European Commission

Public consultation on the AI White Paper

Final report

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Digital Single Market

European Commission

DG for Communications Networks,
Content and Technology

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1. OBJECTIVES OF THE CONSULTATION

The public consultation ran from 19 February to 14 June 2020, collecting a wide variety of views on the upcoming policy and regulatory steps on artificial intelligence (AI). It was based on the **White Paper on AI**[1] that promotes an ecosystem of excellence and trust for AI.

The online questionnaire was divided in three sections:

- Section 1 referred to the specific actions for the building of an **ecosystem of excellence** to support the development and uptake of AI across the EU economy and public administration;
- Section 2 outlined a series of options for a **regulatory framework for AI**;
- Section 3 referred to **safety and liability aspects of AI**[2].

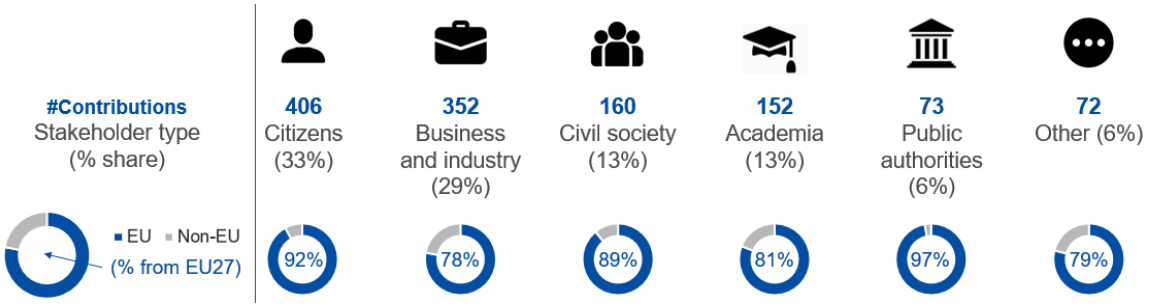
Methodological note: Unless explicitly included, all percentages and numbers are given excluding the – often small – share of respondents that chose not to answer a given question. This choice was also made because respondents also usually had the answer option 'no opinion'.

2. WHO REPLIED?

The public consultation attracted 1 215 contributions through an online survey. 84% of contributions came from the EU's 27 Member States; additional answers came from all over the world, including the UK, the US, Switzerland, Norway, Japan, India, Turkey and China.

A wide variety of stakeholders participated in the public consultation.

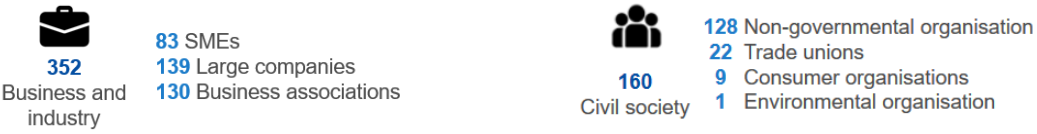
Breakdown of participants by stakeholder type



[1] White Paper on Artificial Intelligence - A European approach to excellence and trust (COM(2020) 65 final), available on: https://ec.europa.eu/info/sites/info/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf

[2] Report on the safety and liability implications of Artificial Intelligence, the Internet of Things and robotics (COM/2020/64 final), available on: https://eur-lex.europa.eu/legal-content/en/TXT/?qid=1593079180383&uri=CELEX%3A52020DC0064

Zoom in on business and industry, and civil society representatives

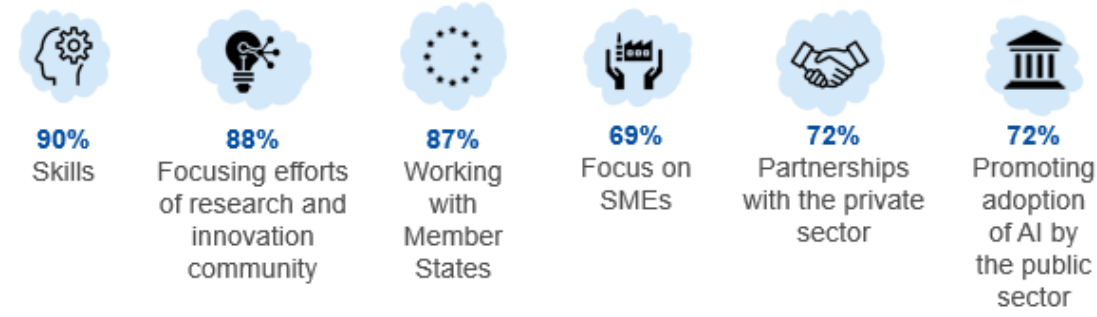


Through the public consultation, we received over 400 position papers, some of them submitted via email. These will be discussed at the end of this document under section **6. Position papers**.[3]

3. ECOSYSTEM OF EXCELLENCE

The AI White Paper proposed six actions to build an ecosystem of excellence on AI in Europe. Skills and excellence in research emerged as important topics.

