



Special Eurobarometer 382

PUBLIC ATTITUDES TOWARDS ROBOTS

REPORT

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This survey has been requested by Directorate-General for Information Society and Media (INSFO) and co-ordinated by Directorate-General for Communication (DG COMM "Research and Speechwriting" Unit).

http://ec.europa.eu/public_opinion/index_en.htm

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Special Eurobarometer 382 / Wave EB77.1 – TNS Opinion & Social

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Public Attitudes towards Robots

Conducted by TNS Opinion & Social at the request of
Directorate-General for Information Society and Media (INSFO)

Survey co-ordinated by Directorate-General Communication

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INTRODUCTION

This report presents the results of a Special Eurobarometer survey into public attitudes towards robots. The aim of the survey is to gauge public opinion towards robots by measuring public perceptions, acceptance levels, worries and reservations among EU citizens aged 15 and over in the 27 Member States.

Robotics is a key technology for Europe's future competitiveness. Robots enable efficiency in all manufacturing and production sectors and contribute to employment in the European Union. Public perceptions of robots, are however, often influenced by misconceptions and fears. In order to improve the image of robots and to increase public acceptance, it is necessary to better understand public opinion about this technology.

The results of the survey are analysed in terms of the European average for the 27 Member States (EU27), then on a country-by-country basis, then at a socio-demographic level by comparing the results on the basis of gender, age, education, occupation and people's position on the social ladder. Where relevant other socio-demographic characteristics are also analysed. Finally, the results are examined on the basis of people's interest in science and technology and their general view of robots.

The first part begins with a short introduction in which EU citizens' interest in scientific discoveries and technological developments are discussed, as this is an important analysis variable. The chapter then looks at familiarity and personal experiences with robots and general and more specific attitudes towards robots.

The second part examines the application areas for robots and presents the areas where EU citizens believe robots should be used as a priority and where EU citizens believe robots should be banned.

In the last part, the focus is on the future of robots. The chapter examines the acceptance of tasks done by robots and considers when EU citizens believe it will become commonplace for robots to do household tasks.

This survey was carried out by TNS Opinion & Social network in the 27 Member States of the European Union between 25 February and 11 March 2012. 26 751 respondents from different social and demographic groups were interviewed face-to-face at home in their mother tongue on behalf of the Directorate-General for Information Society and Media (INSFO). The methodology used is that of Eurobarometer surveys as carried out by the Directorate-General for Communication ("Research and Speechwriting" Unit)¹. A technical note on the manner in which interviews were conducted by the Institutes within the TNS Opinion & Social network is appended as an annex to this report. Also included are the interview methods and confidence intervals².

¹ http://ec.europa.eu/public_opinion/index_en.htm

² The results tables are included in the annex. It should be noted that the total of the percentages in the tables of this report may exceed 100% when the respondent has the possibility of giving several answers to the question.

Note: In this report, countries are referred to by their official abbreviation. The abbreviations used in this report correspond to:

ABBREVIATIONS			
BE	Belgium	LV	Latvia
CZ	Czech Republic	LU	Luxembourg
BG	Bulgaria	HU	Hungary
DK	Denmark	MT	Malta
DE	Germany	NL	The Netherlands
EE	Estonia	AT	Austria
EL	Greece	PL	Poland
ES	Spain	PT	Portugal
FR	France	RO	Romania
IE	Ireland	SI	Slovenia
IT	Italy	SK	Slovakia
CY	Republic of Cyprus*	FI	Finland
LT	Lithuania	SE	Sweden
		UK	The United Kingdom
EU27	European Union – 27 Member States		
EU15	BE, IT, FR, DE, LU, NL, DK, UK, IE, PT, ES, EL, AT, SE, FI**		
NMS12	BG, CZ, EE, CY, LT, LV, MT, HU, PL, RO, SL, SK***		
EURO AREA	BE, FR, IT, LU, DE, AT, ES, PT, IE, NL, FI, EL, EE, SI, CY, MT, SK		

* Cyprus as a whole is one of the 27 European Union Member States. However, the 'acquis communautaire' has been suspended in the part of the country which is not controlled by the government of the Republic of Cyprus. For practical reasons, only the interviews carried out in the part of the country controlled by the government of the Republic of Cyprus are included in the 'CY' category and in the EU27 average.

** EU15 refers to the 15 countries forming the European Union before the enlargements of 2004 and 2007

*** The NMS12 are the 12 'new Member States' which joined the European Union during the 2004 and 2007 enlargements

* * * * *

The Eurobarometer web site can be consulted at the following address:

http://ec.europa.eu/public_opinion/index_en.htm

We wish to thank the people throughout European Union who have given their time to take part in this survey. Without their active participation, this survey would not have been possible.

EXECUTIVE SUMMARY

The key findings from this survey are:

- ◆ A quarter of EU citizens are 'very interested' in scientific discoveries and technological developments and half are 'moderately' interested, although the proportion expressing strong interest ranges from 9% in the Czech Republic to 43% in Cyprus and depends on age, education and occupation. Interest in scientific discoveries and technological developments is an important factor in explaining and understanding people's views about robots.
- ◆ The image that EU citizens have of a robot is more likely to be that of an instrument-like machine than that of a human-like machine but in Malta, Cyprus, Spain and Bulgaria both correspond equally well to people's idea of robots.
- ◆ Few EU citizens have experience with using robots: in total, 12% of EU citizens have used or are currently using a robot: six percent have experience with the use of a robot at home and six percent have used or are currently using a robot at work. Personal experience levels are highest in Slovakia, Poland, Italy and Slovenia and lowest in Greece, Bulgaria, Cyprus and Malta.
- ◆ The majority of EU citizens has a positive view of robots. While there are variations between countries, the majority of EU citizens in all Member States holds a positive opinion, with percentages ranging from 54% in Greece and Malta to 88% in Denmark and Sweden.
- ◆ EU citizens have well-defined specific attitudes about robots: on the one hand they express the utilitarian view that robots are useful and good because they do jobs that are either too hard or too dangerous for, or helpful to, people; on the other hand, they express a degree of caution, in that robots steal people's jobs and require careful management. However, there are considerable variations between Member States and between different social groups.
- ◆ EU citizens also have well-defined views about the application areas for robots and the areas in which the use of robots should be banned: they should be used as a priority in areas that are too difficult or too dangerous for humans, like space exploration (52% priority), manufacturing (50%), military and security (41%) and search and rescue tasks (41%); there is widespread agreement that robots should be banned in the care of children, the elderly or the disabled (60%) with large minorities also wanting a ban when it comes to other 'human' areas such as education (34%), healthcare (27%) and leisure (20%).

- ◆ A computation of the difference between the percentage of EU citizens viewing each of the possible application areas as a priority and the percentage considering that each of the areas should be banned reveals that support for the use of robots is most widespread when it comes to space exploration (a +51-point difference) and manufacturing (+46) while opposition to the use of robots is most widespread when it comes to the care of people and (-56) and education (-31).
- ◆ In line with these results, EU citizens are relatively comfortable about the idea of a robot assisting them at work (48% of respondents give a score from 7 to 10 on a scale from 1 to 10) but totally uncomfortable about the idea of having their children or elderly parents cared for by a robot (66% chose point 1 on the scale). Neither are EU citizens particularly keen to have a medical operation performed on them by a robot or to have their dog walked by a robot. For both tasks, the most frequent answer given by respondents in all Member States is point 1 on the 10-point scale.
- ◆ It will not become commonplace to have robots doing housework in the near future, according to the majority of EU citizens: overall, only 12% believe it is already commonplace (4%) or that it will be commonplace in 5 years' time (8%).

1. ATTITUDES TOWARDS ROBOTS

INTRODUCTION/CONTEXT: Interest in scientific discoveries and technological developments

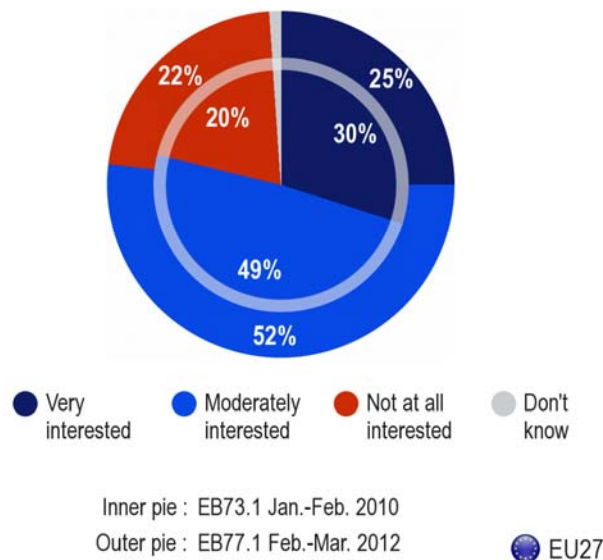
– Interest in scientific discoveries and technological developments has decreased since 2010 –

A 2010 Special Eurobarometer on general attitudes towards science and technology revealed that three EU citizens in ten were 'very interested' in new scientific discoveries and technological developments (30%), while a fifth were 'not at all interested' (20%). The rest of EU citizens were in between, saying they were 'moderately interested' (49%).

This current survey measures views and attitudes of EU citizens about a very specific scientific subject: robots. However, before presenting the results, it is interesting and helpful to examine the *current* level of public interest in scientific discoveries and technological developments³.

These results reveal that interest has decreased since January-February 2010: a quarter of EU citizens now claim to be 'very interested' in scientific discoveries and technological developments (25%), a 5-point decrease since the previous survey. Just over half are 'moderately' interested (52%; +3) and 22% are 'not at all interested' (+2).

QA1. Please tell me whether you are very interested, moderately interested or not at all interested in scientific discoveries and technological developments.



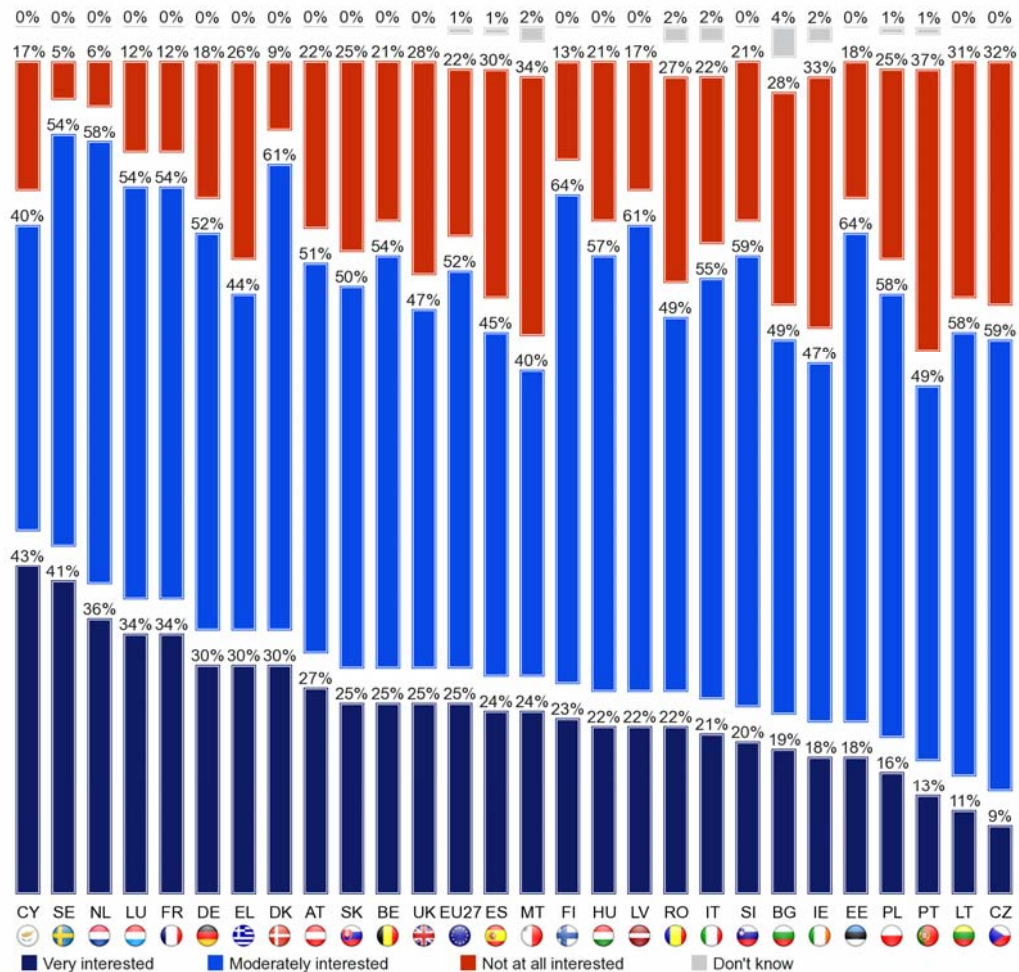
³ QA1 Please tell me whether you are very interested, moderately interested or not at all interested in scientific discoveries and technological developments

The **national results** reveal large differences between Member States regarding the level of interest in scientific discoveries and technological developments.

There are substantial differences in the proportions who are 'very interested' in scientific discoveries and technological developments. The graph below shows that more than a third of respondents are 'very interested' in Cyprus (43%), Sweden (41%), the Netherlands (36%), France (34%), and Luxembourg (34%).

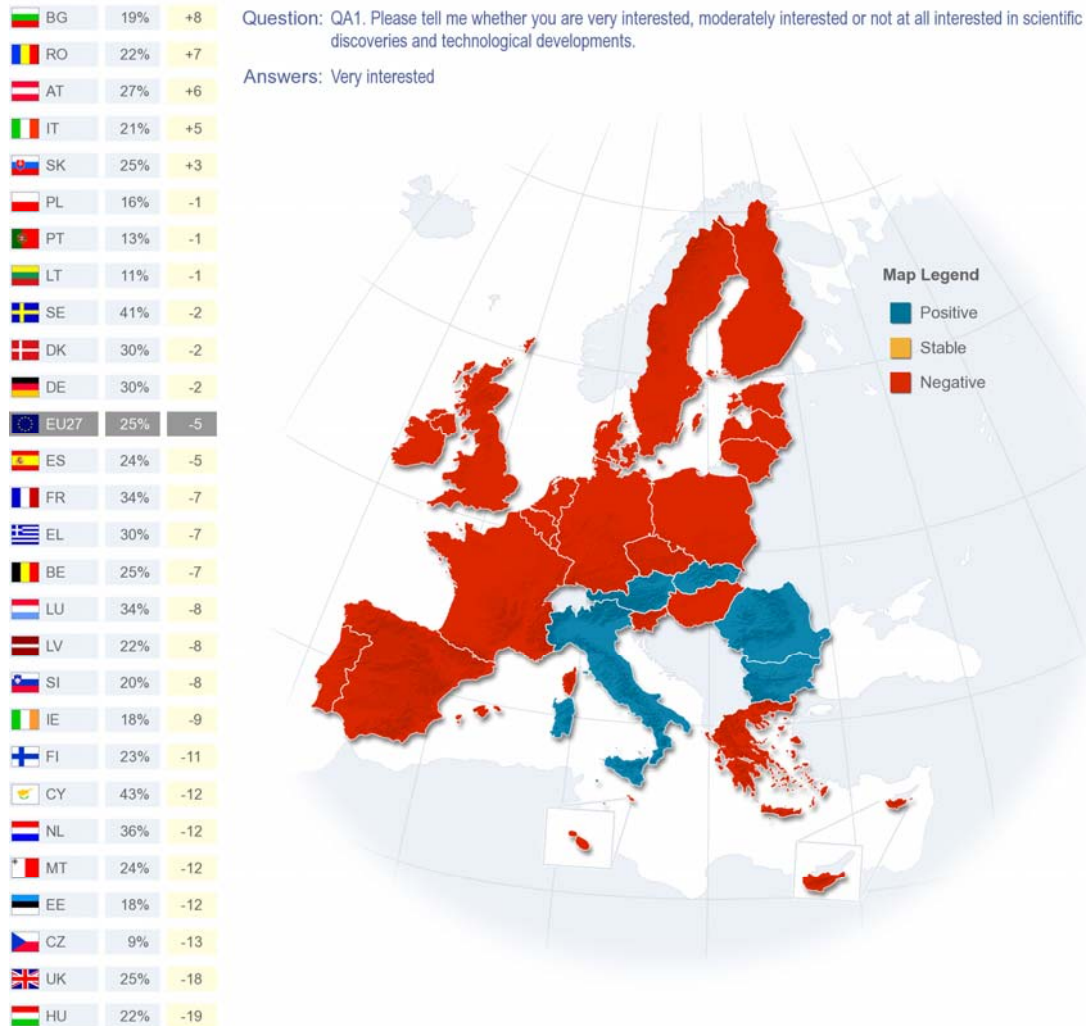
While on average just over one in five EU citizens (22%) is 'not at all interested' in scientific discoveries and technological developments, around a third of respondents take this position in Portugal (37%), Malta (34%), Ireland (33%) and the Czech Republic (32%).

QA1. Please tell me whether you are very interested, moderately interested or not at all interested in scientific discoveries and technological developments.



In comparison to 2010, increases of at least five points in the proportion of respondents that are 'very interested' have been recorded in Bulgaria (+8), Romania (+7), Austria (+6) and Italy (+5). At the same time, 16 Member States record noteworthy decreases in the proportion of respondents that are 'very interested' since 2010, with the largest falls recorded in Hungary (-19) and the UK (-18).

In the UK, Hungary, Greece, Spain, Malta and Ireland, the proportion of the population that is 'not at all interested' in scientific discoveries and technological developments has increased considerably since 2010. Again, the UK and Hungary stand out, as the greatest increases are recorded in these two countries (+15 and +13, respectively).



Evolution Jan./Feb. 2012 - Jan./Feb. 2010

At the **socio-demographic level**, the data show that some social groups are more interested in scientific discoveries and technological developments than others. On the whole, men are much more often 'very interested' in scientific discoveries and technological developments than women (33% of men, for 18% of women). Education is also an important factor: interest levels increase with the number of years people stayed in full-time education: 37% of respondents whose education ended at the age of 20 or older are 'very interested' in new scientific discoveries and technological developments for 23% of those who left school between 16 and 19, and just 13% of those whose studies ended before 16. Managers are also most likely to express a great interest (41%, for 23% of manual workers, and 15% of house-persons).

The analyses also point to a close relationship between interest in scientific discoveries and technological developments and use of modern technologies: 34% of EU citizens who use the Internet daily say that they are 'very interested' in scientific discoveries and technological developments.

The subsequent analysis of views and attitudes to robots will include a comparison between EU citizens who are very interested in scientific discoveries and technological developments, those who are 'moderately' interested and those who are 'not at all interested'.

QA1 Please tell me whether you are very interested, moderately interested or not at all interested in scientific discoveries and technological developments.

	Very interested	Moderately interested	Not at all interested	Don't know
EU27	25%	52%	22%	1%
Sex				
Male	33%	50%	16%	1%
Female	18%	54%	27%	1%
Education (End of)				
15-	13%	43%	42%	2%
16-19	23%	55%	22%	0%
20+	37%	53%	9%	1%
Still studying	31%	57%	12%	0%
Respondent occupation scale				
Self-employed	34%	51%	15%	0%
Managers	41%	51%	8%	0%
Other white collars	26%	59%	14%	1%
Manual workers	23%	55%	21%	1%
House persons	15%	51%	32%	2%
Unemployed	22%	52%	25%	1%
Retired	21%	46%	32%	1%
Students	31%	57%	12%	0%
Use of the Internet				
Everyday	34%	53%	13%	0%
Often/ Sometimes	20%	60%	19%	1%
Never	12%	46%	41%	1%

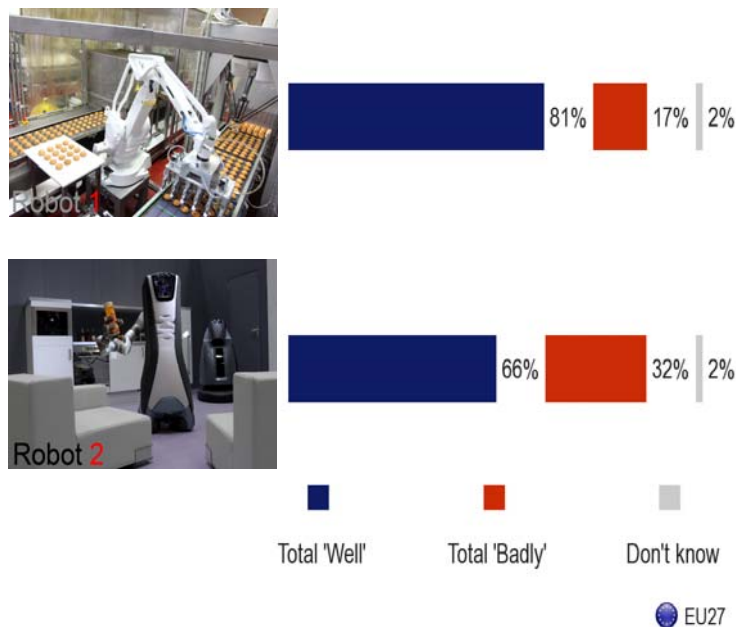
1.1. Familiarity with representations of robots

– The image of a robot is more likely to be that of an autonomous machine used in the workplace than a human-like machine that helps in the home –

Respondents were shown two different pictures of robots and were asked to what extent each picture corresponds with the idea they have of robots⁴.

When seeing the first picture of *an instrument-like robot* doing a factory floor activity (Robot 1), 81% of respondents say that it corresponds well to the idea that they have of robots while 17% say it corresponds badly to their idea of robots. Two percent lack an opinion. Shown the second picture of *a human-like robot* helping out in the home (Robot 2), 66% of respondents say that it corresponds well to the idea that they have of robots while 32% say that it corresponds badly. Here again, two percent have no opinion.

QA2. I'm going to show you two pictures. For each of them, please tell me to what extent it corresponds with the idea you have of robots.



The **national analyses** show that in most EU Member States, citizens tend to think of robots more as instrument-like machines than as human-like machines but public perceptions of robots vary somewhat from country to country. The extent to which the instrument-like robot (Robot 1) corresponds well to people's image of robots ranges from 56% in Romania to 95% in Sweden. For the human-like robot (Robot 2), the figures range from 52% in Romania to 80% in Bulgaria.

⁴ QA2 I'm going to show you two pictures. For each of them, please tell me to what extent it corresponds with the idea you have of robots. Picture Robot 1 and Picture Robot 2

























































In Malta, respondents made no distinction at all between the two pictures: both the instrument-like machine and the human-like machine correspond well to the idea that 65% of respondents have of robots. Nor do the two images produce meaningfully different replies in Cyprus (75% for picture 1 and 74% for picture 2), Spain (75% and 73%) and Bulgaria (83% and 80%). In Romania, Italy and Ireland, the degree to which the two pictures produce different responses also is small (five points in Ireland and four points in Romania and Italy).

At the other extreme, the survey shows that the tendency to think of robots more as instrument-like machines than as human-like machines is greatest in Sweden (95% vs. 63%), Germany (87% vs. 56%), Finland (93% vs. 65%), Denmark (94% vs. 66%), Belgium (86% vs. 59%), France (86% vs. 62%) and Luxembourg (79% vs. 58%). The difference between the two images of robots is above 20 points in these seven Western and Northern European countries.

Overall, it should be noted that in every country, for more than half of respondents, both images correspond well with the idea people have of robots.

QA2. I'm going to show you two pictures. For each of them, please tell me to what extent it corresponds with the idea you have of robots.



Total 'Well'		Total 'Well'			
	EU27	81%		EU27	66%
	SE	95%		BG	80%
	DK	94%		CZ	78%
	FI	93%		SK	76%
	NL	91%		IE	75%
	SI	88%		CY	74%
	SK	88%		ES	73%
	CZ	87%		IT	73%
	DE	87%		LV	73%
	BE	86%		PL	73%
	FR	86%		NL	72%
	LV	85%		SI	72%
	HU	84%		AT	67%
	BG	83%		DK	66%
	PL	83%		EE	66%
	UK	82%		HU	66%
	EE	80%		LT	65%
	IE	80%		MT	65%
	LU	79%		FI	65%
	LT	78%		UK	64%
	IT	77%		SE	63%
	ES	75%		FR	62%
	CY	75%		EL	61%
	AT	74%		BE	59%
	FI	69%		LU	58%
	MT	65%		DE	56%
	PT	64%		PT	55%
	RO	56%		RO	52%

The image of robots also differs meaningfully at the **socio-demographic level**, even if here again people in all social groups are more likely to think of robots as machines doing factory floor activities than as human-like machines.

Men are somewhat more likely than women to say that each image corresponds well to their idea of robots: in the case of the instrument-like robot the level of identification is 85% for men and 78% for women and in the case of the human-like robot the corresponding figures are 68% for men and 64% for women.

