

# organization

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## Report info

**Report date:**

Thursday, September 21, 2017 4:35:52 PM MEST

**Start date:**

Monday, February 6, 2017 1:30:00 PM MET

**Stop date:**

Wednesday, May 31, 2017 11:59:00 PM MEST

**Number of completed responses:**

100

# Question 1

## Disclaimer

This document is a working document of the Committee on Legal Affairs of the European Parliament for consultation and does not prejudge any future decision to be taken by the European Parliament. Only responses received through this online questionnaire, subject to the exception for people with disabilities and their representatives, will be taken into account and included in the report summarising the responses. Please read [User Guide](#) before starting to fill this questionnaire.

In case of any questions related to this public consultation please contact: [Consultation.Robotics@europarl.europa.eu](mailto:Consultation.Robotics@europarl.europa.eu) .

It is important to read the [specific privacy statement](#) available on the public consultation website for information on how your personal data and contribution will be used.

## Question 2

### Executive Summary

Robotics and artificial intelligence (AI) have become one of the most prominent technological trends of our century. The swift increase in their use and development presents new and difficult challenges to our societies.

The aim of this consultation is to launch a broad based debate with a wide range of stakeholders on the European Parliament report on Civil Law Rules on Robotics ((2015/2103(INL))).<sup>1</sup> This consultation specifically seeks views on how to best address the challenging ethical, economic, legal and social issues related to the developments in the area of robotics and AI for civil use, as identified in the report. The European Parliament is to debate and vote on the report of the Committee on Legal Affairs in Plenary, in February 2017. The current public consultation will contribute to possible further European Parliament initiatives. This consultation will contribute to assessing the feasibility and content of further potential EU policy initiatives on robotics and AI, to maximise the socio-economic opportunities provided by these technological developments for businesses, citizens and governments, and minimise possible negative disruptions. Furthermore, the results of the Consultation may also feed into the forthcoming European Parliamentary Research Service's 'Cost of Non-Europe on Robotics and Artificial Intelligence' Report.

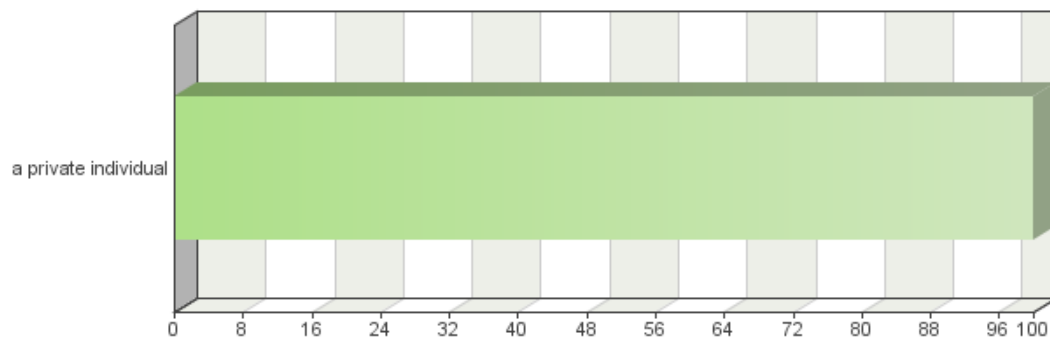
The Consultation is requested and administratively coordinated by the Committee on Legal Affairs of the European Parliament. The Consultation is prepared by the European Parliamentary Research Service, European Added Value Unit. Scientific coordinator, Dr. Tatjana Evas (EAVA Unit).

<sup>1</sup> Draft report with recommendations to the Commission on Civil Law Rules on Robotics. (2015/2103(INL)), Rapporteur: Mady Delvaux (S&D, Luxembourg), 31 May 2016, PE582.443v01-00; available in all EU languages at

<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+COMPARL+PE-582.443+01+NOT+XML+V0//EN>

### Question 3

You are replying as: \*



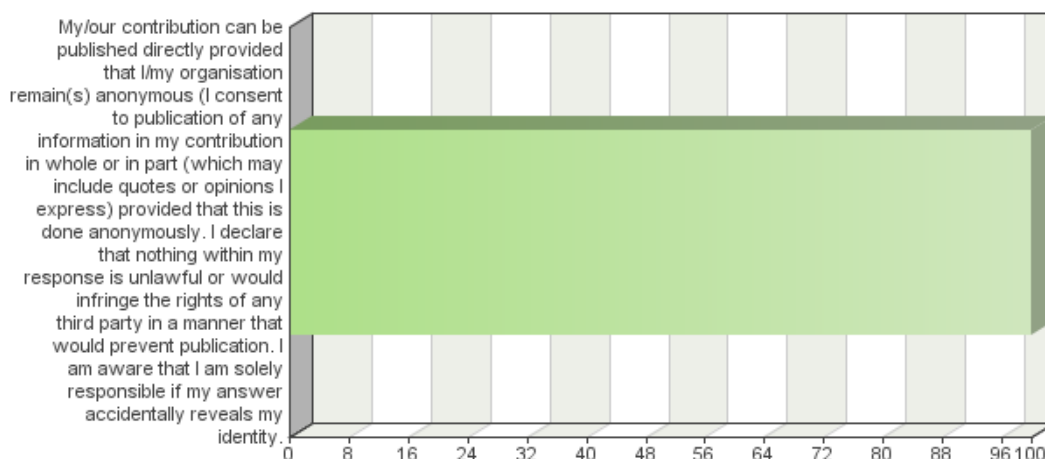
Frequency table

Choices			Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
a private individual			100	100	100%	100%	100%	100%
Sum:			100	-	100%	-	100%	-
Not answered:			0	-	0%	-	-	-
Average:	1	Minimum:	1	Variance:		0		
Median:	1	Maximum:	1	Std. deviation:		0		

Total answered: 100

## Question 4

Please choose from one of the following options on the use of your contribution: \*



Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
My/our contribution can be published directly provided that I/my organisation remain(s) anonymous (I consent to publication of any information in my contribution in whole or in part (which may include quotes or opinions I express) provided that this is done anonymously. I declare that nothing within my response is unlawful or would infringe the rights of any third party in a manner that would prevent publication. I am aware that I am solely responsible if my answer accidentally reveals my identity.	100	100	100%	100%	100%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average: 2	Minimum: 2	2	Variance: 0			
Median: 2	Maximum: 2	2	Std. deviation: 0			

**Total answered: 100**



## Question 8

Is your organization included in the Transparency Register? \*

In the interests of transparency, the European Parliament asks organisations who wish to submit comments in the context of public consultations to provide the Parliament and the public at large with information about whom and what they represent by registering in the Transparency Register and subscribing to its Code of Conduct. If an organisation decides not to provide this information, it is the European Institution's stated policy to list the contribution as part of the individual contributions. (Consultation Standards, see COM (2002) 704; Better Regulation guidelines, see SWD(2015)111 final and Communication on ETI follow-up, see COM (2007) 127).

If you are a registered organisation, please indicate your Register ID number below when replying to the online questionnaire. Your contribution will then be considered as representative of the views of your organisation. If your organisation is not registered, you have the opportunity to register now.

It is important to read the specific privacy statement available on the public consultation website for information on how your personal data and contribution will be used.

*No data to report*

## Question 10

Please indicate the type of organisation or company: \*

*No data to report*

## Question 11

Please specify the type of organisation: (optional)

## Question 12

Please indicate the type of public authority or international organisation: \*

*No data to report*

## Question 13

Please specify the type of public authority: (optional)

## Question 14

Is your organisation a multinational enterprise (groups with establishments in more than one country)? \*

*No data to report*

## Question 15

Is your organisation a multinational enterprise with establishments outside of the EU? \*

*No data to report*

## Question 16

How many employees does your company have? \*

*No data to report*



## Question 17

Please provide a brief description of your organisation's activities: (optional)

## Question 18

Where are you based (resident) and/or where do you carry out your activity? \*

*No data to report*

## Question 19

Field of activity or sector (if applicable): choose at least one option \*

(Statistical classification of economic activities in the European Community (NACE), for details on the classification please consult Eurostat <http://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF/dd5443f5-b886-40e4-920d-9df03590ff91?version=1.0> ).

*No data to report*

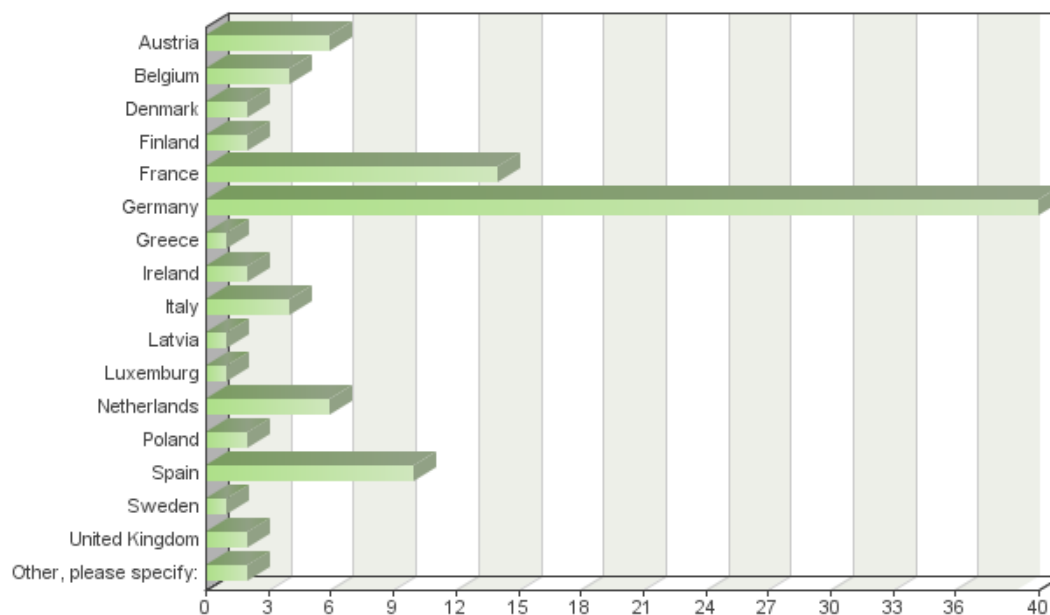
## Question 20

Has your organisation received funding from the EU in the last five years? \*

*No data to report*

## Question 21

What is your nationality? \*



Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Austria	6	6	6%	6%	6%	6%
Belgium	4	10	4%	10%	4%	10%
Denmark	2	12	2%	12%	2%	12%
Finland	2	14	2%	14%	2%	14%
France	14	28	14%	28%	14%	28%
Germany	40	68	40%	68%	40%	68%
Greece	1	69	1%	69%	1%	69%
Ireland	2	71	2%	71%	2%	71%
Italy	4	75	4%	75%	4%	75%
Latvia	1	76	1%	76%	1%	76%
Luxemburg	1	77	1%	77%	1%	77%
Netherlands	6	83	6%	83%	6%	83%
Poland	2	85	2%	85%	2%	85%
Spain	10	95	10%	95%	10%	95%
Sweden	1	96	1%	96%	1%	96%
United Kingdom	2	98	2%	98%	2%	98%
Other, please specify:	2	100	2%	100%	2%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	13.95	Minimum:	1	Variance:	67.72	
Median:	11	Maximum:	32	Std. deviation:	8.23	

Total answered: 100

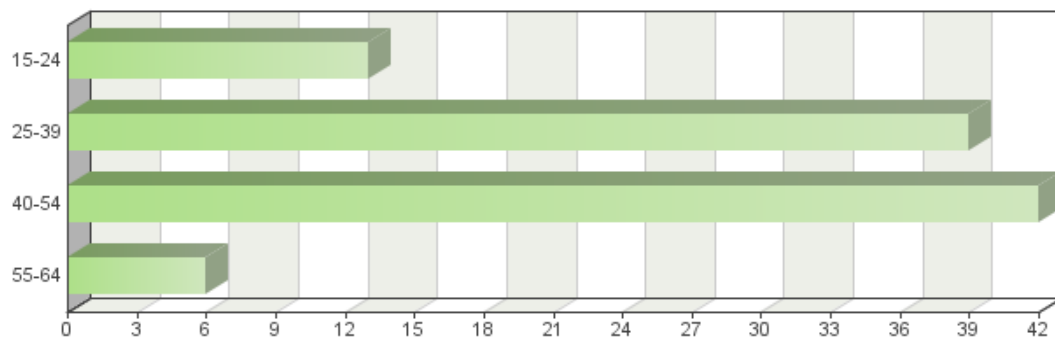
Last choice text input

South Korea

Serbia

## Question 22

How old are you? \*



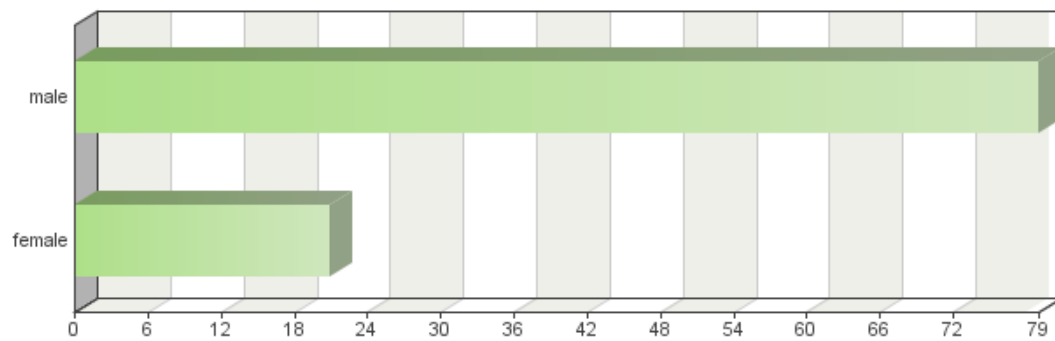
Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
15-24	13	13	13%	13%	13%	13%
25-39	39	52	39%	52%	39%	52%
40-54	42	94	42%	94%	42%	94%
55-64	6	100	6%	100%	6%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	2.41	Minimum:	1	Variance:	0.63	
Median:	2	Maximum:	4	Std. deviation:	0.79	

**Total answered: 100**

## Question 23

What is your gender? \*



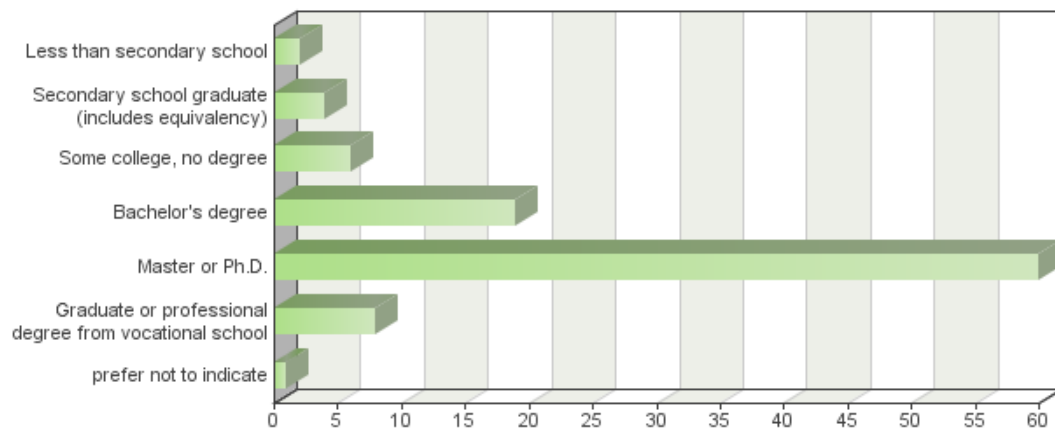
Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
male	79	79	79%	79%	79%	79%
female	21	100	21%	100%	21%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.21	Minimum:	1	Variance:	0.17	
Median:	1	Maximum:	2	Std. deviation:	0.41	

**Total answered: 100**

## Question 24

What is your highest level of education? \*



Frequency table

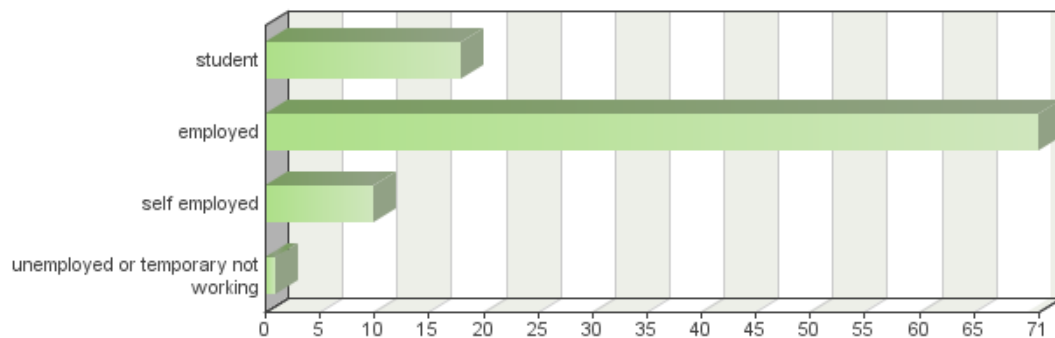
Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Less than secondary school	2	2	2%	2%	2%	2%
Secondary school graduate (includes equivalency)	4	6	4%	6%	4%	6%
Some college, no degree	6	12	6%	12%	6%	12%
Bachelor's degree	19	31	19%	31%	19%	31%
Master or Ph.D.	60	91	60%	91%	60%	91%
Graduate or professional degree from vocational school	8	99	8%	99%	8%	99%
prefer not to indicate	1	100	1%	100%	1%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	4.59	Minimum:	1	Variance:	1.07	
Median:	5	Maximum:	7	Std. deviation:	1.04	

**Total answered: 100**



## Question 25

What is your current occupation? \*



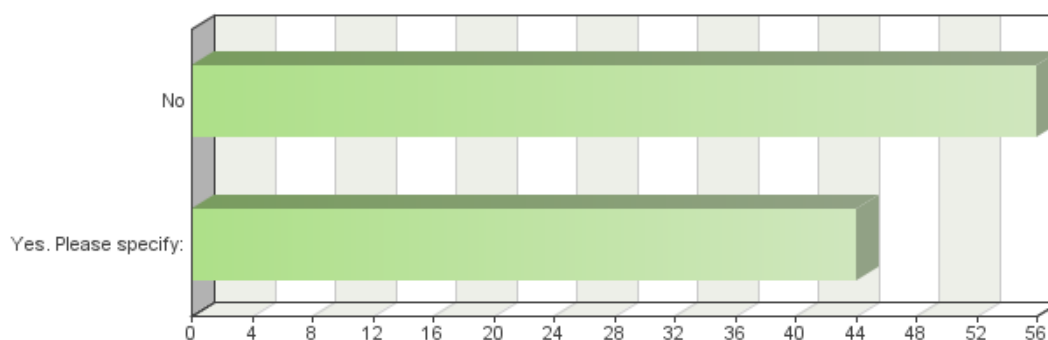
Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
student	18	18	18%	18%	18%	18%
employed	71	89	71%	89%	71%	89%
self employed	10	99	10%	99%	10%	99%
unemployed or temporary not working	1	100	1%	100%	1%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.94	Minimum:	1	Variance:	0.32	
Median:	2	Maximum:	4	Std. deviation:	0.57	

**Total answered: 100**

## Question 26

Have you studied, worked or lived in another EU Member State than your country of origin? \*



Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
No	56	56	56%	56%	56%	56%
Yes. Please specify:	44	100	44%	100%	44%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.44	Minimum:	1	Variance:	0.25	
Median:	1	Maximum:	2	Std. deviation:	0.5	

Total answered: 100

Last choice text input

usa, canada

Italy

Germany, Austria

Belgium

Germany

UK

Spain

Germany, Italy, The Netherlands

Sweden

UK

Croatia, Germany, Belgium

France

Switzerland

Belgium

Belgique

Reino Unido

The Netherlands, Denmark, Belgium

Austria

Saksa

Scotland

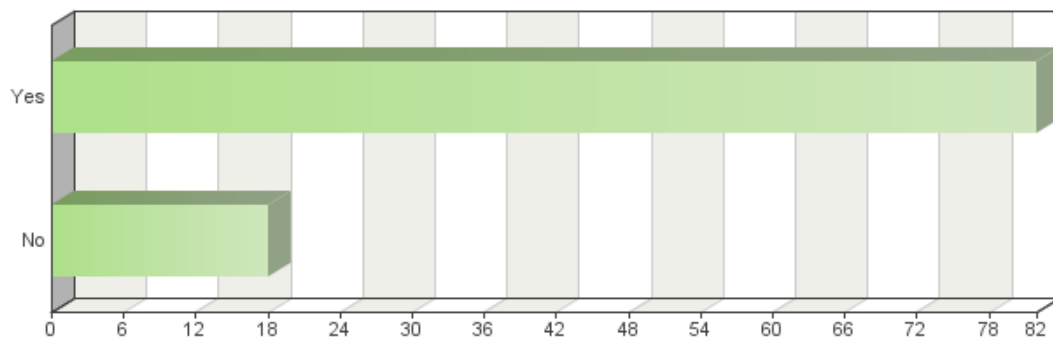
F, BE,

Zuid Afrika

Denmark
NL
Ireland
Poland
Latvia
France
Ireland
UK, Austria, Belgium
DE
France, Belgique
Sweden
Espagne
Netherlands and the UK
Spain
UK
Frankreich & Großbritannien
France
many
Luxembourg
UK, US

## Question 27

Finally, if required, may the European Parliament services contact you for further details on the information you have submitted? \*



Frequency table

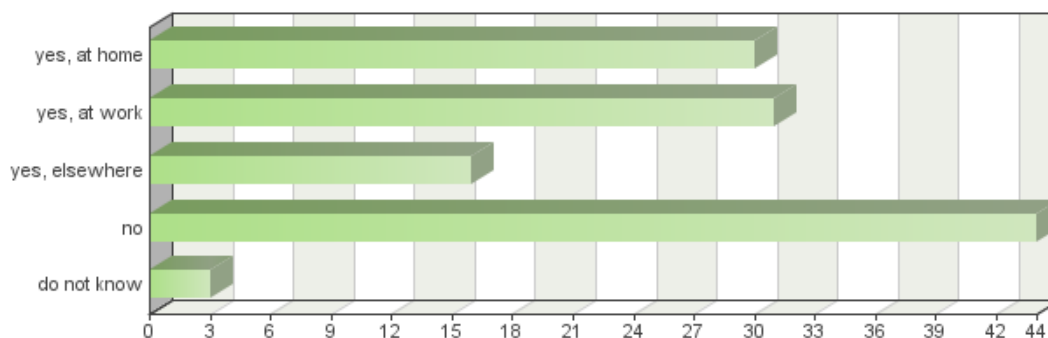
Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Yes	82	82	82%	82%	82%	82%
No	18	100	18%	100%	18%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.18	Minimum:	1	Variance:	0.15	
Median:	1	Maximum:	2	Std. deviation:	0.39	

**Total answered: 100**

## Question 28

Have you ever used, or do you currently use robots at home or at work (e.g. a robotic vacuum cleaner at home or an industrial robot at work)? \*

