead to ...

(%)

	... situations where it is unclear who is responsible, for example in case of accidents caused by self-driving cars	... discrimination in terms of age, gender, race or nationality, for example in taking decisions on recruitment, creditworthiness, etc.	... situations where there is nobody to complain to in case of problems	None of the above	All of the above (SPONTANEOUS)	Don't know
EU28	43	36	33	12	3	9
EU27	43	36	33	12	4	9
BE	**46**	39	*36*	13	1	3
BG	**42**	*26*	*26*	6	8	20
CZ	**42**	34	*31*	18	2	6
DK	**43**	*36*	39	14	2	6
DE	**48**	39	*24*	15	4	7
EE	**45**	*17*	43	13	8	11
IE	**46**	38	*27*	8	2	13
EL	**47**	*32*	38	8	13	5
ES	37	**38**	*33*	10	3	13
FR	*36*	45	**50**	10	1	7
HR	**40**	37	*23*	14	3	8
IT	**42**	*33*	*33*	13	4	10
CY	38	*37*	**41**	10	4	12
LV	**42**	*28*	41	9	3	12
LT	37	*19*	**38**	16	4	13
LU	*29*	**42**	41	9	6	10
HU	**55**	*21*	26	11	3	10
MT	**36**	23	*18*	14	9	28
NL	48	**57**	*27*	11	1	0
AT	**43**	32	*30*	15	7	7
PL	**45**	*22*	29	7	6	15
PT	31	*29*	**47**	9	5	13
RO	**49**	26	*25*	10	3	10
SI	**40**	39	*26*	13	5	12
SK	**45**	*28*	30	12	6	9
FI	**59**	34	*32*	11	1	6
SE	**46**	**46**	*33*	17	1	3
UK	**45**	39	*30*	12	2	10

Highest percentage per country *Lowest percentage per country*

Highest percentage per item | Lowest percentage per item

Analysis of the socio-demographic data shows that in almost all socio-demographic categories, respondents are most concerned that the use of artificial intelligence could lead to situations where it is unclear who is responsible, for example in the case of accidents caused by self-driving cars:

- This fear is most frequent among Europeans aged 15 to 24 (51%), students (52%), managers (49%) and other white collars (48%). Although still the majority view, it is far less widespread among Europeans aged 55 and over (37%), those who finished education at age 15 or earlier (35%), retired people (36%) and people who never use the internet (29%);
- Meanwhile, the fear that artificial intelligence could cause discrimination in terms of age, gender, race or nationality, for example in taking decisions on recruitment, creditworthiness, etc., is the main concern among people who consider themselves upper class (50% against 42% for lack of clarity about who is responsible) and upper middle class (47% against 44%).

QF3 Which statements below, if any, would you select to finish the statement: You are concerned that the use of artificial intelligence could lead to …

(% - EU)

	… situations where it is unclear who is responsible, for example in case of accidents caused by self-driving cars	… discrimination in terms of age, gender race or nationality, for example in taking decisions on recruitment, creditworthiness, etc.	… situations where there is nobody to complain to in case of problems	None of the above	All of the above (SPONTANEOUS)	Don't know
EU28	43	36	33	12	3	9
Gender						
Man	44	37	34	12	3	7
Woman	43	35	32	11	3	11
Age						
15-24	51	33	30	12	4	7
25-39	46	37	35	11	4	4
40-54	47	41	34	10	3	5
55 +	37	34	31	13	3	15
Education (End of)						
15-	35	28	28	15	3	21
16-19	44	36	33	12	4	8
20+	45	43	35	10	2	5
Still studying	52	35	31	11	3	5
Socio-professional category						
Self-employed	44	36	32	13	4	5
Managers	49	44	34	11	3	3
Other white collars	48	38	35	10	4	5
Manual workers	45	36	34	12	4	7
House persons	41	32	32	10	4	13
Unemployed	40	39	33	11	4	10
Retired	36	33	30	13	3	17
Students	52	35	31	11	3	5
Difficulties paying bills						
Most of the time	42	32	37	11	3	10
From time to time	45	35	35	11	4	7
Almost never/ Never	43	38	31	12	3	9
Consider belonging to						
The working class	41	33	31	11	3	15
The lower middle class	44	36	35	12	3	7
The middle class	45	37	33	12	3	6
The upper middle class	44	47	36	11	2	3
The upper class	42	50	35	17	0	0
Use of the Internet						
Everyday	46	40	34	11	3	5
Often/ Sometimes	43	32	34	12	3	11
Never	29	22	24	16	5	25

QF3 Which statements below, if any, would you select to finish the statement: You are concerned that the use of artificial intelligence could lead to ...