The age analyses show that the likelihood of thinking of robots more as instrument-like machines than as human-like machines increases with age. The difference between the two pictures is just six points among EU citizens aged 15 to 24 (81% and 75%) and increases to 20 points among EU citizens aged 55 and over (77% and 57%).

The extent to which EU citizens identify with both images of robots increases with the number of years they stayed in full-time education. However, among all educational groups the tendency is to identify more with the instrument-like robot than with the human-like robot.

There are also differences depending on people's position on the social scale: the higher their position, the more likely they are to identify with both images of robots. All three groups in this category are more likely to identify with the instrument-like robot than with the human-like robot.

The survey also points to large differences at the **attitudinal level**. 91% of respondents who are 'very interested' in science say that the picture of the instrument-like machine corresponds well to their image of robots, compared to 63% of respondents who are 'not at all interested'. For the image of the human-like robot, the corresponding figures are 75% and 51%, respectively. When it comes to people's general views of robots, the survey shows that 89% of respondents with a positive view say that the instrument-like machine corresponds well to their image of robots, compared with 61% of those with a negative view of robots. For the human-like robot, the figures are 73% and 46%, respectively. Finally, in terms of Internet use, the survey shows that identification levels are 87% and 71% respectively among daily Internet users, compared to 72% and 55% respectively among non-users.

1.2. Personal experience of robots

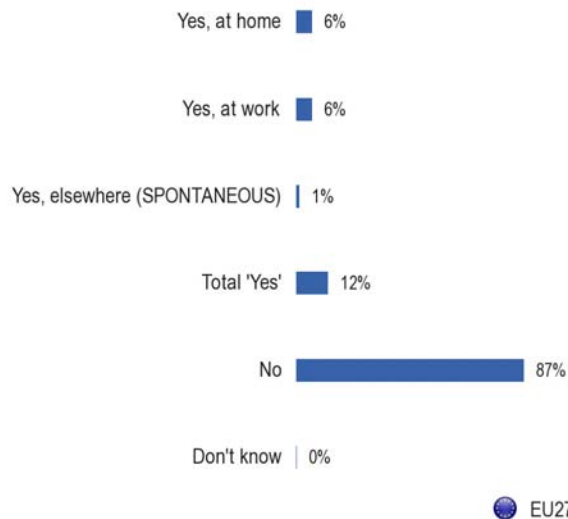
– Few EU citizens have experience with using robots –

To measure the use of robots at home or at work among the EU population, respondents were first provided with the following definition of robots:

"A robot is defined here as an autonomous machine which can assist humans in everyday tasks e.g. as a kind of co-worker helping on the factory floor or as a robot cleaner, or in activities which may be dangerous for humans, like search and rescue in disasters. Robots can come in many shapes or sizes, including human-like. Traditional kitchen appliances, such as a blender or a coffee maker, are not robots."

Personal experience of robots is quite limited among EU citizens: based on the definition above, six percent of respondents have experience of the use of a robot at home and six percent have used or are currently using robots at work. A small proportion of EU citizens say *spontaneously* that they have already used robots in another context (1% answer 'yes, elsewhere'), making an overall proportion of 12% who have some personal experience of robots. Conversely, 87% of EU citizens have never used a robot in their life⁵.

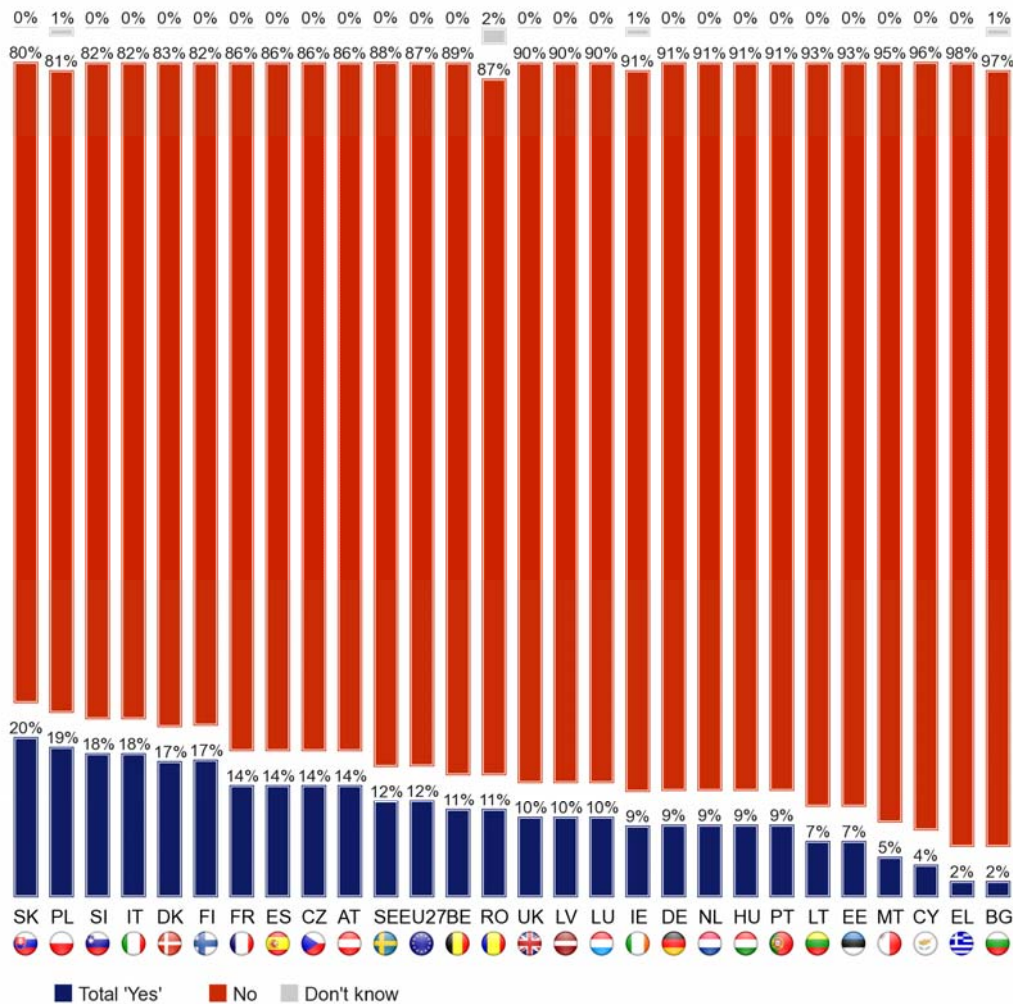
QA3. Have you ever used, or are you currently using such robots at home or at work (e.g. a robotic vacuum cleaner at home or an industrial robot at work)?



⁵ QA3 Have you ever used, or are you currently using such robots at home or at work (e.g. a robotic vacuum cleaner at home or an industrial robot at work)? (MULTIPLE ANSWERS POSSIBLE)

The largest differences in the extent to which EU citizens have personal experience with robots are found at the **national level**. The analyses show that experience with robots (at home, at work or somewhere else) is most widespread in Slovakia (20%), followed by Poland (19%), Slovenia, Italy (both 18%), Denmark and Finland (both 17%). **For the use of robots in the home, Italy tops the list (14%), while Finland tops the list when it comes to personal experience of using robots at work (12%).** The countries where personal experience of robots is least widespread are Greece, Bulgaria (both 2%), Cyprus (4%) and Malta (5%).

QA3. Have you ever used, or are you currently using such robots at home or at work (e.g. a robotic vacuum cleaner at home or an industrial robot at work)?



The **socio-demographic analyses** show that men use or have used robots somewhat more often than women at work (10% vs. 3%). There are no differences in the extent to which men and women use or have used robots at home. The age analyses show that there are only marginal differences between the various age groups, with respondents in the 'working age groups' slightly more likely to use robots at work than EU citizens who have not yet reached or have already passed the 'working age'.

In terms of education, the only notable difference also relates to the experience of using robots at work, which is slightly more widespread (9%) among EU citizens who left full-time education aged 20 or older than it is among those who left school at an earlier age (6% for those who left school aged 16-19 and 4% for those who left school aged 15 or younger). In terms of occupation, both managers and manual workers are more likely to have personal experience with robots at work (both 10%) than other occupational groups.

The **attitudinal analyses** reveal slightly larger differences: 18% of EU citizens who are 'very interested' in science and technology have used robots (7% at home and 11% at work), compared to just 7% of those who are 'not at all interested'; 16% of respondents who have a positive view of robots have personal experience of using them (7% at home and 8% at work), compared to just 5% of those who have a negative view of robots.

QA3 Have you ever used, or are you currently using such robots at home or at work (e.g. a robotic vacuum cleaner at home or an industrial robot at work)? (MULTIPLE ANSWERS POSSIBLE)

	Yes, at home	Yes, at work	Yes others (SPONTANEOUS)	Total 'Yes'	No
EU27	6%	6%	1%	12%	87%
Sex					
Male	6%	10%	2%	16%	84%
Female	6%	3%	1%	9%	90%
Age					
15-24	6%	5%	2%	12%	88%
25-39	7%	9%	1%	16%	84%
40-54	6%	8%	1%	15%	85%
55 +	5%	4%	1%	9%	91%
Education (End of)					
15-	5%	4%	1%	9%	91%
16-19	5%	6%	1%	12%	87%
20+	6%	9%	1%	15%	85%
Still studying	7%	4%	2%	12%	87%
Respondent occupation scale					
Self-employed	6%	6%	1%	12%	87%
Managers	6%	10%	1%	15%	85%
Other white collars	8%	6%	1%	14%	86%
Manual workers	6%	10%	2%	16%	84%
House persons	6%	1%	1%	8%	91%
Unemployed	7%	8%	2%	15%	85%
Retired	4%	4%	1%	9%	91%
Students	7%	4%	2%	12%	87%
Interested in science and technology					
Very	7%	11%	1%	18%	82%
Moderately	6%	6%	2%	12%	87%
Not at all	4%	3%	1%	7%	93%
View of robots					
Positive	7%	8%	2%	16%	84%
Negative	2%	2%	1%	5%	95%

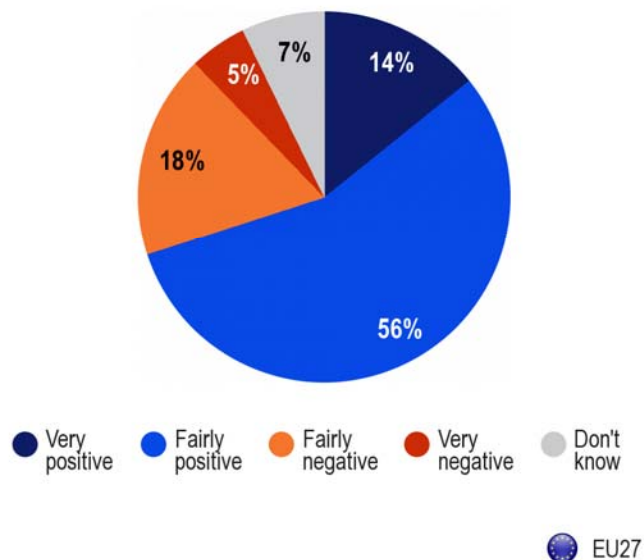
1.3. Views on robots

1.3.1. Overall view

– A majority of EU citizens has a positive view of robots –

Overall, at 70%, the proportion of EU citizens with a positive view of robots is high: the majority has a 'fairly positive' view (56%) with a further 14% saying that they have a 'very positive' view of robots⁶. Close to one EU citizen in five has a 'fairly negative' view (18%) while one EU citizen in twenty has a 'very negative' view (5%): overall, slightly less than a quarter of Europeans have a negative view of robots (23%). Seven percent lack an opinion.

QA4. Generally speaking, do you have a very positive, fairly positive, fairly negative or very negative view of robots?



The **national analyses** show that an absolute majority of EU citizens in all Member States has a positive view of robots, but there are nonetheless large differences between countries. The proportion of EU citizens holding positive views about robots ranges from 54% in Greece and Malta to 88% in Denmark and Sweden. Negative views range from just 9% in Denmark to 44% in Greece.

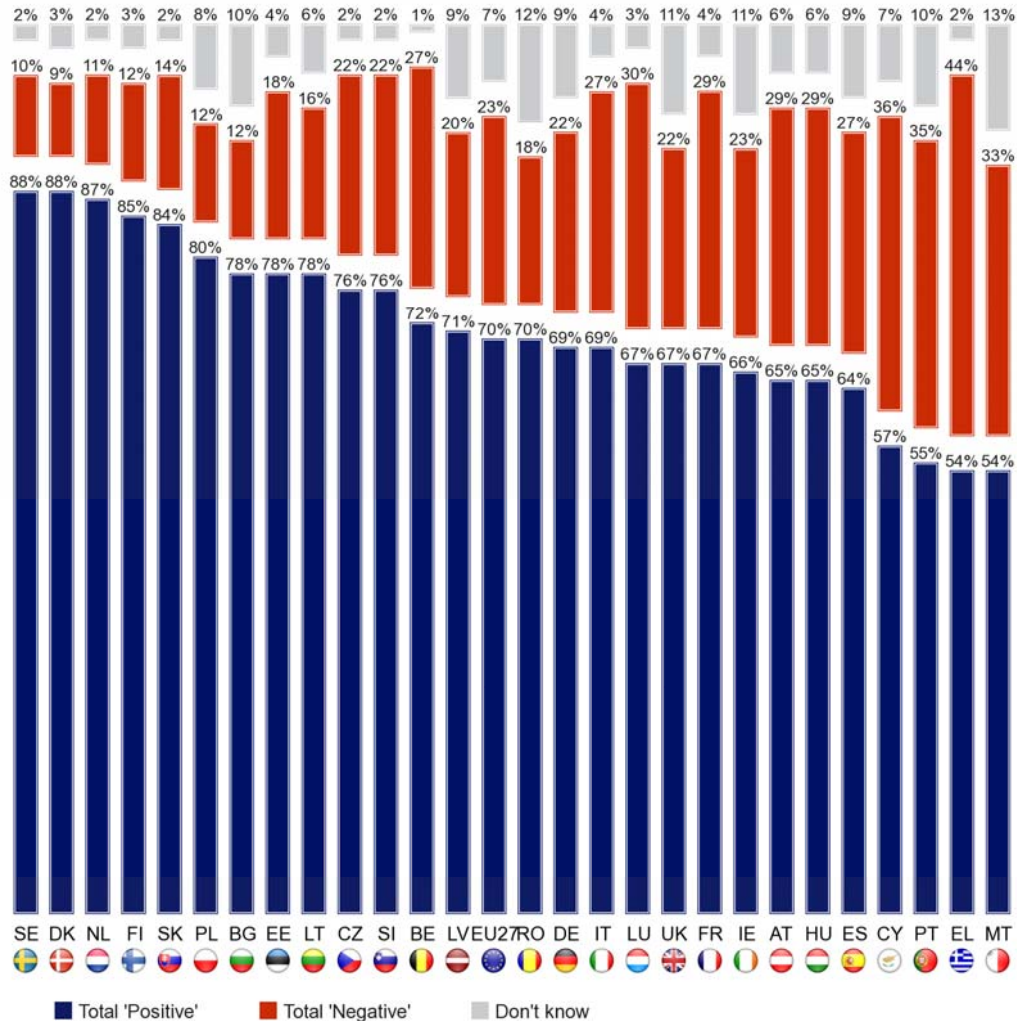
With a difference of just ten points between those with a positive view and those with a negative view, public opinion on robots is most evenly divided in Greece.

⁶ QA4 Generally speaking, do you have a very positive, fairly positive, fairly negative or very negative view of robots?

There is no other country where the difference between those with a positive view and those with a negative view is this small, the next smallest difference being 20 points in Portugal (55% positive view vs. 35% negative view) and 21 points in Cyprus (57% vs. 36%) and Malta (54% vs. 33%). After these countries, the difference jumps to 36 points in Austria and Hungary (in both countries, 65% have a positive view of robots against 29% with a negative view). The difference between those with a positive view of robots and those with a negative view is highest in Denmark (79 points), followed by Sweden (78 points) and the Netherlands (76 points).

This analysis points to the strong presence of a North-South divide when it comes to attitudes to robots, with EU citizens in the northern countries holding far more positive views than in the southern countries. Meanwhile, an analysis between the EU15 and NMS12 countries reveals that EU citizens in the latter group tend to hold a more positive view of robots than those in the EU15 countries (75% vs. 68%).

QA4. Generally speaking, do you have a very positive, fairly positive, fairly negative or very negative view of robots?



At the **socio-demographic level**, the survey reveals that an absolute majority in all social groups in the EU has an overall positive view of robots, but again there are differences between groups in the strength of the results. In terms of gender, the analyses show that men more often have a positive view of robots than women (76% vs. 65%) and in particular that men more often have a 'very positive' view (19% vs. 10%).

The proportion of respondents with a positive view decreases with age: 79% of EU citizens aged 15 to 24 have a positive view of robots compared to 62% of those aged 55 and over.

The reverse relationship is found for education: the proportion with a positive view increases with the length of time people spent in full-time education, and is highest among students (84%). The same relationship is found depending on where people place themselves on the social scale: 64% of respondents who place themselves in the lowest positions have positive views and this increases to 79% of respondents who place themselves at the top of the scale.

There are also large differences between occupational groups: 82% of managers have positive views compared to 57% of people who are looking after the home.

The **attitudinal analyses** point to a strong relationship between overall views of robots and interest in science and technology: 86% of EU citizens who are 'very interested' hold positive views about robots, compared to just 42% of those who are 'not at all interested' in science and technology. Among this last group, a relative majority has a negative view of robots (44%). The few EU citizens with personal experience of using robots are also more likely to have a positive view of robots (88%) than the wide majority who lack this experience (68%).

QA4 Generally speaking, do you have a very positive, fairly positive, fairly negative or very negative view of robots?

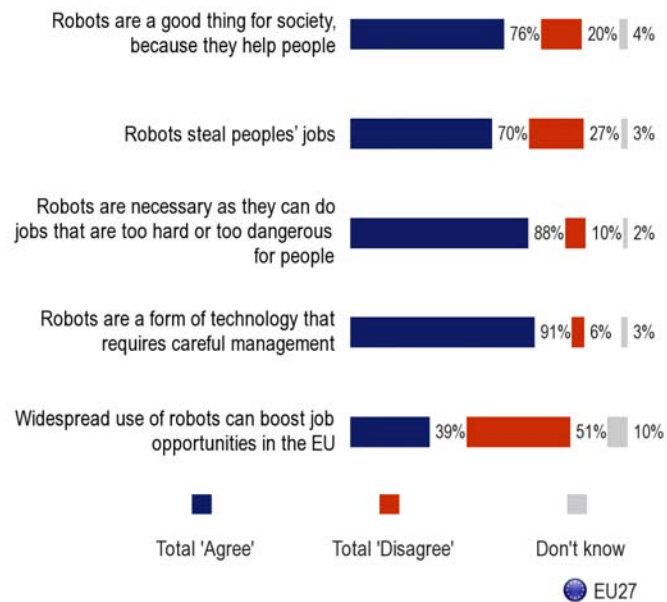
	Very positive	Fairly positive	Fairly negative	Very negative	Total 'Positive'	Total 'Negative'	Don't know
EU27	14%	56%	18%	5%	70%	23%	7%
Sex							
Male	19%	57%	14%	5%	76%	19%	5%
Female	10%	55%	21%	6%	65%	27%	8%
Age							
15-24	19%	60%	13%	3%	79%	16%	5%
25-39	15%	59%	15%	5%	74%	20%	6%
40-54	14%	58%	17%	5%	72%	22%	6%
55 +	12%	50%	22%	8%	62%	30%	8%
Education (End of)							
15-	8%	44%	27%	11%	52%	38%	10%
16-19	13%	56%	18%	6%	69%	24%	7%
20+	18%	62%	12%	3%	80%	15%	5%
Still studying	23%	61%	11%	2%	84%	13%	3%
Respondent occupation scale							
Self-employed	16%	61%	14%	5%	77%	19%	4%
Managers	20%	62%	10%	2%	82%	12%	6%
Other white collars	12%	64%	14%	5%	76%	19%	5%
Manual workers	13%	56%	20%	5%	69%	25%	6%
House persons	8%	49%	24%	8%	57%	32%	11%
Unemployed	15%	53%	19%	6%	68%	25%	7%
Retired	11%	50%	22%	8%	61%	30%	9%
Students	23%	61%	11%	2%	84%	13%	3%
Self-positioning on the social staircase							
Low (1-4)	12%	52%	21%	7%	64%	28%	8%
Medium (5-6)	13%	55%	19%	6%	68%	25%	7%
High (7-10)	18%	61%	13%	4%	79%	17%	4%
Interested in science and technology							
Very	29%	57%	9%	2%	86%	11%	3%
Moderately	11%	64%	17%	3%	75%	20%	5%
Not at all	5%	37%	29%	15%	42%	44%	14%
Use of robots							
Total 'Yes'	28%	60%	8%	1%	88%	9%	3%
Yes, at home	27%	62%	8%	1%	89%	9%	2%
Yes, at work	31%	59%	6%	1%	90%	7%	3%
No	12%	56%	19%	6%	68%	25%	7%

1.3.2. Specific attitudes

– 'Robots are necessary and good but also pose a threat and thus require careful management' –

Next, respondents were read a set of statements about robots to get an understanding of more specific attitudes⁷. The analysis of the answers to these five statements reveals that public opinion about robots is well-defined and robust, with EU citizens clearly expressing their views and concerns: 'don't know' rates never exceed 10% on this question. On the one hand, EU citizens express a utilitarian view in that the majority agree that "robots are necessary as they can do jobs that are too hard or too dangerous for people" (88%) and that "robots are a good thing for society because they help people" (76%). On the other hand, the broad consensus with the statement that "robots are a form of technology that requires careful management" suggests that robots are seen to pose a potential threat: 52% of respondents 'strongly agree' and 39% 'tend to agree' with this statement, while only 6% disagree and 3% 'don't know'. The finding that 70% of respondents agree with the statement that "robots could steal people's jobs" is a further expression of scepticism. There is less consensus about the view that "widespread use of robots can boost job opportunities in the EU": 39% of respondents agree with this statement while 51% disagree (and 10% have no opinion).

QA5. Please tell me to what extent you agree or disagree with each of the following statements about robots.

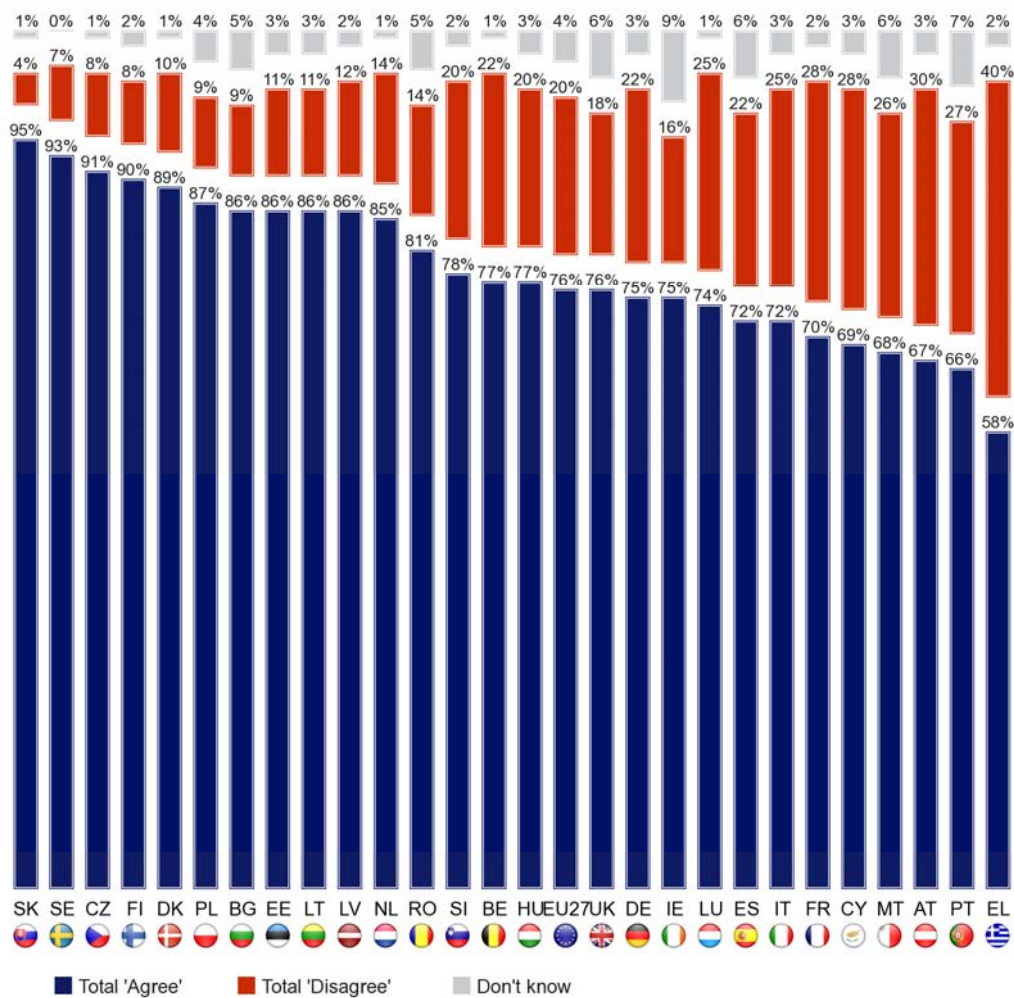


⁷ QA5 Please tell me to what extent you agree or disagree with each of the following statements about robots

Statement 1: Robots are a good thing for society, because they help people

The **national analyses** show that an absolute majority of EU citizens in all Member States agree that robots are a good thing for society, because they help people. Agreement levels range from 58% in Greece to over 90% in the Czech Republic (91%), Sweden (93%) and Slovakia (95%). Disagreement is most widespread in Greece (40%), followed by Austria (30%). The proportion of respondents answering ‘don’t know’ is below ten percent in all Member States.