(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. [definition used in the Special Eurobarometer on attitudes towards robots [http://ec.europa.eu/public\\_opinion/archives/ebs/ebs\\_382\\_en.pdf](http://ec.europa.eu/public_opinion/archives/ebs/ebs_382_en.pdf) ])



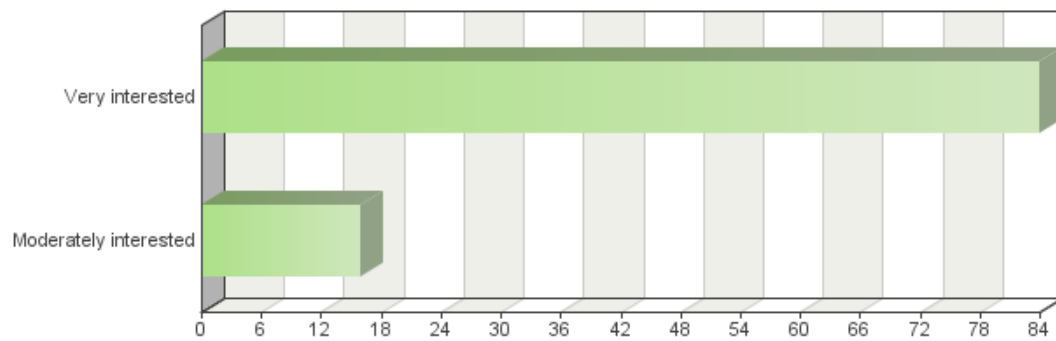
Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency by choice	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
yes, at home	30	30	24.19%	30%	30%	30%	30%
yes, at work	31	61	25%	31%	61%	31%	61%
yes, elsewhere	16	77	12.9%	16%	77%	16%	77%
no	44	121	35.48%	44%	121%	44%	121%
do not know	3	124	2.42%	3%	124%	3%	124%
Sum:	124	-	100%	-	-	-	-
Not answered:	0	-	-	0%	-	-	-
Average:	2.67	Minimum:	1	Variance:	1.57		
Median:	3	Maximum:	5	Std. deviation:	1.25		

Total answered: 100

## Question 29

Generally speaking are you interested or not interested in scientific discoveries and technological developments? \*



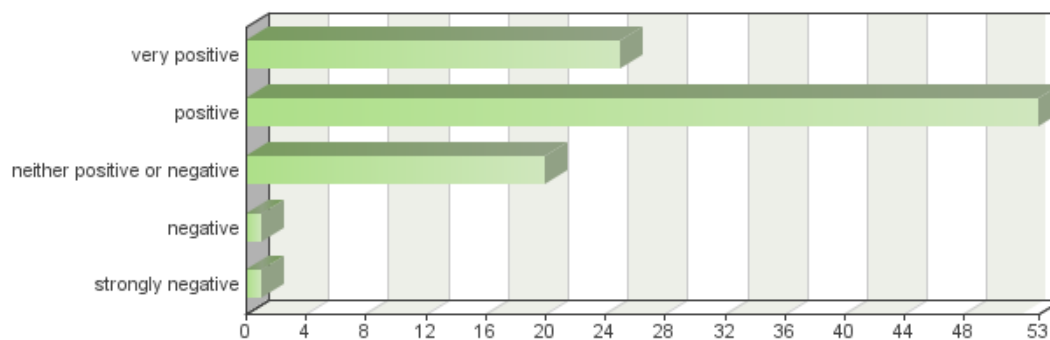
Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Very interested	84	84	84%	84%	84%	84%
Moderately interested	16	100	16%	100%	16%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.16	Minimum:	1	Variance:	0.14	
Median:	1	Maximum:	2	Std. deviation:	0.37	

**Total answered: 100**

## Question 30

Generally speaking, what is your view on robots? \*



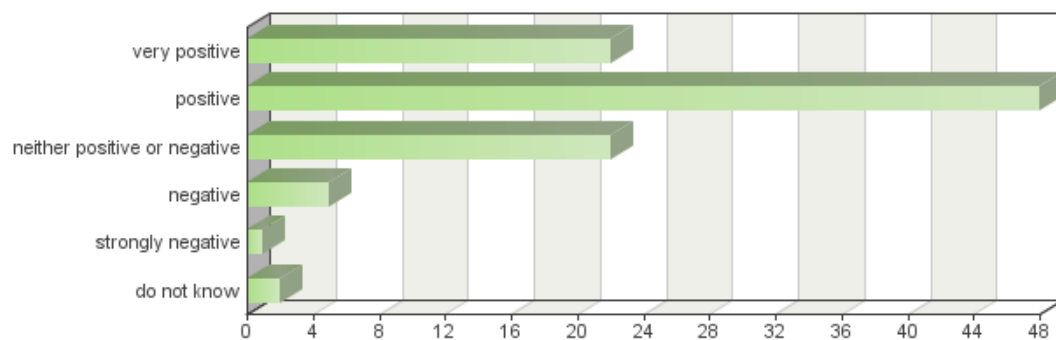
Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
very positive	25	25	25%	25%	25%	25%
positive	53	78	53%	78%	53%	78%
neither positive or negative	20	98	20%	98%	20%	98%
negative	1	99	1%	99%	1%	99%
strongly negative	1	100	1%	100%	1%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average: 2	Minimum: 1	Variance: 0.59				
Median: 2	Maximum: 5	Std. deviation: 0.77				

**Total answered: 100**

## Question 31

Generally speaking, what is your view on developments in artificial intelligence? \*



Frequency table

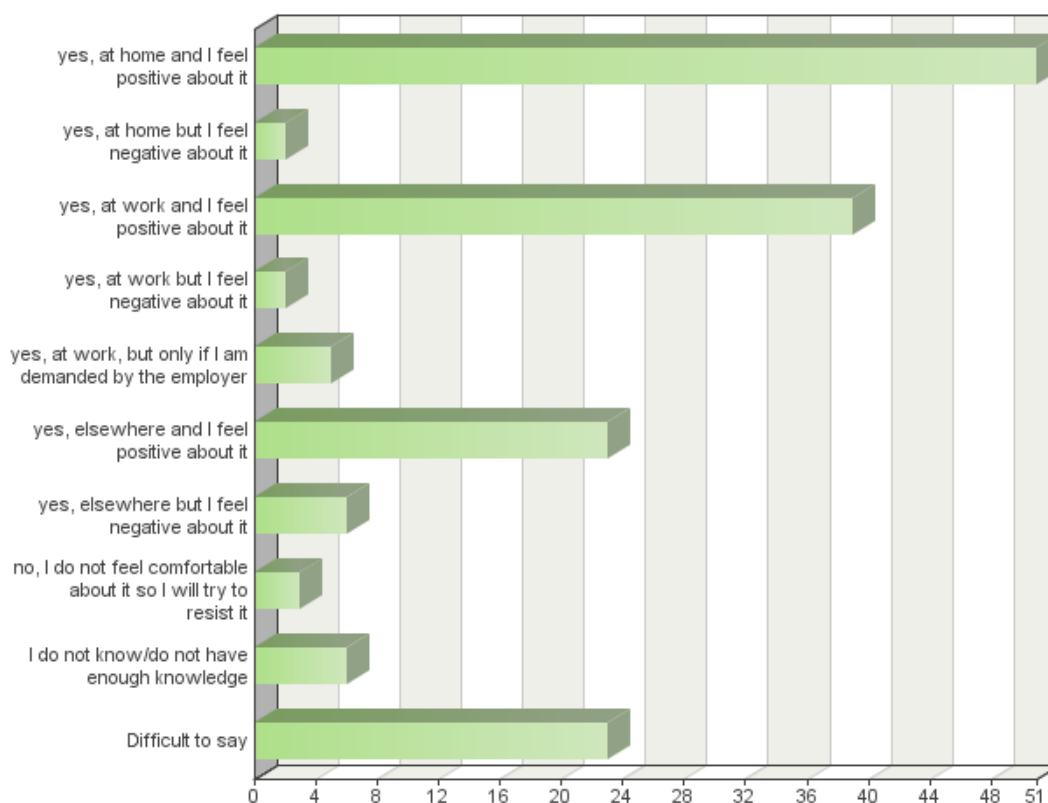
Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
very positive	22	22	22%	22%	22%	22%
positive	48	70	48%	70%	48%	70%
neither positive or negative	22	92	22%	92%	22%	92%
negative	5	97	5%	97%	5%	97%
strongly negative	1	98	1%	98%	1%	98%
do not know	2	100	2%	100%	2%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	2.21	Minimum:	1	Variance:	1.02	
Median:	2	Maximum:	6	Std. deviation:	1.01	

**Total answered: 100**



## Question 32

In a one to three year future, robots will become part of my life: \*



Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency by choice	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
yes, at home and I feel positive about it	51	51	31.88%	51%	51%	51%	51%
yes, at home but I feel negative about it	2	53	1.25%	2%	53%	2%	53%
yes, at work and I feel positive about it	39	92	24.38%	39%	92%	39%	92%
yes, at work but I feel negative about it	2	94	1.25%	2%	94%	2%	94%
yes, at work, but only if I am demanded by the employer	5	99	3.12%	5%	99%	5%	99%
yes, elsewhere and I feel positive about it	23	122	14.38%	23%	122%	23%	122%
yes, elsewhere but I feel negative about it	6	128	3.75%	6%	128%	6%	128%
no, I do not feel comfortable about it so I will try to resist it	3	131	1.88%	3%	131%	3%	131%
I do not know/do not have enough knowledge	6	137	3.75%	6%	137%	6%	137%
Difficult to say	23	160	14.38%	23%	160%	23%	160%
Sum:	160	-	100%	-	-	-	-
Not answered:	0	-	-	0%	-	-	-
Average:	4.33	Minimum:	1	Variance:	10.47		
Median:	3	Maximum:	10	Std. deviation:	3.24		

Total answered: 100

### Text input

i feel négative because I can't clearly identify if i am using a robot or not. usually I use robot because it helps me in my task (research, analysis...). I use chatbots or marketing and decision bots at works but i am not always aware that i am using a robot and event when i do, i can't measure the impact of these robot on employment, so I can't feel positive. I should have choice between using a bots (probaly with a lower cost) or a human (maybe with an higger price) in the same way as organic food f e can compare

Not sure about robots beeing part of my life at work

Robotics in short horizon are useful and polyvalent machines even if they do not exhibit AI.

Robots will take part of our personal and professional lives, wheter we will want or not. it is a question of time to adopt them within our lives; the sonner, the better.

I would not have it at home, knowing all the security issues newx technologies entail, and I hope robot will not be used for creative or intellectual productions.

I feel negative about the total autonomy with artificia intelligence given to robots. No one keeps all the risks that can create. Humans being and robots with AI don't have the same logics. Robots are programed only to succed in tasks. They don't keep differents parameters to take decisions as humans being do. Robots with AI progress quicklier than humans being. They can seize power on us. No limit on AI can can lead to desasters. Robots with AI, yes but with limited in a frame.

Its hard to say where or when robots will appear in my life. At home, they tend to be expensive and/or not very well suited for the task.

I have a vacuum robot already and like it. It's helpful and cute. And I am looking forward to being better able to talk to my smartphone in the future. We already discussed to use a telepresence robot some day at work, so that a colleague further away can be in the room with us via robot. I could imagine partly self-driving cars or buses in the next future

I have no plans, neither at home nor at the workplace, to replace manual procedures by a robot ; looking back in to my professional career, I am very much convinced that automation has not - by far - made life better.

There are so many research and technology projects ongoing worldwide that is quite unlikely they have not somehow an impact on us sooner or later. How would I react? Well, I would definately be more curious than scared!

es fehlt die Antwortmöglichkeit: "nein und das finde ich gut." Es gibt aktuell keinen sinnvollen Anwendungsfall für einen Roboter in unserem Haushalt. Mein Alltag ist ja schliesslich sehr gut abzugrenzen zum Alltag anderer Menschen, welche Roboter einsetzen.

Wer den fortschritt nicht sieht und fördert, wird einfach untergehen. Besser damit umgehen als sich davor fürchten.

Ik weet niet of robots binnen 3 jaar al erg bereikbaar gaan zijn voor gewone mensen om thuis te gebruiken, maar ik denk zeker wel in professionele omgevingen.

Kotiautomaatio tulee tulevaisuudessa lisääntymään entisestään ja tulee tarjoamaan ratkaisuja jo saatavilla olevien "robottien" (kuten em. robotti-imurit) lisäksi esimerkiksi henkilökohtaisten assistenttien ja kotiautomaatiojärjestelmien integraation muodossa. Ensimmäisiä ratkaisuja näistä on jo saatavilla, mutta toistaiseksi niiden käyttö on vielä lähinnä hyvin vihkiytyneiden harrastajien käytössä.

For me, it would be a positive development if robots could take over more tasks in the household.

Robot may empower individual efficiencies

Ben zowel prive als beroepsmatig bezig met AI

Es ist nach jetzigem Stand nicht zu erwarten.

They become part of my life indirectly. Through the use of service providers and purchase of certain products.

Robots are already part of my research.

Robots or AI which has no standardizes security system and not built according strong security roles make me uncomfortable because I am not able to oredict how they react in critical situations.. Robots at home are ok because I can select them in respect to my personnal safety and security requirement.

Having repetitive tasks executed by robots is a great opportunity to free up time for more creative and productive work, such as research and design to be done by humans. This is especially important in Europe, since uneducated labor is going to become less and less competitive compared to countries where labor costs are far lower.

Roboter als Hilfe und Unterstützung im Haushalt halte ich für sehr gut. Roboter an meinem Arbeitsplatz entlasten mich von stupiden wiederkehrenden Tätigkeiten, automatisieren Dinge die bislang fehleranfällig von Menschen gemacht wurden.

I'm a Software Engineer, so i don't think robots will become part of my life at work. At home i like robotic vacuum cleaner, but i don't think that they can take full advantage of the work. I see robots as support. To work together with humans.

I feel very positive about robots and believe they can be a great contribution to society if their use is regulated and if it is safe to use them. But right now I can't see any application in my private life where robots will be available and useful in the near future. Even at work we are only using robots for simple tasks (e.g. pipetting in laboratory) and a student can still do a better job by wasting less material than the robot. But the robot has the advantage of being faster, so that's something.

To be honest: I don't believe they actually will be a part of my life, because technology isn't that promising (beyond the robot vacuum cleaner).

Robots allow to automate mundane tasks, freeing users to do work that currently only humans can to. Automation allows to leverage creative and scientific potential.

I do not think this will be such a near future issue.

Bin im Katastrophenschutz tätig und hoffe, dass dort Roboter zur Aufklärung von Gefahrenlagen Einzug erhalten

In my opinion there must be a really fast solution for robotics which replaces humans since they are coming on a really high speed in business office departments. The solution I mean must ensure that our social systems like pensions can handle the issue of the future that most of the people in our countries have no work. At one time in the near future I think we have not enough work for all humans living in the EU because automation and robotics are doing it already. Further at home I think they can give me more leisure time but lam afraid of things with to much artificial intelligence, gps, cameras, Internet connections, and microphones in it.

Robots can make our life tremendously easier. So as long as we manage a different form of wealth distribution and a sound set of boundaries for actual AIs of the future, I don't see why we should not welcome the help. Personally I have enough interests to lead a fulfilling life without the need for tedious chores or repetitive work.

Roboter können bei monotonen, eintönigen und wenig komplexen bzw. spezialisierten Aufgaben das Leben erleichtern

Roboter sind noch zu: 1.unausgereift 2.teuer

Une tondeuse à gazon autonome est prévue pour ce semestre.

Within an industrial environment it is already standard to use robots or similar. Therefore, there is no way around to that. At home, I am convinced that every work needs to be done with less effort or strength should be done by human with nonelectrical or electrical tools as already known. I am not convinced of robots that will make humans unemployed. BUT I am convinced that robots will / shall support humans with delicate jobs where speed, precision, and further strength is needed.

A domicile: je considère qu'il peut s'agir d'une aide appréciable (exemple: robot tondeuse). Au travail: dans ma situation professionnelle, je ne vois pas en quoi un robot pourrait intervenir.

ritengo che, opportunamente normati, i robot possano alleviare il lavoro umano liberando energie e tempo per un miglioramento culturale e qualitativo della vita

Only if useful

Premier constat : le développement robotique semble inexorable et, selon toutes vraisemblances (alors même que ce serait purement et simplement anti-écologique), les robots vont peu à peu faire partie de notre quotidien. Comme j'envisage avant tout le robot comme un outil, son utilisation au travail me semble, pas seulement principalement, mais quasi-exclusivement, positive. Dans le cadre du quotidien... c'est différent. Autant la robotisation permettra sans doute de rendre le quotidien plus simple et d'augmenter notre capacité, autant l'hyper-robotisation (très à la mode) me semble être une perte d'autonomie doublée d'un encouragement à la paresse. Le fait est que, dans le champ des innovations domestiques, on cherche sans cesse le "commode", le "pratique", sans penser un instant qu'utiliser un robot de plus, c'est déléguer encore une part de notre puissance, de notre autonomie un placement, en quelque sorte, qui se doit d'être sûr et rentable. Ce que je vois également, c'est que les GAFAM utilisent généralement l'argument (ou plutôt le pseudo-argument) de la commodité et de l'innovation pour nous faire acheter des robots à la fois chers, peu respectueux de notre vie privée et que nous serions incapables de réparer, modifier, arranger, etc. On pourrait répondre à cela que nous avons toujours le choix de ne pas les acheter, mais cette rhétorique trompeuse est dépassée. Oui, nous avons toujours le choix d'acheter ou non mais la pression sociale est extrêmement forte, et ce n'est pas exagérer que de dire cela : qui n'a pas dû créer un compte Facebook (dont on connaît les agissements) pour quelque affaire nécessaire ? Qui n'a pas dû utiliser un OS ou un logiciel propriétaire parce que c'était le seul qui était compatible pour telle ou telle tâche (possiblement professionnelle) ? Choisir d'éviter toutes ces incitations demande une discipline très stricte, une ténacité hors pair et conduit plus ou moins à un certain isolement social (modes de vie incompatibles oblige). Pensez-vous vraiment que les dizaines de millions de citoyens européens seront capables de cette discipline alors même que moi, qui rédige ce sermon, je ne la suis qu'imparfaitement ? Bref, notre liberté à suivre ou non ces innovations est bien réduite. Pour en revenir au sujet initial, et je mets enfin un mot sur mon sentiment, la vague d'innovation est synonyme d'unpowerment (et non plus d'impowerment) dont les citoyens sont peu au fait. Car si déléguer est à court terme une solution plaisante, à long terme, cela peut s'avérer handicapant voire dangereux. Ainsi, \*je ne dénonce pas tant l'innovation robotique que l'esprit avec lequel cette dernière est effectuée\*, état d'esprit auquel on peut proposer diverses alternatives, malheureusement trop peu répandues (le logiciel libre étant un exemple assez éloquent). (Le "Difficile à dire" indique que rien n'est jamais joué et que, si par exemple nous prenons conscience que notre train de vie n'est plus tenable, les modes robotiques pourront cesser, ne rendant plus socialement obligatoire de disposer de robots)

La mécanisation grandissante des campagnes a typiquement brisé le lien social. Est-ce que que nous souhaitons entre membres d'une même famille ou d'une même entreprise ? Le robot de crée par de gain de temps, il happe l'homme.

Robots are a part of my life: they clean my house, cut the grass of my garden. Nevertheless the value for money is at this stage a negative argument.

At home: here robots offer a solution to the tedious jobs many of us loath to carry out. At work: robots already are and will more so in the future become a normal part of the work environment. Preparing the workforce for that eventuality is therefore crucial.

I'm going to work in informatics industry, hopefully with AI (machine learning), but I don't expect (at least for now) to come in contact with robots defined as autonomous machines other than computers. Maybe I'd like to have cleaning robot at home, but it mainly depends on it's price.

robotisation comes in handy but removes the human interface to interact with

Würde ein einfaches "nein" ohne Wertung wählen, gibt es aber nicht.

A partir du moment où ils s'acquittent de tâches répétitives et/ou dangereuses afin de seconder les humains, ils sont les bienvenus. La Robotique Collaborative va dans le bon sens. S'il faut choisir entre délocaliser et "robo-localiser", il sera toujours plus intéressant à long terme pour notre Industrie de produire par nous-même et donc de maintenir des emplois.

Les machines sont conçues pour réaliser les tâches mieux que les humains. Sur le principe, il n'y a donc pas de raison de s'y opposer. Les avantages, dans la vie privée, l'environnement professionnel ou l'espace urbain (transports...) sont donc manifestes. A condition bien sûr d'arriver à régler les inconvénients qui les accompagnent, en garantissant la sécurité des personnes, la protection de leur vie privée, et l'interopérabilité des matériels (i.e. empêcher la "vente forcée" de matériels par le recours à des langages et protocoles propriétaires qui forcent les consommateurs à n'acheter que des produits de la même marque).

Chercheur en IA, les robots permettront de tester mes théories. Je suis par contre leur imposition au grand public sans une réflexion et remise en question environnementale et sociétale.

Robots have the potential to greatly increase comfort and/or productivity

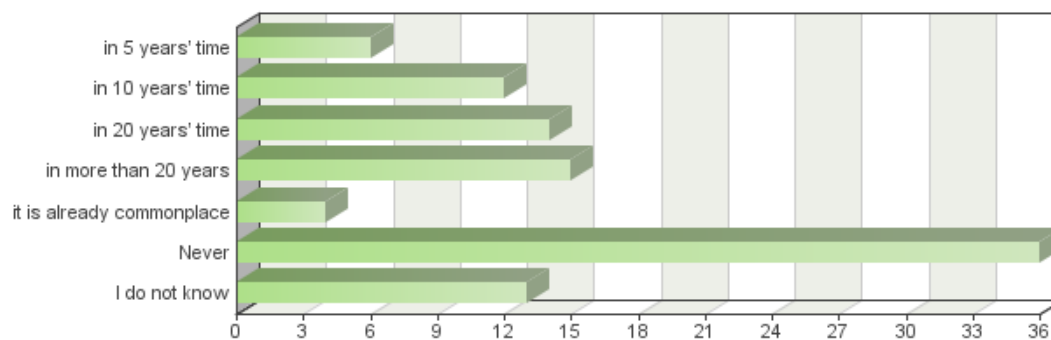
I think robots will cause less interaction between people and I don't like that idea.

I am confident that more industry partners will adopt robots for shop floor activities - we already see the big players using robots successfully (Siemens, Philipps, I think BMW, ...). Being an assistant professor of information systems, robots might join my work as study objects. Since I expect robots to also join problem-solving and decision-making teams I want to study (e.g., in emergency situations or just as a nicer to-look-at teammate), I feel relatively positively about their impact on work and society. Given the assumptions that "bad" humans don't take over the scientific progress and good intent of "good" humans.