(% - EU)

	... situations where it is unclear who is responsible, for example in case of accidents caused by self-driving cars	... discrimination in terms of age, gender, race or nationality, for example in taking decisions on recruitment, creditworthiness, etc.	... situations where there is nobody to complain to in case of problems	None of the above	All of the above (SPONTANEOUS)	Don't know
EU27	43	36	33	12	4	9
Gender						
Man	44	37	35	12	4	7
Woman	43	35	32	12	4	11
Age						
15-24	51	34	30	11	4	6
25-39	46	36	36	11	4	5
40-54	46	41	35	10	3	5
55 +	37	33	31	13	3	15
Education (End of)						
15-	35	27	28	15	3	20
16-19	44	35	34	11	4	8
20+	45	42	36	10	3	6
Still studying	51	36	30	11	4	6
Socio-professional category						
Self-employed	45	35	33	12	5	4
Managers	47	45	36	10	3	3
Other white collars	48	38	35	9	4	5
Manual workers	45	35	35	12	4	7
House persons	41	32	33	11	5	12
Unemployed	41	39	36	10	4	10
Retired	35	32	30	14	3	17
Students	51	36	30	11	4	6
Difficulties paying bills						
Most of the time	41	31	37	12	4	10
From time to time	45	35	35	11	4	7
Almost never/ Never	43	37	32	12	3	9
Consider belonging to						
The working class	39	31	31	11	4	16
The lower middle class	44	36	36	12	3	7
The middle class	45	37	33	12	3	6
The upper middle class	44	46	37	11	2	3
The upper class	43	49	33	18	0	0
Use of the Internet						
Everyday	46	39	35	11	3	5
Often/ Sometimes	43	33	33	12	3	10
Never	30	21	24	16	5	24

IV. HOW TO ENSURE ETHICAL AI APPLICATIONS

More than half of Europeans believe that public policy intervention is needed to ensure the ethical development of artificial intelligence

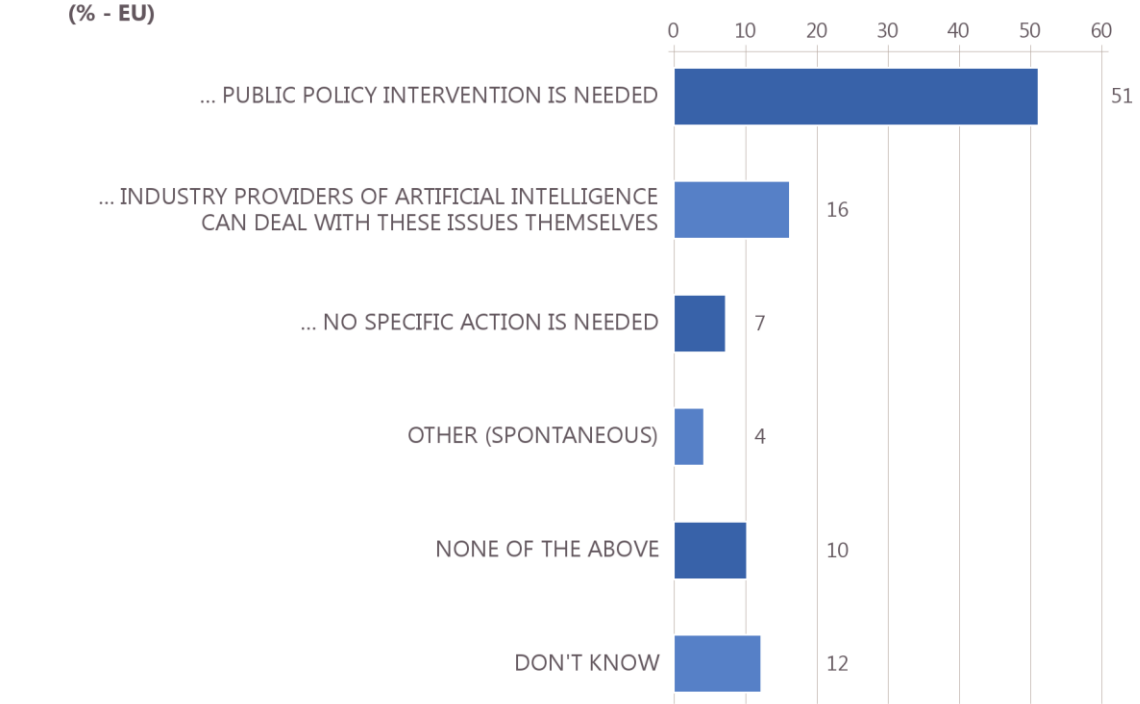
Respondents were asked what they believe to be the best way to ensure the ethical development of artificial intelligence applications[13]:

- More than half of Europeans (51%) think that 'public policy intervention is needed' to ensure the ethical development of artificial intelligence applications, a long way ahead of the other items;
- Fewer than one in five respondents (16%) think that 'industry providers of artificial intelligence can deal with these issues themselves';
- Fewer than one in ten respondents (7%) say that 'no specific action is needed' to ensure the ethical development of artificial intelligence applications.