QA5.1. Please tell me to what extent you agree or disagree with each of the following statements about robots.
Robots are a good thing for society, because they help people



The **socio-demographic analyses** show that an absolute majority in all social groups in the EU agrees with the statement. Agreement is slightly higher among men than among women (79% vs. 74%). It increases the longer people stayed in full-time education and the higher respondents place themselves on the social scale, but decreases with age. Those who stayed in full-time education the longest have the highest level of agreement (84%) while respondents who left full-time education aged 15 or younger (63%) are least likely to agree with the statement.

The **attitudinal analyses** reveal larger differences; 87% of EU citizens who are 'very interested' in science and technology agree, compared to 59% of those who are 'not at all interested'. The most influential factor is people's overall view of robots: 90% of EU citizens with a positive view agree that robots are a good thing for society, because they help people, compared to 39% of EU citizens with a negative overall view of robots.





























QA5.1 Please tell me to what extent you agree or disagree with each of the following statements about robots.

Robots are a good thing for society, because they help people

	Total 'Agree'	Total 'Disagree'	Don't know
EU27	76%	20%	4%
Sex			
Male	79%	18%	3%
Female	74%	22%	4%
Education (End of)			
15-	63%	31%	6%
16-19	76%	20%	4%
20+	84%	14%	2%
Still studying	83%	15%	2%
Interested in science and technology			
Very	87%	12%	1%
Moderately	78%	19%	3%
Not at all	59%	33%	8%
View of robots			
Positive	90%	8%	2%
Negative	39%	56%	5%

Statement 2: Robots steal people's jobs

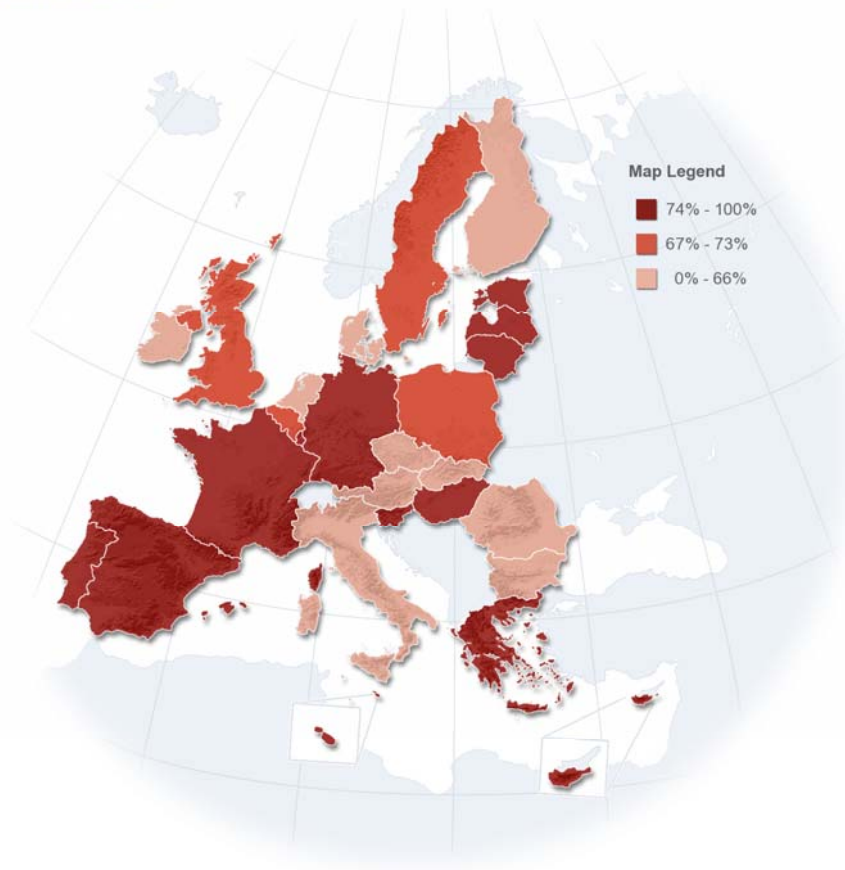
The **national analyses** show that an absolute majority of EU citizens in all Member States also agrees that robots steal people's jobs, but the ranking of countries is very different. There is some evidence of a North-South divide: agreement is lowest in the Netherlands (51%) and Finland (55%) and highest in Portugal (89%), followed by Spain (84%), Greece, Cyprus (both 83%) and Malta (82%). The proportion of respondents answering 'don't know' is below ten percent in all Member States.

 PT	89%
 ES	84%
 EL	83%
 CY	83%
 MT	82%
 LU	79%
 LV	78%
 HU	78%
 LT	78%
 EE	77%
 SI	76%
 DE	76%
 FR	74%
 BE	72%
 EU	70%
 PL	70%
 SE	67%
 UK	67%
 IT	64%
 RO	63%
 IE	63%
 BG	61%
 CZ	60%
 SK	60%
 DK	59%
 AT	58%
 FI	55%
 NL	51%

Question: QA5.2. Please tell me to what extent you agree or disagree with each of the following statements about robots.

Option: Robots steal peoples' jobs

Answers: Total 'Agree'



The **socio-demographic analyses** show that all social groups in the EU agree with this statement. Women more often than men consider that robots steal people's jobs (74% vs. 68%) and respondents who left full-time education aged 15 or younger are more likely to agree than people who stayed in school until the age of 20 or older (78% vs. 61%). The latter category represents the social group with the lowest level of agreement, whereas EU citizens who left full-time education aged 15 or younger and unemployed respondents (both 78%) are the most likely to agree with the statement.

Generally speaking, the view that robots steal jobs is more widespread among the most precarious categories of the EU population. This is also evident when occupational groups are compared: while 57% of managers believe that robots steal people's jobs, this increases to 75% among manual workers.

Manual workers who have already used robots at work are slightly less likely to consider that robots steal peoples' jobs compared with those who do not use robots at work (71%⁸ vs 75%⁹).

The **attitudinal analyses** show that 62% of EU citizens who are 'very interested' in science and technology agree, compared to 77% of those who are 'not at all interested'. EU citizens with a negative overall view of robots most often agree that robots steal people's jobs (85%). Among EU citizens with a positive view of robots, this figure is considerably lower (66%), though it remains the majority view.

⁸ 71% from 555 manual workers who use robots at work agree with the statement.

⁹ 75% from 4944 manual workers who do not use robots at work agree with the statement.





























QA5.2 Please tell me to what extent you agree or disagree with each of the following statements about robots.

Robots steal peoples' jobs

	Total 'Agree'	Total 'Disagree'	Don't know
EU27	70%	27%	3%
Sex			
Male	68%	30%	2%
Female	74%	23%	3%
Education (End of)			
15-	78%	18%	4%
16-19	73%	24%	3%
20+	61%	37%	2%
Still studying	69%	30%	1%
Respondent occupation scale			
Self-employed	64%	34%	2%
Managers	57%	41%	2%
Other white collars	68%	30%	2%
Manual workers	75%	23%	2%
House persons	77%	19%	4%
Unemployed	78%	20%	2%
Retired	72%	24%	4%
Students	69%	30%	1%
Interested in science and technology			
Very	62%	36%	2%
Moderately	73%	25%	2%
Not at all	77%	19%	4%
View of robots			
Positive	66%	32%	2%
Negative	85%	13%	2%

Statement 3: Robots are necessary as they can do jobs that are too hard or too dangerous for people

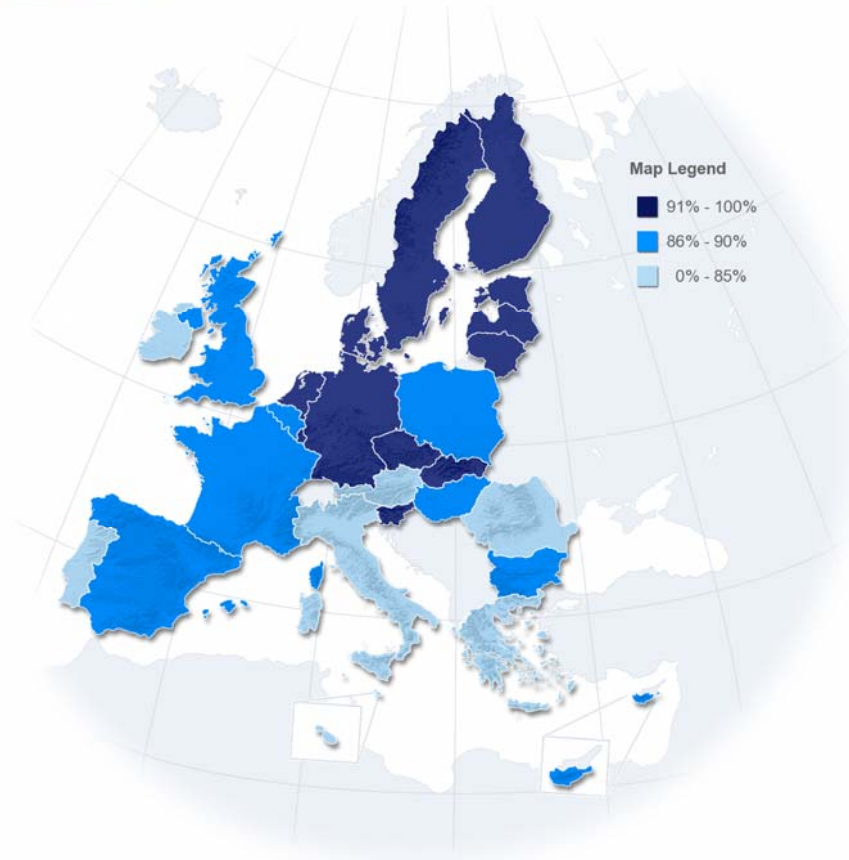
The **national analyses** show widespread agreement throughout the EU with the statement that robots are necessary as they can do jobs that are too hard or too dangerous for people. Agreement ranges from 75% in Greece to 97% in Sweden. In 13 of the 27 EU Member States at least nine out of ten citizens agree with the statement. Apart from Greece, Portugal (78%) is the only Member State where less than eight out of ten citizens agree.

 SE	97%
 SK	96%
 SI	96%
 LV	95%
 DK	95%
 NL	94%
 EE	94%
 DE	92%
 CZ	92%
 FI	92%
 LT	92%
 LU	91%
 FR	90%
 BE	89%
 BG	88%
 PL	88%
 EU	88%
 CY	88%
 HU	87%
 UK	87%
 ES	87%
 IE	84%
 AT	83%
 RO	82%
 MT	81%
 IT	80%
 PT	78%
 EL	75%

Question: QA5.3. Please tell me to what extent you agree or disagree with each of the following statements about robots.

Option: Robots are necessary as they can do jobs that are too hard or too dangerous for people

Answers: Total 'Agree'

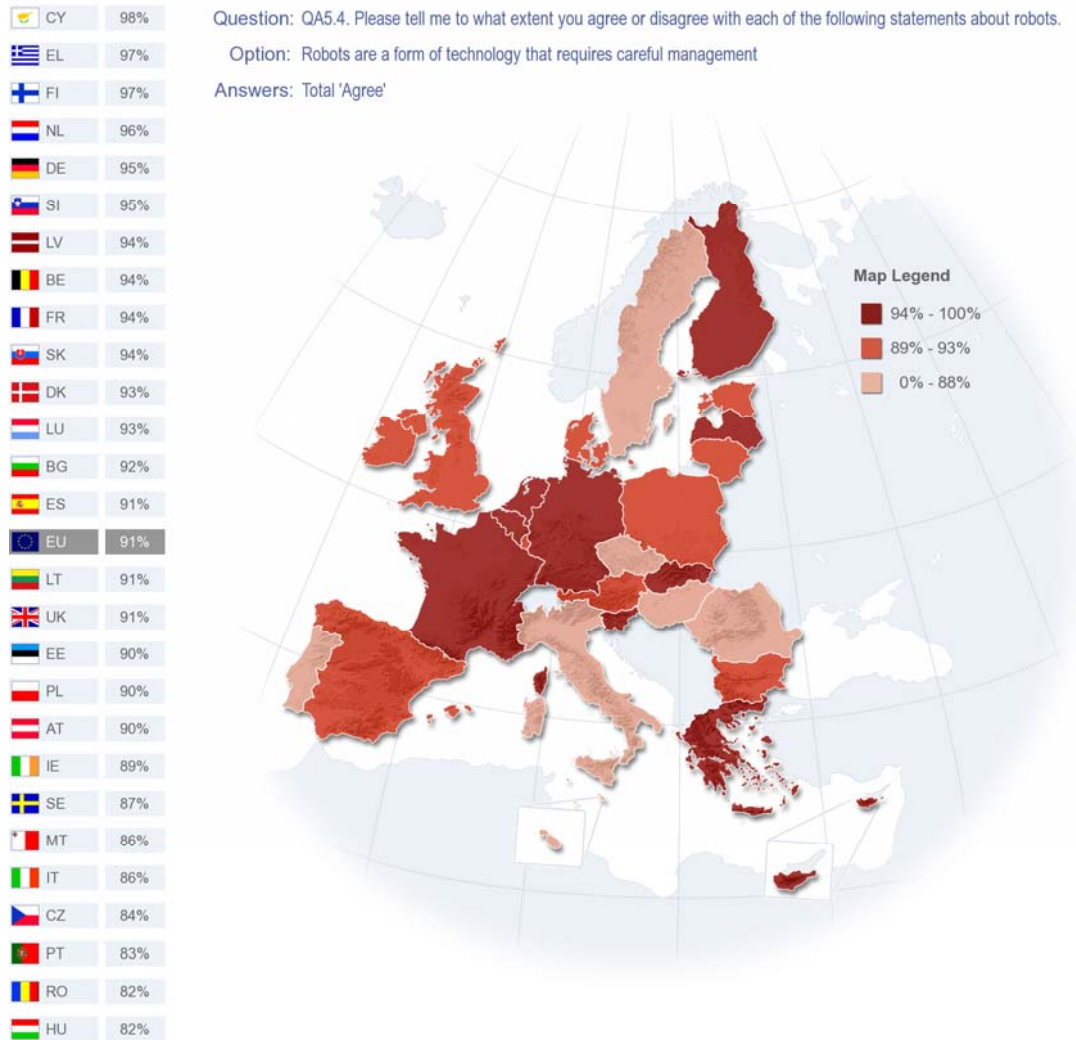


The **socio-demographic analyses** show that agreement is widespread among all social groups with few variations reflecting gender, age, education, occupation or social position.

There are larger differences depending on people's overall **attitude** towards science and technology and towards robots in general: 95% of EU citizens who are 'very interested' in science and technology agree, compared to 74% of those who are 'not at all interested'; 95% of EU citizens with a positive view agree that robots are a good thing for society because they help people, compared to 68% of EU citizens with a negative overall view of robots.

Statement 4: Robots are a form of technology that requires careful management

The **national analyses** show even more widespread agreement throughout the EU with statement that robots are a form of technology that requires careful management. Agreement ranges from 82% in Hungary to 98% in Cyprus (for a European average of 91%). In 19 Member States at least nine out of ten citizens agree with the statement, An absolute majority of respondents 'totally agree' with this statement (56%).



The **socio-demographic analyses** show that there is widespread consensus among all social groups in the EU that robots are a form of technology that requires careful management.

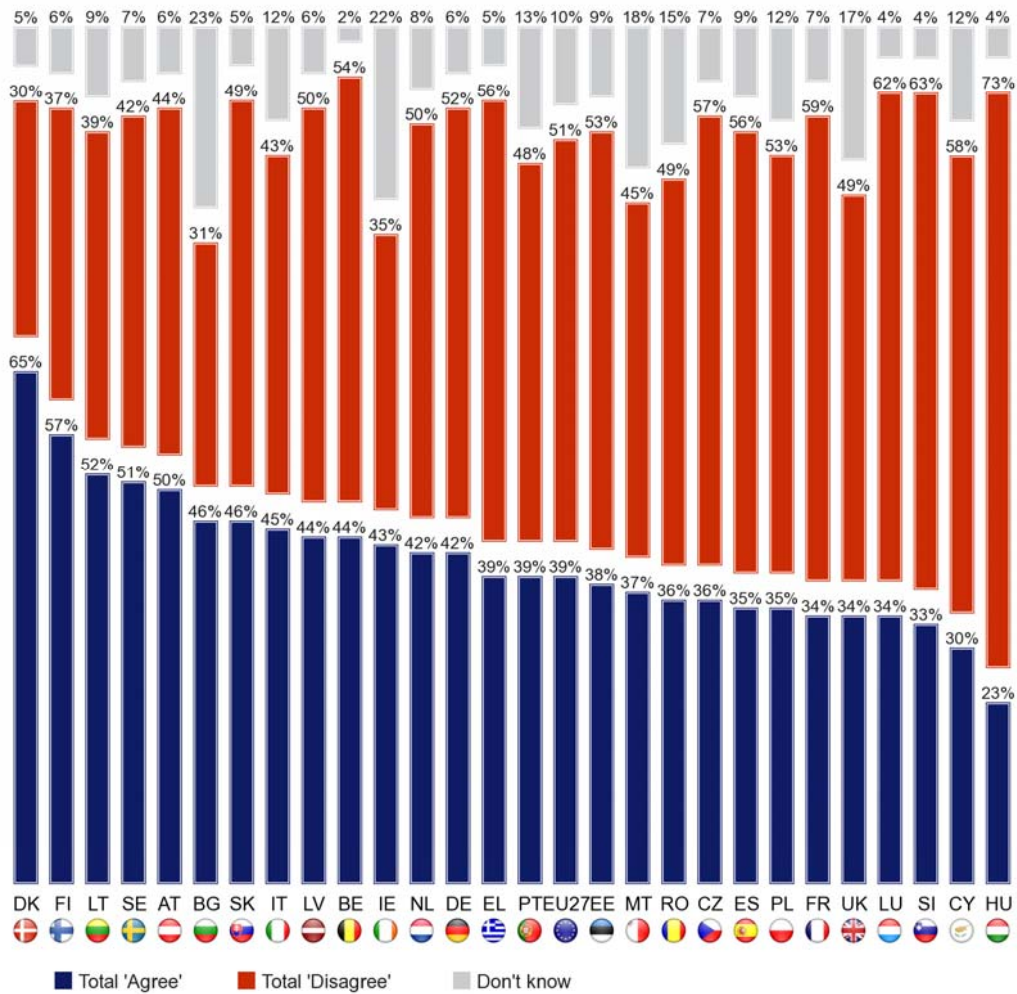
The **attitudinal analyses** reveal some divergence in the strength of agreement depending on people's interest in science and technology and overall view of robots. The analyses show that 94% of EU citizens who are 'very interested' in science and technology agree, compared to 82% of those who are 'not at all interested'; 94% of EU citizens with a positive overall view of robots agree, compared to 84% of those with a negative view.

Statement 5: Widespread use of robots can boost job opportunities in the EU

The **national analyses** show that public opinion is divided both between and within countries. There are only five Member States where an absolute majority agrees that widespread use of robots can boost job opportunities in the EU: Denmark (65%), Finland (57%), Lithuania (52%), Sweden (51%) and Austria (50%). In Bulgaria, respondents who agree greatly outnumber those who disagree (46% vs. 31%), in Ireland those who agree are also clearly in the majority (43% vs. 35%), while in Italy those who agree only just outnumber those who disagree (45% vs. 43%). In all other Member States, the majority view is to disagree with the statement, with highest level of disagreement recorded in Hungary (73%), Slovenia (63%) and Luxembourg (62%). The proportion of respondents answering that they ‘don’t know’ is highest in Bulgaria (23%) and Ireland (22%) and is also above average in Malta (18%), the UK (17%) and Romania (15%).

QA5.5. Please tell me to what extent you agree or disagree with each of the following statements about robots.

Widespread use of robots can boost job opportunities in the EU



The **socio-demographic analyses** show that while agreement levels differ considerably between the different EU social groups there is less variation in the extent to which the groups disagree. This is because the level of 'don't know' responses fluctuates considerably and particularly affects the distribution of responses on the basis of age and gender. In terms of education, differences in opinion are more pronounced: the earlier EU citizens left full-time education, the more likely they are to disagree with the statement. There are also noteworthy differences between managers on the one hand and manual workers, unemployed respondents and those who look after the home on the other; 50% of managers agree compared to 34% of respondents who look after the home, 35% of unemployed respondents and 36% of the retired. A similar division in opinion accompanies people's positions on the social scale.

The **attitudinal analyses** reveal stronger divergences. 50% of EU citizens who are 'very interested' in science and technology agree, compared to 28% of those who are 'not at all interested'.

Among the latter group, the majority disagrees with the statement (57%). There are also clear differences depending on whether people have personal experience of robots: those who do are far more likely to agree with the statement than those who do not (51% vs. 37%). Finally, the analyses show that 48% of respondents with a positive view agree that widespread use of robots can boost job opportunities in the EU while 75% of those with a negative overall view of robots disagree with this statement.

QA5.5 Please tell me to what extent you agree or disagree with each of the following statements about robots.

Widespread use of robots can boost job opportunities in the EU

	Total 'Agree'	Total 'Disagree'	Don't know
EU27	39%	51%	10%
Sex			
Male	43%	50%	7%
Female	35%	52%	13%
Age			
15-24	43%	49%	8%
25-39	40%	52%	8%
40-54	41%	50%	9%
55 +	37%	50%	13%
Education (End of)			
15-	32%	54%	14%
16-19	38%	53%	9%
20+	46%	46%	8%
Still studying	45%	47%	8%
Respondent occupation scale			
Self-employed	46%	44%	10%
Managers	50%	42%	8%
Other white collars	40%	52%	8%
Manual workers	37%	55%	8%
House persons	34%	53%	13%
Unemployed	35%	55%	10%
Retired	36%	51%	13%
Students	45%	47%	8%
Interested in science and technology			
Very	50%	43%	7%
Moderately	39%	52%	9%
Not at all	28%	57%	15%
View of robots			
Positive	48%	43%	9%
Negative	17%	75%	8%

2. AREAS OF APPLICATION FOR ROBOTS

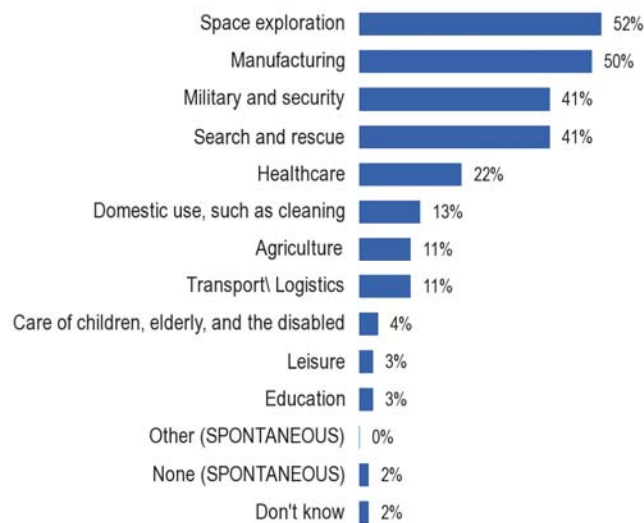
2.1. Areas where EU citizens believe robots should be used as a priority

- Robots should be used as a priority for tasks that are too difficult or too dangerous for humans -

Since EU citizens have a clear set of views about, and attitudes towards, robots, it is not surprising to find that they also have a clear set of preferences regarding the areas where they believe robots should be used as a priority¹⁰.

Asked to choose a maximum of three areas where they think that robots should be used as a priority, an absolute majority of EU citizens mention space exploration (52%) and manufacturing (50%). Around two out of five say that robots should be used as a priority in military and security activities and in search and rescue activities (both 41%). In line with the attitudes noted above, these are all areas where robots can be useful and helpful or where a job could be considered too dangerous for people. EU citizens are far less inclined to believe robots should be used as a priority in areas that could be considered 'human': only 3% believe robots should be used for leisure activities or educational purposes and 4% that they should be involved in the care of children, the elderly and people with disabilities.