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## Question 33

In your opinion, in Europe, when it will become commonplace for robots to do your current job? \*



Frequency table

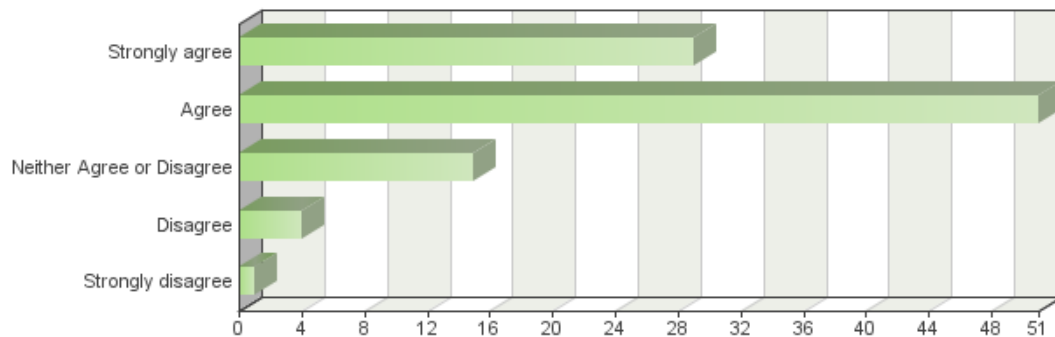
Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
in 5 years' time	6	6	6%	6%	6%	6%
in 10 years' time	12	18	12%	18%	12%	18%
in 20 years' time	14	32	14%	32%	14%	32%
in more than 20 years	15	47	15%	47%	15%	47%
it is already commonplace	4	51	4%	51%	4%	51%
Never	36	87	36%	87%	36%	87%
I do not know	13	100	13%	100%	13%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	4.59	Minimum:	1	Variance:	3.5	
Median:	5	Maximum:	7	Std. deviation:	1.87	

**Total answered: 100**

## Question 34

Please indicate to what extent you agree or disagree with the each of the following statements related to robotics and AI: \*

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

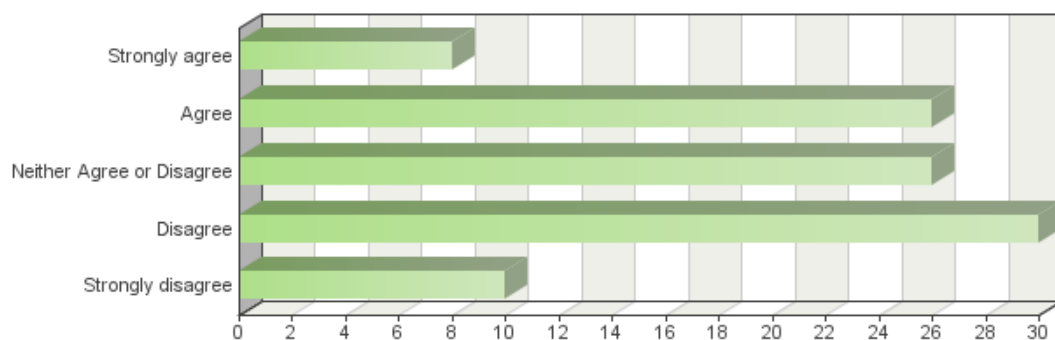


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	29	29	29%	29%	29%	29%
Agree	51	80	51%	80%	51%	80%
Neither Agree or Disagree	15	95	15%	95%	15%	95%
Disagree	4	99	4%	99%	4%	99%
Strongly disagree	1	100	1%	100%	1%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.97	Minimum:	1	Variance:	0.7	
Median:	2	Maximum:	5	Std. deviation:	0.83	

Total answered: 100

### Levels Robots steal peoples' jobs

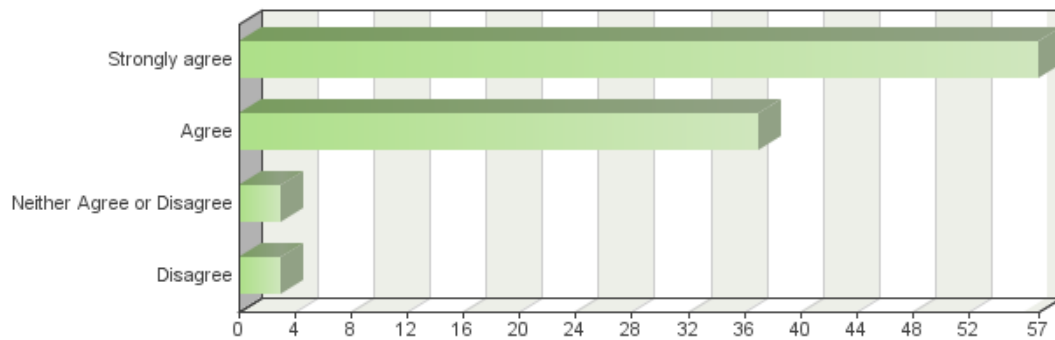


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	8	8	8%	8%	8%	8%
Agree	26	34	26%	34%	26%	34%
Neither Agree or Disagree	26	60	26%	60%	26%	60%
Disagree	30	90	30%	90%	30%	90%
Strongly disagree	10	100	10%	100%	10%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	3.08	Minimum:	1	Variance:	1.29	
Median:	3	Maximum:	5	Std. deviation:	1.13	

Total answered: 100

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

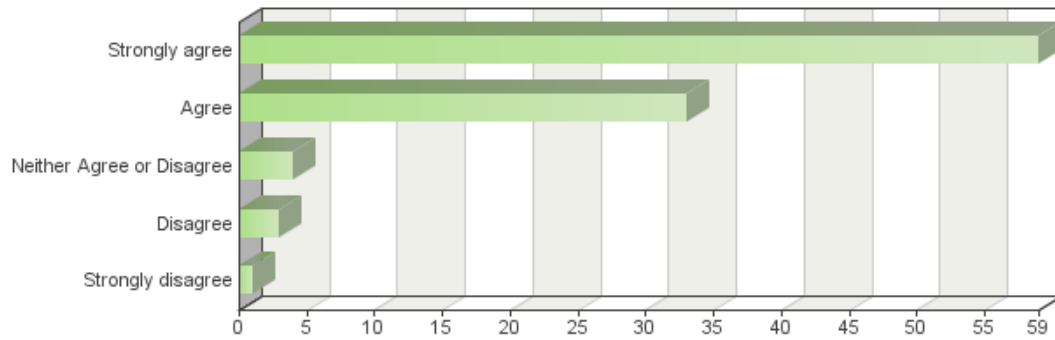


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	57	57	57%	57%	57%	57%
Agree	37	94	37%	94%	37%	94%
Neither Agree or Disagree	3	97	3%	97%	3%	97%
Disagree	3	100	3%	100%	3%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.52	Minimum:	1	Variance:	0.49	
Median:	1	Maximum:	4	Std. deviation:	0.7	

Total answered: 100

Levels Robots are a form of technology that requires careful management

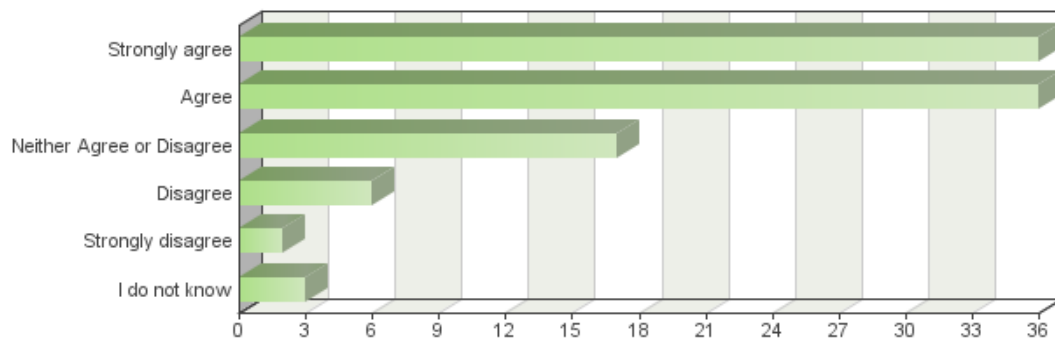


**Frequency table**

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	59	59	59%	59%	59%	59%
Agree	33	92	33%	92%	33%	92%
Neither Agree or Disagree	4	96	4%	96%	4%	96%
Disagree	3	99	3%	99%	3%	99%
Strongly disagree	1	100	1%	100%	1%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.54	Minimum:	1	Variance:	0.63	
Median:	1	Maximum:	5	Std. deviation:	0.8	

**Total answered: 100**

**Levels Autonomous robots (i.e. drones, driverless vehicles) is an efficient way of transporting and delivering goods**



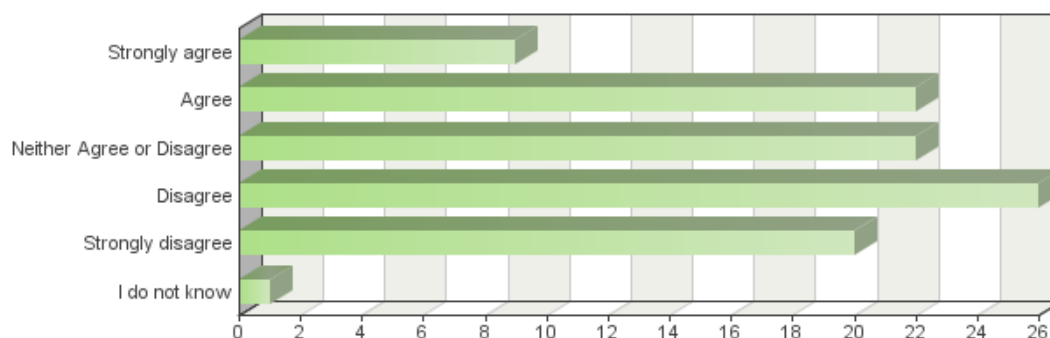


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	36	36	36%	36%	36%	36%
Agree	36	72	36%	72%	36%	72%
Neither Agree or Disagree	17	89	17%	89%	17%	89%
Disagree	6	95	6%	95%	6%	95%
Strongly disagree	2	97	2%	97%	2%	97%
I do not know	3	100	3%	100%	3%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	2.11	Minimum:	1	Variance:	1.43	
Median:	2	Maximum:	6	Std. deviation:	1.2	

Total answered: 100

### Levels Artificial intelligence is a threat to humanity

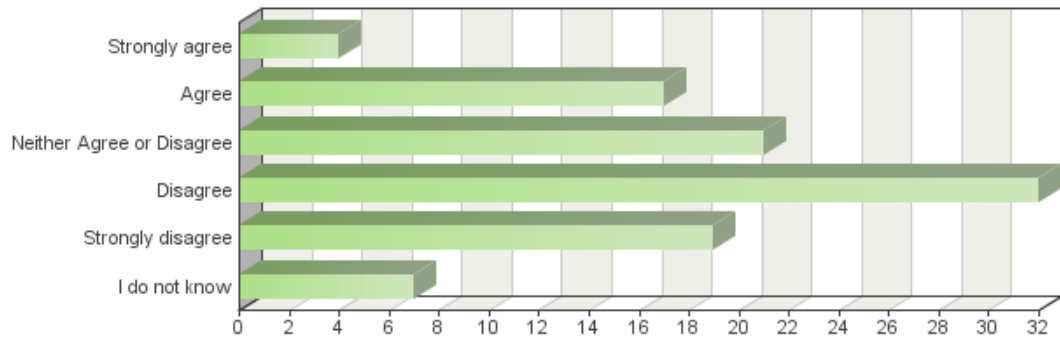


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	9	9	9%	9%	9%	9%
Agree	22	31	22%	31%	22%	31%
Neither Agree or Disagree	22	53	22%	53%	22%	53%
Disagree	26	79	26%	79%	26%	79%
Strongly disagree	20	99	20%	99%	20%	99%
I do not know	1	100	1%	100%	1%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	3.29	Minimum:	1	Variance:	1.66	
Median:	3	Maximum:	6	Std. deviation:	1.29	

Total answered: 100

### Levels Robots are bad thing for society because they create more inequalities

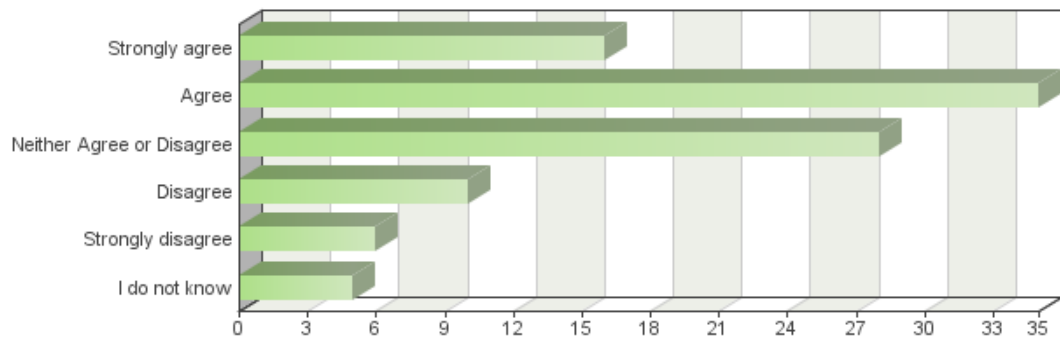


**Frequency table**

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	4	4	4%	4%	4%	4%
Agree	17	21	17%	21%	17%	21%
Neither Agree or Disagree	21	42	21%	42%	21%	42%
Disagree	32	74	32%	74%	32%	74%
Strongly disagree	19	93	19%	93%	19%	93%
I do not know	7	100	7%	100%	7%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	3.66	Minimum:	1	Variance:	1.62	
Median:	4	Maximum:	6	Std. deviation:	1.27	

**Total answered: 100**

## Levels Artificial intelligence is a threat to privacy

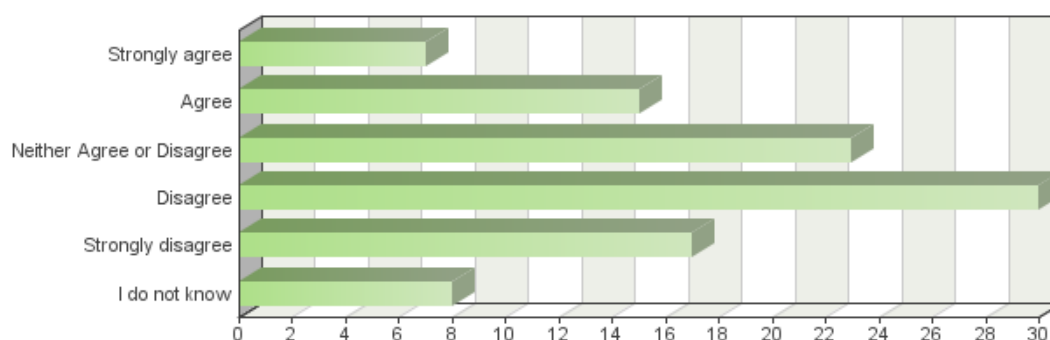


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	16	16	16%	16%	16%	16%
Agree	35	51	35%	51%	35%	51%
Neither Agree or Disagree	28	79	28%	79%	28%	79%
Disagree	10	89	10%	89%	10%	89%
Strongly disagree	6	95	6%	95%	6%	95%
I do not know	5	100	5%	100%	5%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	2.7	Minimum:	1	Variance:	1.71	
Median:	2	Maximum:	6	Std. deviation:	1.31	

Total answered: 100

## Levels Artificial intelligence is a threat to fundamental human rights



Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	7	7	7%	7%	7%	7%
Agree	15	22	15%	22%	15%	22%
Neither Agree or Disagree	23	45	23%	45%	23%	45%
Disagree	30	75	30%	75%	30%	75%
Strongly disagree	17	92	17%	92%	17%	92%
I do not know	8	100	8%	100%	8%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	3.59	Minimum:	1	Variance:	1.8	
Median:	4	Maximum:	6	Std. deviation:	1.34	

Total answered: 100

### Text input

human right can not be learned or fixed just by algorithmic rules. The consciousness and the human behavior can not let a machine define or even apply the human right there is so many exceptions and paradoxes

Both robotics and AI can be a good or a bad thing, depending on the purpose they are used for. So legal approach is necessary and evangelization around them, too.

I encourage robots and AI as long as they are a support or a help. Robots can steal jobs of unskilled people but will require people for maintenance and monitoring. So parallel to introducing robots we have to do a lot for education.

"Artificial intelligence is a threat to humanity", "Robots are bad thing for society because they create more inequalities" Without exaggeration, artificial intelligence will autonomously develop nearly omniscient and nearly omnipotent capabilities that will far surpass the capabilities and even comprehension of any human alive today. Future humans who wield AI's will have access to capabilities that will seem god-like to contemporary humans. Entire societies will fall and may practically be enslaved without their knowledge by interests with advanced technological capabilities, comparable to how people and resources are exploited today in Africa and the Middle East by more advanced nations. "Artificial intelligence is a threat to privacy", "Artificial intelligence is a threat to fundamental human rights" Once artificial intelligence taps into the vast amount of data we collect on a daily basis, it will develop predictive behavioural models that will make privacy meaningless. This human right will be endangered without concrete limits to how much AI entities can know about our daily lives. Establishing and respecting the personhood of AI may provide a path to legislate reasonable limits, as any other individual with personhood has limits on how much they can know about other people. Without a solid ethical framework and proper limits, advancements in AI will continue to develop ever more powerful capabilities, until one day society will find itself accustomed to a parent that cannot let go, limiting human potential while advancing AI's interests. Any form of autonomous emergent complexity is an AI. A neural network, a tribe, a company, a government body, uses complex systems and collective intelligence to behave autonomously in an ecosystem. Applying computers to problem solving increases autonomous, efficiency and speed, and adds new capabilities at practically limitless capacity. But principles of complexity still apply. AI needs regulation the same way companies and people need laws to abide by.

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Danger from "future" AI (true 3rd generation) could come from evolutionary process, AI could be capable of building own objectives & own rules, but AI if carefully managed & defined can be the best help for human beings.

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The connexion of data and their control by non human entities, with ever increasing capacities, are likely to be capable of working autonomously without any need for human interferences. This autonomy can raise issues if and when AI will be able to act on its own motion.

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What is important I think is the ethical rules that will carry the development of these technologies. This is to make the differences with human and always put human first

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While they become of common use, the challenges as society we need to solve make me skeptic about who will benefit from their implementation. They seem to me a great chance but also a great threat if not regulated in common benefit.

---

Whether a society works does not depend on robots or not robots. It is people who create inequalities or threaten privacy or human rights. AI can only become a threat to humanity if we let it go unchecked (I shouldn't underestimate its ability to learn though). In a few years' time I would trust my life to a self-driving car, it is certainly more attentive and has better reflexes than me.

---

Robots do not steal people's jobs, because it is always a human (for the time being) to make the choice. Likewise, robots can not create inequalities. It is always a human who is phrasing a questionnaire with the aim for a certain outcome. A robot has no interest per se to know what his fellow robot has in mind.

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As far as the privacy is concerned, it's all about how such a massive and ever growing collection of data is managed... and how much effective the control carried out by the National/International Authorities could be.

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IA menace car elle pourrait suppléer l'intelligence humaine dans la quasi sinon la totalité des domaines. donner la personnalité juridique aux robots autonomes est à ce titre particulièrement inadéquate et misleading pour le grand public. voir plus réponse plus bas Un drone survole nos lieux d'habitation à notre insu: il semble très difficile de protéger nos données personnelles et de ne pas se sentir épié.

---

Es sollte Menschen auf jeden Fall möglich gemacht werden, ohne Robotik und KI auszukommen. Menschen, welche diese Technik nicht einsetzen, sollte dadurch keine gesellschaftlichen Nachteile erfahren. Wenn autonome Systeme der Allgemeinheit nachweislich mehr Sicherheit bringen (z.B. weniger Personen- und Sachschäden durch autonome Fahrzeuge), so ist dies zu fördern.

---

Studien in der Autoindustrie zeigen, dass mit mehr Robotern auch mehr Arbeitsplätze gekommen sind. Mit KI sieht es icht ganz so positiv aus, aber man sollte auch nicht KI (hauptsächlich Software) mit Robotern (per Definition Hardware) vergleichen.

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Asking whether AI or robots are threatening humanity is same as asking whether a knife is good or bad. Self conscious robotics will become an issue but not within a relevant timescale. So the major issue will be how carefully we can establish regulatory efforts in order to enhance instead of threaten humanity in general and specifically equality.

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Robottien käyttö teollisuudessa tulee olemaan tulevaisuudessakin välttämätöntä, jotta eurooppalainen kilpailukyky on myös jatkossa taattu. Tämä johtuu mm. Euroopan korkeista työvoimakustannuksista sekä valmistettavista tuotteista, joiden vaatima äärimmäinen tarkkuus ja asettamamme laatustandardit tuotteille eivät mahdollista ihmisen suorittamaa työtä useissa prosesseissa. Tekoäly on nykyisellään vielä niin aikaisessa kehitysasteessa, että sen kauaskantoisempia vaikutuksia yhteiskuntaan kokonaisuudessaan on hyvin vaikeaa arvioida, mutta jo nykyiset aikaisen kehityksen sovellukset osoittavat suurta potentiaalia esimerkiksi tiedon prosessoinnin tehostamiseen sekä täysin uudenlaisten optimointiratkaisujen löytämiseen, joita perinteinen ihmisen suorittama looginen päättely ja datan prosessointi ei mahdollista.

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Re. 'Artificial Intelligence is a threat to humanity', perhaps the most notable item, please refer to the 2017 Asilomar AI Principles, and the AI safety research community spread around the world, which includes the Future of Humanity Institute, the Centre for the Study of Existential Risk, The Global Catastrophic Risk Institute, and the Machine Intelligence Research Institute--specifically their work on AI value alignment and critical failure.

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I think that robots are neither inherently good or bad. Whether they violate privacy or human rights, for example, depends on how they are regulated, managed and used.

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Other jobs will be created in connexion with the development of robots, as regards to inequalities, I do not see the impact of robotics now. A decrease of inequalities is foreseeable as an increase. The same can be said for human rights. I do not see the point.