Furthermore, one in ten respondents (10%) think that none of the three proposals can ensure the ethical development of artificial intelligence applications, while 4% *spontaneously* put forward a different proposal.

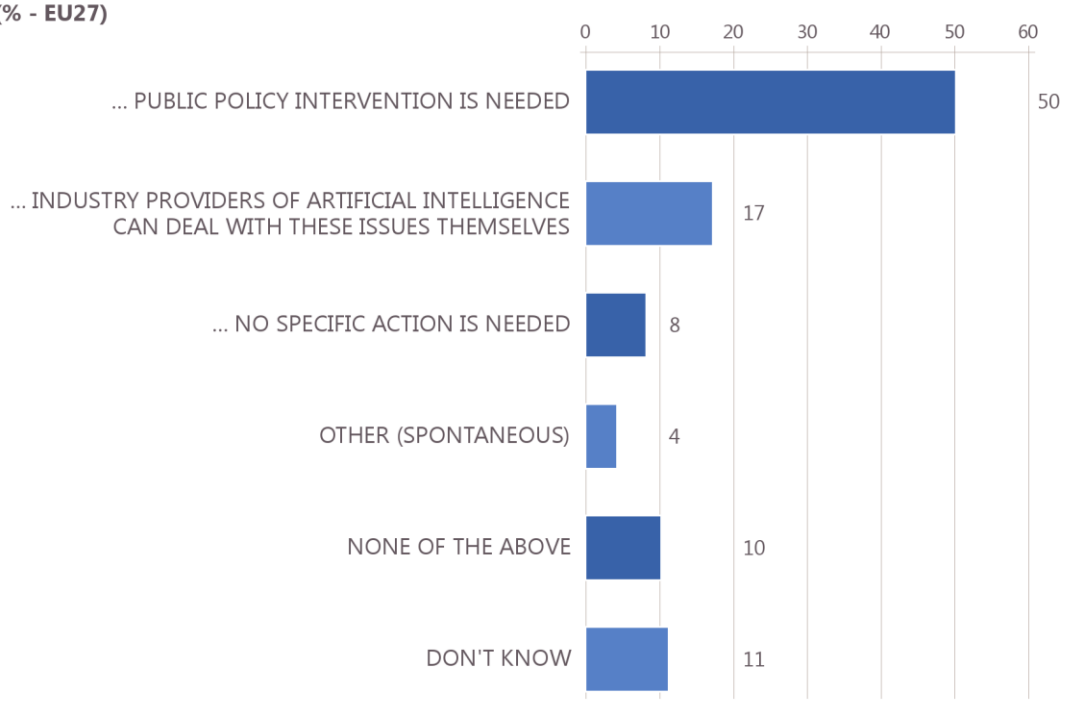
Finally, more than one in ten Europeans (12%) say they 'don't know'.

QF4 Which statement below do you agree most to finish the statement: To ensure that Artificial Intelligence applications are developed in an ethical manner ...
(% - EU)



[13] QF4. Which statement below do you agree most to finish the statement: To ensure that Artificial Intelligence applications are developed in an ethical manner...

QF4 Which statement below do you agree most to finish the statement: To ensure that Artificial Intelligence applications are developed in an ethical manner ...
(% - EU27)



A national analysis shows that a majority of respondents in 26 EU Member States believe that public policy intervention is needed to ensure the ethical development of artificial intelligence applications, with the highest proportions in the Netherlands (77%), Sweden (72%) and Denmark (63%). This item is mentioned far less frequently in Romania (19%), Hungary (30%), and Poland and Slovakia (both 31%).

Romania (39%) and Hungary (33%) are the only two EU Member States where a majority of respondents think that industry providers of artificial intelligence can deal with these issues themselves. At least a quarter of respondents also give this answer in Slovakia and Croatia (both 27%) and in Poland (25%). Fewer than one in ten hold this opinion in the Netherlands (7%), Denmark (8%), and Luxembourg and Sweden (both 9%).

The share of respondents who say that 'no specific action is needed' to ensure the ethical development of artificial intelligence is highest in Latvia (17%), Poland and Romania (both 16%), and lowest in Sweden (3%), the Netherlands and Spain (both 4%).