QA6. In which areas do you think that robots should be used as a priority?



EU27

¹⁰ QA6 In which areas do you think that robots should be used as a priority? (MAX. 3 ANSWERS)?

QA6 In which areas do you think that robots should be used as a priority?

	Space exploration	Manufacturing	Military and security	Search and rescue	Healthcare	Domestic use, such as cleaning	Agriculture	Transport Logistics	Care of children, elderly, and the disabled	Leisure	Education
EU27	52%	50%	41%	41%	22%	13%	11%	11%	4%	3%	3%
BE	43%	65%	33%	40%	38%	12%	10%	12%	7%	2%	2%
BG	59%	56%	33%	34%	16%	22%	14%	5%	3%	4%	2%
CZ	61%	55%	33%	48%	35%	15%	9%	4%	2%	1%	2%
DK	51%	80%	45%	36%	16%	13%	18%	20%	8%	1%	2%
DE	62%	50%	49%	44%	20%	9%	11%	14%	2%	1%	2%
EE	55%	60%	42%	59%	10%	11%	10%	8%	5%	2%	1%
IE	45%	57%	42%	35%	18%	11%	12%	9%	3%	4%	4%
EL	60%	44%	19%	39%	25%	8%	6%	7%	2%	1%	1%
ES	42%	37%	38%	39%	23%	12%	8%	9%	4%	3%	2%
FR	56%	49%	39%	49%	32%	15%	10%	11%	4%	1%	2%
IT	51%	30%	40%	36%	22%	20%	10%	13%	4%	6%	2%
CY	70%	23%	48%	52%	21%	15%	14%	4%	5%	5%	7%
LV	58%	64%	35%	44%	8%	19%	10%	8%	2%	1%	2%
LT	68%	37%	32%	49%	10%	22%	13%	8%	3%	2%	1%
LU	54%	45%	40%	52%	22%	16%	11%	15%	3%	2%	2%
HU	64%	36%	44%	54%	14%	14%	10%	13%	2%	3%	2%
MT	41%	43%	31%	46%	18%	19%	7%	3%	7%	2%	4%
NL	41%	64%	38%	50%	31%	9%	16%	25%	7%	1%	1%
AT	57%	62%	37%	38%	9%	20%	14%	13%	2%	6%	3%
PL	53%	59%	28%	47%	20%	12%	9%	6%	1%	2%	3%
PT	26%	42%	26%	45%	12%	13%	12%	7%	4%	5%	2%
RO	46%	54%	24%	21%	27%	24%	23%	5%	3%	4%	4%
SI	57%	69%	33%	32%	18%	13%	11%	6%	2%	1%	3%
SK	51%	75%	34%	32%	23%	21%	15%	8%	2%	2%	3%
FI	59%	77%	29%	35%	18%	10%	18%	22%	5%	2%	1%
SE	52%	72%	41%	55%	17%	6%	13%	24%	4%	0%	2%
UK	45%	57%	64%	36%	18%	8%	7%	9%	5%	2%	5%

Highest percentage per country

Lowest percentage per country

Highest percentage per item

Lowest percentage per item

The **national analyses** indicate that the preferred areas in which robots should be used as a priority vary between the Member States.

Space exploration is the most mentioned priority for the use of robots in the following 11 Member States: Bulgaria, the Czech Republic, Germany, Greece, Spain, France, Italy, Cyprus, Lithuania, Luxembourg and Hungary. The proportion of respondents selecting space exploration as a priority area for robot use ranges from 26% in Portugal to 70% in Cyprus.

In 13 Member States **manufacturing** is the most mentioned priority for the use of robots: Belgium, Denmark, Estonia, Ireland, Latvia, the Netherlands, Austria, Poland, Romania, Slovenia, Slovakia, Finland and Sweden. The proportion of respondents selecting manufacturing as a priority area for robot use ranges from 23% in Cyprus to 80% in Denmark.

The United Kingdom is the only country where **military and security** is the most frequently mentioned priority. 64% of UK respondents selected it as a priority area for the use of robots. In Germany (49%) and Cyprus (48%), close to half of respondents also select this domain. The preference for using robots in this area is least in Greece (19%).

In Malta (46%) and Portugal (45%) **search and rescue** is the most mentioned priority. However, the proportion of respondents selecting this as a priority area for robot use is highest in Estonia (59%). Respondents in Romania mentioned search and rescue as a priority area least frequently (21%).

In none of the Member States are any of the other areas considered a top priority for the use of robots. The proportion of respondents selecting **healthcare** as a priority area ranges from eight percent in Latvia to 38% in Belgium. The proportion of respondents selecting **domestic use** ranges from six percent in Sweden to 24% in Romania. **Agriculture** is seen as a priority area for the application of robots by just six percent of respondents in Greece. The highest proportion is noted in Romania (23%). Responses for **transport/logistics** range from just three percent in Malta to 25% in the Netherlands. Responses are below ten percent in all Member States when it comes to the application of robots in the areas of **care, leisure** and **education**.

At the **socio-demographic level** there are some notable differences: 61% of managers view manufacturing as a top priority for robot use, compared with 39% of house-persons. Respondents aged 55 and over are far less receptive to the use of robots in space exploration (46%) than younger EU citizens (55%). Overall, the analyses show that education is an important factor when it comes to the use of robots in manufacturing and space exploration: respondents who left full-time education aged 15 or younger are less likely to regard these two areas as priorities than those who remained in full-time education longer.

When it comes to personal experience of the use of robots, it is interesting to note that 29% of EU citizens who have used robots at home consider domestic use a priority area for robots (compared to an EU average of 13%).

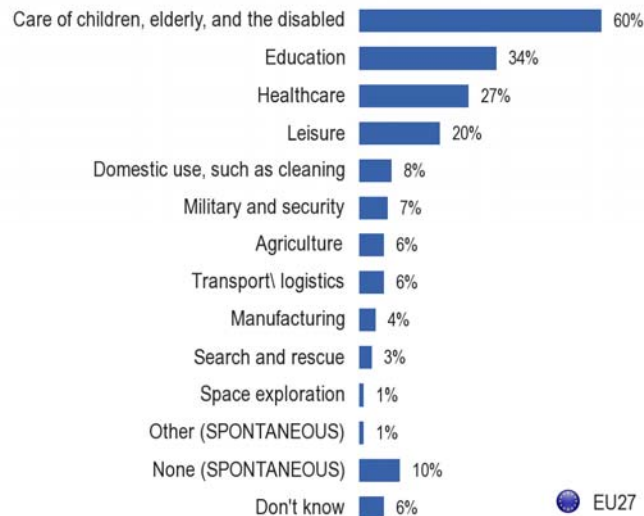
Finally, the analyses show large differences between EU citizens with a positive view of robots and those with a negative view, especially with regard to the use of robots in manufacturing: 56% of EU citizens with a positive view of robots consider this a priority area, compared to 32% of those with a negative view.

2.2. Areas where EU citizens believe robots should not be used

- Robots should not be used to care for people –

EU citizens also have well-defined views about the areas where robots should be banned¹¹. Views are most emphatic when it comes to the care of children, elderly people and people with disabilities, with 60% of EU citizens saying that this is an area where robots should be banned. There is also considerable opposition to the use of robots in the other more 'human' areas included in the survey: 34% of respondents believe robots should be banned in education, 27% are against the use of robots in healthcare and 20% oppose their use for leisure purposes. Less than ten percent oppose the use of robots in any of the other areas. Overall, ten percent of respondents *spontaneously* said that robots should not be banned in any of the areas listed.

QA7. And on the other hand, in which areas do you think that the use of robots should be banned?



The **national analyses** show that, throughout the EU, the **care of children, elderly people and people with disabilities** tops the list of areas where the use of robots should be banned. In 24 Member States, an absolute majority holds this view. Portugal (35%), Bulgaria (40%) and Malta (49%) are the only exceptions. Public opinion is most emphatic in Cyprus (85%), followed by Luxembourg (78%).

In Luxembourg (58%), France (56%), Belgium (51%) and the Netherlands (50%) an absolute majority of EU citizens believe that robots should be banned in the area of **education**. This view is least widely expressed in Finland (14%), Slovenia (17%) and Slovakia (19%).

¹¹ QA7 And on the other hand, in which areas do you think that the use of robots should be banned? (MAX. 3 ANSWERS)

An absolute majority of respondents in Lithuania (53%) is of the view that robots should be banned in **healthcare** and more than two out of five respondents in Latvia (48%), Malta (44%) and Estonia (42%) share this view. The Czech Republic (14%) is the only country where less than one respondent out of five is says that robots should be banned from healthcare.

The use of robots in **leisure** should be banned according to more than three out of ten respondents in Belgium (37%), France and Slovenia (both 31%). In the Czech Republic (26%) more than a quarter of respondents share this view. It is least widely mentioned in Portugal (4%).

The view that robots should be banned for **domestic use** is far more widespread in Cyprus (25%) than in other Member States. It is also above the average in Greece (17%) and Belgium (16%). The view that robots should be banned in the **military and security** sphere is most often mentioned in Greece (19%), followed by Cyprus (16%).

In all Member States there is very little opposition to the use of robots in the other areas. The national analyses also show that a considerable minority of respondents in Finland (27%) and Denmark (23%) *spontaneously* indicated that robots should not be banned in any of the 11 areas included in the survey.


QA7 And on the other hand, in which areas do you think that the use of robots should be banned?

	Care of children, elderly, and the disabled	Education	Healthcare	Leisure	Domestic use, such as cleaning	Military and security	Agriculture	Transport/ logistics	Manufacturing	Search and rescue	Space exploration	None (SPONT)	Don't know
EU27	60%	34%	27%	20%	8%	7%	6%	6%	4%	3%	1%	10%	6%
BE	59%	51%	23%	37%	16%	6%	6%	6%	5%	3%	3%	3%	1%
BG	40%	30%	35%	10%	5%	13%	8%	12%	2%	2%	2%	8%	16%
CZ	53%	22%	14%	26%	6%	13%	6%	9%	1%	2%	1%	15%	6%
DK	59%	31%	25%	19%	10%	5%	2%	4%	1%	4%	0%	23%	1%
DE	74%	30%	28%	21%	7%	7%	4%	6%	3%	5%	2%	9%	2%
EE	54%	40%	42%	24%	10%	10%	4%	6%	1%	2%	1%	7%	4%
IE	62%	23%	33%	15%	10%	4%	7%	6%	4%	3%	1%	9%	11%
EL	61%	36%	24%	18%	17%	19%	5%	6%	7%	1%	0%	9%	5%
ES	52%	38%	29%	15%	6%	6%	8%	6%	6%	2%	1%	10%	6%
FR	64%	56%	26%	31%	8%	8%	9%	8%	6%	2%	1%	6%	3%
IT	50%	28%	24%	21%	9%	6%	7%	5%	6%	6%	1%	13%	9%
CY	85%	38%	36%	21%	25%	16%	7%	1%	3%	3%	1%	1%	1%
LV	60%	33%	48%	25%	5%	10%	3%	6%	2%	3%	2%	5%	5%
LT	61%	35%	53%	16%	3%	8%	2%	5%	1%	2%	0%	9%	4%
LU	78%	58%	38%	21%	5%	11%	6%	8%	3%	4%	1%	3%	1%
HU	57%	35%	32%	24%	10%	6%	8%	3%	6%	2%	2%	11%	6%
MT	49%	34%	44%	12%	5%	7%	4%	8%	12%	2%	2%	4%	9%
NL	57%	50%	28%	24%	9%	7%	2%	2%	2%	2%	1%	13%	3%
AT	73%	41%	39%	17%	7%	12%	7%	8%	3%	7%	2%	7%	3%
PL	61%	22%	21%	16%	4%	6%	4%	5%	3%	2%	1%	9%	8%
PT	35%	22%	30%	4%	4%	6%	5%	3%	5%	2%	1%	15%	24%
RO	51%	33%	27%	19%	7%	12%	6%	6%	2%	4%	1%	7%	13%
SI	76%	17%	27%	31%	7%	9%	6%	11%	1%	2%	0%	6%	2%
SK	55%	19%	26%	21%	5%	11%	4%	9%	1%	4%	2%	12%	6%
FI	53%	14%	21%	13%	7%	8%	1%	4%	1%	6%	1%	27%	1%
SE	68%	28%	38%	21%	9%	9%	3%	3%	0%	2%	1%	18%	1%
UK	61%	30%	30%	12%	11%	4%	4%	6%	4%	3%	1%	14%	6%

Highest percentage per country Lowest percentage per country
 Highest percentage per item Lowest percentage per item

The **socio-demographic analyses** reveal few notable differences, although educational levels are a good guide to how respondents think about banning robots from education: 28% of EU citizens who left full-time education aged 15 or younger believe robots should be banned in education, compared to 38% of those who left school aged 20 or older and 39% of those who are still studying.

Finally, a good overall measure of public opinion on the areas of application for robots is obtained from a simple comparison of the results of the two questions. This comparison shows that **support for the use of robots is most widespread in the case of space exploration** (+51 point difference between the proportion of respondents who believe robots should be used as a priority and the proportion who believe robots should not be used). The comparison also shows that EU citizens who view domestic use as a priority area for robots (13%) outnumber those who believe robots should not be used in this domain (8%). **The areas where opposition to the application of robots is more widespread than support are in order of magnitude: care (-56), education (-31), leisure (-17) and healthcare (-5).**

 EU27	QA6 In which areas do you think that robots should be used as a priority?	QA7 And on the other hand, in which areas do you think that the use of robots should be banned?	Areas of robots usage index (Q6-Q7)
Space exploration	52%	1%	+51
Manufacturing	50%	4%	+46
Search and rescue	41%	3%	+38
Military and security	41%	7%	+34
Domestic use, such as cleaning	13%	8%	+5
Agriculture	11%	6%	+5
Transport/ Logistics	11%	6%	+5
Healthcare	22%	27%	-5
Leisure	3%	20%	-17
Education	3%	34%	-31
Care of children, elderly, and the disabled	4%	60%	-56

3. ROBOTS IN THE EU: FUTURE PERSPECTIVES

3.1. Acceptance of tasks done by a robot

– EU citizens are willing to accept help from a robot at work but are totally against having their children or elderly parents minded by a robot -

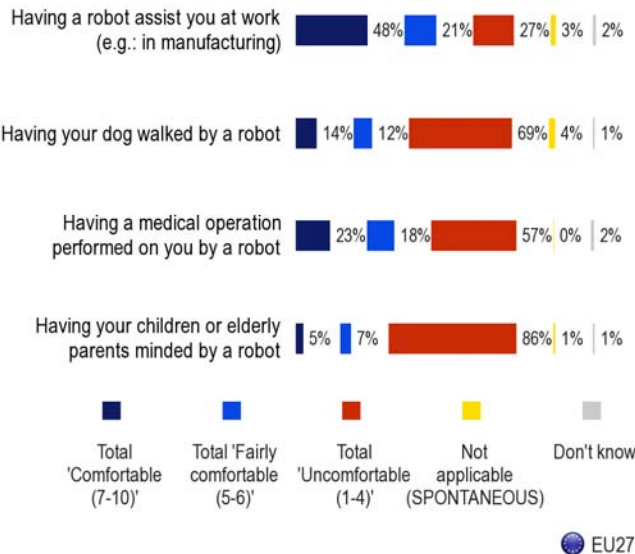
In order to understand public acceptance of various tasks done by robots, respondents were asked on a scale from 1 to 10 how comfortable they would personally feel about four different things that could be done by robots¹².

The results confirm the earlier findings from this survey: **EU citizens are fairly receptive to the use of robots in manufacturing but far less willing to use them for human tasks**. There is outright opposition to the use of robots to look after one's children or elderly parents.

Close to half of EU citizens (48%) would feel 'comfortable' (points 7 to 10 on the scale) accepting assistance from a robot at work (e.g. in **manufacturing**), one in five (21%) would feel 'fairly comfortable' in this situation (points 5-6 on the scale) and over a quarter (27%) would feel 'uncomfortable' (points 1 to 4 on the scale). For the other three situations presented to respondents, the majority would feel 'uncomfortable': on average, 86% would feel 'uncomfortable' about **having their children or elderly parents minded by a robot** (in fact, 66% chose point 1 'totally uncomfortable' on the scale), 69% would feel 'uncomfortable' about **having their dog walked by a robot** (47% 'totally uncomfortable') and 57% would feel 'uncomfortable' about **having a medical operation performed on them by a robot** (37% 'totally uncomfortable').

¹² QA8 Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

QA8. Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.



Before analysing the national results for each item separately, it should be noted that there are considerable difference between EU15 countries and NMS12 countries in the level of acceptance of jobs done by robots. For all tasks, **EU citizens living in the NMS12 countries would be more comfortable accepting the use of robots.**

Task 1: Having a medical operation performed on you by a robot

The **national analyses** show that in all Member States respondents most often chose point 1 – 'totally uncomfortable' - on the 10-point scale when asked how they would personally feel about having a medical operation performed on them by a robot. But views on this matter vary considerably between countries: the proportion of respondents who said they would feel 'totally uncomfortable' ranges from 20% in the Netherlands to 70% in Lithuania.

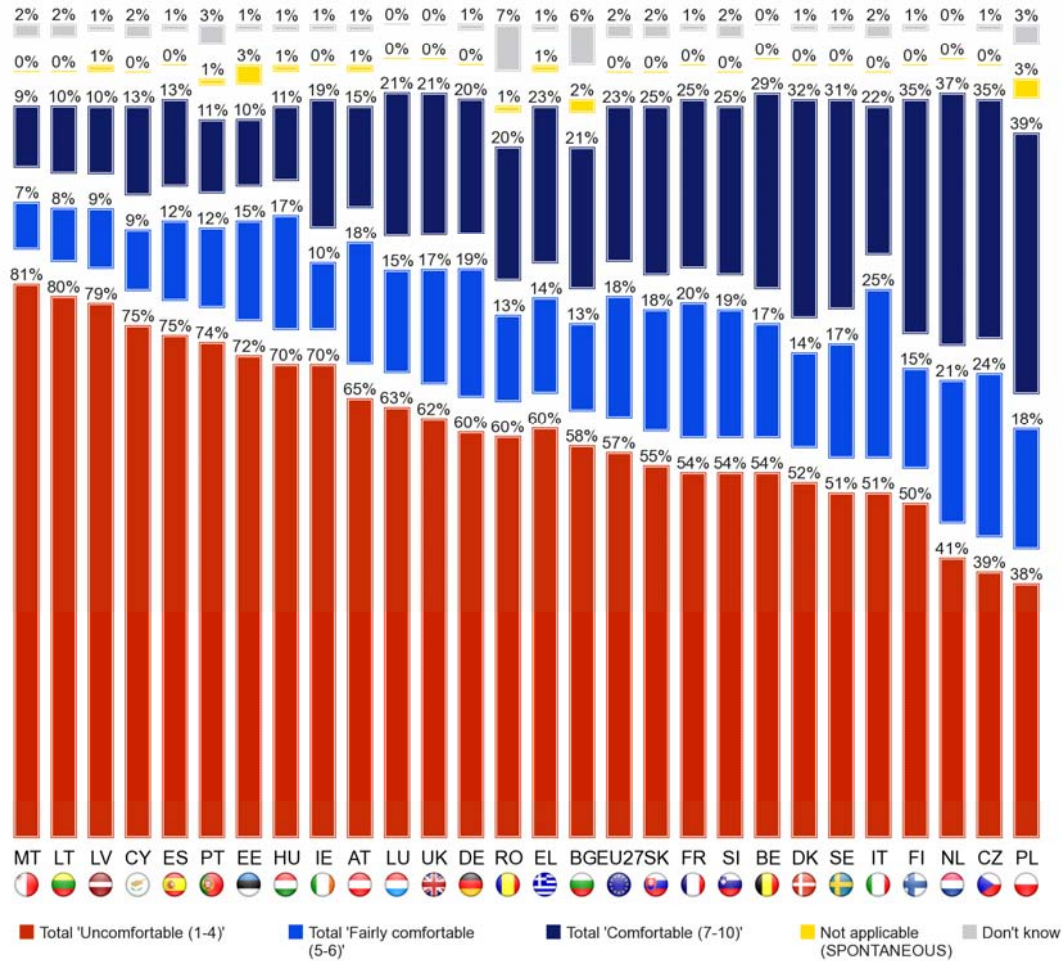
Average scores on the 10-point scale range from 2.2 in Malta to 5.4 in Poland (for an EU average of 3.9). The average score for the EU15 countries is 3.8 compared with 4.3 in the NMS12 countries.

There are only four Member States where more than a third of citizens would feel comfortable (points 7 to 10 on the scale) if a robot performed a medical operation on them: Poland (39%), the Netherlands (37%), and Finland and the Czech Republic (both 35%). In a further six Member States, this applies to at least a quarter of respondents.





























At the other extreme, the survey shows that around eight in ten citizens in Malta (81%), Lithuania (80%) and Latvia (79%) would feel uncomfortable (points 1 to 4 on the scale) in this situation. In Cyprus, Spain (both 75%) and Portugal (74%), this applies to around three quarters of respondents.

QA8.1. Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Having a medical operation performed on you by a robot



QA8. Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Average scores				
	Having a robot assist you at work (e.g.: in manufacturing)	Having a medical operation performed on you by a robot	Having your dog walked by a robot	Having your children or elderly parents minded by a robot
 EU27	6.1	3.9	3.1	2.0
 BE	6.1	4.2	2.6	2.2
 BG	7.3	3.7	4.7	2.9
 CZ	7.6	5.1	3.4	2.7
 DK	7.8	4.5	4.1	2.4
 DE	6.3	3.7	2.3	1.6
 EE	6.9	2.8	3.1	2.2
 IE	5.6	3.2	3.7	1.9
 EL	5.2	3.7	3.2	2.1
 ES	5.6	2.8	3.0	1.9
 FR	5.9	4.1	2.8	1.5
 IT	5.3	4.2	3.1	2.6
 CY	4.8	2.7	3.2	1.7
 LV	6.7	2.5	3.4	1.8
 LT	6.2	2.3	3.3	1.7
 LU	5.4	3.6	2.5	1.4
 HU	6.2	3.0	2.8	2.0
 MT	5.1	2.2	3.4	1.8
 NL	7.2	5.0	2.8	2.2
 AT	5.6	3.4	3.0	2.2
 PL	7.6	5.4	4.5	2.7
 PT	4.9	2.8	2.6	2.0
 RO	4.0	3.6	3.4	2.3
 SI	6.9	4.1	2.2	1.7
 SK	8.2	4.1	3.6	2.8
 FI	7.0	4.7	3.3	2.3
 SE	8.3	4.5	2.6	1.7
 UK	6.2	3.6	3.4	1.8
	Highest percentage per item		Lowest percentage per item	

The **socio-demographic analyses** also show that respondents in all social groups most often chose point 1 – ‘totally uncomfortable’ - on the 10-point scale. But views on this matter also vary between social groups. Men are more likely than women to feel comfortable in this situation (27% and 19% respectively choose points 7 to 10 on the scale), and the same applies to respondents who stayed in education the longest compared with those who left school aged 15 or younger (30% vs. 14%) and managers compared with house-persons (32% vs. 15%).

The **attitudinal analyses** display a similar pattern. ‘Totally uncomfortable’ is the most frequently selected response, irrespective of respondents’ views on science in general, their overall attitude towards robots or their personal experience of robots. However, views do also differ at the **attitudinal level**: 33% of the EU citizens who are ‘very interested’ in science and technology would feel comfortable, compared to 13% of those who are ‘not at all interested’; 31% of the respondents with personal experience of robots would feel comfortable vs. 22% of those without this experience; and 28% of EU citizens with a positive view of robots would feel comfortable, compared to just nine percent of those with a negative view.