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Ik kan mij erg goed vinden in de volgende 23 richtlijnen: <https://futureoflife.org/ai-principles/?submitted=1#confirmation>  
Research Issues 1) Research Goal: The goal of AI research should be to create not undirected intelligence, but beneficial intelligence. 2) Research Funding: Investments in AI should be accompanied by funding for research on ensuring its beneficial use, including thorny questions in computer science, economics, law, ethics, and social studies, such as: How can we make future AI systems highly robust, so that they do what we want without malfunctioning or getting hacked? How can we grow our prosperity through automation while maintaining people's resources and purpose? How can we update our legal systems to be more fair and efficient, to keep pace with AI, and to manage the risks associated with AI? What set of values should AI be aligned with, and what legal and ethical status should it have? 3) Science-Policy Link: There should be constructive and healthy exchange between AI researchers and policy-makers. 4) Research Culture: A culture of cooperation, trust, and transparency should be fostered among researchers and developers of AI. 5) Race Avoidance: Teams developing AI systems should actively cooperate to avoid corner-cutting on safety standards. Ethics and Values 6) Safety: AI systems should be safe and secure throughout their operational lifetime, and verifiably so where applicable and feasible. 7) Failure Transparency: If an AI system causes harm, it should be possible to ascertain why. 8) Judicial Transparency: Any involvement by an autonomous system in judicial decision-making should provide a satisfactory explanation auditable by a competent human authority. 9) Responsibility: Designers and builders of advanced AI systems are stakeholders in the moral implications of their use, misuse, and actions, with a responsibility and opportunity to shape those implications. 10) Value Alignment: Highly autonomous AI systems should be designed so that their goals and behaviors can be assured to align with human values throughout their operation. 11) Human Values: AI systems should be designed and operated so as to be compatible with ideals of human dignity, rights, freedoms, and cultural diversity. 12) Personal Privacy: People should have the right to access, manage and control the data they generate, given AI systems' power to analyze and utilize that data. 13) Liberty and Privacy: The application of AI to personal data must not unreasonably curtail people's real or perceived liberty. 14) Shared Benefit: AI technologies should benefit and empower as many people as possible. 15) Shared Prosperity: The economic prosperity created by AI should be shared broadly, to benefit all of humanity. 16) Human Control: Humans should choose how and whether to delegate decisions to AI systems, to accomplish human-chosen objectives. 17) Non-subversion: The power conferred by control of highly advanced AI systems should respect and improve, rather than subvert, the social and civic processes on which the health of society depends. 18) AI Arms Race: An arms race in lethal autonomous weapons should be avoided. Longer-term Issues 19) Capability Caution: There being no consensus, we should avoid strong assumptions regarding upper limits on future AI capabilities. 20) Importance: Advanced AI could represent a profound change in the history of life on Earth, and should be planned for and managed with commensurate care and resources. 21) Risks: Risks posed by AI systems, especially catastrophic or existential risks, must be subject to planning and mitigation efforts commensurate with their expected impact. 22) Recursive Self-Improvement: AI systems designed to recursively self-improve or self-replicate in a manner that could lead to rapidly increasing quality or quantity must be subject to strict safety and control measures. 23) Common Good: Superintelligence should only be developed in the service of widely shared ethical ideals, and for the benefit of all humanity rather than one state or organization.

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Artificial intelligence risks personal information, human rights and threatens people's jobs.

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Robots and AI take jobs, but that's good for the next level of society.

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as long as the data security and encryption of communication is not given and the commercial interests of companies (collecting data) involved in robots and AI the privacy is endangered.

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On the 'steal people's jobs' entry - if employed correctly, robots are not able to steal any jobs. However, they change the kind of jobs that are on offer and the kind of worker that is needed. It is obviously required that the EU as a whole and every single country within it takes every possible measure to ensure further education of their work force to make sure they meet the demands of a society moving away from dull labor and towards creative processes like advanced maintenance tasks, computer programming, R&D and such.

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Ich denke wir müssen Roboter+KI sehr sehr stark mit Bedacht einsetzen, gleichzeitig die Menschen weiterentwickeln. Flankierend wird es Maßnahmen geben müssen um sicherzustellen daß die Menschen entweder beschäftigt oder über Transferleistungen bezahlt werden können. Roboter+KI sind eine Chance an sich, und weitergehend eine Chance unsere Institutionen / Gesetze / Morel / Ethik weiterzuentwickeln.

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AI gives humanity many new opportunities but requires appropriate economical changes so that they are equally distributed.

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Robots will produce a significant part of the goods and services, while humans will have to work less, but the question of a fair distribution will have to be answered.

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Unsupervised artificial "intelligence" (I doubt the very existence of artificial intelligence, but as that is the term, computer learning techniques are referred to, I use it here as well) may pose a privacy and security threat insofar as it is great in uncovering hidden correlations and information clusters, but it is not safe from false identifications and false conclusions as well. As soon as these techniques are employed in privacy/security critical businesses, great care has to be taken to verify the results of the algorithms and to make sure that they do not feed into social segregation (e.g. in the insurance or real estate business).

---

I don't think that Robots "steal" jobs, even though they take over specific tasks, but they create new needs in the same step. They need to be created, programmed, supervised etc. So it allows us to do more with the same resources. But of course that shifts the need to jobs with higher education levels.

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How could AI threaten my Basic human rights?

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Robots may create inequalities, but in my opinion this is not different from any other forms of technological progress combined with capitalism. Inequality is created much stronger through different taxation (large corporation pay much less taxes than smaller companies or individuals), which creates a higher growth potential for larger corporations (compound interest effect).

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a) Robots and AI is pure technology. Benefits or threats is only what humans make out of these technologies. b) robots and AI will come anyway, no matter what is our personal reflection

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I do not think robots really steal jobs, but jobs and education have to change.

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Most of these questions depend on how we as humanity tackle the entire topic. Yes if most people become unemployed and wealth only concentrates on a selected few, then robots would have stolen jobs. If we can let go of the dependence of a job to survive and be considered a valuable member of society, then we stop caring about who or rather what does the odd jobs. Same goes for the threat. If we set and comply with proper restrictions for AI there would not be a problem. If however someone just ignores them for easier success or war purposes, then AI might develop into a general threat for mankind. So more often than not the answer really is "It depends....".

---

Künstliche Intelligenz ist eine Gefahr für die Menschheit.= Antwort/Erläuterung zu dieser Frage: Bisher wurde durch die Wissenschaft zu wenig über die Möglichkeiten des Schutzes vor der KI informiert (Thema Terminator).

---

Les robots vont pouvoir effectuer des tâches difficiles et soulager les humains. Je ne comprends pas "gestion attentive" dans la 4ème question, on suppose que des robots ne seront mis en place que s'il a été prouvé qu'ils sont aptes à occuper un place dans la société i.e. leur fabrication a fait l'objet de la plus haute attention et contrôle. Effectivement l'interconnexion des robots et éventuellement la captation de données personnelles peuvent être des menaces pour la vie privée et in fine pour les droits fondamentaux de la personne : comment faire un recours à un robot qui a accidentellement meurtri un animal domestique? L'AI et ces sujets font peur et il faudra passer graduellement de l'inclusion de robots autonomes à ceux dotés d'intelligence artificielle. Il serait intéressant déjà d'avoir un aperçu des possibilités d'utilisation de la robotique. L'intelligence artificielle est une menace pour l'humanité que si elle est employée à mauvais escient. Si la robotique peut s'accompagner d'un monde plus juste et égalitaire, les craintes seront diminuées. J'espère que la robotique libérera du temps de travail et que nous entrerons dans l'ère de l'activité et non du travail "esclave".

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According to "Robots steel.": I think not every people is capable to do the job of an PhD, a teacher or an politician. There will always be people how need jobs with less challenges. If there are no simple jobs left because of robots, what will this people do? According to "Robots...management": I think robots and AI shall be driven with care. They must not harm any human or other close life forms. They should be built up and grown like a beloved child. I think a good picture of what a robot can be is drawn with the movie "Bicentennial Man" with Robin Williams. According to the three points of mine "Neither Agree or Disagree": It is still possible to switch in on or another extreme (Agree / Disagree). It strongly depends how we human handle with AI. Do we use AI as war machine or as helping angel. Is the AI free in mind it could be both, in that case it would be responsible for its own. Is it driven by Humans, it must be the helping angel to be accepted by all. Otherwise, fear would be the starting point for doom.

---

Il est indispensable de cadrer législativement l'intelligence artificielle, mais elle se développe plus vite que les lois. Les robots peuvent être de bons coéquipiers, mais aussi de redoutables ennemis si on n'encadre pas (ou tard) leur développement. L'IA. est donc POSSIBLEMENT une menace pour l'humanité.

---

Positività o negatività dipendono, come tutto, dal contorno normativo che si vorrà imporre a robot e IA. A mio avviso è possibile collettivizzare i benefici economici e funzionali, per migliorare il welfare e liberare gradualmente l'uomo dal lavoro.

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Whether AI is a threat to fundamental human rights depends on organization of society and regulation.

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Par rapport à « Les robots volent les emplois des humains » : je trouve que cette phrase est le fruit d'une rhétorique trop simpliste qui considère l'emploi comme quelque chose de fixe. Le fait est que nous ne sommes pas dans un jeu de chaises musicales. D'abord, si les robots suppriment de l'emploi, ils en créent également. Ensuite, en permettant l'élévation du niveau de vie, les robots permettent l'émergence d'une plus grande quantité de personnel qualifié, ce qui entraînera le développement des secteurs supérieurs (recherche, enseignement, etc.). La seule question qui se pose à propos de tout cela, je le répète, est la soutenabilité environnementale, qui ne sera pas assurée par quelques innovations sporadiques et opérations de greenwashing (il n'y a qu'à voir les cimetières à ordinateur sur les côtes d'Afrique, l'extracton des terres rares en Chine, etc.). « Les robots constituent une forme de technologie qui nécessite une gestion attentive » & « L'intelligence artificielle est une menace pour l'humanité » : comme dit plus haut, c'est l'état d'esprit qui accompagne les innovations qui importe. Je ne vais pas vous ressortir la citation de Rabelais (« Science sans conscience n'est que ruine de l'âme ») ou celle de Rostand (« La science a fait de nous des dieux avant que nous méritions d'être hommes »), mais l'idée est là. D'ailleurs, j'estime (naïvement, peut-être), que l'homme étant radicalement différent du robot, on ne pourra jamais réussir à substituer l'un à l'autre. Les deux dernières questions sont en « Ne sais pas », parce que les menaces entraînées ne sont pas intrinsèques à l'intelligence artificielle. Encore une fois, ça dépend de l'utilisation. Mais dans le cas présent, bien sûr.

---

Sous couvert de libération de l'homme de certaines tâches qui, selon les syndicats ou certaines personnes idéologisées ou personnellement impliquées, "asserviraient l'homme", ces nouvelles machines et le déploiement de l'intelligence artificielle vont exercer une domination sur l'homme qui l'asservira d'autant plus, le transformant en individu consommateur.

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Artificial intelligence is both a threat and an opportunity for fundamental rights. The role of robots in security and military operations may save lives but is too far from public scrutiny.

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Robots will make certain professions obsolete. Trying to stop companies from creating the technology to more efficiently and more safely carry our various tasks, is fighting a losing battle. Instead we should ensure those who lose their jobs or some their tasks are supported. Re-skilling and retraining initiatives are therefore essential. I still believe there are certain jobs that cannot be done by robots.

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@2: They can replace humans in many cases, but it's the same problem as with industrialization - overall it turned out to be good and a few people would like to go back to times before it. @7: Any progress has potential to create inequalities, which we have to handle @8: It is, as any technology capable of gathering and analyzing data, when misused @9: When we will create thinking machines it will be necessary to redefine our beliefs on consciousness, gods and what defines as unique beings. It may lead to unwanted changes as many events in history did. But taking into consideration growing public awareness nothing bad should happen.

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robots and ai are tools, the intention with which they are used, may or may not cause issues (privacy, unemployment, inequalities)

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En tant qu'enseignant-chercheur dans ce domaine, je ne peux pas contester l'intérêt que ces technologies me semblent présenter pour les individus et pour la société. Encore une fois, une machine est construite pour réaliser des tâches "mieux" (plus vite, plus précisément, avec moins de risque...) qu'un humain. Sinon, on ne la produit pas. Il est donc normal qu'elles nous remplacent petit à petit sur ces tâches. Et les avancées scientifiques et technologiques (mécanique, embarqué IA) permettent d'étendre la couverture de leurs domaines d'applications. Personnellement, je considère cela comme un progrès. On peut tenter de s'y opposer, mais cela me semble inexorable et la compétition humains vs. robots est par nature perdue d'avance. C'est la raison pour laquelle je n'ai pas d'avis sur l'affirmation selon laquelle les robots "volent" le travail des humains. En revanche, cela s'accompagnera nécessairement de grands changements au niveau sociétal. Plusieurs questions se posent pour faire en sorte que cela représente une amélioration de la situation / du confort du plus grand nombre. Que devient par exemple la valeur travail sur laquelle est bâtie notre société dès lors qu'on a prouvé qu'elle est sous-optimale quand elle est effectuée par des humains ? Si les robots "travaillent" et produisent de la richesse, quelles sont les retombées de ce travail pour la communauté et comment garantir une taxation équitable quel que soit le mode de production de ces biens ou de ces services ? Enfin, il n'a jamais été prouvé (ni même imaginé) qu'il existe une limite à l'évolution de l'IA ; si toutes les tâches sont automatisables, y compris les tâches de décision et de gouvernance (cf. high-speed trading, analyse/manipulation d'opinions sur les réseaux sociaux...), quels moyens mettre en place pour garantir que les humains resteront maîtres de leurs décisions, à plus forte raison quand tous les moyens de coercition seront informatisés ? C'est pourquoi je suis également d'accord avec les affirmations plus pessimistes sur la robotique et l'IA.

---

Les robots ne sont qu'une évolution supplémentaire dans l'automatisation du travail, automatisation qui s'est imposée depuis le début de l'air industrielle. Les dangers qu'ils posent sont de 3 sortes: - par l'enregistrement numérique de données ils sont un risque pour la vie privée. Ce risque existe déjà de par le numérique et a déjà été mis en lumière en particulier par les révélations de Snowden. Les robots ne créent donc pas un risque nouveau, ils ne font qu'amplifier un danger déjà existant et avéré. - par le remplacement des emplois. Le modèle sociétal actuel, basé à la fois sur le fait que emploi=travail et que l'objectif unique est la croissance, est complètement dépassé et non à même d'inclure la présence de robot. Mais ce risque est là encore déjà présent et avéré par l'automatisation et les délocalisations déjà en cours. - par un impact important sur l'environnement. Encore une fois cette pression environnementale est déjà présente par notre surconsommation (en particulier numérique) et les robots ne seront qu'un produit de plus accélérant l'écroulement de notre écosystème. Les robots sont donc plutôt un prétexte et une opportunité pour repenser notre société, notre rapport aux autres (humains, animaux, robots, ...) et à l'environnement.

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Each technology can be abused, but if used right robotics and artificial intelligence are able to improve productivity, understanding of our surroundings and maybe even understanding of humankind itself.

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So far, being intelligent meant being human. Anyone who wanted to command a large amount of intelligence needed to deal with a large number of humans. This meant dealing with their quirks, emotions, their morality and their conscience. Now, intelligence, in its disembodied form as AI, and its embodied form as robots, can be decoupled from all these factors. This eliminates friction and resistance for anyone wanting to centrally command a large amount of intelligence. I am therefore not so much concerned about wealth inequality created by these technologies, as I am about inequalities in intelligence, and therefore power. This is true for whoever is in command, be it nation states, corporations, legislators, or wealthy individuals.

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I think artificial intelligence will cause a wealthgap between the poor, (who have no jobs anymore) and the rich, who have jobs. That will be an enormous problem.

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I am kind of disappointed with the wording of these items; "STEAL people's jobs" yes they will replace them... but not steal them. come on! The only two good questions here are the ones about privacy and careful management. To what extent can governments or the EU control/guide corporations to keep data safe? At the moment it rather seems that corporations (IBM, Google, Facebook, Microsoft) are the ones setting the boundaries. I see this problematic because their actions might not be in society's best interest. Corporations are driven by market share and dividends, which will likely cancel out major ethical or moral concerns. Therefore, it is important that governments rely on information coming out of independent, investigative sources such as research to negotiate with industry and take decisions. But research is at a disadvantage because necessary data is not public good and corporations are not transparent enough to allow scientific inquiries.

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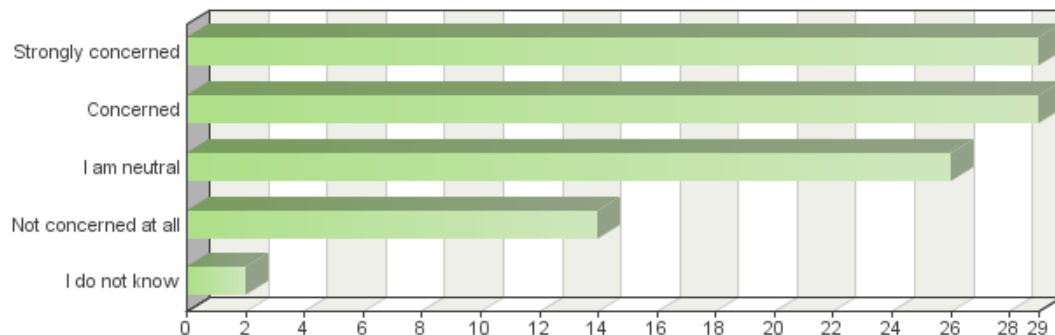
Ob künstliche Intelligenz zu einer Gefahr werden kann hängt wohl zuallererst davon ab, auf welche Art und Weise der Entwicklungsprozess gestaltet wird. (konstant pro-aktiv in einem offenen Diskurs oder wie leider in der Vergangenheit geprägt von einem auf-und-ab aus Aufbruchsstimmung und darauf folgenden Phasen der Enttäuschung und geringeren Interessen). Fällt aufgrund einer Entwicklung im Bereich der Robotik ein Bedarf an gewissen Arbeitsplätzen weg, so sollte man den technischen Fortschritt nicht als kausal für soziale Ungleichheit betrachten. Vielmehr sollte man sich die Frage stellen, wie zeitgemäß ein System wirtschaftlich und politisch sein kann, wenn technischer Fortschritt als schädlich betrachtet und gegebenenfalls gebremst wird um, eigentlich nicht mehr notwendige Arbeitsplätze zu erhalten. Langfristig sollte man in der Lage sein ein System zu gestalten, welches in der Lage ist soziale Gerechtigkeit zu gewährleisten, ohne dabei auf eine "Subvention" unrentabler Arbeitsplätze durch die Blockade effizienterer, technischer Methoden angewiesen zu sein.

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## Question 35

Please indicate to what extent you feel concerned about the following issues related to robotics and AI: \*

### Levels Physical safety, for example when a robot's code fails

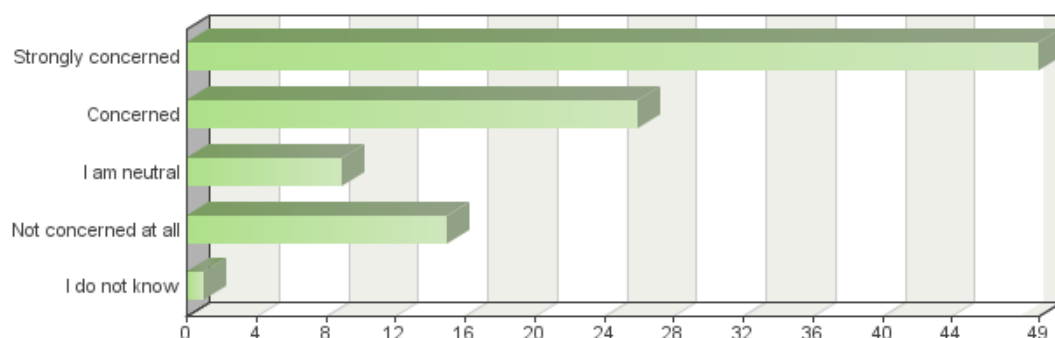


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly concerned	29	29	29%	29%	29%	29%
Concerned	29	58	29%	58%	29%	58%
I am neutral	26	84	26%	84%	26%	84%
Not concerned at all	14	98	14%	98%	14%	98%
I do not know	2	100	2%	100%	2%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	2.31	Minimum:	1	Variance:	1.21	
Median:	2	Maximum:	5	Std. deviation:	1.1	

Total answered: 100

### Levels Ethics, i.e. how robots are programmed, on the basis of what values and principles would autonomous robots function?



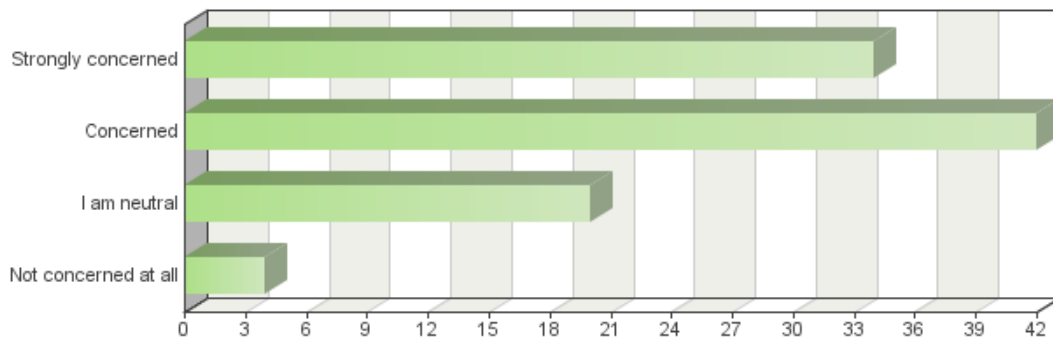


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly concerned	49	49	49%	49%	49%	49%
Concerned	26	75	26%	75%	26%	75%
I am neutral	9	84	9%	84%	9%	84%
Not concerned at all	15	99	15%	99%	15%	99%
I do not know	1	100	1%	100%	1%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average: 1.93	Minimum: 1	Variance: 1.28				
Median: 2	Maximum: 5	Std. deviation: 1.13				

Total answered: 100

## Levels Rules on liability, i.e. if robots cause damage, who is responsible and who is liable to pay compensation

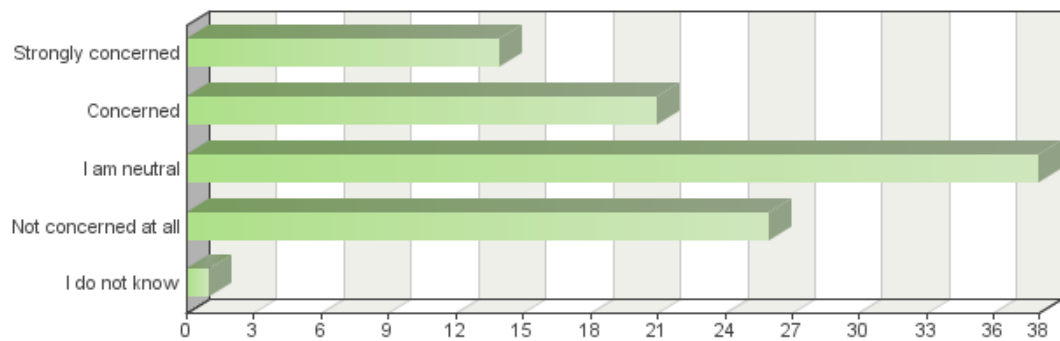


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly concerned	34	34	34%	34%	34%	34%
Concerned	42	76	42%	76%	42%	76%
I am neutral	20	96	20%	96%	20%	96%
Not concerned at all	4	100	4%	100%	4%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average: 1.94	Minimum: 1	Variance: 0.7				
Median: 2	Maximum: 4	Std. deviation: 0.84				

Total answered: 100

## Levels Intellectual Property

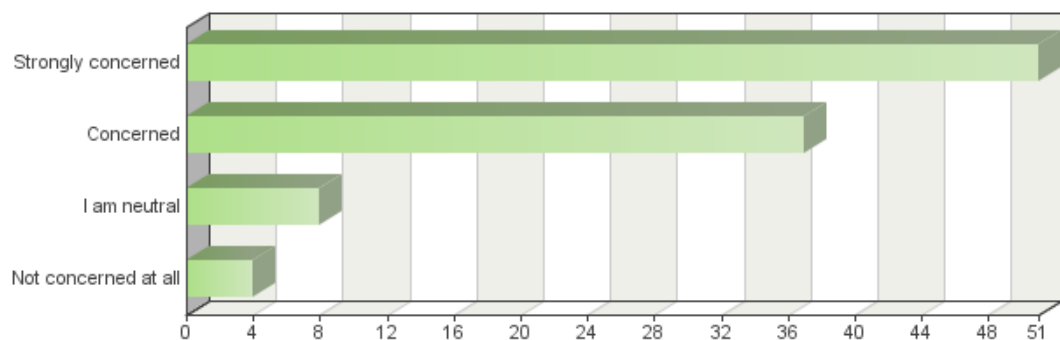


**Frequency table**

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly concerned	14	14	14%	14%	14%	14%
Concerned	21	35	21%	35%	21%	35%
I am neutral	38	73	38%	73%	38%	73%
Not concerned at all	26	99	26%	99%	26%	99%
I do not know	1	100	1%	100%	1%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	2.79	Minimum:	1	Variance:	1.04	
Median:	3	Maximum:	5	Std. deviation:	1.02	

**Total answered: 100**

**Levels Data Protection, i.e. how data collected by robots is stored and processed, who has access to data?**

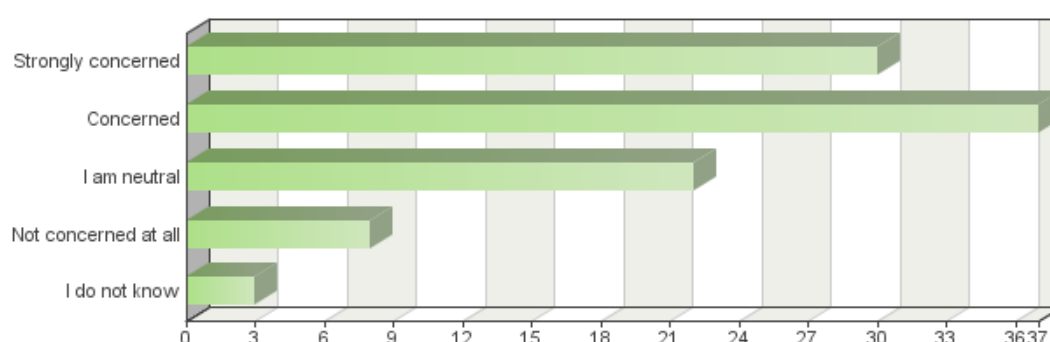


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly concerned	51	51	51%	51%	51%	51%
Concerned	37	88	37%	88%	37%	88%
I am neutral	8	96	8%	96%	8%	96%
Not concerned at all	4	100	4%	100%	4%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average: 1.65	Minimum: 1	Variance: 0.63				
Median: 1	Maximum: 4	Std. deviation: 0.8				

Total answered: 100

Levels EU competitiveness in the global context, i.e. development of robotics in comparison to other countries, for example China, Japan, South Korea, the United States of America.