Respondents are most likely to say that none of these three proposals can ensure the ethical development of artificial intelligence applications in Czechia (18%) and France and Croatia (both 14%). They are least likely to do so in Portugal (4%) and Greece and Ireland (both 6%).

Finally, the 'don't know' rate is particularly high in three countries: Bulgaria (31%), Malta (30%) and Portugal (22%).

QF4 Which statement below do you agree most to finish the statement: To ensure that Artificial Intelligence applications are developed in an ethical manner ...
(%)

	... public policy intervention is needed	... industry providers of Artificial Intelligence can deal with these issues themselves	... no specific action is needed	Other (SPONTANEOUS)	None of the above	Don't know
EU28	51	16	7	4	10	12
EU27	50	17	8	4	10	11
BE	**49**	22	*10*	3	12	4
BG	**34**	19	*5*	3	8	31
CZ	**33**	21	*13*	7	18	8
DK	**63**	8	*6*	8	8	7
DE	**62**	12	*5*	3	12	6
EE	**40**	15	*7*	7	13	18
IE	**50**	24	*5*	2	6	13
EL	**51**	24	*5*	6	6	8
ES	**50**	13	*4*	3	12	18
FR	**56**	10	*5*	3	14	12
HR	**33**	27	*11*	3	14	12
IT	**51**	18	*9*	3	9	10
CY	**56**	11	*7*	3	10	13
LV	**33**	*17*	*17*	4	12	17
LT	**40**	18	*7*	6	11	18
LU	**58**	9	*5*	4	12	12
HU	30	**33**	*12*	3	8	14
MT	**34**	13	*9*	2	12	30
NL	**77**	7	*4*	3	7	2
AT	**40**	22	*13*	6	11	8
PL	**31**	25	*16*	3	7	18
PT	**46**	19	*7*	2	4	22
RO	19	**39**	*16*	4	8	14
SI	**48**	13	*9*	4	12	14
SK	**31**	27	*11*	5	12	14
FI	**60**	14	*5*	4	9	8
SE	**72**	9	*3*	4	8	4
UK	**57**	12	*5*	3	8	15

Highest percentage per country *Lowest percentage per country*

Highest percentage per item | Lowest percentage per item

Analysis of the socio-demographic data shows that a majority across all socio-demographic categories believe that public policy intervention is needed to ensure that artificial intelligence applications are developed in an ethical manner. However, this opinion is most widespread among Europeans aged 40 to 54 years (55%), people who continued education up to the age of 20 or beyond (60%), managers (66%), the self-employed (56%), people who never or almost never have difficulty paying their bills (55%), those who consider themselves to be middle class (69%) and those who use the internet every day (55%). It is far less common among Europeans who never use the internet (37%, but with a 'don't know' rate of 28%).

QF4 Which statement below do you agree most to finish the statement: To ensure that Artificial Intelligence applications are developed in an ethical manner ...

(% - EU)

	... public policy intervention is needed	... industry providers of Artificial Intelligence can deal with these issues themselves	... no specific action is needed	Other (SPONTANEOUS)	None of the above	Don't know
EU28	51	16	7	4	10	12
Gender						
Man	54	17	8	3	9	9
Woman	49	15	7	4	11	14
Age						
15-24	47	20	8	5	9	11
25-39	49	20	9	4	10	8
40-54	55	17	8	3	9	8
55 +	51	12	6	3	11	17
Education (End of)						
15-	43	11	6	3	12	25
16-19	49	18	8	3	10	12
20+	60	15	6	3	10	6
Still studying	51	20	8	5	8	8
Socio-professional category						
Self-employed	56	19	8	3	9	5
Managers	66	15	6	2	7	4
Other white collars	48	22	9	4	8	9
Manual workers	48	18	8	4	11	11
House persons	50	14	6	4	11	15
Unemployed	46	15	8	4	12	15
Retired	49	11	6	3	12	19
Students	51	20	8	5	8	8
Difficulties paying bills						
Most of the time	44	18	8	4	11	15
From time to time	43	21	10	4	11	11
Almost never/ Never	55	14	6	3	10	12
Consider belonging to						
The working class	46	14	7	3	11	19
The lower middle class	49	18	7	4	11	11
The middle class	53	17	8	4	10	8
The upper middle class	69	12	6	2	7	4
The upper class	54	17	17	2	8	2
Use of the Internet						
Everyday	55	17	7	4	9	8
Often/ Sometimes	44	18	9	4	12	13
Never	37	11	7	4	13	28

QF4 Which statement below do you agree most to finish the statement: To ensure that Artificial Intelligence applications are developed in an ethical manner ...