QA8.1 Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Having a medical operation performed on you by a robot

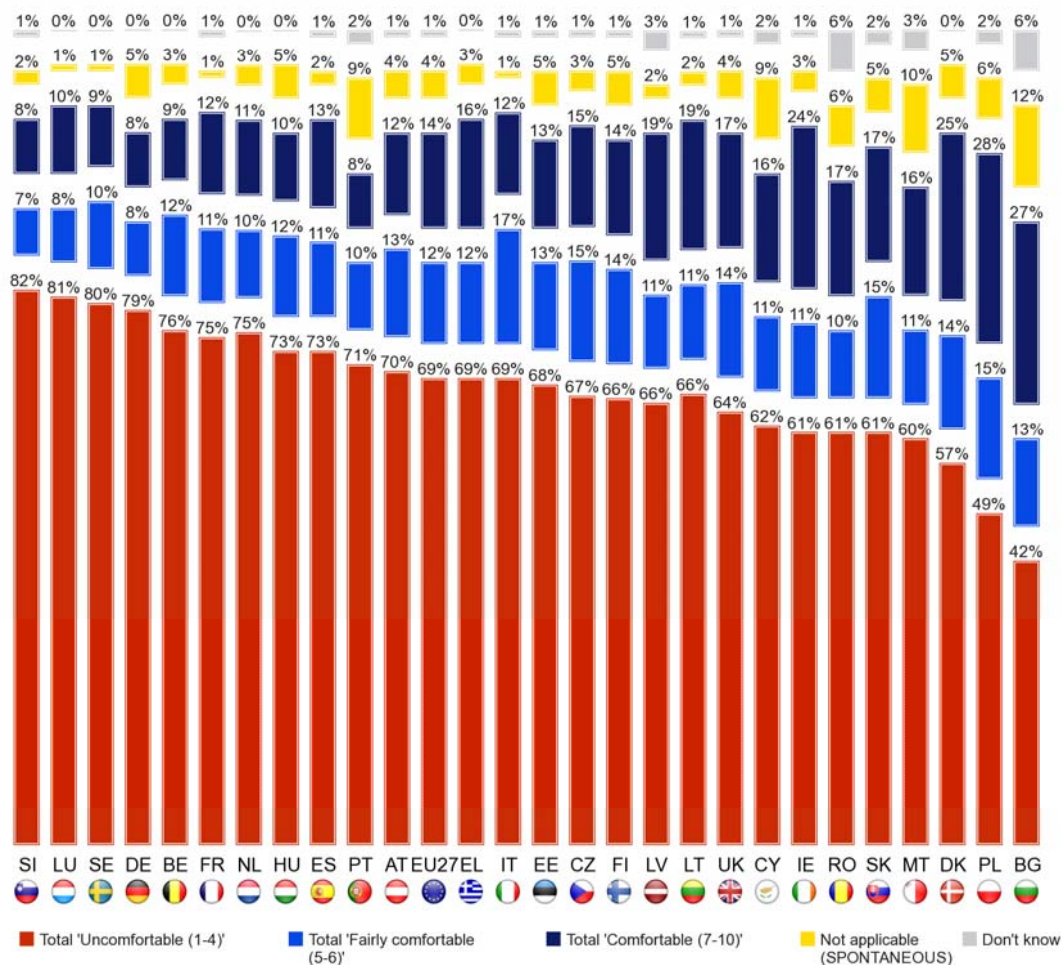
	Total 'Uncomfortable (1-4)'	Total 'Fairly comfortable (5-6)'	Total 'Comfortable (7-10)'	Average scores
EU27	57%	18%	23%	3.9
Sex				
Male	52%	19%	27%	4.3
Female	63%	16%	19%	3.5
Education (End of)				
15-	69%	15%	14%	3.1
16-19	57%	19%	22%	3.9
20+	48%	20%	30%	4.6
Still studying	59%	16%	24%	3.9
Interested in science and technology				
Very	47%	18%	33%	4.7
Moderately	57%	20%	22%	3.9
Not at all	70%	13%	13%	2.9
View of robots				
Positive	50%	20%	28%	4.4
Negative	76%	13%	9%	2.6

Task 2: Having your dog walked by a robot

For this task again, the **national analyses** show that ‘totally uncomfortable’ is the most frequently selected response in all Member States, with the proportion of respondents selecting point 1 on the 10-point scale ranging from 24% in Bulgaria to 62% in Germany and Luxembourg. Nonetheless, views do vary considerably between countries, with average scores ranging from 2.2 in Slovenia to 4.7 in Bulgaria (compared with 3.1 in the EU generally). The average score for the EU15 countries is 2.9 compared with 3.8 for the NMS12 countries.

QA8.2. Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, ‘1’ means that you would feel “totally uncomfortable” and ‘10’ means that you would feel “totally comfortable” with this situation.

Having your dog walked by a robot



In just three Member States would more than a quarter of citizens feel comfortable (points 7 to 10 on the scale) if a robot walked their dog: Poland (28%), Bulgaria (27%), and Denmark (25%). In Ireland, this applies to 24% of respondents.

Conversely, the survey shows that around eight in ten citizens in Slovenia (82%), Luxembourg (81%), Sweden (80%) and Germany (79%) would feel uncomfortable (points 1 to 4 on the scale) in this situation. In Belgium (76%), France and the Netherlands (both 75%), this applies to around three-quarters of those surveyed.

'Totally uncomfortable' is also the most frequently selected reply in all social groups. The **socio-demographic analyses** show that the proportion of respondents choosing point 1 on the 10-point scale ranges from 28% of students to 56% of retired EU citizens and those who left full-time education aged 15 or younger. Education produces the largest variations, with just eight percent of respondents who left full-time education aged 15 or younger saying that they would feel comfortable (points 7 to 10 on the scale), compared to 25% of students.

Age also matters in this regard: 23% of EU citizens aged 15 to 24 would feel comfortable, compared to just nine percent of those aged 55 and over. Finally, the analyses shows that men are somewhat more likely than women to feel comfortable in this situation (17% and 12%, respectively, choose points 7 to 10 on the scale).

'Totally uncomfortable' is also the most frequently selected reply irrespective of people's views of science in general, their overall attitude towards robots or their personal experience of robots. The **attitudinal analyses** show that 18% of the EU citizens who are 'very interested' in science and technology would feel comfortable (points 7 to 10 on the scale), compared to 10% of those who are 'not at all interested'; and 17% of EU citizens with a positive outlook on robots would feel comfortable, compared to just seven percent of EU citizens with a negative view.

Task 3: Having a robot assist you at work (e.g.: in manufacturing)

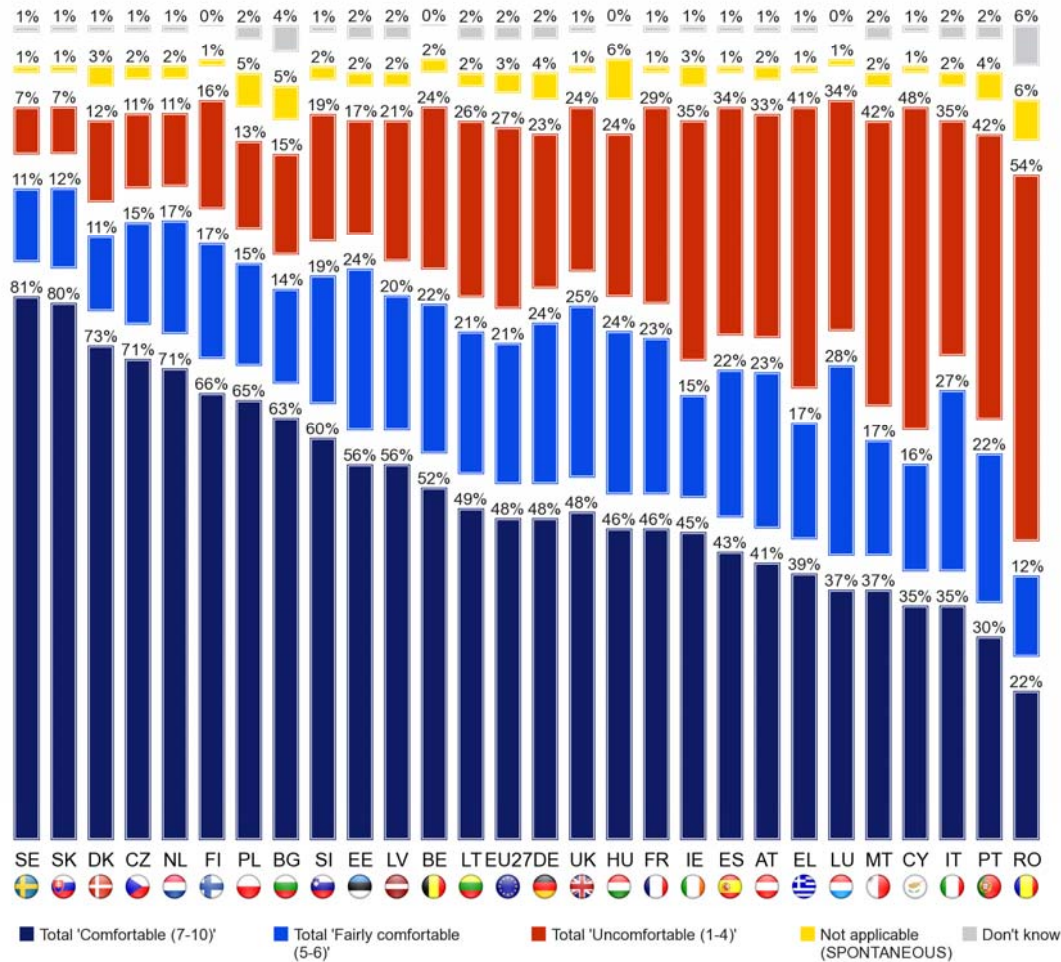
The **national analyses** show that in all Member States this is the task performed by robots with which EU citizens are most likely to feel comfortable. Nonetheless, comfort levels vary considerably between countries: the proportion of respondents saying that they would feel 'totally comfortable' (point 10 on the scale) ranges from seven percent in Italy and Portugal to 49% in Sweden; average scores on the 10-point scale range from 4.0 in Romania to 8.3 in Sweden (compared with an EU average of 6.1). The average score for the EU15 countries is 6.0 compared with 6.6 for the NMS12 countries.

In 12 Member States more than half of respondents say that they would feel comfortable (points 7 to 10 on the scale) if a robot assisted them at work, ranging from 52% in Belgium to 81% in Sweden. Close to half share this opinion in Lithuania (49%), Germany and the UK (both 48%).

At the opposite end of the scale, the survey shows that 54% of respondents in Romania would feel uncomfortable (points 1 to 4 on the scale) in this situation. This applies to nearly half the respondents in Cyprus (48%) and to just above two-fifths in Portugal and Malta (both 42%) and Greece (41%).

QA8.3. Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Having a robot assist you at work (e.g.: in manufacturing)



The **socio-demographic analyses** show that the proportion of respondents choosing point 10 ('totally comfortable') on the 10-point scale ranges from just nine percent of house-persons to 26% of managers. Education again produces large variations; 32% of respondents who left full-time education aged 15 or younger say that they would feel comfortable (points 7 to 10), compared to 60% of students and those who left full-time education aged 20 or older. The largest difference, however, is found between managers (63% feel comfortable) and people who look after the home (34% of house-persons feel comfortable). There are also considerable differences on the basis of gender and age: men are more comfortable than women, and the older EU citizens are the less likely they would be comfortable about having a robot assist them at work.

Views on this matter are strongly dependent on how people think about science in general and their overall attitude towards robots. The **attitudinal analyses** show that point 10 on the scale ('totally comfortable') is the answer most frequently selected by respondents who are 'very interested' in science and technology (27%) while point 1 on the scale ('totally uncomfortable') is the most frequent response of those who are 'not at all interested' (23%). Similarly, point 10 on the scale is the most frequent response of those with a positive view of robots (23%) while point 1 on the scale is the answer most frequently selected by those with a negative view (27%).

QA8.3 Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Having a robot assist you at work (e.g.: in manufacturing)

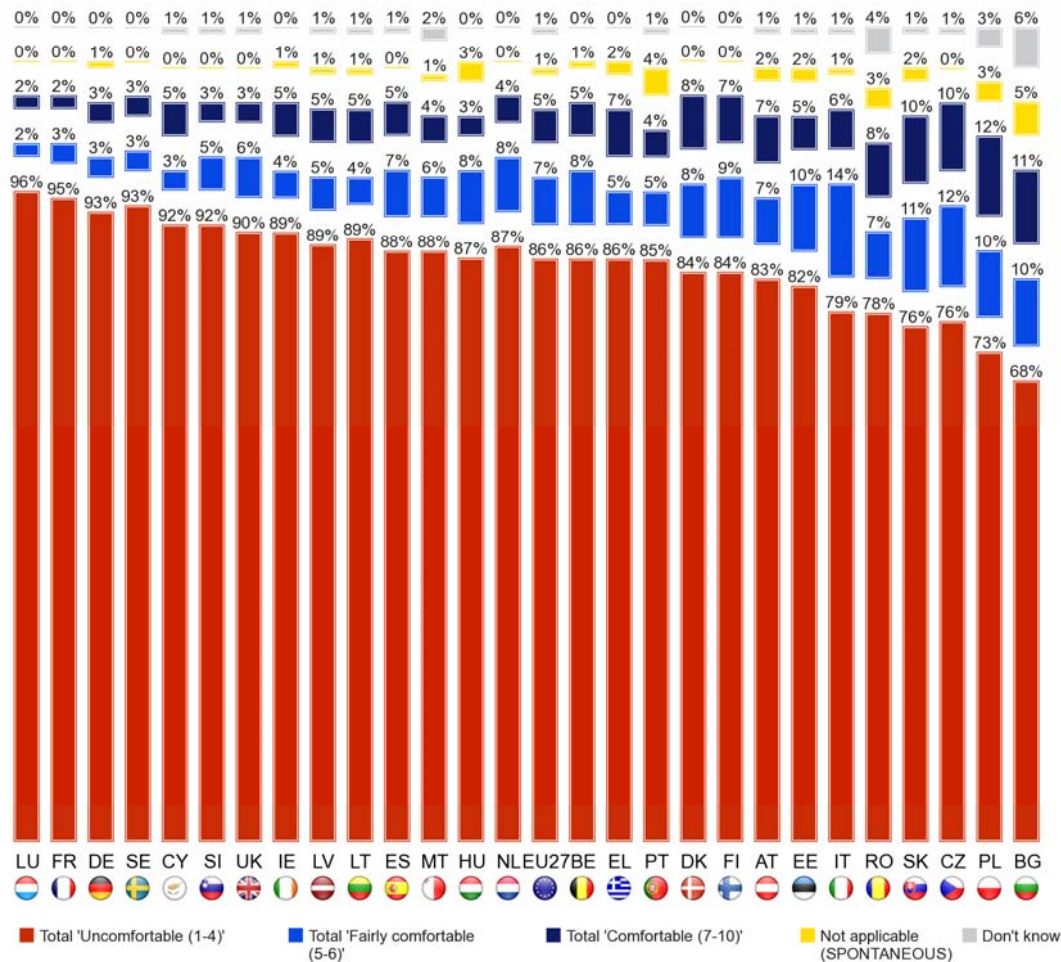
	Total 'Uncomfortable (1-4)'	Total 'Fairly comfortable (5-6)'	Total 'Comfortable (7-10)'	Average scores
EU27	27%	21%	48%	6.1
Sex				
Male	23%	20%	54%	6.5
Female	30%	23%	43%	5.8
Education (End of)				
15-	39%	22%	32%	5.0
16-19	27%	23%	46%	6.0
20+	19%	18%	60%	6.8
Still studying	18%	19%	60%	6.9
Respondent occupation scale				
Self-employed	26%	19%	53%	6.3
Managers	17%	18%	63%	7.1
Other white collars	25%	23%	50%	6.2
Manual workers	28%	22%	47%	6.0
House persons	35%	25%	34%	5.2
Unemployed	29%	23%	47%	6.0
Retired	29%	21%	42%	5.8
Students	18%	19%	60%	6.9
Interested in science and technology				
Very	18%	17%	62%	6.9
Moderately	24%	23%	49%	6.2
Not at all	41%	22%	30%	4.9
View of robots				
Positive	18%	20%	60%	6.9
Negative	52%	24%	20%	4.1

Task 4: Having your children or elderly parents minded by a robot

Finally, the **national analyses** show that large majorities in all Member States would feel ‘very uncomfortable’ if their children or elderly parents were minded by a robot. The proportion feeling ‘totally uncomfortable’ (point 1 on the 10-point scale) ranges from 44% in Bulgaria to 86% in Luxembourg and average scores on the scale range from 1.4 in Luxembourg to 2.9 in Bulgaria (compared with 2.0 in the EU as a whole). The average score for the EU15 countries is 1.9 compared with 2.5 in the NMS12 countries.

QA8.4. Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, ‘1’ means that you would feel “totally uncomfortable” and ‘10’ means that you would feel “totally comfortable” with this situation.

Having your children or elderly parents minded by a robot



Bulgaria (where 68% choose points 1 to 4 on the scale) and Poland (73%) are the only Member States where less than three-quarters would feel uncomfortable if a robot minded their children or elderly parents. This applies to more than nine out of ten of respondents in Luxembourg (96%), France (95%), Germany and Sweden (both 93%), and Cyprus and Slovenia (both 92%).

'Totally uncomfortable' is by far the most widespread reply among all social groups. The **socio-demographic analyses** show that the proportion of respondents choosing point 1 on the 10-point scale ranges from 57% of those aged 15-24 to 73% of divorced or separated EU citizens.

'Totally uncomfortable' is also the most frequently selected reply irrespective of people's views of science in general, their overall attitude towards robots or their personal experience of robots. The **attitudinal analyses** show that 62% of EU citizens who are 'very interested' in science and technology would feel 'totally uncomfortable', compared to 70% of those who are 'not at all interested'; 61% with personal experience of robots would feel 'totally uncomfortable' vs. 67% of those without this experience; and 61% of EU citizens with a positive view of robots would feel 'totally uncomfortable', compared to 79% of those with a negative view..

Summary of overall acceptance levels

The **national analyses** show that, overall, the greatest acceptance of tasks done by robots is found in Poland, where the average score for the four items is 5.1. The Czech Republic, Denmark, Slovakia and Bulgaria follow, each with an average score of 4.7. After this cluster, there is a further cluster with acceptance levels above point 4 (average score for all four items), consisting of Finland, the Netherlands and Sweden (all 4.3). Acceptance is lowest in three Southern European countries: Portugal, Cyprus and Malta (all 3.1). This highlights both the North-South divide noted earlier and the differences between public opinion in the EU15 and NMS12 countries.

From a **socio-demographic perspective**, the analyses indicate that, overall, acceptance levels are higher among men than women (average scores for the four items are 4.1 and 3.5 respectively). Education accounts for wide differences in acceptance levels, with average scores on the scale ranging from 3.1 among respondents who left full-time education aged 15 and younger to 4.2 for those who stayed in full-time education until the age of 20 or older. Respondents who left full-time education aged 15 and younger have the lowest acceptance levels of all social groups. The highest acceptance levels are noted among students (average score for the four items is 4.4.) and managers (4.3).

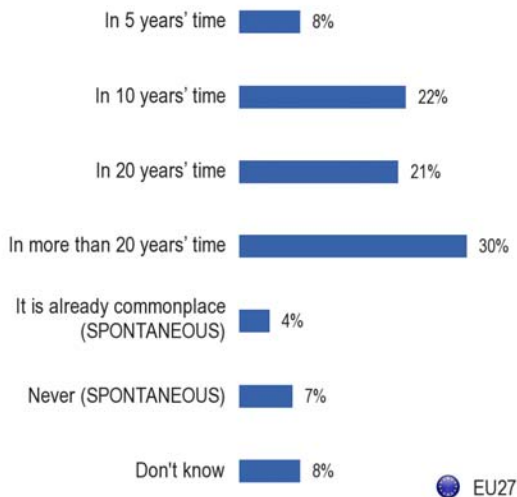
Finally, the **attitudinal analyses** show that the average scale scores for the four items are 2.7 among EU citizens with a negative view of robots compared with 4.2 among those with a positive view and 3.1 for respondents who are 'not at all interested' in science compared with 4.3 among those who are 'very interested'. Respondents with personal experience of robots also have a higher level of acceptance (average score for the four items is 4.3) than those without this experience (3.7).

3.2. When will it become commonplace for robots to do housework?

– Robots doing the housework will not be commonplace in the near future –

Finally, respondents were asked when they think it will become commonplace in Europe for robots to do housework¹³. The results show that **most EU citizens do not see this happening in the near future**: only eight percent believe that in 5 years' time it will become commonplace for robots to do housework and four percent *spontaneously* say that it is already commonplace. At the other extreme, seven percent spontaneously say that it will never become commonplace. The majority view is that robots will do the housework in more than 20 years' time (30%), while around two in five EU citizens believe it will be at least 20 years (21%) or at least 10 more years (22%) before robots doing housework will become commonplace.

QA9. In your opinion, in Europe, when it will become commonplace for robots to do house work?



The **national analyses** demonstrate that opinions vary considerably between the Member States. The most widely held view is that it will be more than 20 years before it is commonplace for robots to do the housework. **This is the most widespread perception in 17 of the 27 Member States.** In the 10 remaining Member States the most common view is that it will be 10 years before it becomes commonplace for robots to do housework.

¹³ QA9 In your opinion, in Europe, when it will become commonplace for robots to do house work?

In (less than) 5 years' time

The perception that robots doing the housework will be commonplace in five years' time or that it is already commonplace is generally low throughout the EU. There are some exceptions: in Denmark 27% of respondents believe that it will take 5 years. There is no other country where more than 20% hold this view and in 20 Member States ten percent or less express this belief. In Austria and Portugal eight percent of respondents say that it is already commonplace and in Slovakia, seven percent believe this to be the case.

In 10 years' time

This is the most widespread view in 10 Member States: Belgium, Denmark, Italy, Malta, the Netherlands, Austria, Slovenia, Slovakia, Finland and Sweden. Respondents in Hungary are least likely to believe that it will be 10 years before robots doing housework is a commonplace activity (12%) while respondents in Denmark are most likely to think it will take 10 years (37%).

In 20 years' time

The proportion of respondents who say that it will be 20 years before it is commonplace for robots to do housework ranges from 14% in Malta and Portugal to 28% in the Czech Republic.

In more than 20 years' time

This is the likeliest opinion in 17 Member States: Bulgaria, the Czech Republic, Germany, Estonia, Ireland, Greece, Spain, France, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Poland, Portugal, Romania and the United Kingdom. Respondents in Denmark are least likely to believe that it will be more than 20 years before robots doing housework becomes a commonplace activity (13%) while respondents in Lithuania are most likely to think it will be more than 20 years (47%).





























Never

In five Member States, ten percent or more believe that it will never become commonplace for robots to do the housework: Germany (15%), Hungary (12%), and Lithuania, Austria and Romania (all 10%).

'Don't know'

Lastly, the national analyses show that in three Member States a high proportion of respondents have no opinion: 24% in Portugal and 19% in Bulgaria and Malta.

QA9 In your opinion, in Europe, when it will become commonplace for robots to do house work?

	In 5 years' time	In 10 years' time	In 20 years' time	In more than 20 years' time	It is already commonplace (SPONTANEOUS)	Never (SPONTANEOUS)	Don't know
 EU27	8%	22%	21%	30%	4%	7%	8%
 BE	14%	31%	21%	26%	3%	4%	1%
 BG	7%	20%	20%	27%	3%	4%	19%
 CZ	8%	21%	28%	29%	4%	5%	5%
 DK	27%	37%	16%	13%	5%	1%	1%
 DE	4%	18%	21%	31%	4%	15%	7%
 EE	7%	22%	25%	35%	2%	4%	5%
 IE	9%	19%	21%	28%	3%	8%	12%
 EL	5%	20%	19%	40%	2%	7%	7%
 ES	10%	19%	15%	36%	6%	5%	9%
 FR	12%	27%	22%	29%	1%	5%	4%
 IT	9%	24%	21%	20%	7%	8%	11%
 CY	6%	19%	20%	39%	0%	6%	10%
 LV	8%	25%	23%	30%	3%	7%	4%
 LT	2%	14%	20%	47%	1%	10%	6%
 LU	10%	28%	21%	30%	4%	3%	4%
 HU	3%	12%	22%	44%	2%	12%	5%
 MT	16%	27%	14%	19%	3%	2%	19%
 NL	9%	30%	27%	27%	1%	4%	2%
 AT	10%	25%	18%	23%	8%	10%	6%
 PL	5%	18%	23%	39%	2%	3%	10%
 PT	9%	18%	14%	21%	8%	6%	24%
 RO	9%	17%	15%	27%	5%	10%	17%
 SI	12%	27%	26%	21%	4%	6%	4%
 SK	13%	26%	25%	22%	7%	4%	3%
 FI	15%	34%	26%	19%	1%	3%	2%
 SE	10%	31%	23%	30%	2%	3%	1%
 UK	8%	25%	24%	31%	1%	5%	6%

Highest percentage per

Lowest percentage per

Highest percentage per item

Lowest percentage per

The **socio-demographic analyses** indicate that the majority view among all social groups except students and the respondents who place themselves highest on the social scale is that it will be more than 20 years before robots commonly do housework. Students are more likely to think it will be 10 years (30%) than more than 20 years (25%). Among EU citizens who place themselves at the top of the social scale, equal proportions believe it will be 10 years and at least 20 more years (both 27%).

The **attitudinal analyses** show that EU citizens who are 'very interested' in science and technology are divided as to whether it will be 10 years (28%) or at least 20 years (27%). Respondents who already use robots are more likely to believe it will be 10 years than more than 20 years (27% vs. 23%) whereas the most widespread view among the majority of EU citizens who do not use robots is that it will be more than 20 years (31%). The most common view among respondents with both a positive and a negative view of robots is that it will take more than 20 years. However, this tendency is stronger among those with a negative view: 35% of 'negative' respondents believe it will be more than 20 years, compared with 28% of the 'positive' group. Nearly as many 'positive' respondents believe it will be 10 more years before it becomes commonplace for robots to do the housework (25%).