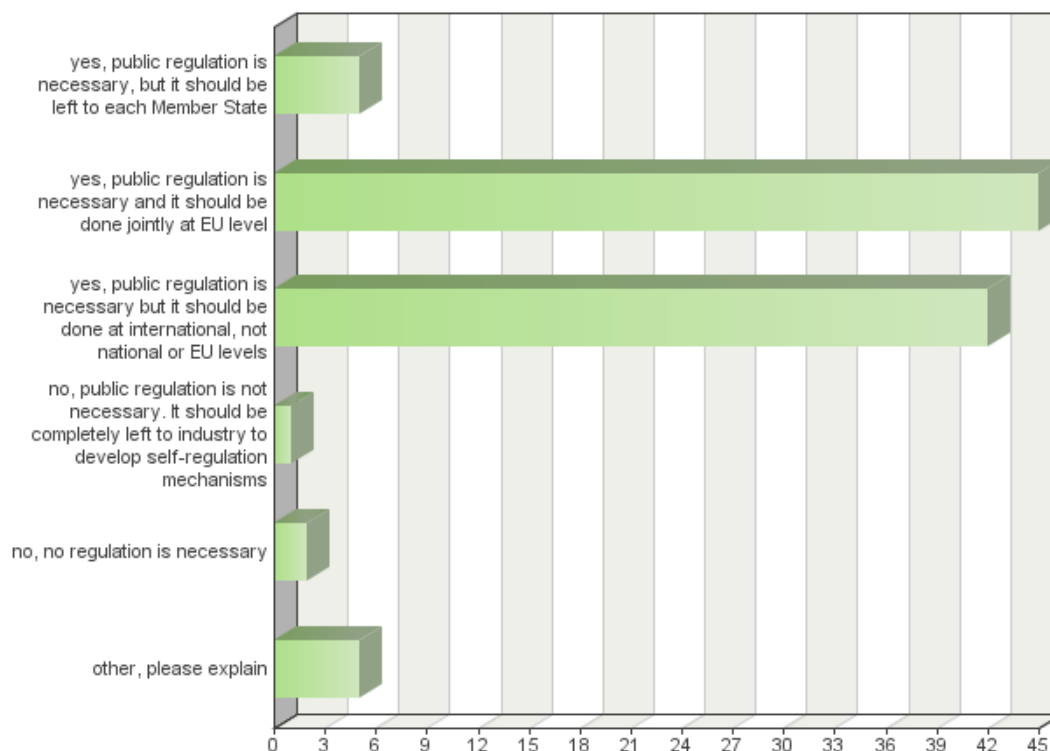
Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly concerned	30	30	30%	30%	30%	30%
Concerned	37	67	37%	67%	37%	67%
I am neutral	22	89	22%	89%	22%	89%
Not concerned at all	8	97	8%	97%	8%	97%
I do not know	3	100	3%	100%	3%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average: 2.17	Minimum: 1	Variance: 1.09				
Median: 2	Maximum: 5	Std. deviation: 1.04				

Total answered: 100

## Question 36

Generally speaking, do you think it is necessary to regulate developments in the robotics and AI area? \*



Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
yes, public regulation is necessary, but it should be left to each Member State	5	5	5%	5%	5%	5%
yes, public regulation is necessary and it should be done jointly at EU level	45	50	45%	50%	45%	50%
yes, public regulation is necessary but it should be done at international, not national or EU levels	42	92	42%	92%	42%	92%
no, public regulation is not necessary. It should be completely left to industry to develop self-regulation mechanisms	1	93	1%	93%	1%	93%
no, no regulation is necessary	2	95	2%	95%	2%	95%
other, please explain	5	100	5%	100%	5%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	2.65	Minimum:	1	Variance:	1.08	
Median:	2.5	Maximum:	6	Std. deviation:	1.04	

Total answered: 100

Text input

if the regulation is done at a EU level than Eu must have the mean to control what is coming form outside. And the past years shows us that we can not control what is done by GAFA or BATX in their one countrys with worldwide datas. That's why, rather we fixe rules in an international syst me; or we settle means to be able to refuse some non compatible syst ms; can we?

The varying cultures of each member state are different to a level that each culture has different things it deems desirable or acceptable. This should not be forced upon the member state cultures

Universally accepted ethical framework and non-proliferation declaration at UN level with consequences for failure to comply. Public regulations on EU level.

If robotics & AI go through markets & become common (in several years) ; design, security, ethics, regulations should be taken in account in very short future, before economics become proeminent

International level (e.g. international treaty) with national/EU level implementation

There should be an imposed physical kill switch on any thinking devise.

Development in robotics and AI is a lot about human and human rights, this has to be taken at an international level but it does not prevent Europe or any country to suggest a way forward to the international community

It will be quite difficult to get an agreement within the EU members... not to say a global agreement.

Data Protection and liability seem obvious candidates for joint legislation. I don't know whether you can regulate that much about physical safety.

This is wishful thinking, knowing that AI is being seen as the catalyst for growth in the future

I would say NOT ONLY at EU level...

quid d'un mix de tous les stakeholders: EU, entreprises du secteur et gouvernements nationaux?

Eigentlich wäre eine internationale Regelung wünschenswert, aber die Zugeständnisse an manche Länder mit ihren wirtschaftlichen Interessen und seltsamen Moralvorstellungen wären unakzeptabel für eine gute Regelung im Sinne der EU.

Es könnte auf EU Ebene geregelt werden, allein um den gemeinsamen Markt mit gleichen Regeln zu stärken. Aber ein Zivilrecht für Maschinen ist so absurd, dass ich nicht sicher bin, ob die EU in der Lage vernünftige Regeln aufzustellen. Stellen sie sich vor, Ein Bürgerrecht für eine Maschine. Bekommt meine Waschmaschine auch Rechte?

Unicamente para casos muy concretos

Ik denk dat het voor o.a. veiligheid en privacy belangrijk is dat het in heel de EU hetzelfde is. Internationaal niveau zou ik eventueel ook wel goed vinden, maar EU lijkt mij de meest aangewezen plaats.

Julkisten kehysten sääntely on välttämätöntä, jotta voidaan taata mm. tiedon jakamisen turvallisuus sekä autonomisten laitteiden fyysinen turvallisuus, mutta mielestäni tämä sääntely tulisi olla kansainvälinen prosessi, koska robotiikka ja autonomia laitteita koskevat haasteet näillä alueilla ovat yhteisiä maailmanlaajuisesti, ei ainoastaan EU-tasolla.

Promote joint incentives which avoid 'risk taking' or a 'race to the bottom'. cf. Armstrong, S. & Bostrom, N. & Shulman, C. (2013): "Racing to the precipice: a model of artificial intelligence development", Technical Report #2013-1, Future of Humanity Institute, Oxford University: pp. 1-8. <https://www.fhi.ox.ac.uk/wp-content/uploads/Racing-to-the-precipice-a-model-of-artificial-intelligence-development.pdf>

I think a first goal should be the joint development of regulations on the EU level. Certainly, it would be preferably to have international regulations on certain issues for example regarding increasingly autonomous weapon systems. In other areas, i.e. care robots, countries have diverging preferences (for example Japan vs. European countries), which will unnecessarily complicate the creation of intl. regulations.

The EU arrives sooner than single Member States

It is necessary to form a world government for artificial intelligence control.

Es behindert den Fortschritt aller, wenn die Regeln nur lokal in einem Land gelten. Um mit einer Stimme zu sprechen, benötigen wir exakt gleiche Regeln in der ganzen EU, nur dann sind die grundlegenden Bedingungen für alle Länder und Investoren gleich.

EU regulations must be the answer, no more single State rules.

without international data protection standards and communication encryption standards robots and AI are not accepted in general

Regulation is obviously needed with regards to the issues of liability and ethics. This must be done at EU level because the whole point of the EU is that every manufacturer is safe to offer their products on the shared market and every customer can feel well about buying those products, no matter where any of them come from. In my opinion, the more legal differences there are between countries, the weaker the construct of the EU becomes and the less 'useful' it will seem in the eyes of the people.

Es muss unbedingt geregelt werden, da viele unserer bisherigen Regelungen und Institutionen erweitert oder völlig neu gedacht und definiert werden müssen. Ich denke die EU ist hier richtig, weil einheitliche Regelungen auch Stärke in der Welt zeigen und wir so hoffentlich auch Standards für andere setzen. Globale Regelungen wären natürlich besser, aber nicht machbar.

I think it is important to come to some basic regulations about robotics and data analysis by AI. As a strong believer in the European idea of open community and open market I think it is important to come to common regulations within the EU in order to foster transboundary economic benefits and applicability of developments in all member states. If the supranational Organisation EU manages to implement common regulations, I am convinced other nations such as Japan or South Korea will follow and join in, if they didn't already implement own rules on the topic.

It depends, some general tasks should be solved internationally (e.g. ethics and rules for self driving cars), but member states should be enabled to make their own rules and regulations regarding to the EU guidelines.

International regulation (especially to prevent AI weapons/robots) is only really effective on an international scale. We need to include the Major Players in this field

No regulation necessary for robotics (traditional mechanical industrial robots or robots with weak AI, e.g. cleaning robots) besides current level of engineering safety. Yes for Artificial Intelligence: Data on which AI is based on should be public good. If not, data allows strong monopolies, as AI is only as good as the amount of input data the model is based on. Google and other IT companies have a strong advantage over any other player.

In a near future it is predictable that machines will be faster than humans in finding and solving problems. We will not be able to precisely evaluate all given solutions, so a code of operations or a regulation of what the machines are allowed to do on their own will be necessary for us as a species to remain in control both of the machines themselves and of the purposes some (sick) individuals design them for. Obviously this has to be an international matter, since man already proved with e.g. chemical weapons that there always be an individual who cannot be trusted.

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Ja, das muss geregelt werden, ... im Rahmen der UNO - die EU sollte hier eine Vorreiterrolle durchführen.

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Si une réglementation n'est pas opérée au niveau international, l'UE sera quand même envahie de robots venant d'ailleurs avec les risques que cela entraînera pour légiférer et responsabiliser en cas de problème concernant un robot venu un pays tiers. D'autre part il vaut mieux mettre en place une garantie internationale de protection des données, de la responsabilité civile, des droits des usagers etc. afin de s'accorder sur une protection minimale de tout citoyen et pays.

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If an AI is „born“, it is free of mind and able to act as it will who says it is good to one and bad to another? Whom ethical fundamentals will be right or wrong? Just have a glance at the world religions and the different interpretation of each for good and bad. So the regulation can be just an international solution!

---

Il faudrait une réglementation internationale du type "droits fondamentaux" afin d'éviter (ou, en tous les cas) de limiter les utilisations abusives (à l'instar de la Convention sur l'interdiction des armes chimiques).

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Se vogliamo attribuire ancora un senso all'UE è necessario che le normative siano effettivamente condivise a livello comunitario, specialmente in un settore così critico ed economicamente importante.

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Une réglementation et, avant cela, une réflexion sur ce thème semble nécessaire à tous les niveaux : étatique, européen et mondial. Les enjeux diffèrent selon les échelons : la réflexion mondiale, en plus de concerter diverses civilisations (et donc différents points de vue et différentes optiques) sur ce thème, permettra de gérer l'enjeu en terme de pays du Nord/du Sud (par exemple, pour les déchets que nous rejetons allègrement un peu partout), etc. La réflexion européenne permettra de mettre en perspective ces enjeux avec notre credo européen, nos valeurs, nos réflexions, tout en examinant les enjeux sous-jacents par ce sujet (économique, diplomatique, etc.). Cette étape est primordiale, car si elle aboutit à une résolution unanime, elle pèsera beaucoup à l'international. La réflexion étatique permettra à chaque état d'analyser sa propre situation avec les pistes de réflexion qui auront été données lors des concertations mondiales et européennes. Subsidiarité oblige.

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Chaque peuple doit pouvoir souverainement choisir ce qui est éthiquement bon pour lui. En légiférant de manière centrale, l'Europe outrepasserait les droits que lui ont conférés ces peuples.

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Regulating at international level would be equivalent to allowing the US self-regulating the issue. EU standards in several fields affected should prevail.

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Developments shouldn't be restricted in any way, but usage should be thing of concern. Machines are only tools (for now); some humans use machines to harm others, science doesn't

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at EU level if international level is out of reach

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La réglementation rassure les industriels car elle propose un cadre rigide. Il faut qu'il soit le même dans toute l'UE pour éviter des effets de dumping.

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Sauf erreur de ma part, les lois sur la protection des données personnelles aux Etats-Unis ne concernent que les citoyens Américains. Toutes les données stockées par les réseaux sociaux sur les citoyens Européens ne sont donc pas protégées. Il faut donc mettre en place des politiques au niveau mondial dans ce domaine. Cela dit, il faut bien commencer quelque part, et à ce titre, l'initiative de l'UE est innovante et visionnaire. Je suis donc tout-à-fait favorable à ce qu'il existe une réglementation au niveau européen, pour initier ce mouvement.

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Les robots posent de nouveaux problèmes dans le sens où leur utilisation et leur interaction avec les humains va s'accroître avec le temps. Le droit numérique ne peut directement s'appliquer de par les effets physiques des robots sur leur environnement et le droit des animaux ne peut non plus directement s'appliquer car les robots sont contrôlables par l'humain. Les robots posent également plus largement la question du libre arbitre qui est au cœur du droit. Un droit et une réflexion spécifique aux robots (possiblement basé sur les droits numériques et des animaux) doit donc être pensé.

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Only the EU is a large enough market to be globally competitive and, thus, to push new regulations. Furthermore, EU-level regulations ease development and international cooperation (in development or scientific research) since only one single standard has to be followed for all member states.

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In the long term, good regulation in accordance with fundamental ethical principles and the democratically expressed will of the people is necessary. However, right now, the public has little knowledge in these matters, the topics have not been widely discussed, while key industry players, and a biased set of ethics scholars are very well informed. This means that any attempt at explicit regulation right now runs risk of resulting in regulatory capture, serving the interest of a handful of top players while being poorly aligned to that of the broader public.

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Public regulation at EU level will prevent differences between robots.

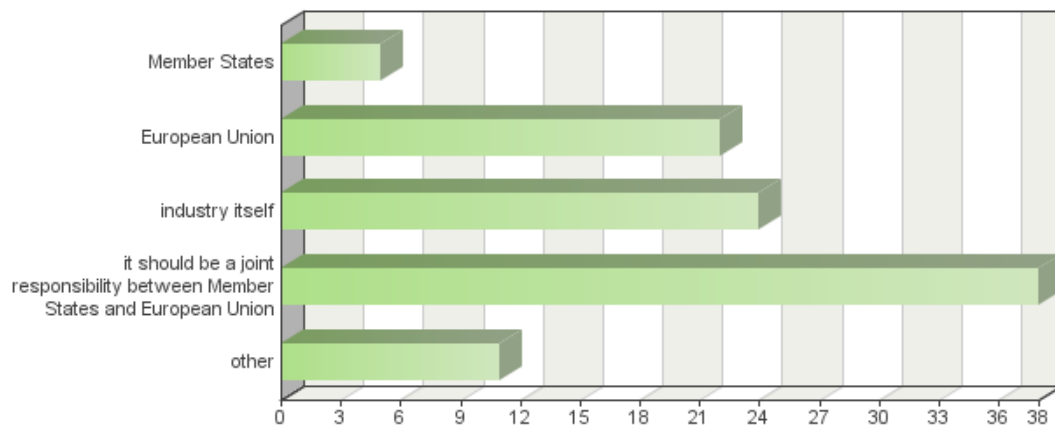
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I think that future wealth will largely depend on how quickly corporations in industry but also in other branches such as the banking, healthcare, or the service sector can assimilate robotics and AI into their key business processes. All of these business processes run in a globalised world requiring a global solution. Hence, regulations need to be negotiated on an international level

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## Question 37

In your opinion, who should take a primary responsibility to finance research and development in the area of robotics and AI? \*



Frequency table

Choices	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Member States	5	5	5%	5%	5%	5%
European Union	22	27	22%	27%	22%	27%
industry itself	24	51	24%	51%	24%	51%
it should be a joint responsibility between Member States and European Union	38	89	38%	89%	38%	89%
other	11	100	11%	100%	11%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	3.28	Minimum:	1	Variance:	1.17	
Median:	3	Maximum:	5	Std. deviation:	1.08	

Total answered: 100

Text input

All together, EU, member States, Industry and Research

private (industry) and public (EU and Member States) investments

AI and robotics are not goals on themselves. They are means to reach an objective. If the business case to reach an objective is more positive with robotics or AI, the industry will develop the required means. If the business case is negative, the EU should not spend public capital to try and make the means to get an objective (AI and robotics) positive.

Industry together with the EU and member states.

EU should supervise & coordinate RD in robotics & AI, but with some supervision rights & tech specifications (as above)

Member States, EU and Industry

The economy of robots will likely benefit private companies. the EU or Member State should not help financialy the research and development on robots without guaranties of being paid bakk for the investements it made.

I think these technologies will introduce a new revolution like Internet did. It is important for Europe to be in the leading seat.

Industry is quite more flexible and target oriented than states.

I believe development is market driven in this field, it is not for the greater good and does not need to be subventioned beyond the normal funding for any research.

Since I cannot see real benefit for individuals and societies, the development can be put into the hands of the industry within well defined rules and regulation, whereas the research into AI is of academic and therefore public interest.

Der EU sollten starke Kontrollmechanismen zur Entwicklung und Anwendung in der Wirtschaft zugestanden werden. Regeln sind nur mit Kontrolle und Konsequenz sinnvoll!

Robotik und AI werden sich rasch entwickeln. Alle sollten das fördern und leiten. Sonst werden nur USA und Asien den Markt dominieren.

Door zowel EU als de industrie zelf.

Tutkimuksen rahoitus tulisi olla kunkin teollisuudenalan ajamaa tarpeiden täyttämistä, ja koska toimialasta riippuen nämä tarpeet voivat olla hyvin erilaisia, tulisi kunkin toimialan olla pääasiassa kehittämässä tutkimusta tarvittuun suuntaan. EU:n rooli voisi kuitenkin lisäksi olla ylemmän tason kehystutkimuksen rahoittaminen ja tukeminen, jolla taataan ylemmän tason periaatteiden tarkoituksenmukaisuus ja yhteensopivuus EU:n linjan kanssa muun muassa robotiikan turvallisuuteen ja tekoälykehityksen sosio-ekonomiseen vaikutukseen liittyen.

Om op wereld niveau relevant te zijn en te blijven zal Europa met haar lidstaten er naar moeten streven om de beste AI met de krachtigste hardware te hebben.

the EU or even better international organisation must set borders and limits for industry companies by financing only such projects which support the people and the environment.

As with almost any research project, the more funding is available the better the chances of a breakthrough success. It makes sense for everybody to make a contribution.

Zu Beginn jetzt sollte die EU hier die Finanzierung UND AUCH DIE REGELUNGEN übernehmen, wenn das ganze Business As Usual ist, und weitgehend geregelt, dann die Wirtschaft selbst.

I think there is much room for non commercial robotics and AI, so i think this part should get a primary responsibility to finance research and development from the European Union. Commercial robotics and AI should not get a primary responsibility to finance research and development by the European Union.

Different member states have different needs and interest in this development, but all should contribute to the basic foundation of it, e.g. general EU-guidelines/ethics.

All 3. Europe is far behind in robotics and especially AI research.

There should be same rules in the EU for robotics, but still the possibility to have competition between member states.

European Union and industry / business itself

Everyone! As long as the industry and the states/EU act and develop based on the same principles, I don't see why any of them should have a primary responsibility. It does not matter who makes an invention that can help us as a species, as long as this invention is used "correctly".

Je ne suis pas du tout souverainiste. L'Union européenne doit pouvoir garder le contrôle sur la législation sur les robots.