(% - EU)

	... public policy intervention is needed	... industry providers of Artificial Intelligence can deal with these issues themselves	... no specific action is needed	Other (SPONTANEOUS)	None of the above	Don't know
EU27	50	17	8	4	10	11
Gender						
Man	53	18	8	3	9	9
Woman	48	16	7	4	11	14
Age						
15-24	46	21	9	5	9	10
25-39	49	21	9	3	11	7
40-54	54	18	8	3	9	8
55 +	50	12	6	4	11	17
Education (End of)						
15-	42	12	6	3	12	25
16-19	48	19	9	3	10	11
20+	59	15	7	3	10	6
Still studying	50	21	8	5	8	8
Socio-professional category						
Self-employed	55	20	8	3	9	5
Managers	66	15	6	2	8	3
Other white collars	49	22	9	4	8	8
Manual workers	47	19	9	3	12	10
House persons	49	15	7	4	11	14
Unemployed	48	14	8	4	12	14
Retired	48	11	6	3	12	20
Students	50	21	8	5	8	8
Difficulties paying bills						
Most of the time	43	18	9	4	11	15
From time to time	43	21	11	3	11	11
Almost never/ Never	54	15	6	4	10	11
Consider belonging to						
The working class	43	15	7	3	12	20
The lower middle class	48	19	8	4	11	10
The middle class	53	18	8	3	10	8
The upper middle class	69	13	6	2	7	3
The upper class	56	17	15	2	8	2
Use of the Internet						
Everyday	54	18	8	3	10	7
Often/ Sometimes	44	19	9	4	11	13
Never	36	12	8	4	13	27

TABLES

QF1 Do you think that you should be informed when a digital service or mobile application is using artificial intelligence? **(%)**

	Yes, in every case	Yes, in cases where it isn't obvious to you	Yes, in cases where artificial intelligence may pose a risk	No, it is not important for you to know	No, you trust that the rules in place already protect you in any event	Don't know	Total 'Yes'	Total 'No'
EU28	51	15	14	8	5	7	80	13
EU27	50	15	15	8	5	7	80	13
BE	48	16	17	11	6	2	81	17
BG	37	18	17	10	2	16	72	12
CZ	43	15	19	12	7	4	77	19
DK	49	19	13	8	7	4	81	15
DE	58	15	12	4	5	6	85	9
EE	42	21	11	12	4	10	74	16
IE	46	23	12	6	4	9	81	10
EL	52	19	17	4	3	5	88	7
ES	61	8	9	8	4	10	78	12
FR	62	11	11	7	4	5	84	11
HR	39	20	19	10	6	6	78	16
IT	40	17	16	12	7	8	73	19
CY	56	13	13	8	3	7	82	11
LV	41	15	14	16	5	9	70	21
LT	40	12	18	18	3	9	70	21
LU	59	12	14	5	2	8	85	7
HU	30	23	19	14	7	7	72	21
MT	58	12	4	5	1	20	74	6
NL	54	20	18	4	3	1	92	7
AT	39	22	17	11	6	5	78	17
PL	39	14	20	8	8	11	73	16
PT	50	13	10	11	3	13	73	14
RO	22	19	29	14	8	8	70	22
SI	53	13	10	8	4	12	76	12
SK	39	20	17	8	8	8	76	16
FI	44	23	16	9	3	5	83	12
SE	54	19	14	6	4	3	87	10
UK	61	14	10	6	2	7	85	8

QF2 Which statements below, if any, would you select to finish the statement: Artificial intelligence can be best used ...
(%)
(MAX. 2 ANSWERS)

	... to improve medical diagnostics, develop personalised medicine, improve surgery	... to improve traffic management, reduce congestion, improve air quality	... to improve the monitoring of pollution, energy consumption levels	... to power robots, improve productivity and job safety	... to improve the safety and security of society	None of the above	All of the above (SPONTANEOUS)	Don't know
EU28	50	29	26	16	19	7	3	8
EU27	50	30	26	17	18	7	3	8
BE	48	39	26	12	32	7	0	2
BG	45	28	15	18	17	5	5	17
CZ	50	23	20	19	24	10	1	5
DK	41	32	28	33	19	4	3	5
DE	51	36	22	22	12	8	3	6
EE	41	27	20	17	22	8	7	9
IE	43	33	26	14	19	5	2	10
EL	56	32	28	14	20	5	7	5
ES	57	20	21	17	17	6	2	13
FR	59	27	27	12	25	8	0	8
HR	49	29	20	14	13	8	2	6
IT	43	29	34	15	17	8	3	7
CY	72	27	22	15	20	4	3	6
LV	52	34	16	18	23	6	1	11
LT	55	25	19	19	18	7	3	9
LU	52	35	24	10	20	6	2	9
HU	35	28	31	27	10	8	2	8
MT	33	37	22	7	11	8	10	20
NL	74	30	27	9	35	3	1	1
AT	41	34	25	23	11	11	5	7
PL	37	32	23	15	14	5	5	11
PT	53	27	25	8	31	3	6	11
RO	31	30	30	14	11	6	4	8
SI	53	32	18	13	15	8	4	11
SK	40	34	24	17	13	8	5	8
FI	42	33	25	38	14	6	0	5
SE	60	32	27	26	26	3	1	2
UK	54	26	26	12	25	6	3	7

QF3 Which statements below, if any, would you select to finish the statement: You are concerned that the use of artificial intelligence could lead to ...