CONCLUSIONS

The survey shows that a quarter of EU citizens are 'very interested' in new scientific discoveries and technological developments. However, this proportion is now somewhat lower than it was in 2010. The survey results demonstrate that this variable is an important determinant of views and attitudes towards robots.

The majority of Europeans indicate that both the image of an instrument-like machine used in the workplace and the image of a human-like machine helping in the home corresponded well to their idea of robots. However, they are more likely think of robots as instrument-like machines than as human-like machines.

While EU citizens have ideas about what robots look like, not many have direct personal experience of robots; the survey shows that six percent of respondents have used or are currently using robots in their home and an equal proportion have used or are currently using a robot in their home.

Overall EU citizens have a positive view of robots: more than two-thirds of Europeans are of this opinion. However, further analyses show that **the public are clear that while robots serve a utilitarian purpose and are useful for tasks that are too dangerous or difficult for humans, their use nevertheless requires careful management.** EU citizens express widespread concern that robots could steal people's jobs; however, a sizeable minority consider that robots could boost job opportunities in the EU.

In this context, it is unsurprising to find that EU citizens have a clear set of preferences when it comes to the areas of application for robots. While there is strong support for the use of robots in space exploration and manufacturing, there is outright opposition to their use to take care of people. The survey shows that support for the use of robots is greatest in areas where the tasks are too difficult or too dangerous for humans, but that robots should not be used to carry out 'human' tasks.

This also means that EU citizens would feel very uncomfortable if a robot were used to look after their children or elderly parents or even to walk their dog, although they can tolerate the idea of a robot assisting them at work.

However, all of this is future talk to most Europeans, as very few imagine that it will soon become commonplace for robots to do homework.

The analyses point to a North-South divide in views of robots, with EU citizens in the North generally more receptive to and accepting of robots than those in southern Europe. There are also differences between citizens in EU15 countries and citizens in NMS12 countries; the latter are more positive and tolerant than EU15 citizens.

The national analyses show that in countries where personal exposure to robots is higher – personal experiences range from just two percent in Bulgaria and Greece to around 20% in Slovakia, Poland, Slovenia and Italy – EU citizens are more likely to have a positive view of robots, but this relationship does not hold everywhere. The extent to which EU citizens hold positive views ranges from 54% in Malta and Greece to 88% in Denmark and Sweden. Attitudes towards robots tend to be among the most negative in Greece, whereas citizens in Bulgaria are more likely than average to have no opinion. The perception that robots steal people's jobs is greater in countries badly affected by the economic crisis than in some of the more resilient Western-European economies.

The survey shows that public opinion is united across the Member States when it comes to the areas of application for robots: manufacturing is the priority area in 13 Member States, while space exploration is the priority area in 11. The UK is the only country where military and security is the most frequently selected area; Malta and Portugal are the two countries where search and rescue are the top priority. Across the EU, citizens agree that the care of children, the elderly and people with disabilities is the first area from which robots should be banned, even if the strength of this view varies from country to country.

EU citizens in all Member States would feel uncomfortable if a robot were to look after their children or their elderly parents; in all countries the majority also dislike the idea of a robot walking their dog or having a medical operation performed on them by a robot. National differences are more striking in the case of having a robot assist people at work: the proportion that would feel comfortable in this situation ranges from 22% in Bulgaria to 81% in Sweden.

When asked about the prospects for robots performing tasks in the home, respondents in 17 Member States believe that this lies more than 20 years in the future; in 10 Member States the most frequent answer is that this will happen 10 years from now. Respondents in countries with generally more positive attitudes towards robots tend to think that it will be 10 more years whereas in countries with a more sceptical stance towards robots the tendency is to think that it will take more than 20 years.

The survey shows that in socio-demographic terms education and gender are important determinants of views about robots. Men are generally more receptive and positive than women, and education generally appears to have a positive influence on people's views. Furthermore, the analyses show that interest in science and technology and overall attitudes towards robots are very important measures of people's specific views and concerns. **EU citizens who are 'very interested' in science and technology and who have an overall positive view of robots are much more open to and accepting of robots than those with no interest in science and technology or with a negative overall view of robots.** However, even among 'very interested' and positive respondents, there is little acceptance of robots operating in 'human' areas, particularly in the case of taking care of vulnerable people.

ANNEXES

TECHNICAL SPECIFICATIONS

SPECIAL EUROBAROMETER 382

Public Attitudes towards Robots

TECHNICAL SPECIFICATIONS

Between the 25th of February and the 11th of March 2012, TNS Opinion & Social, a consortium created between TNS plc and TNS opinion, carried out the wave 77.1 of the EUROBAROMETER, on request of the EUROPEAN COMMISSION, Directorate-General for Communication, "Research and Speechwriting".

The SPECIAL EUROBAROMETER 382 is part of wave 77.1 and covers the population of the respective nationalities of the European Union Member States, resident in each of the Member States and aged 15 years and over. 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"). 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.

ABBR.	COUNTRIES	INSTITUTES	N° INTERVIEWS	FIELDWORK DATES		POPULATION 15+
BE	Belgium	TNS Dimarso	1.051	25/02/2012	11/03/2012	8.939.546
BG	Bulgaria	TNS BBSS	1.006	25/02/2012	05/03/2012	6.537.510
CZ	Czech Rep.	TNS Aisa	1.003	25/02/2012	07/03/2012	9.012.443
DK	Denmark	TNS Gallup DK	1.019	25/02/2012	11/03/2012	4.561.264
DE	Germany	TNS Infratest	1.552	25/02/2012	11/03/2012	64.409.146
EE	Estonia	Emor	1.000	25/02/2012	11/03/2012	945.733
IE	Ireland	Ipsos MRBI	1.008	25/02/2012	09/03/2012	3.522.000
EL	Greece	TNS ICAP	999	25/02/2012	10/03/2012	8.693.566
ES	Spain	TNS Demoscopia	1.004	25/02/2012	11/03/2012	39.127.930
FR	France	TNS Sofres	1.059	25/02/2012	07/03/2012	47.756.439
IT	Italy	TNS Infratest	1.036	25/02/2012	11/03/2012	51.862.391
CY	Rep. of Cyprus	Synovate	506	25/02/2012	11/03/2012	660.400
LV	Latvia	TNS Latvia	1.024	25/02/2012	11/03/2012	1.447.866
LT	Lithuania	TNS Gallup Lithuania	1.021	25/02/2012	11/03/2012	2.829.740
LU	Luxembourg	TNS ILReS	501	25/02/2012	10/03/2012	404.907
HU	Hungary	TNS Hoffmann Kft	1.021	25/02/2012	11/03/2012	8.320.614
MT	Malta	MISCO	500	25/02/2012	09/03/2012	335.476
NL	Netherlands	TNS NIPO	1.014	25/02/2012	08/03/2012	13.371.980
AT	Austria	Österreichisches Gallup-Institut	1.031	25/02/2012	11/03/2012	7.009.827
PL	Poland	TNS OBOP	1.000	25/02/2012	11/03/2012	32.413.735
PT	Portugal	TNS EUROTESTE	1.009	25/02/2012	11/03/2012	8.080.915
RO	Romania	TNS CSOP	1.020	25/02/2012	07/03/2012	18.246.731
SI	Slovenia	RM PLUS	1.017	25/02/2012	09/03/2012	1.759.701
SK	Slovakia	TNS Slovakia	1.000	25/02/2012	11/03/2012	4.549.955
FI	Finland	TNS Gallup Oy	1.003	25/02/2012	11/03/2012	4.440.004
SE	Sweden	TNS GALLUP	1.016	25/02/2012	11/03/2012	7.791.240
UK	United Kingdom	TNS UK	1.331	25/02/2012	11/03/2012	51.848.010
TOTAL EU27			26.751	25/02/2012	11/03/2012	408.879.069

For each country a comparison between the sample and the universe was carried out. The Universe description was derived from Eurostat population data or from national statistics offices. For all countries surveyed, a national weighting procedure, using marginal and intercellular weighting, was carried out based on this Universe description. In all countries, gender, age, region and size of locality were introduced in the iteration procedure. For international weighting (i.e. EU averages), TNS Opinion & Social applies the official population figures as provided by EUROSTAT or national statistic offices. The total population figures for input in this post-weighting procedure are listed above.

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:

Observed percentages	10% or 90%	20% or 80%	30% or 70%	40% or 60%	50%
Confidence limits	± 1.9 points	± 2.5 points	± 2.7 points	± 3.0 points	± 3.1 points

QUESTIONNAIRE

QA. PUBLIC ATTITUDES TOWARDS ROBOTS

QA1	Please tell me whether you are very interested, moderately interested or not at all interested in scientific discoveries and technological developments. (M)
-----	--

(ONE ANSWER ONLY)

Very interested	1
Moderately interested	2
Not at all interested	3
DK	4

EB73.1 QC1.5 TREND MODIFIED

QA2	I'm going to show you two pictures. For each of them, please tell me to what extent it corresponds with the idea you have of robots.
-----	--

(SHOW CARD WITH SCALE – SHOW PICTURES – ONE ANSWER PER LINE)

	(READ OUT)	Very well	Fairly well	Fairly badly	Very badly	DK
1	Picture robot 1	1	2	3	4	5
2	Picture robot 2	1	2	3	4	5

NEW

A robot is defined here as an autonomous machine which can assist humans in everyday tasks e.g. as a kind of co-worker helping on the factory floor or as a robot cleaner, or in activities which may be dangerous for humans, like search and rescue in disasters. Robots can come in many shapes or sizes, including human-like. Traditional kitchen appliances, such as a blender or a coffee maker, are not robots.

QA3 Have you ever used, or are you currently using such robots at home or at work (e.g. a robotic vacuum cleaner at home or an industrial robot at work)?

(READ OUT – MULTIPLE ANSWERS POSSIBLE)

Yes, at home	1,
Yes, at work	2,
Yes, elsewhere (SPONTANEOUS)	3,
No	4,
DK	5,

NEW

QA4 Generally speaking, do you have a very positive, fairly positive, fairly negative or very negative view of robots?

(ONE ANSWER ONLY)

Very positive	1
Fairly positive	2
Fairly negative	3
Very negative	4
DK	5

NEW

QA5	Please tell me to what extent you agree or disagree with each of the following statements about robots.
-----	---

(SHOW CARD WITH SCALE – ONE ANSWER PER LINE)

	(READ OUT – ROTATE)	Totally agree	Tend to agree	Tend to disagree	Totally disagree	DK
1	Robots are a good thing for society, because they help people	1	2	3	4	5
2	Robots steal peoples' jobs	1	2	3	4	5
3	Robots are necessary as they can do jobs that are too hard or too dangerous for people	1	2	3	4	5
4	Robots are a form of technology that requires careful management	1	2	3	4	5
5	Widespread use of robots can boost job opportunities in the EU	1	2	3	4	5

NEW

QA6 In which areas do you think that robots should be used as a priority?

(SHOW CARD – READ OUT – MAX. 3 ANSWERS)

Manufacturing	1,
Healthcare	2,
Leisure	3,
Domestic use, such as cleaning	4,
Military and security	5,
Search and rescue	6,
Education	7,
Care of children, elderly, and the disabled	8,
Space exploration	9,
Agriculture	10,
Transport\ Logistics	11,
Other (SPONTANEOUS)	12,
None (SPONTANEOUS)	13,
DK	14,

NEW

QA7 And on the other hand, in which areas do you think that the use of robots should be banned?

(SHOW CARD – READ OUT – MAX. 3 ANSWERS)

Manufacturing	1,
Healthcare	2,
Leisure	3,
Domestic use, such as cleaning	4,
Military and security	5,
Search and rescue	6,
Education	7,
Care of children, elderly, and the disabled	8,
Space exploration	9,
Agriculture	10,
Transport\ logistics	11,
Other (SPONTANEOUS)	12,
None (SPONTANEOUS)	13,
DK	14,

NEW

QA8 Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

(SHOW CARD WITH SCALE – ONE ANSWER PER LINE)

	(READ OUT – ROTATE)	1 Total ly unco mfor table	2	3	4	5	6	7	8	9	10 Total ly comf orta ble	Not appli cabl e (SP ONT ANE OUS)	DK
--	---------------------	---	---	---	---	---	---	---	---	---	--	--	----

1	Having a medical operation performed on you by a robot	1	2	3	4	5	6	7	8	9	10	11	12
2	Having your dog walked by a robot	1	2	3	4	5	6	7	8	9	10	11	12
3	Having a robot assist you at work (e.g.: in manufacturing)	1	2	3	4	5	6	7	8	9	10	11	12
4	Having your children or elderly parents minded by a robot	1	2	3	4	5	6	7	8	9	10	11	12

NEW

QA9	In your opinion, in Europe, when it will become commonplace for robots to do house work?
-----	--

(READ OUT – ONE ANSWER ONLY)

In 5 years' time	1
In 10 years' time	2
In 20 years' time	3
In more than 20 years' time	4
It is already commonplace (SPONTANEOUS)	5
Never (SPONTANEOUS)	6
DK	7





























NEW

TABLES

QA1 Veuillez me dire si vous êtes très intéressé(e), moyennement intéressé(e) ou pas du tout intéressé(e) par les découvertes scientifiques et les évolutions technologiques ?

QA1 Please tell me whether you are very interested, moderately interested or not at all interested in scientific discoveries and technological developments.

QA1 Bitte sagen Sie mir, ob Sie an wissenschaftlichen Entdeckungen und technologischen Entwicklungen sehr interessiert, etwas interessiert oder gar nicht interessiert sind.

%		Très intéressé(e)		Moyennement		Pas du tout intéressé(e)		NSP	
		Very interested		Moderately interested		Not at all interested		DK	
		Sehr interessiert		Etwas interessiert		Gar nicht interessiert		WN	
		EB 77.1	Diff. EB 73.1	EB 77.1	Diff. EB 73.1	EB 77.1	Diff. EB 73.1	EB 77.1	Diff. EB 73.1
	EU 27	25	-5	52	3	22	2	1	0
	BE	25	-7	54	6	21	1	0	0
	BG	19	8	49	2	28	-8	4	-2
	CZ	9	-13	59	3	32	10	0	0
	DK	30	-2	61	17	9	-14	0	-1
	DE	30	-2	52	1	18	1	0	0
	EE	18	-12	64	14	18	-1	0	-1
	IE	18	-9	47	3	33	7	2	-1
	EL	30	-7	44	-5	26	12	0	0
	ES	24	-5	45	-7	30	12	1	0
	FR	34	-7	54	8	12	-1	0	0
	IT	21	5	55	2	22	-6	2	-1
	CY	43	-12	40	3	17	9	0	0
	LV	22	-8	61	10	17	-2	0	0
	LT	11	-1	58	8	31	-6	0	-1
	LU	34	-8	54	5	12	3	0	0
	HU	22	-19	57	7	21	13	0	-1
	MT	24	-12	40	2	34	11	2	-1
	NL	36	-12	58	17	6	-5	0	0
	AT	27	6	51	-2	22	-3	0	-1
	PL	16	-1	58	10	25	-9	1	0
	PT	13	-1	49	0	37	2	1	-1
	RO	22	7	49	6	27	-10	2	-3
	SI	20	-8	59	5	21	3	0	0
	SK	25	3	50	-5	25	2	0	0
	FI	23	-11	64	13	13	-2	0	0
	SE	41	-2	54	7	5	-5	0	0
	UK	25	-18	47	3	28	15	0	0

QA2.1 Je vais vous montrer deux images. Pour chacune d'entre elles, veuillez me dire dans quelle mesure elle correspond à l'idée que vous vous faites des robots.





























Image robot 1

QA2.1 I'm going to show you two pictures. For each of them, please tell me to what extent it corresponds with the idea you have of robots.

Picture robot 1

QA2.1 Ich zeige Ihnen nun zwei Bilder. Bitte sagen Sie mir zu jedem Bild, inwieweit dieses Ihrer Vorstellung von Robotern entspricht.

Bild Roboter 1

		Très bien	Plutôt bien	Plutôt mal	Très mal	NSP	Total 'Bien'	Total 'Mal'
		Very well	Rather well	Rather badly	Very badly	DK	Total 'Well'	Total 'Badly'
		Sehr gut	Eher gut	Eher schlecht	Sehr schlecht	WN	Gesamt'Gut'	Gesamt'Gut'
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	34	47	12	5	2	81	17
	BE	40	46	11	3	0	86	14
	BG	41	42	10	2	5	83	12
	CZ	45	42	10	3	0	87	13
	DK	74	20	4	1	1	94	5
	DE	44	43	9	3	1	87	12
	EE	28	52	13	4	3	80	17
	IE	34	46	8	7	5	80	15
	EL	23	46	22	9	0	69	31
	ES	26	49	16	7	2	75	23
	FR	36	50	10	3	1	86	13
	IT	23	54	14	7	2	77	21
	CY	34	41	14	10	1	75	24
	LV	33	52	10	3	2	85	13
	LT	25	53	14	5	3	78	19
	LU	36	43	15	5	1	79	20
	HU	35	49	12	3	1	84	15
	MT	35	30	16	15	4	65	31
	NL	49	42	7	2	0	91	9
	AT	26	48	21	4	1	74	25
	PL	26	57	10	3	4	83	13
	PT	19	45	26	7	3	64	33
	RO	21	35	23	15	6	56	38
	SI	39	49	9	2	1	88	11
	SK	42	46	9	2	1	88	11
	FI	50	43	5	1	1	93	6
	SE	63	32	4	1	0	95	5
	UK	38	44	11	4	3	82	15

QA2.2 Je vais vous montrer deux images. Pour chacune d'entre elles, veuillez me dire dans quelle mesure elle correspond à l'idée que vous vous faites des robots.





























Image robot 2

QA2.2 I'm going to show you two pictures. For each of them, please tell me to what extent it corresponds with the idea you have of robots.

Picture robot 2

QA2.2 Ich zeige Ihnen nun zwei Bilder. Bitte sagen Sie mir zu jedem Bild, inwieweit dieses Ihrer Vorstellung von Robotern entspricht.





























Bild Roboter 2

		Très bien	Plutôt bien	Plutôt mal	Très mal	NSP	Total 'Bien'	Total 'Mal'
		Very well	Rather well	Rather badly	Very badly	DK	Total 'Well'	Total 'Badly'
		Sehr gut	Eher gut	Eher schlecht	Sehr schlecht	WN	Gesamt'Gut'	Gesamt'Gut'
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	27	39	23	9	2	66	32
	BE	26	33	31	10	0	59	41
	BG	37	43	11	2	7	80	13
	CZ	44	34	18	4	0	78	22
	DK	37	29	26	7	1	66	33
	DE	21	35	30	12	2	56	42
	EE	26	40	22	8	4	66	30
	IE	29	46	12	8	5	75	20
	IT	24	37	24	15	0	61	39
	ES	32	41	17	8	2	73	25
	FR	28	34	26	11	1	62	37
	GR	26	47	17	8	2	73	25
	CY	39	35	11	14	1	74	25
	LV	34	39	19	5	3	73	24
	LT	20	45	23	8	4	65	31
	LU	25	33	28	12	2	58	40
	HU	24	42	24	8	2	66	32
	MT	38	27	17	13	5	65	30
	NL	37	35	21	7	0	72	28
	AT	26	41	24	7	2	67	31
	PL	27	46	17	4	6	73	21
	PT	14	41	30	12	3	55	42
	RO	17	35	25	17	6	52	42
	SI	31	41	19	8	1	72	27
	SK	34	42	18	4	2	76	22
	FI	29	36	26	8	1	65	34
	SE	30	33	28	8	1	63	36
	UK	29	35	25	8	3	64	33

QA3 Avez-vous déjà utilisé, ou utilisez-vous actuellement, un robot de ce type à la maison ou sur votre lieu de travail (par ex. un robot aspirateur chez vous, ou un robot industriel au travail) ? (PLUSIEURS REPONSES POSSIBLES)

QA3 Have you ever used, or are you currently using such robots at home or at work (e.g. a robotic vacuum cleaner at home or an industrial robot at work)? (MULTIPLE ANSWERS POSSIBLE)





























QA3 Nutzen Sie derzeit oder haben Sie jemals solche Roboter zu Hause oder am Arbeitsplatz genutzt (z.B. einen Staubsauger-Roboter im Haushalt oder einen Industrieroboter auf der Arbeit)? (MEHRFACHNENNUNGEN MÖGLICH)

		Oui, à la maison	Oui, au travail	Oui, ailleurs (SPONTANE)	Non	NSP	Total 'Oui'
		Yes, at home	Yes, at work	Yes others (SPONTANEOUS)	No	DK	Total 'Yes'
		Ja, zu Hause	Ja, am Arbeitsplatz	Ja, an einem anderen Ort (SPONTAN)	Nein	WN	Gesamt 'Ja'
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	6	6	1	87	0	12
	BE	4	7	1	89	0	11
	BG	2	1	0	97	1	2
	CZ	8	7	0	86	0	14
	DK	7	10	1	83	0	17
	DE	3	6	0	91	0	9
	EE	2	5	0	93	0	7
	IE	1	5	2	91	1	9
	EL	0	1	0	98	0	2
	ES	7	8	1	86	0	14
	FR	7	8	1	86	0	14
	IT	14	3	1	82	0	18
	CY	2	2	1	96	0	4
	LV	5	5	0	90	0	10
	LT	3	3	1	93	0	7
	LU	6	4	0	90	0	10
	HU	5	4	1	91	0	9
	MT	1	3	1	95	0	5
	NL	2	7	0	91	0	9
	AT	4	8	3	86	0	14
	PL	7	5	7	81	1	19
	PT	4	4	2	91	0	9
	RO	6	4	2	87	2	11
	SI	9	8	5	82	0	18
	SK	11	11	1	80	0	20
	FI	3	12	3	82	0	17
	SE	2	9	1	88	0	12
	UK	3	7	1	90	0	10

QA4 De façon générale, avez-vous une image très positive, plutôt positive, plutôt négative ou très négative des robots ?

QA4 Generally speaking, do you have a very positive, fairly positive, fairly negative or very negative view of robots?

QA4 Ist das Bild, das Sie von Robotern haben, alles in allem sehr positiv, ziemlich positiv, ziemlich negativ oder sehr negativ?

		Très positive	Plutôt positif	Plutôt négatif	Très négative	NSP	Total 'Positif'	Total 'Négatif'
		Very positive	Fairly positive	Fairly negative	Very negative	DK	Total 'Positive'	Total 'Negative'
		Sehr positiv	Ziemlich positiv	Ziemlich negativ	Sehr negativ	WN	Gesamt 'Positiv'	Gesamt 'Negativ'
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	14	56	18	5	7	70	23
	BE	12	60	22	5	1	72	27
	BG	25	53	10	2	10	78	12
	CZ	19	57	19	3	2	76	22
	DK	33	55	8	1	3	88	9
	DE	14	55	17	5	9	69	22
	EE	13	65	15	3	4	78	18
	IE	17	49	16	7	11	66	23
	EL	10	44	28	16	2	54	44
	ES	13	51	20	7	9	64	27
	FR	7	60	23	6	4	67	29
	IT	12	57	18	9	4	69	27
	CY	16	41	28	8	7	57	36
	LV	12	59	17	3	9	71	20
	LT	15	63	12	4	6	78	16
	LU	10	57	23	7	3	67	30
	HU	9	56	23	6	6	65	29
	MT	13	41	20	13	13	54	33
	NL	20	67	9	2	2	87	11
	AT	13	52	23	6	6	65	29
	PL	17	63	10	2	8	80	12
	PT	5	50	30	5	10	55	35
	RO	17	53	12	6	12	70	18
	SI	17	59	18	4	2	76	22
	SK	28	56	13	1	2	84	14
	FI	18	67	11	1	3	85	12
	SE	27	61	9	1	2	88	10
	UK	16	51	17	5	11	67	22

QA5.1 Veuillez me dire dans quelle mesure vous êtes d'accord ou pas d'accord avec les propositions suivantes concernant les robots.





























Les robots sont une bonne chose pour la société, parce qu'ils aident les gens

QA5.1 Please tell me to what extent you agree or disagree with each of the following statements about robots.

Robots are a good thing for society, because they help people

QA5.1 Bitte sagen Sie mir, inwieweit Sie jeder der folgenden Aussagen über Roboter zustimmen oder nicht zustimmen.