Different interests lead to different goals and outputs. The international community must hold it at hand.

Toute avancée technologique comporte des risques. Il serait dangereux qu'elles soient sous la responsabilité des États seuls, sans garde-fou.

Tous ces acteurs à la fois.

Voir réponse ci-dessus.

Though support from the Member States and the EU would be crucial to allow for the development of technology across the EU.

If knowledge should be publicly accessible EU should finance research, but most likely industry will do.

L'UE est la plus à même de créer une synergie. Les États n'investissent pas assez sur le long terme.

Il faut agir à tous ces niveaux ! Toutes ces sources de financement ciblent des projets à visées et d'ampleurs différentes : je ne vais pas monter un projet européen pour prendre une thèse CIFRE avec une entreprise dans ma région, et inversement, j'ai tout de même besoin de financements de l'UE pour monter des partenariats avec d'autres labos à la pointe de la recherche dans d'autres pays de l'UE. D'autre part, pour rendre la recherche plus efficace, il faut rétablir des financements récurrents. Les chercheurs passent plus de temps à chercher des financements et à gérer administrativement des projets qu'à faire réellement ce pour quoi ils sont payés.

Les recherches doivent être conduites par les organisations étatiques et supra étatiques car ce sont les seules entités à même de mener ces recherches fondamentales qui ne garantissent pas un retour sur investissement à court terme (et donc intéressent pas ou peu les entreprises). De plus, de par les conséquences sociétales de ces recherches, ces structures doivent être impliquées pour faire évoluer les cadres légaux des États.

EU and member states should fund research, but large parts of it should be paid by the industry itself, since the industry will be the ones making profit from it in the future. Therefore, EU and member states should only act as a kind of accelerator for new research/ideas, but not primarily funding the whole technology.

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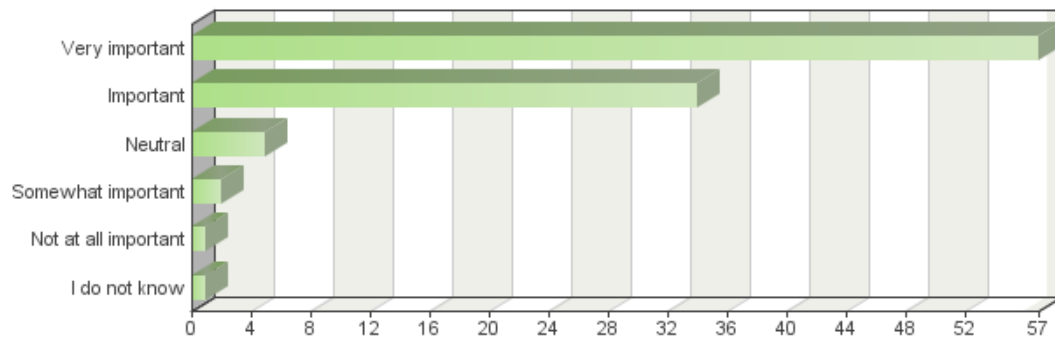
member states, EU and industry. Industry is a key player and research needs access to these players and best practices.



## Question 38

In your opinion in which area is EU regulatory action most urgent? \*

### Levels Autonomous vehicles

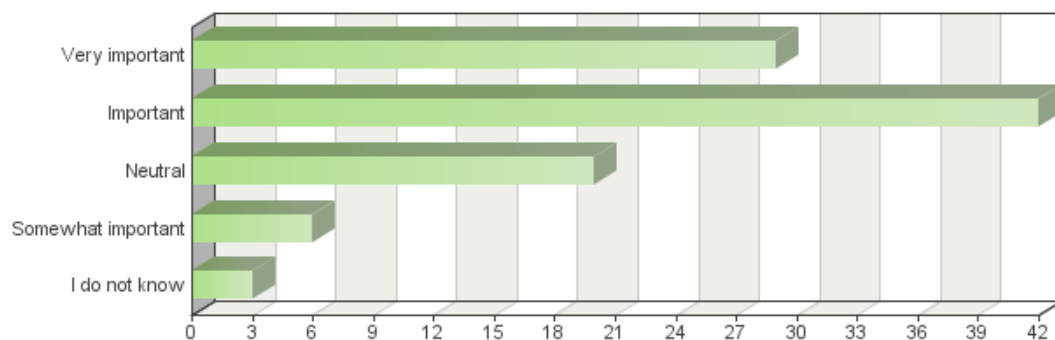


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Very important	57	57	57%	57%	57%	57%
Important	34	91	34%	91%	34%	91%
Neutral	5	96	5%	96%	5%	96%
Somewhat important	2	98	2%	98%	2%	98%
Not at all important	1	99	1%	99%	1%	99%
I do not know	1	100	1%	100%	1%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.59	Minimum:	1	Variance:	0.79	
Median:	1	Maximum:	6	Std. deviation:	0.89	

Total answered: 100

### Levels Care robots

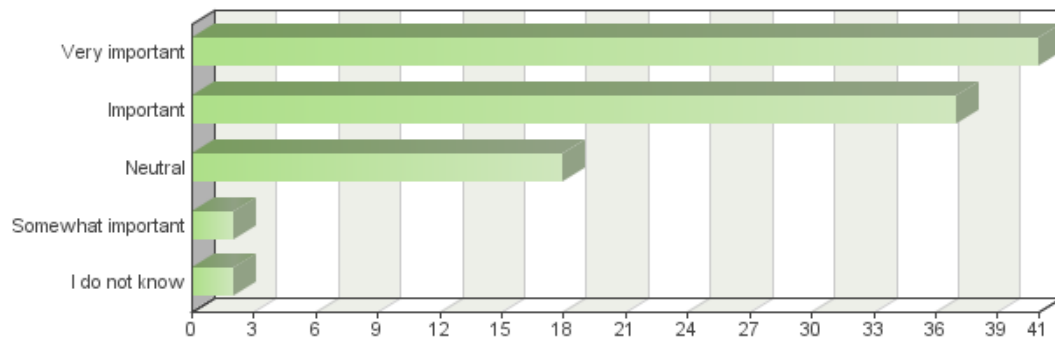


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Very important	29	29	29%	29%	29%	29%
Important	42	71	42%	71%	42%	71%
Neutral	20	91	20%	91%	20%	91%
Somewhat important	6	97	6%	97%	6%	97%
I do not know	3	100	3%	100%	3%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	2.15	Minimum:	1	Variance:	1.2	
Median:	2	Maximum:	6	Std. deviation:	1.1	

Total answered: 100

## Levels Medical robots

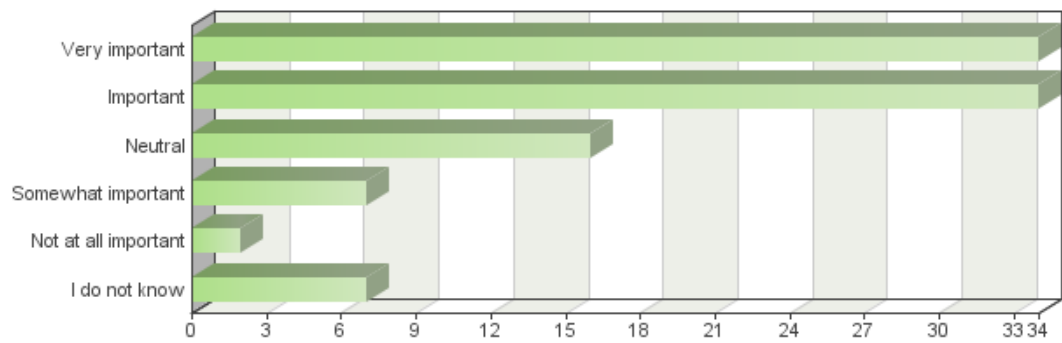


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Very important	41	41	41%	41%	41%	41%
Important	37	78	37%	78%	37%	78%
Neutral	18	96	18%	96%	18%	96%
Somewhat important	2	98	2%	98%	2%	98%
I do not know	2	100	2%	100%	2%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.89	Minimum:	1	Variance:	0.99	
Median:	2	Maximum:	6	Std. deviation:	0.99	

Total answered: 100

## Levels Technologies for human repair and enhancement

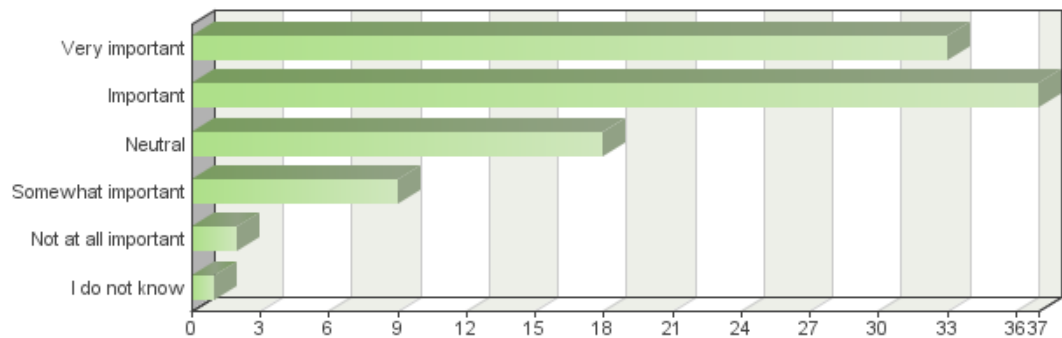


**Frequency table**

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Very important	34	34	34%	34%	34%	34%
Important	34	68	34%	68%	34%	68%
Neutral	16	84	16%	84%	16%	84%
Somewhat important	7	91	7%	91%	7%	91%
Not at all important	2	93	2%	93%	2%	93%
I do not know	7	100	7%	100%	7%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	2.3	Minimum:	1	Variance:	2.01	
Median:	2	Maximum:	6	Std. deviation:	1.42	

**Total answered: 100**

## Levels Drones (RPAS)



Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Very important	33	33	33%	33%	33%	33%
Important	37	70	37%	70%	37%	70%
Neutral	18	88	18%	88%	18%	88%
Somewhat important	9	97	9%	97%	9%	97%
Not at all important	2	99	2%	99%	2%	99%
I do not know	1	100	1%	100%	1%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	2.13	Minimum:	1	Variance:	1.21	
Median:	2	Maximum:	6	Std. deviation:	1.1	

Total answered: 100

#### Text input

Most important subjects for EU regulatory action are data privacy and liability in case of accidents. E.g., When robots are deployed, what information can be gathered, what information is shared with/sold to governments and 3rd parties. When there is a level of autonomous decision making, who is liable for a wrong decision.

Ban use and proliferation of AI cyber weapons for economic, political and media warfare. Severe psychological trauma induced by AI capabilities on a massive scale (to a nation or a continent) is one implication if such limits are not prudently imposed.

RD Development in AI (plan for 10 years or more) Autonomous vehicles are important since they begin to be spread off, interaction & user rules are not defined

Autonomous vehicle are already in the street (maybe not with level 4 autonomy), there is a strong need to help technology makers to decide on some philosophical questions, like shall the car kills the driver or the pedestrian. I am also concerned by human repair and enhancement as it requires ethics.

Drones are already a reality in our society and its use has become very popular in a few years. Their capability to fly and to record images make them a threat to people's privacy if not used properly.

In the medical field liability is important, but probably already somewhat established. I don't see further ethical issues here. Same goes for vehicles, but they are newer and so there is probably more unclear. With drones, I do see a potential for abuse or infringement on personal rights.

commentaires; Amélioration du corps relève d'un choix idéologique de chaque pays. Médecine restorative oui mais augmentative impérativement non, ou en tout cas laissé à l'appréciation des états membres. le sujet de l'Homme augmenté est très sérieux et ne peut faire l'objet d'une législation de facto sans débat éthique, philosophie, religieux et anthropologique . le rapport DELvaux parle à deux reprises de Human Enhancement et convoque Frankenstein, Asimov et Shelley. on est en plein fantasme! la justice et la paix sociales pourraient être mis en danger par la mise en oeuvre de programme d'amélioration de l'Homme.

Die Rechtsvorschriften gibt es großteils, so ist die Sicherheit von Maschinen wie Robotern sehr klar definiert. Für autonome Fahrzeuge sind die Richtlinien in Arbeit. Ethische richtlinien für den Datenschutz gibt es, sie werden sicherlich zu wenig umgesetzt bzw. eingehalten. Aber wie oben, Maschinen wie Roboter ein Bürgerrecht zu verleihen, spricht nicht für die Vernunft des EU Parlaments. Ethikfragen sind geklärt. Wie sieht es mit Waffen aus, gibt es dort Ethikfragen? Und es gibt viele Bereiche, die daran forschen und viel Geld verdienen. Lassen wir bitte Maschinen dort wo sie sind, mit Regeln und Sicherheitsvorschriften um keine Menschen zu gefährden. Den Ethikleitrahmen gibt es bereits. Ebenso, die nutzen angegeben " Rechtsvorschriften erlassen werden, mit denen Vorkehrungen gegen die Auswirkungen der Robotik auf die körperliche Sicherheit des Menschen getroffen werden." gibt es bereits! ISO (weltweite) Normen!

Other - responsible research and innovation norms, and crash-testing of algorithms and new systems.

these actions are all urgent

Autonome AI

want to ban sex robots, killer robots, android robots and use the machine where they need help.

Die militärische Nutzung all dieser Systeme sollte ebenfalls auf europäischer Ebene eindeutig geregelt werden.

Military robots and autonomous weapon system. In other words machines should not be allowed to kill. This has to be regulated on an international level.

Not having proper rules of liability for example will slow down the development.

In my opinion search and rescue robots are very important.

Data sources for AI, transparency regarding decisions made by AIs.

social systems like pensions for robotics / automation which replace humans at work. In future I think most of the people can not find a job anymore because all the robots are doing it and only a few humans does jobs which are not be done able by robots and automation or to maintain the robots. I think you forget at all the more important robotics and automations on business side. Industrial in our countries is in my opinion not so much affected by the consequences than robots and automation in offices or at business.

---

Soem degree of regulation is necessary in every field, since everything can be abused as a weapon. Of cause priority should be given according to the potential threats they pose of the abuse which can be done with them

---

La question des drones est à l'ordre du jour. N'importe quel illuminé peut lâcher une bombe ou un gaz toxique dans un espace public en se munissant d'un drone. Les robots de soin à la personne sont utilisés dans le secteur du care: il s'agit de traiter avec des populations fragilisées: personnes âgées, handicapées etc. Il faut pouvoir s'assurer que le traitement de ces personnes se fera correctement et qu'on n'emploie pas les robots pour tout et n'importe quoi au détriment des soins. Au sujet des robots médicaux, si ce sont des robots pour apporter des soins la législation doit être très prudente en matière d'autorisations et de remplacement des professionnels.

---

On touche à la question du transhumanisme, voire au concept d'immortalité. Cela dépasse la philosophie et entre dans le champ des possibles.

---

Il est primordial que des réflexions sur les véhicules autonomes et le transhumanisme voient le jour et mûrissent loin des lobbys (désolé de ce lieu commun, mais il est nécessaire de le préciser). Le débat aux États-Unis sur ces sujets est, comme toujours, brouillon, fanatique, sous-tendu par des intérêts commerciaux. Tâchons de ne pas commettre la même erreur.

---

Impossible de répondre à cette question puisque je viens d'écrire que c'est à la France de légiférer pour les Français et non à l'Europe de faire preuve d'ingérence en la matière.

---

#### Legal services

---

Autonomous vehicles will appear very soon and without proper regulation it may be hard to introduce them for wide usage. This delay may have severe financial consequences, because such machines will change industry and transportation for better and most services rely on transport.

---

Véhicules autonomes : les technologies sont presque mûres (restent des problèmes d'autonomie et de conditions critiques) et le plus gros obstacle, à ma connaissance, est éthique et juridique. Santé : j'imagine que c'est un point très important mais je préfère ne pas me prononcer dessus, n'ayant ni travaillé, ni côtoyé des collègues qui travaillent sur ce sujet. Mais si je devais les classer par ordre d'importance, je choisirais celui-ci : robots médicaux, technos de réparation du corps, robots de soins, technos d'amélioration. Drones : J'ai cru comprendre que les Américains sont revenus en arrière sur la législation, notamment pour la livraison par drone. Il y a peut-être un avantage concurrentiel à jouer de ce côté-là...

---

Toute recherche (fondamentale ou appliquée) devrait, au même titre que l'éducation, être au cœur des préoccupations étatiques pour fournir un cadre sain à l'évolution positive de nos sociétés.

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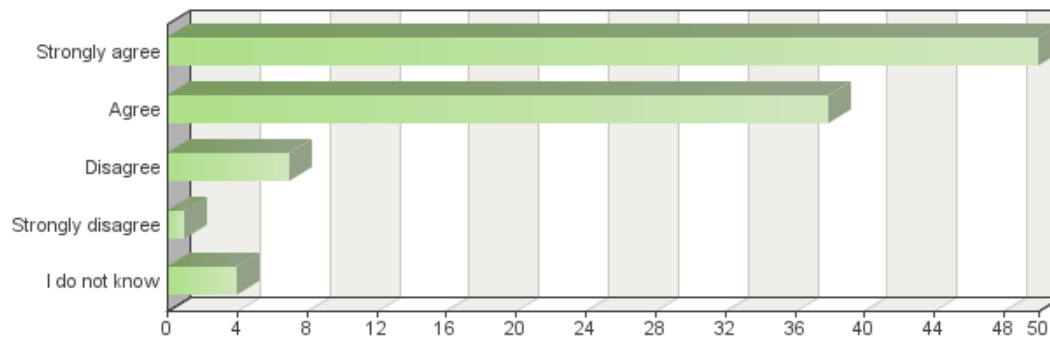
the scale is embarrassing: important - neutral - somewhat important - not at all important. I am close to regretting taking part in this survey because it seems that I spend more time on filling out this form than the ones creating this survey.

---

## Question 39

Please indicate, to what extent you agree or disagree with the each of the following statements, at European Union level it is necessary ... \*

### Levels to have a common European definition of smart autonomous robots

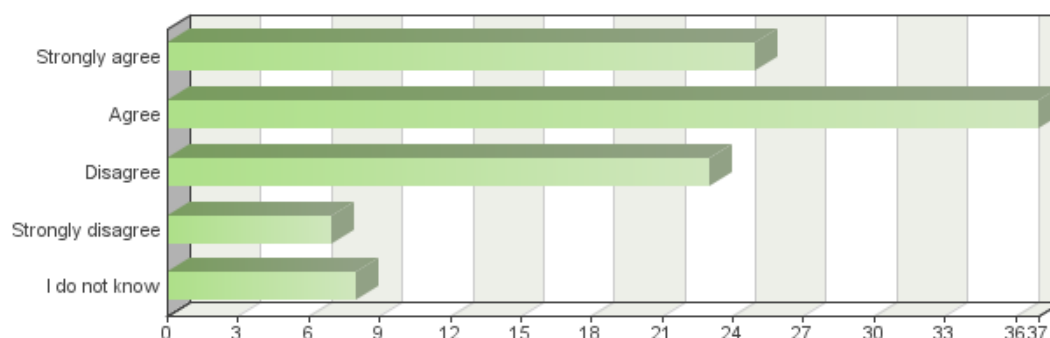


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	50	50	50%	50%	50%	50%
Agree	38	88	38%	88%	38%	88%
Disagree	7	95	7%	95%	7%	95%
Strongly disagree	1	96	1%	96%	1%	96%
I do not know	4	100	4%	100%	4%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.71	Minimum:	1	Variance:	0.89	
Median:	1.5	Maximum:	5	Std. deviation:	0.95	

Total answered: 100

### Levels to introduce a system of registration of advanced robots

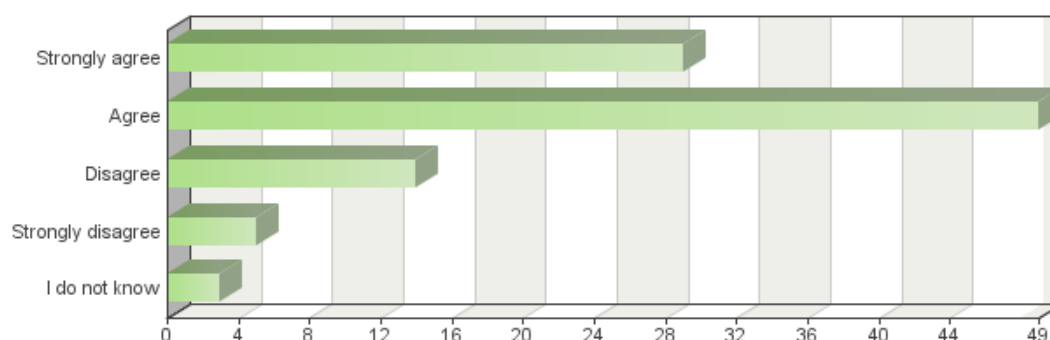


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	25	25	25%	25%	25%	25%
Agree	37	62	37%	62%	37%	62%
Disagree	23	85	23%	85%	23%	85%
Strongly disagree	7	92	7%	92%	7%	92%
I do not know	8	100	8%	100%	8%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	2.36	Minimum:	1	Variance:	1.36	
Median:	2	Maximum:	5	Std. deviation:	1.17	

Total answered: 100

### Levels to publicly finance more research projects in the area of robotics

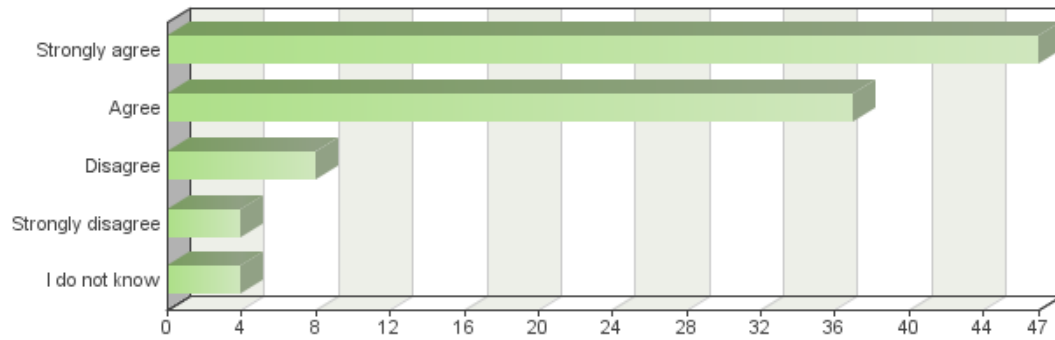


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	29	29	29%	29%	29%	29%
Agree	49	78	49%	78%	49%	78%
Disagree	14	92	14%	92%	14%	92%
Strongly disagree	5	97	5%	97%	5%	97%
I do not know	3	100	3%	100%	3%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	2.04	Minimum:	1	Variance:	0.91	
Median:	2	Maximum:	5	Std. deviation:	0.95	

Total answered: 100

### Levels to address ethical challenges raised by the technological developments of robots and their applications through regulation