(%)

(MAX. 2 ANSWERS)

	... discrimination in terms of age, gender, race or nationality, for example in taking decisions on recruitment, creditworthiness, etc.	... situations where it is unclear who is responsible, for example in case of accidents caused by self-driving cars	... situations where there is nobody to complain to in case of problems	None of the above	All of the above (SPONTANEOUS)	Don't know
EU28	36	43	33	12	3	9
EU27	36	43	33	12	4	9
BE	39	46	36	13	1	3
BG	26	42	26	6	8	20
CZ	34	42	31	18	2	6
DK	36	43	39	14	2	6
DE	39	48	24	15	4	7
EE	17	45	43	13	8	11
IE	38	46	27	8	2	13
EL	32	47	38	8	13	5
ES	38	37	33	10	3	13
FR	45	36	50	10	1	7
HR	37	40	23	14	3	8
IT	33	42	33	13	4	10
CY	37	38	41	10	4	12
LV	28	42	41	9	3	12
LT	19	37	38	16	4	13
LU	42	29	41	9	6	10
HU	21	55	26	11	3	10
MT	23	36	18	14	9	28
NL	57	48	27	11	1	0
AT	32	43	30	15	7	7
PL	22	45	29	7	6	15
PT	29	31	47	9	5	13
RO	26	49	25	10	3	10
SI	39	40	26	13	5	12
SK	28	45	30	12	6	9
FI	34	59	32	11	1	6
SE	46	46	33	17	1	3
UK	39	45	30	12	2	10

QF4 Which statement below do you agree most to finish the statement: To ensure that Artificial Intelligence applications are developed in an ethical manner …

(%)

	... public policy intervention is needed	... industry providers of Artificial Intelligence can deal with these issues themselves	... no specific action is needed	Other (SPONTANEOUS)	None of the above	Don't know
EU28	51	16	7	4	10	12
EU27	50	17	8	4	10	11
BE	49	22	10	3	12	4
BG	34	19	5	3	8	31
CZ	33	21	13	7	18	8
DK	63	8	6	8	8	7
DE	62	12	5	3	12	6
EE	40	15	7	7	13	18
IE	50	24	5	2	6	13
EL	51	24	5	6	6	8
ES	50	13	4	3	12	18
FR	56	10	5	3	14	12
HR	33	27	11	3	14	12
IT	51	18	9	3	9	10
CY	56	11	7	3	10	13
LV	33	17	17	4	12	17
LT	40	18	7	6	11	18
LU	58	9	5	4	12	12
HU	30	33	12	3	8	14
MT	34	13	9	2	12	30
NL	77	7	4	3	7	2
AT	40	22	13	6	11	8
PL	31	25	16	3	7	18
PT	46	19	7	2	4	22
RO	19	39	16	4	8	14
SI	48	13	9	4	12	14
SK	31	27	11	5	12	14
FI	60	14	5	4	9	8
SE	72	9	3	4	8	4
UK	57	12	5	3	8	15

TECHNICAL SPECIFICATIONS

Between the 14th November and the 29th November 2019, Kantar on behalf of Kantar Belgium carried out the wave 92.3 of the Eurobarometer survey, on request of the European Commission, Directorate-General for Communication, "Media monitoring and Eurobarometer" Unit.

The wave 92.3 includes the Standard Eurobarometer 92 and covers the population of the respective nationalities of the European Union Member States, resident in each of the 28 Member States and aged 15 years and over.

The Standard Eurobarometer 92 survey has also been conducted in the five candidate countries (Turkey, North Macedonia, Montenegro, Serbia and Albania) and in the Turkish Cypriot Community. In these countries and in the Turkish Cypriot Community, the survey covers the national population of citizens and the population of citizens of all the European Union Member States that are residents in these countries and territories and have a sufficient command of the national languages to answer the questionnaire.