Roboter sind gut für die Gesellschaft, weil sie Menschen helfen

	%	Tout à fait d'accord	Plutôt d'accord	Plutôt pas d'accord	Pas du tout d'accord	NSP	Total 'D'accord'	Total 'Pas d'accord'
		Totally agree	Tend to agree	Tend to disagree	Totally disagree	DK	Total 'Agree'	Total 'Disagree'
		Stimme voll und ganz zu	Stimme eher zu	Lehne eher ab	Stimme überhaupt nicht zu	WN	Gesamt 'Stimme zu'	Gesamt 'Stimme nicht zu'
		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	26	50	15	5	4	76	20
	BE	23	54	18	4	1	77	22
	BG	45	41	7	2	5	86	9
	CZ	43	48	7	1	1	91	8
	DK	44	45	8	2	1	89	10
	DE	27	48	17	5	3	75	22
	EE	34	52	9	2	3	86	11
	IE	26	49	11	5	9	75	16
	EL	16	42	27	13	2	58	40
	ES	25	47	17	5	6	72	22
	FR	14	56	21	7	2	70	28
	IT	20	52	18	7	3	72	25
	CY	24	45	18	10	3	69	28
	LV	38	48	9	3	2	86	12
	LT	36	50	9	2	3	86	11
	LU	20	54	21	4	1	74	25
	HU	23	54	16	4	3	77	20
	MT	22	46	17	9	6	68	26
	NL	32	53	12	2	1	85	14
	AT	20	47	24	6	3	67	30
	PL	29	58	9	0	4	87	9
	PT	16	50	22	5	7	66	27
	RO	40	41	9	5	5	81	14
	SI	33	45	15	5	2	78	20
	SK	50	45	4	0	1	95	4
	FI	28	62	8	0	2	90	8
	SE	46	47	5	2	0	93	7
	UK	23	53	13	5	6	76	18

QA5.2 Veuillez me dire dans quelle mesure vous êtes d'accord ou pas d'accord avec les propositions suivantes concernant les robots.





























Les robots volent les emplois des gens

QA5.2 Please tell me to what extent you agree or disagree with each of the following statements about robots.

Robots steal peoples' jobs

QA5.2 Bitte sagen Sie mir, inwieweit Sie jeder der folgenden Aussagen über Roboter zustimmen oder nicht zustimmen.

Roboter vernichten Arbeitsplätze

		Tout à fait d'accord	Plutôt d'accord	Plutôt pas d'accord	Pas du tout d'accord	NSP	Total 'D'accord'	Total 'Pas d'accord'
		Totally agree	Tend to agree	Tend to disagree	Totally disagree	DK	Total 'Agree'	Total 'Disagree'
		Stimme voll und ganz zu	Stimme eher zu	Lehne eher ab	Stimme überhaupt nicht zu	WN	Gesamt 'Stimme zu'	Gesamt 'Stimme nicht zu'
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	34	36	20	7	3	70	27
	BE	33	39	22	5	1	72	27
	BG	26	35	24	9	6	61	33
	CZ	20	40	29	10	1	60	39
	DK	22	37	27	13	1	59	40
	DE	42	34	17	5	2	76	22
	EE	40	37	15	6	2	77	21
	IE	33	30	21	9	7	63	30
	EL	53	30	13	3	1	83	16
	ES	54	30	10	5	1	84	15
	FR	35	39	19	5	2	74	24
	IT	25	39	24	9	3	64	33
	CY	63	20	11	4	2	83	15
	LV	45	33	15	5	2	78	20
	LT	39	39	16	3	3	78	19
	LU	45	34	15	5	1	79	20
	HU	37	41	17	4	1	78	21
	MT	53	29	10	5	3	82	15
	NL	16	35	34	13	2	51	47
	AT	24	34	30	9	3	58	39
	PL	27	43	20	5	5	70	25
	PT	57	32	8	2	1	89	10
	RO	35	28	19	11	7	63	30
	SI	44	32	16	7	1	76	23
	SK	23	37	27	11	2	60	38
	FI	15	40	39	5	1	55	44
	SE	21	46	20	12	1	67	32
	UK	28	39	22	8	3	67	30

QA5.3 Veuillez me dire dans quelle mesure vous êtes d'accord ou pas d'accord avec les propositions suivantes concernant les robots.





























Les robots sont nécessaires parce qu'ils peuvent effectuer des tâches qui sont trop difficiles ou dangereuses pour les gens

QA5.3 Please tell me to what extent you agree or disagree with each of the following statements about robots.

Robots are necessary as they can do jobs that are too hard or too dangerous for people

QA5.3 Bitte sagen Sie mir, inwieweit Sie jeder der folgenden Aussagen über Roboter zustimmen oder nicht zustimmen.

Roboter sind notwendig, da sie Arbeiten erledigen können, die für Menschen zu schwer oder zu gefährlich sind

		Tout à fait d'accord	Plutôt d'accord	Plutôt pas d'accord	Pas du tout d'accord	NSP	Total 'D'accord'	Total 'Pas d'accord'
		Totally agree	Tend to agree	Tend to disagree	Totally disagree	DK	Total 'Agree'	Total 'Disagree'
		Stimme voll und ganz zu	Stimme eher zu	Lehne eher ab	Stimme überhaupt nicht zu	WN	Gesamt 'Stimme zu'	Gesamt 'Stimme nicht zu'
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	48	40	7	3	2	88	10
	BE	46	43	8	2	1	89	10
	BG	57	31	5	2	5	88	7
	CZ	49	43	6	1	1	92	7
	DK	73	22	3	1	1	95	4
	DE	65	27	5	2	1	92	7
	EE	63	31	4	1	1	94	5
	IE	41	43	7	3	6	84	10
	EL	33	42	16	9	0	75	25
	ES	45	42	8	3	2	87	11
	FR	46	44	7	2	1	90	9
	IT	30	50	11	7	2	80	18
	CY	56	32	6	4	2	88	10
	LV	69	26	3	1	1	95	4
	LT	57	35	5	1	2	92	6
	LU	51	40	5	3	1	91	8
	HU	42	45	9	2	2	87	11
	MT	37	44	9	4	6	81	13
	NL	63	31	5	1	0	94	6
	AT	40	43	13	2	2	83	15
	PL	45	43	8	1	3	88	9
	PT	31	47	14	2	6	78	16
	RO	45	37	8	4	6	82	12
	SI	68	28	3	1	0	96	4
	SK	61	35	2	1	1	96	3
	FI	44	48	6	1	1	92	7
	SE	76	21	2	1	0	97	3
	UK	46	41	7	3	3	87	10

QA5.4 Veuillez me dire dans quelle mesure vous êtes d'accord ou pas d'accord avec les propositions suivantes concernant les robots.





























Les robots sont un type de technologie qui nécessite d'être géré avec prudence

QA5.4 Please tell me to what extent you agree or disagree with each of the following statements about robots.

Robots are a form of technology that requires careful management

QA5.4 Bitte sagen Sie mir, inwieweit Sie jeder der folgenden Aussagen über Roboter zustimmen oder nicht zustimmen.

Bei Robotern handelt es sich um eine Form der Technologie, die eine sorgsame Handhabung erfordert

		Tout à fait d'accord	Plutôt d'accord	Plutôt pas d'accord	Pas du tout d'accord	NSP	Total 'D'accord'	Total 'Pas d'accord'
		Totally agree	Tend to agree	Tend to disagree	Totally disagree	DK	Total 'Agree'	Total 'Disagree'
		Stimme voll und ganz zu	Stimme eher zu	Lehne eher ab	Stimme überhaupt nicht zu	WN	Gesamt 'Stimme zu'	Gesamt 'Stimme nicht zu'
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	52	39	5	1	3	91	6
	BE	55	39	5	1	0	94	6
	BG	66	26	2	1	5	92	3
	CZ	42	42	13	2	1	84	15
	DK	75	18	5	1	1	93	6
	DE	67	28	3	1	1	95	4
	EE	52	38	6	1	3	90	7
	IE	53	36	3	1	7	89	4
	EL	67	30	1	1	1	97	2
	ES	48	43	3	1	5	91	4
	FR	54	40	4	1	1	94	5
	IT	43	43	8	5	1	86	13
	CY	86	12	1	0	1	98	1
	LV	68	26	3	1	2	94	4
	LT	50	41	5	1	3	91	6
	LU	55	38	4	1	2	93	5
	HU	36	46	13	3	2	82	16
	MT	47	39	4	3	7	86	7
	NL	70	26	3	0	1	96	3
	AT	44	46	8	1	1	90	9
	PL	35	55	5	0	5	90	5
	PT	32	51	7	1	9	83	8
	RO	46	36	8	3	7	82	11
	SI	66	29	3	1	1	95	4
	SK	49	45	3	0	3	94	3
	FI	55	42	2	0	1	97	2
	SE	55	32	10	2	1	87	12
	UK	53	38	3	2	4	91	5

QA5.5 Veuillez me dire dans quelle mesure vous êtes d'accord ou pas d'accord avec les propositions suivantes concernant les robots.





























L'utilisation étendue des robots peut stimuler la création d'emplois dans l'UE

QA5.5 Please tell me to what extent you agree or disagree with each of the following statements about robots.

Widespread use of robots can boost job opportunities in the EU

QA5.5 Bitte sagen Sie mir, inwieweit Sie jeder der folgenden Aussagen über Roboter zustimmen oder nicht zustimmen.





























Der weitverbreitete Einsatz von Robotern kann zur Förderung von Beschäftigungsmöglichkeiten in der EU führen

%		Tout à fait d'accord	Plutôt d'accord	Plutôt pas d'accord	Pas du tout d'accord	NSP	Total 'D'accord'	Total 'Pas d'accord'
		Totally agree	Tend to agree	Tend to disagree	Totally disagree	DK	Total 'Agree'	Total 'Disagree'
		Stimme voll und ganz zu	Stimme eher zu	Lehne eher ab	Stimme überhaupt nicht zu	WN	Gesamt 'Stimme zu'	Gesamt 'Stimme nicht zu'
		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	10	29	34	17	10	39	51
	BE	9	35	40	14	2	44	54
	BG	20	26	19	12	23	46	31
	CZ	9	27	41	16	7	36	57
	DK	27	38	23	7	5	65	30
	DE	11	31	38	14	6	42	52
	EE	11	27	35	18	9	38	53
	IE	13	30	19	16	22	43	35
	EL	10	29	32	24	5	39	56
	ES	11	24	30	26	9	35	56
	FR	8	26	39	20	7	34	59
	IT	10	35	28	15	12	45	43
	CY	10	20	26	32	12	30	58
	LV	14	30	31	19	6	44	50
	LT	13	39	28	11	9	52	39
	LU	7	27	40	22	4	34	62
	HU	5	18	36	37	4	23	73
	MT	12	25	27	18	18	37	45
	NL	11	31	40	10	8	42	50
	AT	13	37	32	12	6	50	44
	PL	8	27	40	13	12	35	53
	PT	8	31	31	17	13	39	48
	RO	14	22	25	24	15	36	49
	SI	10	23	37	26	4	33	63
	SK	15	31	36	13	5	46	49
	FI	9	48	32	5	6	57	37
	SE	11	40	31	11	7	51	42
	UK	8	26	33	16	17	34	49

QA6 Dans quels domaines pensez-vous que les robots devraient être utilisés en priorité ? (MAX. 3 REPONSES)

QA6 In which areas do you think that robots should be used as a priority? (MAX. 3 ANSWERS)





























QA6 In welchen Bereichen sollten Roboter Ihrer Meinung nach vorrangig eingesetzt werden? (MAX. 3 ANTWORTEN)

		La fabrication	Les soins de santé	Aux loisirs	Un usage domestique, comme le nettoyage
		Manufacturing	Healthcare	Leisure	Domestic use, such as cleaning
		Verarbeitendes Gewerbe	Gesundheitswesen	Freizeit	Haushalt z.B. für Reinigungsarbeiten
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	50	22	3	13
	BE	65	38	2	12
	BG	56	16	4	22
	CZ	55	35	1	15
	DK	80	16	1	13
	DE	50	20	1	9
	EE	60	10	2	11
	IE	57	18	4	11
	EL	44	25	1	8
	ES	37	23	3	12
	FR	49	32	1	15
	IT	30	22	6	20
	CY	23	21	5	15
	LV	64	8	1	19
	LT	37	10	2	22
	LU	45	22	2	16
	HU	36	14	3	14
	MT	43	18	2	19
	NL	64	31	1	9
	AT	62	9	6	20
	PL	59	20	2	12
	PT	42	12	5	13
	RO	54	27	4	24
	SI	69	18	1	13
	SK	75	23	2	21
	FI	77	18	2	10
	SE	72	17	0	6
	UK	57	18	2	8

QA6 Dans quels domaines pensez-vous que les robots devraient être utilisés en priorité ? (MAX. 3 REponses)

QA6 In which areas do you think that robots should be used as a priority? (MAX. 3 ANSWERS)





























QA6 In welchen Bereichen sollten Roboter Ihrer Meinung nach vorrangig eingesetzt werden? (MAX. 3 ANTWORTEN)

		Les domaines militaires et de la sécurité	Les opérations de recherche et sauvetage	L'éducation	La garde d'enfants, des personnes âgées et des personnes en situation de handicap
		Military and security	Search and rescue	Education	Care of children, elderly, and the disabled
		Militär und Sicherheit	Such- und Rettungsdienste	Bildung	Betreuung von Kindern, Senioren und Behinderten
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	41	41	3	4
	BE	33	40	2	7
	BG	33	34	2	3
	CZ	33	48	2	2
	DK	45	36	2	8
	DE	49	44	2	2
	EE	42	59	1	5
	IE	42	35	4	3
	EL	19	39	1	2
	ES	38	39	2	4
	FR	39	49	2	4
	IT	40	36	2	4
	CY	48	52	7	5
	LV	35	44	2	2
	LT	32	49	1	3
	LU	40	52	2	3
	HU	44	54	2	2
	MT	31	46	4	7
	NL	38	50	1	7
	AT	37	38	3	2
	PL	28	47	3	1
	PT	26	45	2	4
	RO	24	21	4	3
	SI	33	32	3	2
	SK	34	32	3	2
	FI	29	35	1	5
	SE	41	55	2	4
	UK	64	36	5	5

QA6 Dans quels domaines pensez-vous que les robots devraient être utilisés en priorité ? (MAX. 3 REPONSES)

QA6 In which areas do you think that robots should be used as a priority? (MAX. 3 ANSWERS)





























QA6 In welchen Bereichen sollten Roboter Ihrer Meinung nach vorrangig eingesetzt werden? (MAX. 3 ANTWORTEN)

		L'exploration spatiale	L'agriculture	Le transport\ la logistique	Autre (SPONTANE)	Aucun (SPONTANE)	NSP
		Space exploration	Agriculture	Transport\ Logistics	Other (SPONTANEOUS)	None (SPONTANEOUS)	DK
		Weltraumforschung	Landwirtschaft	Verkehr / Logistik	Sonstiges (SPONTAN)	Nichts davon (SPONTAN)	WN
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	52	11	11	0	2	2
	BE	43	10	12	0	1	0
	BG	59	14	5	0	2	4
	CZ	61	9	4	0	1	0
	DK	51	18	20	0	0	0
	DE	62	11	14	0	1	1
	EE	55	10	8	0	1	1
	IE	45	12	9	1	3	5
	EL	60	6	7	3	9	0
	ES	42	8	9	0	2	1
	FR	56	10	11	0	1	1
	IT	51	10	13	0	5	2
	CY	70	14	4	0	2	1
	LV	58	10	8	0	1	2
	LT	68	13	8	1	1	2
	LU	54	11	15	0	2	0
	HU	64	10	13	1	1	1
	MT	41	7	3	0	4	5
	NL	41	16	25	0	0	0
	AT	57	14	13	1	2	1
	PL	53	9	6	0	1	2
	PT	26	12	7	1	6	8
	RO	46	23	5	1	2	5
	SI	57	11	6	1	1	1
	SK	51	15	8	0	0	1
	FI	59	18	22	0	0	0
	SE	52	13	24	1	0	1
	UK	45	7	9	0	3	2

QA7 Et, au contraire, dans quels domaines pensez-vous que l'utilisation des robots devrait être rendue illégale ? (MAX. 3 REPONSES)

QA7 And on the other hand, in which areas do you think that the use of robots should be banned? (MAX. 3 ANSWERS)





























QA7 Und in welchen Bereichen sollte der Einsatz von Robotern Ihrer Meinung nach gesetzlich verboten sein? (MAX. 3 ANTWORTEN)

		La fabrication Manufacturing Verarbeitendes Gewerbe	Les soins de santé Healthcare Gesundheitswesen	Aux loisirs Leisure Freizeit	Un usage domestique, comme le nettoyage Domestic use, such as cleaning Haushalt z.B. für Reinigungsarbeiten
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	4	27	20	8
	BE	5	23	37	16
	BG	2	35	10	5
	CZ	1	14	26	6
	DK	1	25	19	10
	DE	3	28	21	7
	EE	1	42	24	10
	IE	4	33	15	10
	EL	7	24	18	17
	ES	6	29	15	6
	FR	6	26	31	8
	IT	6	24	21	9
	CY	3	36	21	25
	LV	2	48	25	5
	LT	1	53	16	3
	LU	3	38	21	5
	HU	6	32	24	10
	MT	12	44	12	5
	NL	2	28	24	9
	AT	3	39	17	7
	PL	3	21	16	4
	PT	5	30	4	4
	RO	2	27	19	7
	SI	1	27	31	7
	SK	1	26	21	5
	FI	1	21	13	7
	SE	0	38	21	9
	UK	4	30	12	11

QA7 Et, au contraire, dans quels domaines pensez-vous que l'utilisation des robots devrait être rendue illégale ? (MAX. 3 REPONSES)

QA7 And on the other hand, in which areas do you think that the use of robots should be banned? (MAX. 3 ANSWERS)





























QA7 Und in welchen Bereichen sollte der Einsatz von Robotern Ihrer Meinung nach gesetzlich verboten sein? (MAX. 3 ANTWORTEN)

		Les domaines militaire et de la sécurité	Les opérations de recherche et sauvetage	L'éducation	La garde d'enfants, des personnes âgées et des personnes en situation de handicap
		Military and security	Search and rescue	Education	Care of children, elderly, and the disabled
		Militär und Sicherheit	Such- und Rettungsdienste	Bildungswesen	Betreuung von Kindern, Senioren und Behinderten
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	7	3	34	60
	BE	6	3	51	59
	BG	13	2	30	40
	CZ	13	2	22	53
	DK	5	4	31	59
	DE	7	5	30	74
	EE	10	2	40	54
	IE	4	3	23	62
	EL	19	1	36	61
	ES	6	2	38	52
	FR	8	2	56	64
	IT	6	6	28	50
	CY	16	3	38	85
	LV	10	3	33	60
	LT	8	2	35	61
	LU	11	4	58	78
	HU	6	2	35	57
	MT	7	2	34	49
	NL	7	2	50	57
	AT	12	7	41	73
	PL	6	2	22	61
	PT	6	2	22	35
	RO	12	4	33	51
	SI	9	2	17	76
	SK	11	4	19	55
	FI	8	6	14	53
	SE	9	2	28	68
	UK	4	3	30	61

QA7 Et, au contraire, dans quels domaines pensez-vous que l'utilisation des robots devrait être rendue illégale ? (MAX. 3 REPONSES)

QA7 And on the other hand, in which areas do you think that the use of robots should be banned? (MAX. 3 ANSWERS)

QA7 Und in welchen Bereichen sollte der Einsatz von Robotern Ihrer Meinung nach gesetzlich verboten sein? (MAX. 3 ANTWORTEN)

		L'exploration spatiale	L'agriculture	Le transport\ la logistique	Autre (SPONTANE)	Aucun (SPONTANE)	NSP
		Space exploration	Agriculture	Transport\ logistics	Other (SPONTANEOUS)	None (SPONTANEOUS)	DK
		Weltraumforschung	Landwirtschaft	Verkehr / Logistik	Sonstiges (SPONTAN)	Nichts davon (SPONTAN)	WN
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	1	6	6	1	10	6
	BE	3	6	6	1	3	1
	BG	2	8	12	0	8	16
	CZ	1	6	9	0	15	6
	DK	0	2	4	0	23	1
	DE	2	4	6	0	9	2
	EE	1	4	6	0	7	4
	IE	1	7	6	1	9	11
	EL	0	5	6	2	9	5
	ES	1	8	6	0	10	6
	FR	1	9	8	1	6	3
	IT	1	7	5	1	13	9
	CY	1	7	1	0	1	1
	LV	2	3	6	1	5	5
	LT	0	2	5	2	9	4
	LU	1	6	8	1	3	1
	HU	2	8	3	0	11	6
	MT	2	4	8	1	4	9
	NL	1	2	2	1	13	3
	AT	2	7	8	2	7	3
	PL	1	4	5	0	9	8
	PT	1	5	3	1	15	24
	RO	1	6	6	2	7	13
	SI	0	6	11	2	6	2
	SK	2	4	9	1	12	6
	FI	1	1	4	0	27	1
	SE	1	3	3	0	18	1
	UK	1	4	6	1	14	6

QA8.1 Voici une liste de choses qui pourraient être faites par des robots. Pour chacune d'entre elles, pouvez-vous me dire ce que vous en pensez personnellement en utilisant une échelle de 1 à 10, où '1' signifie que vous vous sentez "tout à fait mal à l'aise" et '10' "tout à fait à l'aise" avec la situation proposée.





























Se faire opérer par un robot

QA8.1 Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Having a medical operation performed on you by a robot

QA8.1 Hier ist eine Liste mit Tätigkeiten, die von Robotern ausgeführt werden könnten. Bitte sagen Sie mir zu jeder Tätigkeit, wie Sie sich persönlich dabei fühlen würden, wenn diese von einem Roboter ausgeführt würde. Nutzen Sie hierzu eine Skala von 1 bis 10, auf der '1' bedeutet, dass Sie sich in dieser Situation "vollkommen unwohl fühlen würden" und eine '10', dass Sie sich dabei "vollkommen wohl fühlen würden".

Ein medizinischer Eingriff wird an Ihnen von einem Roboter vorgenommen

		1 Tout à fait mal à l'aise	2	3	4	5	6
		1 Totally uncomfortable	2	3	4	5	6
		1 Würde mich vollkommen unwohl fühlen	2	3	4	5	6
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	37	7	7	6	12	6
	BE	34	6	9	5	12	5
	BG	40	9	5	4	7	6
	CZ	23	5	5	6	16	8
	DK	32	6	9	5	10	4
	DE	39	6	9	6	14	5
	EE	52	8	7	4	11	4
	IE	55	8	4	2	7	3
	EL	41	8	6	5	8	7
	ES	53	10	7	5	9	3
	FR	34	7	8	5	15	5
	IT	28	8	7	8	12	13
	CY	63	5	4	3	7	2
	LV	65	6	5	3	7	2
	LT	70	5	3	3	5	3
	LU	48	5	6	5	12	3
	HU	48	8	8	6	12	5
	MT	67	6	4	4	6	1
	NL	20	6	9	7	13	8
	AT	40	8	9	8	11	7
	PL	22	5	6	5	12	5
	PT	47	13	7	6	7	5
	RO	41	8	6	4	8	5
	SI	34	7	8	5	14	5
	SK	34	7	7	7	11	7
	FI	25	9	9	7	8	7
	SE	32	5	8	6	9	8
	UK	43	7	7	5	12	5

QA8.1 Voici une liste de choses qui pourraient être faites par des robots. Pour chacune d'entre elles, pouvez-vous me dire ce que vous en pensez personnellement en utilisant une échelle de 1 à 10, où '1' signifie que vous vous sentez "tout à fait mal à l'aise" et '10' "tout à fait à l'aise" avec la situation proposée.





























Se faire opérer par un robot

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Having a medical operation performed on you by a robot

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Ein medizinischer Eingriff wird an Ihnen von einem Roboter vorgenommen

		7	8	9	10 Tout à fait à l'aise	Pas applicable (SPONTANE)	NSP
		7	8	9	10 Totally comfortable	Not applicable (SPONTANEOUS)	DK
		7	8	9	10 Würde mich vollkommen wohl fühlen	Trifft nicht zu (SPONTAN)	WN
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	7	7	3	6	0	2
	BE	9	10	4	6	0	0
	BG	5	4	3	9	2	6
	CZ	9	10	6	11	0	1
	DK	10	10	2	11	0	1
	DE	7	6	3	4	0	1
	EE	4	2	1	3	3	1
	IE	4	6	2	8	0	1
	EL	7	7	4	5	1	1
	ES	4	3	1	4	0	1
	FR	7	9	2	7	0	1
	IT	10	6	3	3	0	2
	CY	2	4	3	5	0	2
	LV	2	2	2	4	1	1
	LT	2	3	1	3	0	2
	LU	5	7	2	7	0	0
	HU	4	3	1	3	1	1
	MT	3	3	1	3	0	2
	NL	14	12	5	6	0	0
	AT	5	6	1	3	1	1
	PL	7	9	5	18	3	3
	PT	4	4	1	2	1	3
	RO	5	5	4	6	1	7
	SI	6	8	4	7	0	2
	SK	7	7	3	8	0	2
	FI	8	14	6	6	0	1
	SE	8	11	3	9	0	1
	UK	8	5	2	6	0	0

QA8.1 Voici une liste de choses qui pourraient être faites par des robots. Pour chacune d'entre elles, pouvez-vous me dire ce que vous en pensez personnellement en utilisant une échelle de 1 à 10, où '1' signifie que vous vous sentez "tout à fait mal à l'aise" et '10' "tout à fait à l'aise" avec la situation proposée.





