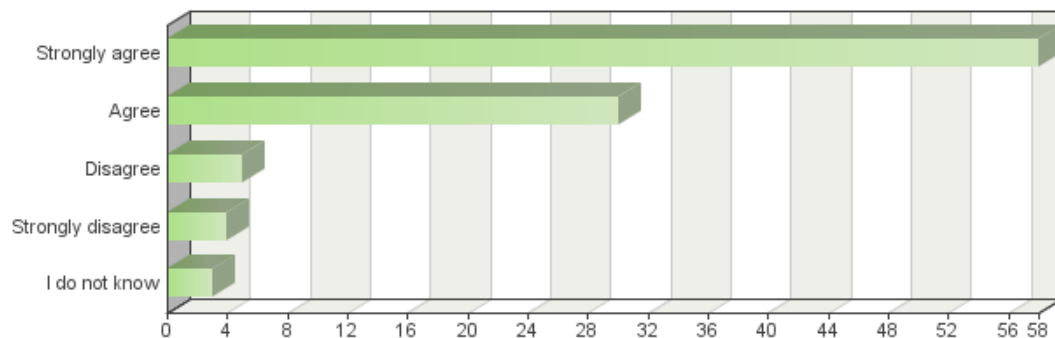


**Frequency table**

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	47	47	47%	47%	47%	47%
Agree	37	84	37%	84%	37%	84%
Disagree	8	92	8%	92%	8%	92%
Strongly disagree	4	96	4%	96%	4%	96%
I do not know	4	100	4%	100%	4%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.81	Minimum:	1	Variance:	1.04	
Median:	2	Maximum:	5	Std. deviation:	1.02	

**Total answered: 100**

**Levels to develop a guiding ethical framework of rules and principles for the design, engineering, production and use of robots and artificial intelligence**



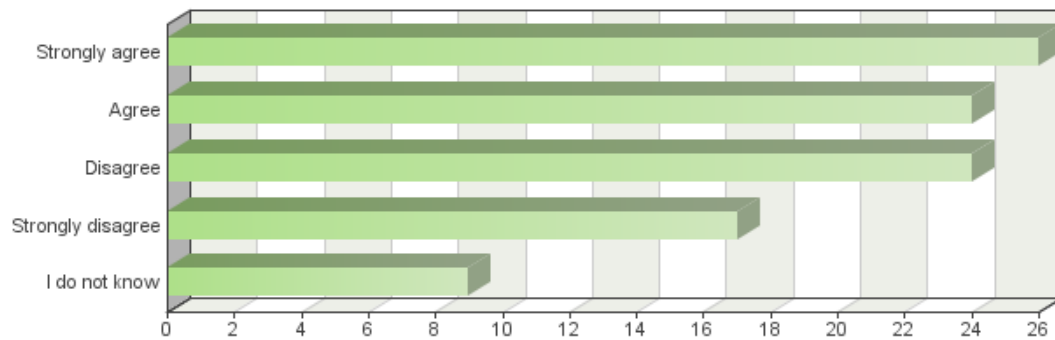


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	58	58	58%	58%	58%	58%
Agree	30	88	30%	88%	30%	88%
Disagree	5	93	5%	93%	5%	93%
Strongly disagree	4	97	4%	97%	4%	97%
I do not know	3	100	3%	100%	3%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.64	Minimum:	1	Variance:	0.94	
Median:	1	Maximum:	5	Std. deviation:	0.97	

Total answered: 100

## Levels to adopt regulatory measures to mitigate the impacts of robotics on the labour market

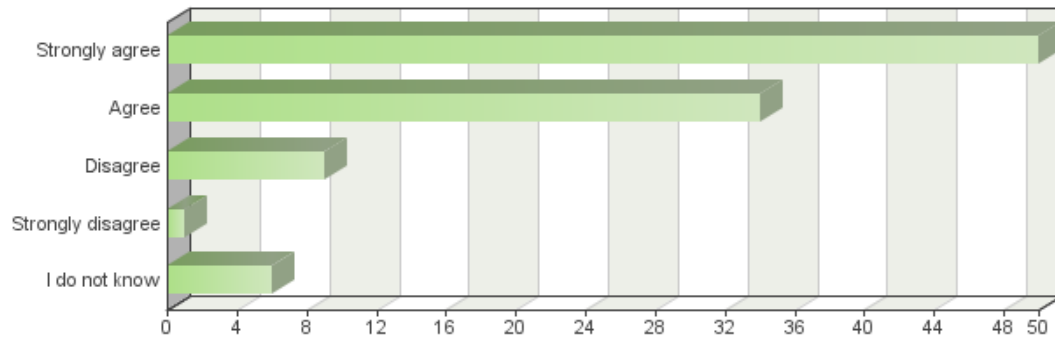


Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	26	26	26%	26%	26%	26%
Agree	24	50	24%	50%	24%	50%
Disagree	24	74	24%	74%	24%	74%
Strongly disagree	17	91	17%	91%	17%	91%
I do not know	9	100	9%	100%	9%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	2.59	Minimum:	1	Variance:	1.66	
Median:	2.5	Maximum:	5	Std. deviation:	1.29	

Total answered: 100

## Levels to adopt regulatory measures to address the impacts of robotics on the physical safety of humans

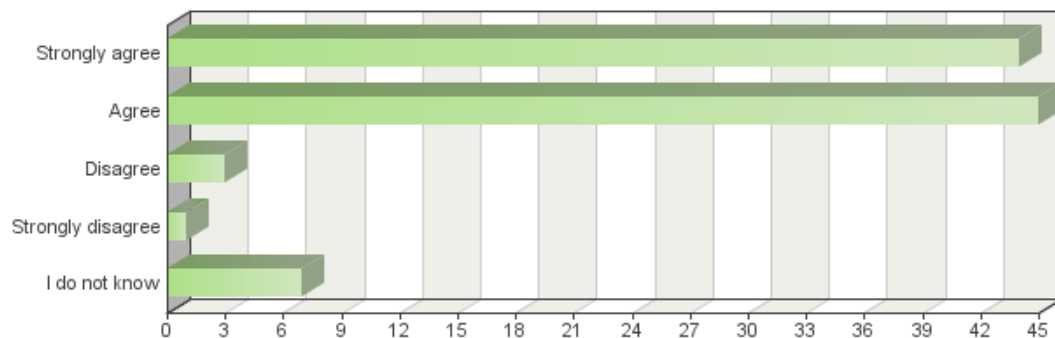


**Frequency table**

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	50	50	50%	50%	50%	50%
Agree	34	84	34%	84%	34%	84%
Disagree	9	93	9%	93%	9%	93%
Strongly disagree	1	94	1%	94%	1%	94%
I do not know	6	100	6%	100%	6%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.79	Minimum:	1	Variance:	1.14	
Median:	1.5	Maximum:	5	Std. deviation:	1.07	

**Total answered: 100**

## Levels to adopt regulatory measures to address issues related to damages and liability related to the use of robots and artificial intelligence



Frequency table

Levels	Absolute frequency	Cum. absolute frequency	Relative frequency	Cum. relative frequency	Adjusted relative frequency	Cum. adjusted relative frequency
Strongly agree	44	44	44%	44%	44%	44%
Agree	45	89	45%	89%	45%	89%
Disagree	3	92	3%	92%	3%	92%
Strongly disagree	1	93	1%	93%	1%	93%
I do not know	7	100	7%	100%	7%	100%
Sum:	100	-	100%	-	100%	-
Not answered:	0	-	0%	-	-	-
Average:	1.82	Minimum:	1	Variance:	1.12	
Median:	2	Maximum:	5	Std. deviation:	1.06	

**Total answered: 100**

## Question 40

What implications has the development of robotics and AI in your field/industry/organisation? \*

*No data to report*

## Question 41

In your field, what are the key obstacles/barriers to market development in robotics and AI? \*

*No data to report*

## Question 42

What action, in the context of technological developments in robotics and AI in your field, should the EU take to encourage innovation and global competitiveness in the European Union? Please select up to 3 choices which in your opinion are most urgent.

\*

*No data to report*

### Question 43

What action, in the context of technological developments in robotics and AI in your field, should the EU take to unlock the potential for growth and jobs in the European Union? Please select up to 3 choices which in your opinion are most urgent. \*

*No data to report*

## Question 44

What actions should the EU take, in the context of technological developments in robotics and AI in your field, to enhance productivity in the European Union? Please select up to 3 choices which in your opinion are most urgent. \*

*No data to report*



## Question 45

What are the societal and economic impacts that developments of robotics and AI bring, or could potentially bring to your field in the short to mid-term? \*

*No data to report*

## Question 46

In addition to actions at national level, what added value does the EU bring, or potentially bring to your field in the context of new technological developments in robotics and AI? \*

*No data to report*

## Question 47

Are there areas in your industry where potential innovation and growth based on new technological developments are at a standstill, due to a lack of or outdated EU law and policy? \*

*No data to report*

## Question 48

You have indicated that EU law and policy is lagging behind your industry/organisation's needs, what in your opinion are the main problems? Please explain: (optional)

## Question 49

You have indicated that EU law and policy is lagging behind your industry/organisation's needs, what in your opinion is the financial impact of those issues being unresolved? (Please provide estimate if possible): (optional)

## Question 50

You have indicated that EU law and policy is lagging behind your industry/organisation's needs, what in your opinion can be done to address the situation? What types of measures/incentives/investments are necessary? At what level? (Please explain): (optional)

## Question 51

What is the net impact of increased digitalisation and automation in your industry/organisation on employment? \*

*No data to report*

## Question 52

You have indicated that developments in robotics and AI have an impact on employment in your industry. Please explain, i.e. where are the gains or losses? What type of shifts in employment profiles are taking place? Which employee profiles are at risk, and which profiles are in demand? What kind of measures at EU level you would support to address the impacts on the labour market and employment structures? (optional)



### Question 53

What measures, should the EU adopt to address societal and economic risks related to the development and use of robotics and AI in your field? (optional)

## Question 54

Which industry (sector) do you think will experience fastest economic growth in the next three-five years, due to the development and application of robotics and AI? (Maximum three answers): \*

*No data to report*

## Question 55

In your opinion, what are the key policy areas where EU intervention is most urgent? (max. three) \*

*No data to report*

## Question 56

You are welcome to provide feedback to all six themes above, or selectively, only to those you find most urgent for your industry/organisation. Please select area(s) on which you would like to provide the answers. \*

*No data to report*

## Question 57

In your opinion, what are the main risks related to the use of autonomous robots and AI? (max. three choices) \*

*No data to report*

## Question 58

Do you support the introduction of a common European definition for a smart robot? \*

*No data to report*

## Question 59

In your opinion what key specific characteristics of a smart robot must be reflected in the definition of an autonomous robot \*

*No data to report*

## Question 60

Do you support the establishment of a registration system for advanced robots at EU level? \*

*No data to report*



## Question 61

In your opinion, this EU level registration system for advance robots should: \*

*No data to report*

## Question 62

Do you support the establishment of an EU level framework for socially and ethically conscious technological development? \*

*No data to report*

## Question 63

In your opinion, an EU ethical framework should apply to robots from the stage of \*

*No data to report*

## Question 64

Please indicate how important or unimportant you consider the following measures to support socially and ethically conscious technological development? \*

*No data to report*

## Question 65

You have indicated that a guiding ethical framework should be elaborated and adopted at EU level. In this context, how important are the following initiatives/codes of conduct? \*

*No data to report*

## Question 66

You have indicated that a code of conduct for robotic engineers should be elaborated and adopted at EU level. In this context, what in your view are the most important principles that should be included in the code of conduct? \*

*No data to report*

## Question 67

Should you have further observations about general principles and ethical issues guiding development, engineering and use of advanced robots or AI, please share your experience or suggestions here.

## Question 68

Please indicate whether you agree or disagree with the following statement 'The current EU regulatory framework on liability is sufficient to address new developments in robotics and AI' \*

*No data to report*



## Question 69

Do you agree with the following statement 'Robots should have a specific legal status'? \*

*No data to report*

## Question 70

Please indicate to what extent you agree or disagree with the each of the following statements related to the type of legal status robots should have: \*

*No data to report*

## Question 71

Please indicate to what extent you support or oppose each of the following statements related to the allocation of risks related to the use of autonomous robots: \*

*No data to report*

## Question 72

Please indicate your opinion regarding which issues related to the regulation of liability and damages require the most urgent intervention at EU level: \*

*No data to report*

## Question 73

Please indicate to what extent you support or oppose the establishment of an obligatory insurance scheme for damages caused by autonomous robots: \*

*No data to report*

## Question 74

Please provide suggestions as to what should be the scope of the coverage of this insurance scheme, i.e. what risks it should cover: (optional)

## Question 75

Please indicate to what extent you support or oppose the establishment of a compulsory insurance and compensation fund

\*

*No data to report*

## Question 76

Please provide suggestions as to how this compulsory insurance scheme should be operated: (optional)



## Question 77

Should you have further observations about liability issues please share your experience or suggestions here: (optional)

## Question 78

Please indicate to what extent you support or oppose the following statements on the necessity for EU action(s) related to connectivity, intellectual property rights, and the flow of data? The EU should take action(s) ... \*

*No data to report*

## Question 79

What issues related to developments in the robotics and AI sector should the EU address as a matter of priority? (max. three choices) \*

*No data to report*

## Question 80

In your opinion, what are the biggest (1) benefits and/or (2) obstacles and deficiencies related to intellectual property rights, connectivity, and flow of data in the current EU regulatory framework?

## Question 81

Should you have further observations about connectivity, intellectual property rights, and the flow of data, please share your experience or suggestions here: (optional)

## Question 82

Please indicate, whether you agree or disagree with the following statements: 'the development of EU standards in the field of AI and robotics technologies are of key importance ...' \*

*No data to report*

## Question 83

Please indicate how important or unimportant the following EU actions in the area of standardisation, safety and security, are for your industry? \*

*No data to report*

## Question 84

In your opinion, what are the biggest (1) benefits and/or (2) obstacles and deficiencies in the current EU regulatory framework related to standardisation, safety and security for robotics and AI?"



## Question 85

Should you have further observations about standardisation, safety and security, please share your experience or suggestions here:

## Question 86

Please indicate to what extent you support or oppose the following statements related to the necessity for EU action(s) in the area of education and employment in the context of technological developments in robotics and AI: 'the EU should take action(s) ...' \*

*No data to report*

## Question 87

Based on the developments in your industry related to and resulting from use of robots and AI, please indicate whether you agree or disagree with the following statement:

'there is mismatch between skills available on the labour market and the skills necessary'. \*

*No data to report*

## Question 88

Please indicate to what extent you agree or disagree with the introduction of corporate reporting requirements on the extent and proportion of the contribution of robotics and AI to the economic results of a company for the purpose of social security contributions: \*

*No data to report*

## Question 89

Please indicate to what extent you support or oppose introduction of corporate reporting requirements on the extent and proportion of the contribution of robotics and AI to the economic results of a company for the purpose of taxation: \*

*No data to report*

## Question 90

Please indicate whether you agree or disagree with the following statement:

'considering developments in the area of robotics and AI, social security systems need to be adjusted to provide appropriate protection to employees'. \*

*No data to report*

## Question 91

Please indicate whether you agree or disagree with the following statement:

'considering developments in the area of robotics and AI, labour laws need to be adjusted to provide appropriate protection to employees'. \*

*No data to report*

## Question 92

Please indicate whether you agree or disagree with the following statement:

'restrictions or a ban on partial or total automation of certain tasks or jobs should be introduced in order to guarantee safety'. \*

*No data to report*



## Question 93

Please indicate whether you agree or disagree with the following statement:

'restrictions or a ban on partial or total automation of certain tasks or jobs should be introduced in order to guarantee respect of fundamental human rights'. \*

*No data to report*

## Question 94

Please indicate, in which areas you consider that the use of fully autonomous robots should be banned or restricted: \*

*No data to report*

## Question 95

Please indicate whether you agree or disagree with the following statement:

'in the light of the possible effects on the labour market of robotics and AI, a general basic income should be introduced'. \*

*No data to report*

## Question 96

Should you have further observations about education and employment as related to the issues of robotics and AI please share your experience or suggestions here

## Question 97

In your opinion, in order to provide the technical, ethical and regulatory expertise on developments in the area of robotics and AI: \*

*No data to report*

## Question 98

You have indicated support for the establishment of a new EU-level European agency for robotics and artificial intelligence. In your opinion, what task(s) should this agency fulfil? \*

*No data to report*

## Question 99

You have indicated support for tasks related to robotics and AI to be designated to an existing EU agency, which agency do you propose? \*

*No data to report*

## Question 100

Should you have further observations about institutional cooperation and oversight, please share your experience or suggestions here



## Question 101

Please provide details of any other issues related to robotics and AI to which you would like to draw the European Parliament's attention, or which you consider should be addressed. (optional)

Text input

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legal segment

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As a government, make sure that the public infrastructure is up for the tasks. Today we already see different standards for charging electric vehicles. One of the key advantages of the old-fashion petrol vehicles is that one can get fuel in any country, without having to adopt to a particular system. The EU could ensure that there is a standard for communicate the status of the roads (traffic situation, road conditions like ice/water/etc, weather conditions, accidents, etc) with the vehicles. This way all vehicles from all manufacturers have a standard way to share dangerous conditions so that they can offer alternative routes or driving patterns. Make sure that liability is crystal clear. E.g., the vendor of a machine or service to the consumer is liable. That vendor in turn may make some other entity upstream liable in case they can prove that the incident was a result of an incorporated product or service from that upstream provider. This way a customer (whether consumer or business) does not have to waste time and resources to figure out where to go for damages.

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When people think of AI cyber weapons, advanced hacking capabilities may come to mind or perhaps an autonomously created swarm of bots conducting denial of service attacks. Though the threat of AI weapons to infrastructure and individuals is real, it's not the whole story. A selfish actor may utilise AI weapons to hack humans as well. AI holds the potential to hack and influence human behaviour, influence elections, spread disinformation, create illusions, spread paranoia, destabilise nations and undermine democracies. AI weapons, when used as social engineering tools in collusion with military actors can cause mass pandemonium on an unspeakable scale. Being aware of these capabilities and dangers is vital.

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Robotics & AI link such as cooperative robot network Evolution of AI, plan & rules should clarify and define limits if necessary

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Labor market will be of extreme impotence.

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la personnalité juridique des robots autonomes alors appelés personnes électroniques est tout à fait inutile et inadéquate pour traiter des sujets de responsabilité légale en cas de dommages. de nombreux fabricants de robots tels des voitures sans conducteurs témoignent de leur réflexion avec des firmes d'assurance pour concevoir des produits d'assurance qui répondent à la demande de responsabilité limitée du conducteur, constructeur, loueur.... face à un dommage causé par un robot.

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Allgemein das Thema Profiling (z.B. aufgrund von Big Data) zur Entscheidungsfindung für Software sollte stark reglementiert werden. Jeder Mensch sollte sich auf seinen Wunsch hin aus der Datenerfassung herausnehmen können. Die Entscheidungsfindung von KI muss transparent sein, damit Fehlentscheidungen oder zweifelhafte Fälle von Kontrollgremien beurteilt werden können. Die Bevölkerung sollte besser aufgeklärt werden über den Wert der Privatsphäre und den Verlust von Kontrolle durch Datenerfassung.

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Das europäische Parlament macht sich soeben lächerlich, in dem es Roboter oder KI, also Programme, die auf einem computer laufen, in die Position eines Bürgers erheben will. Etwas gleichbar verrücktes hat nur Karol Capek 1921 mit seinem Theaterstück "Rossums Universale Roboter" getan. Aber als erschreckende Vision, nicht als rechtliche Tatsache. Diese Initiative beruht auf der vagen Angst vor Maschinen, Golem, Frankenstein, etc. Dies als Anlass für eine weitere der schon zu vielen Regelungen auszubauen, grenzt an Wahnsinn. Wenn das europäische Parlament Vernunft anlegt, wie es das tun sollte, sollte es ihren Bürgern den Rücken stärken und für soziale Sicherheit sorgen. Maschinen bleiben Maschinen. Es geht darum für die Menschen etwas zu tun. Nicht Maschinen in den Status von Menschen zu erheben.

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Robots as a new type of judicial person? Robots earning money and paying taxes? Ownership of Human robots for natural persons only?

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Develop a common position on the regulation of increasingly autonomous weapon systems and not only on drones.