	COUNTRIES	INSTITUTES	N° INTERVIEWS	FIELDWORK DATES		POPULATION 15+	PROPORTION EU28
BE	Belgium	Kantar Belgium (Kantar TNS)	1,012	14/11/2019	25/11/2019	9,464,647	2.19%
BG	Bulgaria	Kantar TNS BBSS	1,039	14/11/2019	24/11/2019	6,045,658	1.40%
CZ	Czechia	Kantar CZ	1,013	14/11/2019	25/11/2019	8,939,378	2.07%
DK	Denmark	Kantar Gallup	1,022	14/11/2019	27/11/2019	4,820,620	1.11%
DE	Germany	Kantar Deutschland	1,540	15/11/2019	29/11/2019	71,620,592	16.55%
EE	Estonia	Kantar Emor	1,001	14/11/2019	26/11/2019	1,103,907	0.26%
IE	Ireland	Kantar UK Limited	1,013	14/11/2019	25/11/2019	3,823,944	0.88%
EL	Greece	Taylor Nelson Sofres Market Research	1,008	15/11/2019	25/11/2019	9,194,498	2.13%
ES	Spain	TNS Investigación de Mercados y Opinión	1,008	15/11/2019	25/11/2019	39,679,883	9.17%
FR	France	Kantar Public France	1,014	15/11/2019	26/11/2019	54,806,403	12.67%
HR	Croatia	Hendal	1,013	15/11/2019	25/11/2019	3,511,100	0.81%
IT	Italy	Kantar Italia	1,023	15/11/2019	24/11/2019	52,403,797	12.11%
CY	Rep. Of Cyprus	CYMAR Market Research	505	14/11/2019	24/11/2019	723,947	0.17%
LV	Latvia	Kantar TNS Latvia	1,000	14/11/2019	28/11/2019	1,629,088	0.38%
LT	Lithuania	TNS LT	1,008	15/11/2019	25/11/2019	2,387,464	0.55%
LU	Luxembourg	ILReS	510	15/11/2019	27/11/2019	504,883	0.12%
HU	Hungary	Kantar Hoffmann	1,011	15/11/2019	24/11/2019	8,356,455	1.93%
MT	Malta	MISCO International	501	14/11/2019	28/11/2019	409,472	0.09%
NL	Netherlands	TNS NIPO	1,006	14/11/2019	27/11/2019	14,418,460	3.33%
AT	Austria	Das Österreichische Gallup Institut	1,018	21/11/2019	24/11/2019	7,549,265	1.74%
PL	Poland	Kantar Polska	1,008	15/11/2019	27/11/2019	32,189,898	7.44%
PT	Portugal	Marktest – Marketing, Organização e Formação	1,003	15/11/2019	26/11/2019	8,867,131	2.05%
RO	Romania	Centrul Pentru Studierea Opiniei si Pietei (CSOP)	1,058	15/11/2019	24/11/2019	16,478,152	3.81%
SI	Slovenia	Mediana DOO	1,007	15/11/2019	25/11/2019	1,756,203	0.41%
SK	Slovakia	Kantar Slovakia	1,007	15/11/2019	26/11/2019	4,593,419	1.06%
FI	Finland	Kantar TNS Oy	1,001	15/11/2019	29/11/2019	4,622,706	1.07%
SE	Sweden	Kantar Sifo	1,023	15/11/2019	27/11/2019	8,325,565	1.92%
UK	United Kingdom	Kantar UK Limited	1,010	15/11/2019	26/11/2019	54,402,027	12.57%
		TOTAL EU28	27,382	14/11/2019	29/11/2019	432,628,562	100%*

* It should be noted that the total percentage shown in this table may exceed 100% due to rounding

CY(tcc)	Turkish Cypriot Community	Lipa Consultancy	500	15/11/2019	25/11/2019	143,226	
TR	Turkey	TNS Piar	1,011	15/11/2019	27/11/2019	50,555,679	
MK	North Macedonia	TNS BRIMA	1,058	15/11/2019	25/11/2019	1,721,528	
ME	Montenegro	TNS Medium Gallup	529	15/11/2019	24/11/2019	501,030	
RS	Serbia	TNS Medium Gallup	1,017	15/11/2019	25/11/2019	6,161,584	
AL**	Albania	TNS BBSS	1046	21/11/2019	13/12/2019	2,221,572	
		TOTAL	32,543	14/11/2019	13/12/2019	493,933,181	

** On 26 November, North-western Albania was struck by a strong 6.4-magnitude earthquake, in which 51 people lost their lives. A large part of the country remained inaccessible and in emergency for a significant period after the disaster. Therefore, fieldwork had to be stopped until 3 December.

The basic sample design applied in all States is a multi-stage, random (probability) one. In each country, a number of sampling points was drawn with probability proportional to population size (for a total coverage of the country) and to population density.