Se faire opérer par un robot

QA8.1 Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Having a medical operation performed on you by a robot

QA8.1 Hier ist eine Liste mit Tätigkeiten, die von Robotern ausgeführt werden könnten. Bitte sagen Sie mir zu jeder Tätigkeit, wie Sie sich persönlich dabei fühlen würden, wenn diese von einem Roboter ausgeführt würde. Nutzen Sie hierzu eine Skala von 1 bis 10, auf der '1' bedeutet, dass Sie sich in dieser Situation "vollkommen unwohl fühlen würden" und eine '10', dass Sie sich dabei "vollkommen wohl fühlen würden".

Ein medizinischer Eingriff wird an Ihnen von einem Roboter vorgenommen

		Total 'Mal à l'aise (1-4)'	Total 'Moyennement à l'aise (5-6)'	Total 'A l'aise (7-10)'
		Total 'Uncomfortable (1-4)'	Total 'Fairly comfortable (5-6)'	Total 'Comfortable (7-10)'
		Gesamt ' Unwohl fühlen(1-4)'	Gesamt 'Ziemlich wohl fühlen (5-6)'	Gesamt 'Wohl fühlen(7-10)'
%		EB	EB	EB
	EU 27	57	18	23
	BE	54	17	29
	BG	58	13	21
	CZ	39	24	35
	DK	52	14	32
	DE	60	19	20
	EE	72	15	10
	IE	70	10	19
	EL	60	14	23
	ES	75	12	13
	FR	54	20	25
	IT	51	25	22
	CY	75	9	13
	LV	79	9	10
	LT	80	8	10
	LU	63	15	21
	HU	70	17	11
	MT	81	7	9
	NL	41	21	37
	AT	65	18	15
	PL	38	18	39
	PT	74	12	11
	RO	60	13	20
	SI	54	19	25
	SK	55	18	25
	FI	50	15	35
	SE	51	17	31
	UK	62	17	21

QA8.2 Voici une liste de choses qui pourraient être faites par des robots. Pour chacune d'entre elles, pouvez-vous me dire ce que vous en pensez personnellement en utilisant une échelle de 1 à 10, où '1' signifie que vous vous sentez "tout à fait mal à l'aise" et '10' "tout à fait à l'aise" avec la situation proposée.





























Faire promener son chien par un robot

QA8.2 Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Having your dog walked by a robot

QA8.2 Hier ist eine Liste mit Tätigkeiten, die von Robotern ausgeführt werden könnten. Bitte sagen Sie mir zu jeder Tätigkeit, wie Sie sich persönlich dabei fühlen würden, wenn diese von einem Roboter ausgeführt würde. Nutzen Sie hierzu eine Skala von 1 bis 10, auf der '1' bedeutet, dass Sie sich in dieser Situation "vollkommen unwohl fühlen würden" und eine '10', dass Sie sich dabei "vollkommen wohl fühlen würden".

Ihr Hund wird von einem Roboter Gassi geführt

		1 Tout à fait mal à l'aise	2	3	4	5	6
		1 Totally uncomfortable	2	3	4	5	6
		1 Würde mich vollkommen unwohl fühlen	2	3	4	5	6
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	47	9	8	5	9	4
	BE	52	11	7	6	9	3
	BG	24	8	6	4	9	4
	CZ	41	10	10	6	10	5
	DK	35	6	10	6	10	4
	DE	62	7	6	4	6	2
	EE	45	10	7	6	9	4
	IE	47	6	4	3	8	3
	EL	44	11	8	6	8	4
	ES	47	11	9	7	8	3
	FR	55	10	7	3	8	3
	IT	39	12	10	8	9	7
	CY	49	7	4	1	9	2
	LV	49	7	5	4	7	4
	LT	52	7	5	2	8	3
	LU	62	7	9	3	6	2
	HU	50	9	8	7	7	5
	MT	43	8	5	4	8	3
	NL	48	12	9	6	8	3
	AT	46	9	10	6	9	4
	PL	29	8	7	5	10	5
	PT	46	12	8	6	7	3
	RO	42	10	5	4	7	3
	SI	61	11	6	4	5	2
	SK	35	8	10	7	12	3
	FI	36	14	11	5	8	6
	SE	56	10	8	5	7	3
	UK	45	8	7	4	11	3

QA8.2 Voici une liste de choses qui pourraient être faites par des robots. Pour chacune d'entre elles, pouvez-vous me dire ce que vous en pensez personnellement en utilisant une échelle de 1 à 10, où '1' signifie que vous vous sentez "tout à fait mal à l'aise" et '10' "tout à fait à l'aise" avec la situation proposée.





























Faire promener son chien par un robot

QA8.2 Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Having your dog walked by a robot

QA8.2 Hier ist eine Liste mit Tätigkeiten, die von Robotern ausgeführt werden könnten. Bitte sagen Sie mir zu jeder Tätigkeit, wie Sie sich persönlich dabei fühlen würden, wenn diese von einem Roboter ausgeführt würde. Nutzen Sie hierzu eine Skala von 1 bis 10, auf der '1' bedeutet, dass Sie sich in dieser Situation "vollkommen unwohl fühlen würden" und eine '10', dass Sie sich dabei "vollkommen wohl fühlen würden".

Ihr Hund wird von einem Roboter Gassi geführt

		7	8	9	10 Tout à fait à l'aise	Pas applicable (SPONTANE)	NSP
		7	8	9	10 Totally comfortable	Not applicable (SPONTANEOUS)	DK
		7	8	9	10 Würde mich vollkommen wohl fühlen	Trifft nicht zu (SPONTAN)	WN
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	3	4	1	5	4	1
	BE	3	3	1	2	3	0
	BG	5	6	4	12	12	6
	CZ	3	3	2	6	3	1
	DK	5	6	3	10	5	0
	DE	2	2	1	3	5	0
	EE	3	3	1	6	5	1
	IE	4	7	4	10	3	1
	EL	4	5	3	4	3	0
	ES	2	4	1	5	2	1
	FR	3	3	1	5	1	1
	IT	7	4	1	1	1	1
	CY	4	4	2	7	9	2
	LV	3	4	2	10	2	3
	LT	3	4	4	9	2	1
	LU	1	3	1	5	1	0
	HU	4	3	0	2	5	0
	MT	2	3	2	9	10	3
	NL	3	2	2	4	3	0
	AT	4	2	2	3	4	1
	PL	5	7	2	14	6	2
	PT	2	3	0	2	9	2
	RO	3	3	3	8	6	6
	SI	3	2	1	2	2	1
	SK	5	5	2	6	5	2
	FI	4	5	1	4	5	1
	SE	3	3	1	3	1	0
	UK	3	3	2	9	4	1

QA8.2 Voici une liste de choses qui pourraient être faites par des robots. Pour chacune d'entre elles, pouvez-vous me dire ce que vous en pensez personnellement en utilisant une échelle de 1 à 10, où '1' signifie que vous vous sentez "tout à fait mal à l'aise" et '10' "tout à fait à l'aise" avec la situation proposée.





























Faire promener son chien par un robot

QA8.2 Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Having your dog walked by a robot

QA8.2 Hier ist eine Liste mit Tätigkeiten, die von Robotern ausgeführt werden könnten. Bitte sagen Sie mir zu jeder Tätigkeit, wie Sie sich persönlich dabei fühlen würden, wenn diese von einem Roboter ausgeführt würde. Nutzen Sie hierzu eine Skala von 1 bis 10, auf der '1' bedeutet, dass Sie sich in dieser Situation "vollkommen unwohl fühlen würden" und eine '10', dass Sie sich dabei "vollkommen wohl fühlen würden".

Ihr Hund wird von einem Roboter Gassi geführt

		Total 'Mal à l'aise (1-4)'	Total 'Moyennement à l'aise (5-6)'	Total 'A l'aise (7-10)'
		Total 'Uncomfortable (1-4)'	Total 'Fairly comfortable (5-6)'	Total 'Comfortable (7-10)'
		Gesamt ' Unwohl fühlen(1-4)'	Gesamt 'Ziemlich wohl fühlen (5-6)'	Gesamt 'Wohl fühlen(7-10)'
%		EB 77.1	EB 77.1	EB 77.1
	EU 27	69	12	14
	BE	76	12	9
	BG	42	13	27
	CZ	67	15	15
	DK	57	14	25
	DE	79	8	8
	EE	68	13	13
	IE	61	11	24
	EL	69	12	16
	ES	73	11	13
	FR	75	11	12
	IT	69	17	12
	CY	62	11	16
	LV	66	11	19
	LT	66	11	19
	LU	81	8	10
	HU	73	12	10
	MT	60	11	16
	NL	75	10	11
	AT	70	13	12
	PL	49	15	28
	PT	71	10	8
	RO	61	10	17
	SI	82	7	8
	SK	61	15	17
	FI	66	14	14
	SE	80	10	9
	UK	64	14	17

QA8.3 Voici une liste de choses qui pourraient être faites par des robots. Pour chacune d'entre elles, pouvez-vous me dire ce que vous en pensez personnellement en utilisant une échelle de 1 à 10, où '1' signifie que vous vous sentez "tout à fait mal à l'aise" et '10' "tout à fait à l'aise" avec la situation proposée.





























Etre assisté(e) par un robot au travail (par ex. pour la production industrielle)

QA8.3 Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Having a robot assist you at work (e.g.: in manufacturing)

QA8.3 Hier ist eine Liste mit Tätigkeiten, die von Robotern ausgeführt werden könnten. Bitte sagen Sie mir zu jeder Tätigkeit, wie Sie sich persönlich dabei fühlen würden, wenn diese von einem Roboter ausgeführt würde. Nutzen Sie hierzu eine Skala von 1 bis 10, auf der '1' bedeutet, dass Sie sich in dieser Situation "vollkommen unwohl fühlen würden" und eine '10', dass Sie sich dabei "vollkommen wohl fühlen würden".

Sie werden auf der Arbeit von einem Roboter unterstützt (z.B. bei der Produktion)

		1 Tout à fait mal à l'aise	2	3	4	5	6
		1 Totally uncomfortable	2	3	4	5	6
		1 Würde mich vollkommen unwohl fühlen	2	3	4	5	6
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	13	4	5	5	13	8
	BE	10	4	6	5	15	7
	BG	7	2	3	2	8	6
	CZ	4	1	3	3	9	6
	DK	5	2	3	2	7	4
	DE	10	2	6	4	16	8
	EE	5	2	4	5	16	8
	IE	25	3	4	3	8	7
	EL	23	5	6	8	10	7
	ES	18	5	6	6	14	7
	FR	13	3	6	6	17	6
	IT	13	6	8	8	12	14
	CY	34	4	6	4	11	5
	LV	11	3	4	3	14	6
	LT	14	3	5	4	14	7
	LU	19	4	6	5	20	8
	HU	10	3	6	5	15	9
	MT	27	7	4	4	12	5
	NL	4	2	2	2	8	9
	AT	15	4	8	6	13	10
	PL	5	2	3	3	10	5
	PT	18	7	10	7	13	9
	RO	34	9	6	5	7	5
	SI	7	2	5	4	13	6
	SK	3	0	2	2	7	4
	FI	7	4	3	3	8	9
	SE	3	1	1	2	7	4
	UK	12	2	5	6	17	8

QA8.3 Voici une liste de choses qui pourraient être faites par des robots. Pour chacune d'entre elles, pouvez-vous me dire ce que vous en pensez personnellement en utilisant une échelle de 1 à 10, où '1' signifie que vous vous sentez "tout à fait mal à l'aise" et '10' "tout à fait à l'aise" avec la situation proposée.





























Etre assisté(e) par un robot au travail (par ex. pour la production industrielle)

QA8.3 Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Having a robot assist you at work (e.g.: in manufacturing)

QA8.3 Hier ist eine Liste mit Tätigkeiten, die von Robotern ausgeführt werden könnten. Bitte sagen Sie mir zu jeder Tätigkeit, wie Sie sich persönlich dabei fühlen würden, wenn diese von einem Roboter ausgeführt würde. Nutzen Sie hierzu eine Skala von 1 bis 10, auf der '1' bedeutet, dass Sie sich in dieser Situation "vollkommen unwohl fühlen würden" und eine '10', dass Sie sich dabei "vollkommen wohl fühlen würden".

Sie werden auf der Arbeit von einem Roboter unterstützt (z.B. bei der Produktion)

		7	8	9	10 Tout à fait à l'aise	Pas applicable (SPONTANE)	NSP
		7	8	9	10 Totally comfortable	Not applicable (SPONTANEOUS)	DK
		7	8	9	10 Würde mich vollkommen wohl fühlen	Trifft nicht zu (SPONTAN)	WN
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	11	12	6	18	3	2
	BE	16	17	5	13	2	0
	BG	10	13	11	29	5	4
	CZ	11	17	11	32	2	1
	DK	9	13	10	41	3	1
	DE	12	13	5	18	4	2
	EE	10	14	8	24	2	2
	IE	9	10	7	20	3	1
	EL	10	12	6	11	1	1
	ES	12	11	6	13	1	1
	FR	12	15	6	14	1	1
	IT	14	10	4	7	2	2
	CY	6	6	3	19	1	1
	LV	9	12	7	27	2	2
	LT	8	12	8	21	2	2
	LU	9	9	3	16	1	0
	HU	12	11	5	18	6	0
	MT	6	7	4	20	2	2
	NL	18	23	11	18	2	1
	AT	11	11	7	12	2	1
	PL	8	12	8	37	5	2
	PT	9	10	4	7	4	2
	RO	4	6	4	8	6	6
	SI	10	13	12	25	2	1
	SK	10	17	11	42	1	1
	FI	13	20	16	16	1	0
	SE	8	14	9	49	1	1
	UK	12	10	6	20	1	1

QA8.3 Voici une liste de choses qui pourraient être faites par des robots. Pour chacune d'entre elles, pouvez-vous me dire ce que vous en pensez personnellement en utilisant une échelle de 1 à 10, où '1' signifie que vous vous sentez "tout à fait mal à l'aise" et '10' "tout à fait à l'aise" avec la situation proposée.





























Etre assisté(e) par un robot au travail (par ex. pour la production industrielle)

QA8.3 Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Having a robot assist you at work (e.g.: in manufacturing)

QA8.3 Hier ist eine Liste mit Tätigkeiten, die von Robotern ausgeführt werden könnten. Bitte sagen Sie mir zu jeder Tätigkeit, wie Sie sich persönlich dabei fühlen würden, wenn diese von einem Roboter ausgeführt würde. Nutzen Sie hierzu eine Skala von 1 bis 10, auf der '1' bedeutet, dass Sie sich in dieser Situation "vollkommen unwohl fühlen würden" und eine '10', dass Sie sich dabei "vollkommen wohl fühlen würden".

Sie werden auf der Arbeit von einem Roboter unterstützt (z.B. bei der Produktion)

		Total 'Mal à l'aise (1-4)'	Total 'Moyennement à l'aise (5-6)'	Total 'A l'aise (7-10)'
		Total 'Uncomfortable (1-4)'	Total 'Fairly comfortable (5-6)'	Total 'Comfortable (7-10)'
		Gesamt ' Unwohl fühlen(1-4)'	Gesamt 'Ziemlich wohl fühlen (5-6)'	Gesamt 'Wohl fühlen(7-10)'
%		EB 77.1	EB 77.1	EB 77.1
	EU 27	27	21	48
	BE	24	22	52
	BG	15	14	63
	CZ	11	15	71
	DK	12	11	73
	DE	23	24	48
	EE	17	24	56
	IE	35	15	45
	EL	41	17	39
	ES	34	22	43
	FR	29	23	46
	IT	35	27	35
	CY	48	16	35
	LV	21	20	56
	LT	26	21	49
	LU	34	28	37
	HU	24	24	46
	MT	42	17	37
	NL	11	17	71
	AT	33	23	41
	PL	13	15	65
	PT	42	22	30
	RO	54	12	22
	SI	19	19	60
	SK	7	12	80
	FI	16	17	66
	SE	7	11	81
	UK	24	25	48

QA8.4 Voici une liste de choses qui pourraient être faites par des robots. Pour chacune d'entre elles, pouvez-vous me dire ce que vous en pensez personnellement en utilisant une échelle de 1 à 10, où '1' signifie que vous vous sentez "tout à fait mal à l'aise" et '10' "tout à fait à l'aise" avec la situation proposée.





























Faire garder vos enfants ou vos parents âgés par un robot

QA8.4 Here is a list of things that could be done by robots. For each of them, please tell me, using a scale from 1 to 10, how you would personally feel about it. On this scale, '1' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

Having your children or elderly parents minded by a robot

QA8.4 Hier ist eine Liste mit Tätigkeiten, die von Robotern ausgeführt werden könnten. Bitte sagen Sie mir zu jeder Tätigkeit, wie Sie sich persönlich dabei fühlen würden, wenn diese von einem Roboter ausgeführt würde. Nutzen Sie hierzu eine Skala von 1 bis 10, auf der '1' bedeutet, dass Sie sich in dieser Situation "vollkommen unwohl fühlen würden" und eine '10', dass Sie sich dabei "vollkommen wohl fühlen würden".

Ein Roboter passt auf Ihre Kinder oder betagten Eltern auf

		1 Tout à fait mal à l'aise	2	3	4	5	6
		1 Totally uncomfortable	2	3	4	5	6
		1 Würde mich vollkommen unwohl fühlen	2	3	4	5	6
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	66	9	7	4	5	2
	BE	63	10	8	5	6	2
	BG	44	13	8	4	5	4
	CZ	52	10	9	5	10	3
	DK	56	11	12	5	6	2
	DE	79	7	4	3	2	1
	EE	58	11	8	5	7	3
	IE	76	7	4	3	3	1
	EL	64	11	6	4	4	2
	ES	67	11	7	2	5	2
	FR	80	9	5	2	2	1
	IT	49	12	11	7	8	6
	CY	83	4	3	1	3	0
	LV	75	9	3	2	3	2
	LT	79	6	3	1	3	2
	LU	86	5	3	1	1	1
	HU	65	9	8	5	5	2
	MT	77	5	3	4	3	2
	NL	61	10	9	6	6	3
	AT	61	9	8	5	4	3
	PL	54	9	7	3	8	2
	PT	60	14	7	4	4	1
	RO	62	9	5	3	4	2
	SI	74	10	7	1	3	1
	SK	50	10	11	4	7	4
	FI	58	14	8	4	4	5
	SE	75	9	5	4	3	1
	UK	72	8	7	2	4	2

QA8.4 Voici une liste de choses qui pourraient être faites par des robots. Pour chacune d'entre elles, pouvez-vous me dire ce que vous en pensez personnellement en utilisant une échelle de 1 à 10, où '1' signifie que vous vous sentez "tout à fait mal à l'aise" et '10' "tout à fait à l'aise" avec la situation proposée.





























Faire garder vos enfants ou vos parents âgés par un robot

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Having your children or elderly parents minded by a robot

QA8.4 Hier ist eine Liste mit Tätigkeiten, die von Robotern ausgeführt werden könnten. Bitte sagen Sie mir zu jeder Tätigkeit, wie Sie sich persönlich dabei fühlen würden, wenn diese von einem Roboter ausgeführt würde. Nutzen Sie hierzu eine Skala von 1 bis 10, auf der '1' bedeutet, dass Sie sich in dieser Situation "vollkommen unwohl fühlen würden" und eine '10', dass Sie sich dabei "vollkommen wohl fühlen würden".

Ein Roboter passt auf Ihre Kinder oder betagten Eltern auf

		7	8	9	10 Tout à fait à l'aise	Pas applicable (SPONTANE)	NSP
		7	8	9	10 Totally comfortable	Not applicable (SPONTANEOUS)	DK
		7	8	9	10 Würde mich vollkommen wohl fühlen	Trifft nicht zu (SPONTAN)	WN
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
	EU 27	2	1	1	1	1	1
	BE	2	2	0	1	1	0
	BG	2	3	2	4	5	6
	CZ	4	2	1	3	0	1
	DK	4	2	0	2	0	0
	DE	1	1	0	1	1	0
	EE	2	1	0	2	2	1
	IE	1	1	0	3	1	0
	EL	3	1	1	2	2	0
	ES	2	1	1	1	0	1
	FR	0	0	0	1	0	0
	IT	3	2	0	0	1	1
	CY	1	1	1	2	0	1
	LV	1	1	0	2	1	1
	LT	1	1	1	1	1	1
	LU	1	1	0	1	0	0
	HU	1	1	0	1	3	0
	MT	0	0	0	3	1	2
	NL	2	2	0	1	0	0
	AT	3	2	1	1	2	1
	PL	3	3	1	4	3	3
	PT	1	2	1	1	4	1
	RO	2	2	2	2	3	4
	SI	1	1	1	0	0	1
	SK	3	3	1	4	2	1
	FI	4	2	1	0	0	0
	SE	2	1	0	0	0	0
	UK	1	1	1	1	0	1

QA8.4 Voici une liste de choses qui pourraient être faites par des robots. Pour chacune d'entre elles, pouvez-vous me dire ce que vous en pensez personnellement en utilisant une échelle de 1 à 10, où '1' signifie que vous vous sentez "tout à fait mal à l'aise" et '10' "tout à fait à l'aise" avec la situation proposée.





























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Having your children or elderly parents minded by a robot

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Ein Roboter passt auf Ihre Kinder oder betagten Eltern auf

		Total 'Mal à l'aise (1-4)'	Total 'Moyennement à l'aise (5-6)'	Total 'A l'aise (7-10)'
		Total 'Uncomfortable (1-4)'	Total 'Fairly comfortable (5-6)'	Total 'Comfortable (7-10)'
		Gesamt ' Unwohl fühlen(1-4)'	Gesamt 'Ziemlich wohl fühlen (5-6)'	Gesamt 'Wohl fühlen(7-10)'
%		EB 77.1	EB 77.1	EB 77.1
	EU 27	86	7	5
	BE	86	8	5
	BG	68	10	11
	CZ	76	12	10
	DK	84	8	8
	DE	93	3	3
	EE	82	10	5
	IE	89	4	5
	EL	86	5	7
	ES	88	7	5
	FR	95	3	2
	IT	79	14	6
	CY	92	3	5
	LV	89	5	5
	LT	89	4	5
	LU	96	2	2
	HU	87	8	3
	MT	88	6	4
	NL	87	8	4
	AT	83	7	7
	PL	73	10	12
	PT	85	5	4
	RO	78	7	8
	SI	92	5	3
	SK	76	11	10
	FI	84	9	7
	SE	93	3	3
	UK	90	6	3

QA9 Selon vous, en Europe, quand les robots qui remplissent des tâches ménagères deviendront-ils une chose courante ?

QA9 In your opinion, in Europe, when it will become commonplace for robots to do house work?

QA9 Wann wird es in Europa Ihrer Meinung nach zum Alltag gehören, dass Roboter die Hausarbeit machen?

		Dans 5 ans	Dans 10 ans	Dans 20 ans	Dans plus de 20 ans	Il s'agit déjà d'une chose courante (SPONTANE)	Jamais (SPONTANE)	NSP
		In 5 years' time	In 10 years' time	In 20 years' time	In more than 20 years' time	It is already commonplace (SPONTANEOUS)	Never (SPONTANEOUS)	DK
		In 5 Jahren	In 10 Jahren	In 20 Jahren	In mehr als 20 Jahren	Das ist bereits Alltag (SPONTAN)	Nie (SPONTAN)	WN
%		EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1	EB 77.1
 EU 27		8	22	21	30	4	7	8
 BE		14	31	21	26	3	4	1
 BG		7	20	20	27	3	4	19
 CZ		8	21	28	29	4	5	5
 DK		27	37	16	13	5	1	1
 DE		4	18	21	31	4	15	7
 EE		7	22	25	35	2	4	5
 IE		9	19	21	28	3	8	12
 EL		5	20	19	40	2	7	7
 ES		10	19	15	36	6	5	9
 FR		12	27	22	29	1	5	4
 IT		9	24	21	20	7	8	11
 CY		6	19	20	39	0	6	10
 LV		8	25	23	30	3	7	4
 LT		2	14	20	47	1	10	6
 LU		10	28	21	30	4	3	4
 HU		3	12	22	44	2	12	5
 MT		16	27	14	19	3	2	19
 NL		9	30	27	27	1	4	2
 AT		10	25	18	23	8	10	6
 PL		5	18	23	39	2	3	10
 PT		9	18	14	21	8	6	24
 RO		9	17	15	27	5	10	17
 SI		12	27	26	21	4	6	4
 SK		13	26	25	22	7	4	3
 FI		15	34	26	19	1	3	2
 SE		10	31	23	30	2	3	1
 UK		8	25	24	31	1	5	6