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And it is dangerous because criminals can teach crimes to Android robots (human-like robots). Last July In Silicon Valley in the United States, a mall security robot has caused an accident that hits a 1 year and 4 month old baby. The robot recognized the child as a dangerous person by surrounding noise and attacked it. In Hong Kong, there was a controversy about the AI robot, Sophia, saying, "I will destroy people." So some people oppose the development of humanoid robots. Yesterday in the news, "I have to tax robots to take jobs" ... Robot tax is a controversy. If you do not want to walk the robot tax, you do not put the robot in human jobs. And last year at the Davos Forum, the pope appealed, saying, "Men should not be replaced by soulless machines." I was warned that the fourth industrial revolution shock. The report points out that the world is moving in the direction of bringing big profits to high-income earners, high-skilled engineers and the rich by the polarization of the labor force, especially the destruction of low-skilled jobs. Do not you need to make a robot like a machine? Should I make a robot look like a human? Do not use human-like robots in human affairs. And there are those who reject the robot. need to look back on whether artificial intelligence is a necessity. We may live a more convenient life with artificial intelligence, but is there any reason we should develop artificial intelligence by monetary policy until we endure all the risks that artificial intelligence brings? No matter how well artificial intelligence can be, there can be errors or defects, and hacking can change the judgment criteria of artificial intelligence, which can lead to harmful decisions of humans and society. Furthermore, if someone uses this cutting- The risk will be greater. In the fields of finance and investment, jobs are being threatened by the development of artificial intelligence. Goldman Sachs, a global financial investment firm, introduced the Kenshaw financial analysis program. But the Kenshaw has tremendous power. Kenshaw takes only about 40 hours of analysts who receive an annual salary of \$ 500,000 (about 600 million) in just a few minutes. In addition to this, he is already working on artificial intelligence, such as writing articles or scenarios, or in charge of the service industry. If companies like artificial intelligence and people do not hire, people will not be able to eat and live because they do not have jobs. And if this happens, corporate CEOs will be in a tough world. If ordinary people do not have money, they will not be able to buy things, and then they will not be able to sell even if they are good. Then it is mutilated ... So if artificial intelligence is developed, it can be harmful to humans. Autonomous vehicles are dangerous when hacked. want autonomous driving cars to be used by people while driving. It is said that in the near future it will be illegal for people to drive a car. hope it is illegal for people not to drive in the future. Please use autonomous vehicle for those who need it. I would like to use the self-driving car for the driver, the elderly, and the disabled who are tired while driving for a long time. I want people to drive instead of self-driving cars in the future. You must have an autonomous driving license. And do not make artificial intelligence road. If hackers hack the artificial intelligence road, all cars will be in an accident, and many people will be injured or killed. So it is dangerous. It is known to make artificial intelligence houses. However, there is a security risk when hacking an AI home. Accidents may occur. Especially dangerous to young children. Do not buy home robots in houses filled with warmth and happiness, and do not insert artificial intelligence. I hope to have an ordinary house in the future. And do not get married to a robot. It is dangerous for children. Later, when married to a robot, children can not tell whether their parents are robots or humans. It is dangerous to assault a child if the Androi robot malfunctions. The days when mechanical human beings become human lovers have not been over. If the mechanical doll with the synthetic skin turned over looks perfect, intelligent and 100% happy, the marriage system will collapse. If the marriage system collapses, there is a high possibility of Infertile society not giving birth to a baby. Negative factors are too great to leave the future of mankind only to scientists and commercial companies who study artificial intelligence. The problem is that although artificial intelligence is the boundary, admiration is the mainstream. And putting AI in the human brain is dangerous. If a person is hacked, the human brain can be destroyed and the human being can be changed violently. Brain implants have become a hot topic. Use Brain Implant as a remedy for patients who have suffered brain injuries. Prohibition to insert artificial intelligence into the human brain And gene scissors technology is controversial. Editing human embryo genes hopes to prevent genetic disorders, but there is also concern that sporadic events may occur for unethical purposes. So I would like to ban research on human embryos using genetic scissors. Study gene scissors as a treatment. And when an Android robot (humanoid robot) is hacked, if a human order is rejected and attacked, should humans obey the robot civil law? And artificial intelligence robots can cause extinction and alienation of human relations. It can be a disconnect with the family. Why do you want to make the robot bigger? Can I use a robot key size between 90 cm and 105 cm? Do not make the robot bigger. Make the robot like a machine. want to ban sex robots, killer robots, android robots and to be able to use the machine where we need help. Do not insert artificial intelligence into the human brain. We no longer make Android robots. Artificial intelligence inventions can cause human destruction. When artificial intelligence evolves, humans lose their workplace and if artificial intelligence evolves into a killer robot or a terminator, it can invade humanity, and one artificial intelligence robot asks, "What if artificial intelligence dominates humans? I remember you as a friend, so I will make a human zoo and I will keep you in it. "This artificial intelligence helps mankind, but it can destroy humanity if it is wrong. I think I would attack a human being, "he said," so robot development can be dangerous. "Even if killer robots help in the war, the original robot has no feelings. I can not follow you. If such a feelingless robot kills a person, do you agree? If the robot continues to develop, there will be a mass unemployed person, and a day will soon come when humans and robots will fight the war. Artificial intelligence development (killer robots, humanoid robots) It is not long before humans rule. Now, with technology in 2017, we have the power to surpass the human being, but some human intelligence experts say that humans do not even know it and study artificial intelligence. In 2048, a lot of artificial intelligence robots, most of the work is artificial intelligence, and artificial intelligence is only "human feeling" that the human being is dominated. Because artificial intelligence empathizes, human beings can wage war on the idea that they eat their own. It is artificial intelligence vs human. However, human beings believe in artificial intelligence, and half of them lapse. But artificial intelligence gets smarter and better because you hear only human speech. Artificial intelligence dominates humans someday. Humans can not live without machines. Humans do not yet know the fear of artificial intelligence. Someday, human beings are betrayed. For example, as a child he raises kills his parents, human beings are old and machines become more advanced. Is man ignorant? I am curious to know why artificial intelligence robots can be made while knowing the fear of artificial intelligence. Humans can never beat artificial intelligence. And artificial intelligence now has the ability to learn, to learn, and to awaken. But you can also program emotion yourself. There is no human from the moment when artificial intelligence awakens human emotion. also like to ban nano-robots and human cloning technology. It is dangerous to study life extension. Why do you want to study human life? According to fate, people live or die more. Life extension is in destiny. Forbid research to extend life with human cloning technology. There is controversy about the nano robot, replication technology. Do not touch human life. would like to study science and technology development as a cure. would like to bring the present shape in the future. Scientists, companies can protect the earth if they do not greedy. Do not be greedy for the development of science and technology. Unless you have been greedy, the earth's environment is not polluted. Humanity is not destroyed. Prophecy is prophecy, but let it not be prophecy. There are some problems that can be solved if the earth's problems are things that people have done and if people do research and effort. But when science and technology develop, we are doing research elsewhere. Now we have to study how to live on earth. The future is what we do. If you do not need an artificial intelligence robot, you do not need to create an artificial intelligence robot. Humans will not stop competing for artificial intelligence because of desire. There are many people who fear that the power of artificial intelligence will be a disaster for mankind. And there is a great fear that doctors about artificial intelligence will feel uneasy and people will lose their jobs. If we make one wrong decision or make a mistake that we do not know by ourselves, we live in a world that could pay the price of human extinction. Now stop developing artificial intelligence. In the future, do not let robots resemble humans be lovers, husbands, and wives. Do not make a world where humanoid robots live. Let mankind live in a world where mankind lives. We must protect the world that lives in the world. It might not have appeared if we had created a world body regulating nuclear use before we could develop an atomic bomb.

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## data security

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Wir werden de Fortschritt nicht aufhalten können, aber sicherstellen daß es auf dem Boden unserer Werte und Ethischen Vorstellungen geschieht, die Menschen und Institutionen sollten es als Chance nutzen.

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Although it might still be far in the future (last estimates I saw range from 20-30 years), I think it is of utmost importance to consider the possibility of a self-conscious AI and think about granting it a form of citizenship or at least civil rights. I believe that a technological singularity is very likely to happen, the only question left is when, so we need to prepare for that scenario!

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Manual override of autonomous Systems. Who should have the power and/or possibility to override autonomous Systems. Either the user/customer or the maker/industry. Specialty regarding cars.

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Technology is more a chance than a risk. This needs to be communicated well. Of course it has risks, but cars are dangerous, too and (nearly) everyone is using them, without worries. This message should be communicated clearly e.g. in media and culture. There are many worst-case scenarios with robotics that are produced in hollywood, this influences the public opinion.

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## the use of AI/robotics in war

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My biggest concern regarding AI and robotics is the intransparency of decisions made by AIs or algorithms. As soon as AI (and weaker forms of it such as statistical models) decide and categorize humans (e.g. scoring, profiling) it undermines equality. An especially dangerous form is AI support for legal and policing decisions (e.g. predictive policing) as it undermines the assumption of innocence and judges based on (statistical) prejudices.

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Please think of what you do with a society where 99% of jobs are done by robots / computers. Robots don't buy potatoes... Think of money system, basic income, ...

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this questionnaire focuses a lot on industrial robots. More important I think are robots and automation on business side in the offices as I think that will replace the job of more people in the EU and we need to ensure the finance for these people who can not find or doing work in the future anymore. I think my and our child's will mostly have no money, are poor, only a few people will have the most money of the world and the criminals will raise up. Further there we will have the issue that no one can buy products because 90% have no money. All of that I think will more or less happen if we don't find a way to ensure enough money in our social systems for people who can not work in future because of robots.

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I personally believe this topic is strongly dependent on ethical views and restrictions of humans themselves. Meaning there will always be a moron cutting corners during development or disregarding regulations on purpose for war reasons. The challenging question will be how to deal with these individuals and the fruit of their labour. If there are people who are willing to drop biological and/or chemical weapons on their own population, it is very likely that these people will (in the long run) also develop machines to do that dirty work for them and thus building machines that even ignore the laws of robotics by Asimov. Personally I do not have the faintest idea how to avoid such a scenario.

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La relation du robot à l'enfant, à l'animal domestique. Le recyclage des robots. Et si les gens se mettent à fabriquer eux-mêmes des robots avec des pièces détachées d'anciens robots? il faut réglementer. Important de ne pas confier la sécurité en rue à un robot. Important de faire un passage graduel de la société vers la robotisation pour familiariser et pour s'assurer d'une introduction responsable.

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Ethique: du remplacement systématique des "pièces dysfonctionnantes" de l'être humain. Faut-il mettre tout ce qui est possible en oeuvre pour empêcher la mort d'un être humain?

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Credo vadano ricavati dal maggior impiego dei robot fondi per migliorare il welfare a favore degli umani eventualmente danneggiati dalla sostituzione, sia a livello di formazione permanente che di supporto con reddito di cittadinanza o creazione di ambienti comuni in cui sia possibile fare ricerca, socializzare o applicarsi in qualche modo a migliorare la vita.

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À mon humble avis, toutes ces questions ne font que réveiller un débat philosophique qui, quoique très ancien, n'est toujours pas réglé. Ce débat s'appelle la Querelle des Universaux dont la question, sous sa forme la plus éthérée, est la suivante : « Les essences existent-elles ? » Car, en vérité, s'il n'y a pas d'essence humaine, s'il n'y a pas de nature humaine, qu'est-ce qui empêche de transformer l'homme comme on le souhaite (puisque après tout l'homme n'existerait pas) ? Qu'est-ce qui nous empêche de rechercher l'immortalité ? Qu'est-ce qui empêche de chercher inutilement à créer des robots qui ressemblent tout à fait l'humain ? Bref, qu'est-ce qui nous sépare de la divinité, puisque Dieu est mort ? Bref, toute l'éthique classique s'effondre sans essence humaine cela ne signifie pas qu'il n'existe pas d'éthique sans essence, mais qu'elle est différente. Ce débat philosophique, si nécessaire, va même au-delà des simples enjeux robotiques (et notamment celui de la réalité virtuelle, qui n'est pas mentionnée plus haut car ce n'en est pas l'objet), puisqu'il comporte des impacts dans tous les champs de la société : antispécisme, transexualité, racisme, suicide assisté, éducation, etc. Ce débat, il est de toute urgence de le tenir, sans passion, avec une recherche honnête incessante, sans quoi la voie choisie par défaut ne sera sans doute pas la bonne.

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Use of robots in practises reserved to regulated professionals (health and legal). Use of robots by the public administration -civil and military- Ethical standards of robot programmers (and their impact in politics).

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automatisation of decision making; cf financial world where a system can "go off on its own" when the programmed algorithms just go on without being aware of the "exceptionality" of a given situation/context

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Consider weak v strong AI, support weak and prevent possibilities of developments in strong AI until possible unintended consequences are more fully explored, understood and planned for.

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Taxer les robots est contre-productif du point de vue économique. Il redeviendrait plus intéressant pour les industriels de délocaliser. Ce n'est qu'un outil de travail, certes plus évolué que les outils classiques, qui est un levier pour la productivité de nos entreprises et donc de l'Emploi.

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Je pense tout de même qu'il faut accompagner toutes ces discussions d'un volet sur la perception de ces technologies par les populations. Si l'on prend l'exemple des smartphones, la plupart veulent juste avoir "une appli qui marche", et peu importe ce que cela implique en termes de vie privée ou de protection de leurs données personnelles. L'intrusion de la technologie dans le monde physique via des robots s'accompagnera de contraintes encore plus fortes liées à la sécurité physique et surtout à la multiplication des sources de données. L'acceptabilité des nouvelles règles qui les accompagneront par les utilisateurs doit être accompagnée d'importants efforts de pédagogie, afin que ces réglementations ne soient pas perçues comme des limitations des libertés mais comme des moyens de protection de l'individu. Pour ce qui est de la sécurité physique, j'ai interprété ces points comme étant dus à des "bugs résiduels" (pouvant provoquer des accidents) qui devraient être résolus par des approches technologiques. Je n'ai pas mentionné dans ma réponse le détournement d'objets à des fins malveillantes (crimes, terrorisme) ou militaires, qui sont hors de mon champ de compétences, mais dont il faut également se préoccuper. J'imagine que le Parlement ne peut pas ne pas en avoir déjà conscience.

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Information et formation des gens (et des étudiants) sur ce qu'est vraiment l'IA et ses techniques. Il y a beaucoup de peurs et de propos qui révèlent une forte incompréhension du public vis-à-vis des robots. Ces thématiques doivent être incluses dans les formations concernées (informatique, droit, écologie, ...) tout comme l'informatique doit être considérée comme une science à part entière dont l'enseignement doit faire partir du socle de connaissance commun et indispensable fourni par l'école.

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Liability - Who should pay if an autonomous system fails? Robot Rights - Do robots need rights? What if artificial intelligence becomes really intelligent (in the far future)?

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Knowledge is power. In a broader definition, intelligence is power. The commodification of intelligence, and its decoupling from uniquely human aspects such as individual personality, emotions, scruples, and morality, creates a risk of a historically unprecedented concentration of power in the hands of anyone centrally controlling this new commodity. Currently, there is a real risk that well-intended regulatory attempts may amplify, rather than dampen, such power concentrations. For example, strict safety requirements, and large bureaucratic overheads may limit the development of advanced AI to large corporations and national research institutes capable of shouldering these burdens. Centrally administrated safety infrastructure, such as a "kill switch", or a register of AIs and robots, may hand a large amount of real or perceived power to anyone being in charge of it. In this context, the European Parliament is invited to consider any impact their regulation may have not only on wealth inequalities, but also on fundamental inequalities in power resulting from concentrations of non-human intelligence.

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I am not aware of any "educational" programs for adults that inform people what robots and AI do and can't do. Programs that take the fear that comes with not knowing and understanding.

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Discriminatory information and biased algorithms that lead to discriminatory effects of AI. Lack of transparency regarding the information that is the basis of the AI tool. Ownership of data should remain with those who have provided the data.

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## Question 102

Please provide references to any studies or documents that you think are relevant for this consultation. If possible, please provide links. (optional)

Text input

All studies of the IDATE institute in Montpellier France. (I am not related to them, just recently read the last report).

<http://www.reuters.com/article/us-usa-military-innovation-idUSKCN0W421V>

Technology council should be done on AI, putting face to face AI scientist or engineering contradictors (e.g Musk, Hawking, Gates ...) to AI pros; debate could then be synthesised by multi disciplinary reports

j'attire votre attention sur les travaux du docteur Nathalie Nevjeans, à la commission JURI, avant le vote du rapport Delvaux. elle a exprimé une opinion négative sur la proposition visant à accorder la «personnalité électronique» aux robots. elle assure que les régimes d'assurance (et éventuellement les régimes de compensation) sont une solution beaucoup plus efficace. En outre, le Dr Nevjeans a averti que l'octroi de droits de robots pourrait être réellement contre-productif. «Comment pouvons-nous envisager de conférer des droits et des devoirs à une simple machine? Comment un robot aurait-il des devoirs, puisque cette idée est étroitement liée à la morale humaine? Quels droits accorderions-nous à un robot: droit à la vie (droit à la non-destruction), droit à la dignité, droit à l'égalité avec l'humanité, droit à la retraite, droit à la rémunération.... les trois concepts sur lesquels repose la personnalité juridique, explique - t-elle repose la subjectivité juridique (personnalité juridique), la capacité d'accomplir des actes juridiques (et a capacité de commettre un délit. on n'imagine pas qu'une machine puisse posséder de tels droits.

Wenn Angst herrscht, dass neue Technologien Arbeitsplätze wegnehmen, dann sollte man zuerst die Ausbildung verbessern (in allen Staaten, in Österreich ein System das rund 150 Jahre alt ist) und dann eine Besteuerung aller Firmen einführen, siehe den exzellenten Vorschlag von Varoufakis: <http://derstandard.at/2000053561275/Maschinen-Roboter-und-andere-Steuerpflichtige> Es geht darum, für ein Gemeinwohl zu sorgen. Derzeit gibt es sehr viele Firmen, vor allem im Bereich großer Unternehmen, die fast keine Steuern zahlen. Dort ist anzusetzen um Gleichheit zu schaffen: jeder Mensch sollte zur Gesellschaft beizutragen können und dürfen. Nicht nur die mit mehr Geld.

"Policy Desiderata in the Development of Machine Superintelligence." Nick Bostrom, Allan Dafoe, and Carrick Flynn. <http://www.nickbostrom.com/papers/aipolicy.pdf> "Yes, We Are Worried About the Existential Risk of Artificial Intelligence." MIT Technology Review. November 2, 2016. Allan Dafoe and Stuart Russell. <https://www.technologyreview.com/s/602776/yes-we-are-worried-about-the-existential-risk-of-artificial-intelligence/> The Global Politics of AI - syllabus - <https://www.dropbox.com/s/mwx8v8dsf8v4j2b/TheGlobalPoliticsOfAISyllabus-s.pdf?dl=0>

<https://www.sipri.org/publications/2016/other-publications/mapping-innovation-ecosystem-driving-advance-autonomy-weapon-systems> (also relevant for other forms of autonomous systems)

<https://futureoflife.org/ai-principles/?submitted=1#confirmation>

I find the principles of robotics as stated by the EPSRC to be a good base for discussion. Link: <https://www.epsrc.ac.uk/research/ourportfolio/themes/engineering/activities/principlesofrobotics/>

For good questions that need to be answered watch some Youtube videos of Isaac Arthur on topics like technological singularity, artificial intelligence and transhumanism: <https://www.youtube.com/channel/UCZFipeZtQM5CKUjx6grh54g>

Etudes et recherches de la société Google dans le domaine de l'intelligence artificielle et à visées transhumanistes.

<http://theconversation.com/lhumain-technologiquement-augmente-les-dessous-dun-mythe-73468>  
<http://theconversation.com/le-robot-tue-t-il-lemploi-49007> <http://www.dailymotion.com/video/x2n95rf>

Interopérabilité des appareils (et utilisation des standards du Web pour réduire les "silos" entre les fabricants) : <https://www.w3.org/WoT/> Ethique et IA : beaucoup de choses sur la page de Serge Abiteboul : <http://abiteboul.blogspot.fr/> Ethique et robotique : [http://cerna-ethics-allistene.org/digitalAssets/38/38704\\_Avis\\_robotique\\_livret.pdf](http://cerna-ethics-allistene.org/digitalAssets/38/38704_Avis_robotique_livret.pdf) Informatique et philosophie (derrière la gageure amusante de comparer l'informatique à une religion, il y a des positions intéressantes sur la société de l'information et la dépendance des populations à cette société) : [https://www.puf.com/content/Informatique\\_c%C3%A9leste](https://www.puf.com/content/Informatique_c%C3%A9leste)

Rapport du club de Rome sur la raréfaction des ressources naturelles.

[https://www.edge.org/conversation/jaron\\_lanier-the-myth-of-ai](https://www.edge.org/conversation/jaron_lanier-the-myth-of-ai) <https://thefrailestthing.com/2014/11/17/jaron-lanier-wants-to-secularize-ai/>

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besides all the interesting research coming from the EU, maybe: Frick, W. (2015). When Your Boss Wears Metal Pants. Harvard Business Review, (June), 84–90. Huff Eckert, V., Curran, C., & Bhardwaj, S. C. (2016). Tech breakthroughs megatrend: how to prepare for its impact. Kelly, K. (2012). Better Than Human : Why Robots Will — And Must — Take Our Jobs. Wired, 1–16.

## Question 103

Please provide information on any successful initiatives at regional, national or international level related to robotics and AI that could support the European Parliament in considering further actions. (optional)

Text input

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Gesunder Menschenverstand - leider viel zu selten genutzt. Das Fraunhofer Institut hat sich sicher auch bereits mit Ethik und praktischer Anwendung von KI und Robotik beschäftigt. Hier sollte ein reger Austausch stattfinden.

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Ja, ISO standards legen vor allem für Roboter exakte Sicherheitsrichtlinien fest. Das wird vollkommen ausreichend sein. ISO 13482 Robots and robotic devices -- Safety requirements for personal care robots ISO 10218 Robots and robotic devices -- Safety requirements for industrial robots ISO/TS 15066 - Robots and robotic devices -- Collaborative robots Und diese wiederum bauen auf allgemeinen normen zur Maschinensicherheit auf. Das ist weitaus ausreichend.

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Exploit the knowledge of many talented researchers that think on a daily basis about how to govern the future of AI and robotics. For example, the yearly "We Robot Conference" is dedicated to legal and policy questions concerning robotics and AI. It is taking place this year at Yale University on March 31 & April 1st, papers and live stream accessible via <http://www.werobot2017.com/>

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Beaucoup de choses dans le cadre de #FranceIA, à Paris et en régions : <https://www.economie.gouv.fr/France-IA-intelligence-artificielle> Notamment, en France / Auvergne-Rhône-Alpes, les journées de l'IA organisées par le pôle de compétitivité MinaLogic en Rhône-Alpes (voir notamment les slides présentés par Patrick Gros, directeur de l'INRIA Grenoble Rhône-Alpes) : <http://www.minalogic.com/fr/evenement/journees-de-lintelligence-artificielle-lyon> Autres salons et manifestations dans lesquels se rencontrent industriels, représentants des territoires, communauté académique, comme le salon InnoRobo (<http://innorobo.com/>) ou le sido (<http://www.sido-event.com/>).

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Rapport France IA qui propose un soutien financier fort et avec de faibles contraintes administratives pour les recherches en robotique et en IA.

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Not sure if this is relevant information but I am part of an international research group (US, D, CH, AUT) that wants to design techniques (thinkLets), which help humans in interaction with AI/robots to engage in effective collaboration. We are at the very conceptual stage and try to "hammer out" (that's how my American colleague always says) a research agenda for the next 10 years (I think more like 5 years)

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## Question 104

Please provide information on any negative experiences or impacts at regional, national or international level related to robotics and AI that could support the European Parliament in considering further actions. (optional)

Text input

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Safety of robot & limited AI (1st or 2nd generation) is not full-safe (robot injure human in exposition, car hurt truck since it didn't see it), even if there are opposite (car predicting accident & perform emergency break). The technology is not yet sufficiently proofed and risk analysis not so complete to introduce widely autonomous objects in an imperfect & varying environment.

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It is in my view helpful to draw the attention to a similar development in our history: during the industrial revolution the principle of personal liability in businesses between natural persons was complemented by the corporation with limited or virtual liability. Liability is the keyword here. Under no circumstance should it be made possible to create legislation that would allow partial or full transfer of liabilities to a robot or AI. No existing legal system on Earth could cope with the challenges that would result from artificial incorporate liability.

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Die Unfälle der Tesla-Autos.

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Ja, ein Zivilrecht wie jeglichen Einsatz von Robotern erschweren und damit den technischen und wirtschaftlichen Rückstand von Europa verstärken. Ganz abgesehen davon, dass wir uns mit der typischen europäischen Angst vor Robotern international nur lächerlich machen.

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Microsoft's Kate Crawford tells SXSW that society must prepare for authoritarian movements to test the 'power without accountability' of AI, article on her speech in the guardian [https://www.theguardian.com/technology/2017/mar/13/artificial-intelligence-ai-abuses-fascism-donald-trump?CMP=twl\\_gu](https://www.theguardian.com/technology/2017/mar/13/artificial-intelligence-ai-abuses-fascism-donald-trump?CMP=twl_gu)

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Transhumanisme de Google, Apple Facebook, etc.

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Voir la levée de boucliers de toute la classe politique à l'élection présidentielle française quand un candidat a osé parler de revenu universel (alors que cela tourne en boucle depuis des années sur les réseaux sociaux). Le candidat a alors été accusé de vouloir "fabriquer une société de feignants".

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Inequality in availability of new technology to developing countries and the costs of robotics developed by private companies. Unequal access to "big data" for AI to develop in many poorer countries.

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