In order to do so, the sampling points were drawn systematically from each of the "administrative regional units", after stratification by individual unit and type of area. They thus represent the whole territory of the countries surveyed according to the EUROSTAT NUTS II (or equivalent) and according to the distribution of the resident population of the respective nationalities in terms of metropolitan, urban and rural areas.

In each of the selected sampling points, a starting address was drawn, at random. Further addresses (every Nth address) were selected by standard "random route" procedures, from the initial address. In each household, the respondent was drawn, at random (following the "closest birthday rule"). If no one answered the interviewer in a household, or if the respondent selected was not available (not present or busy), the interviewer revisited the same household up to three additional times (four contact attempts in total). Interviewers never indicate that the survey is conducted on behalf of the European Commission beforehand; they may give this information once the survey is completed, upon request.

The recruitment phase was slightly different in the Netherlands and Sweden. In these countries, samples of addresses were selected using address or population registers, within each sampling point: the selection of households was done in a random manner. Households were then contacted by telephone (Netherlands and Sweden) and e-mail (Sweden) and an appointment was made.

All interviews were conducted face-to-face in people's homes and in the appropriate national language. As far as the data capture is concerned, CAPI (*Computer Assisted Personal Interview)* was used in those countries where this technique was available.

For each country a comparison between the responding sample and the universe is carried out. Weights are used to match the responding sample to the universe on gender by age, region and degree of urbanisation. For European estimates (i.e. EU average), an adjustment is made to the individual country weights, weighting them up or down to reflect their 15+ population as a proportion of the EU 15+ population.

The response rates are calculated by dividing the total number of complete interviews with the number of all the addresses visited, apart from ones that are not eligible but including those where eligibility is unknown.

For Standard Eurobarometer 92, the response rates for the EU28 countries, calculated by Kantar, are:

BE	46,4%	EL	28,9%	LT	46,9%	PT	40,2%
BG	44,6%	ES	35,7%	LU	20,1%	RO	63,4%
CZ	45,2%	FR	30,2%	HU	61,3%	SI	48,3%
DK	35,5%	HR	57,1%	MT	52,6%	SK	72,5%
DE	19,0%	IT	25,8%	NL	78,0%	FI	17,6%
EE	40,9%	CY	43,4%	AT	47,6%	SE	60,8%
IE	53,5%	LV	42,1%	PL	44,4%	UK	34,7%

Readers are reminded that survey results are estimations, the accuracy of which, everything being equal, rests upon the sample size and upon the observed percentage. With samples of about 1,000 interviews, the real percentages vary within the following confidence limits:

Statistical Margins due to the sampling process

(at the 95% level of confidence)

various sample sizes are in rows *various observed results are in columns*

	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	
	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	
N=50	6.0	8.3	9.9	11.1	12.0	12.7	13.2	13.6	13.8	13.9	N=50
N=500	1.9	2.6	3.1	3.5	3.8	4.0	4.2	4.3	4.4	4.4	N=500
N=1000	**1.4**	**1.9**	**2.2**	**2.5**	**2.7**	**2.8**	**3.0**	**3.0**	**3.1**	**3.1**	**N=1000**
N=1500	1.1	1.5	1.8	2.0	2.2	2.3	2.4	2.5	2.5	2.5	N=1500
N=2000	1.0	1.3	1.6	1.8	1.9	2.0	2.1	2.1	2.2	2.2	N=2000
N=3000	0.8	1.1	1.3	1.4	1.5	1.6	1.7	1.8	1.8	1.8	N=3000
N=4000	0.7	0.9	1.1	1.2	1.3	1.4	1.5	1.5	1.5	1.5	N=4000
N=5000	0.6	0.8	1.0	1.1	1.2	1.3	1.3	1.4	1.4	1.4	N=5000
N=6000	0.6	0.8	0.9	1.0	1.1	1.2	1.2	1.2	1.3	1.3	N=6000
N=7000	0.5	0.7	0.8	0.9	1.0	1.1	1.1	1.1	1.2	1.2	N=7000
N=7500	0.5	0.7	0.8	0.9	1.0	1.0	1.1	1.1	1.1	1.1	N=7500
N=8000	0.5	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.1	N=8000
N=9000	0.5	0.6	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.0	N=9000
N=10000	0.4	0.6	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.0	N=10000
N=11000	0.4	0.6	0.7	0.7	0.8	0.9	0.9	0.9	0.9	0.9	N=11000
N=12000	0.4	0.5	0.6	0.7	0.8	0.8	0.9	0.9	0.9	0.9	N=12000
N=13000	0.4	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.9	0.9	N=13000
N=14000	0.4	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	N=14000
N=15000	0.3	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	N=15000
	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	
	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	