All actions ranked by share of respondents that considered them (very) important



96% of business and industry found partnerships with the private sector (very) important.

Open answers:

Many respondents stressed the action on skills in their open answers. A reference to the fundamental rights implication of AI was also common.

- Business and industry often highlighted the importance of skills, data sharing and the collaboration between industry and academia.
- Civil society organisations commonly emphasised the impact of AI on fundamental rights, society and collective bargaining rights.

[3] The complete results of the consultation are available online on the Better Regulation Portal: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12270-White-Paper-on-Artificial-Intelligence-a-European-Approach/public-consultation

Coordinating with Member States

Strengthening excellence in research (89%) and developing AI skills through adapted training programmes (86%) were considered as the two areas that can benefit most from a coordinated approach by the EU and the Member States. A large majority of respondents also considered infrastructure such as world reference testing facilities (76%) and European data spaces (75%) important or very important. The role of Member State coordination in the promotion of AI uptake by business and public sector, as well as the increase in financing for AI start-ups were seen as (very) important by 71% and 68% of respondents respectively.

352
Business and industry

91% of business and industry considered Member State coordination to promote the uptake of AI by business and the public sector (very) important.

Open answers:

Many respondents elaborated on the importance of developing skills and adapting training programmes on AI. They often mentioned access to data, quality of data or the availability of reference datasets. A common call was to include human rights, social impacts and democratic oversight in the coordinated plan on AI.

- Additionally, business and industry frequently emphasised the importance of digital infrastructure and world-reference testing sites.
- Academia repeatedly called for a general close cooperation, also involving civil society and trade unions. Multi-disciplinary research involving for instance social science was seen as important in this regard.
- Civil society often asked to consider fundamental rights and ethical issues in the coordination among Member States. The social impact of AI, as well as its impact on EU values must be considered.

Strengthening research and innovation communities

Three actions were suggested in the public consultation to strengthen AI research and innovation in Europe. 86% of respondents said that the support of the existing networks of research and innovation centres is (very) important. A new initiative for a world-class lighthouse research centre was only seen as (very) important by 64% of respondents. A public private partnership (PPP) for industrial research was considered (very) important by 69% of all respondents.

152
Academia

Academia's preference towards a network of research and innovation centres was even more pronounced than amongst overall respondents. 91% of academia said that supporting the existing networks of research and innovation centres is (very) important; compared to 60% that considered a world-class lighthouse research centre (very) important.

352
Business and industry

89% of respondents that represent the industrial and business sector found a public private partnership for industrial research very important.

Open answers:

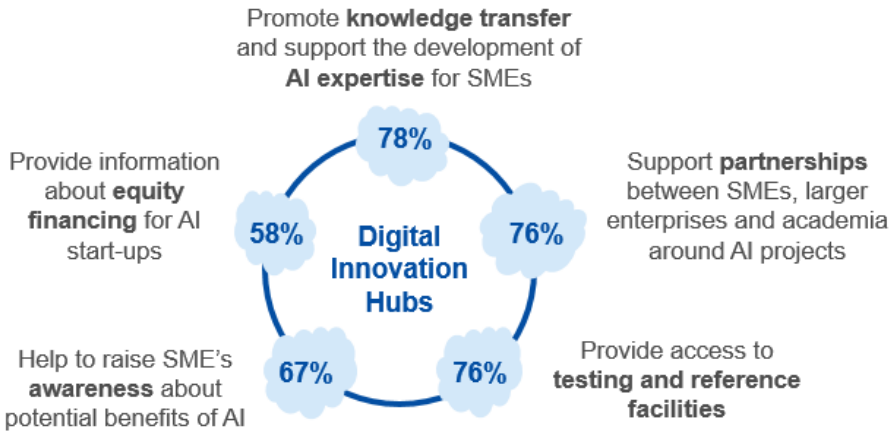
Many respondents argued for a network of existing AI research excellence centres and against a single lighthouse centre of excellence.

- Civil society frequently stressed the importance of making funding conditional on ethical standards. EU values and the social impact of AI should also play a role in research.

Supporting the uptake of AI by SMEs

The role of Digital Innovation Hubs in supporting the uptake of AI by SMEs was highly appreciated by consultation participants. Knowledge transfer and the support of AI expertise for SMEs is seen as a (very) important task of Digital Innovation Hubs by 78% of respondents. In addition, 76% of respondents consider the access to testing and reference facilities and SME partnerships with larger enterprises and academia as a (very) important contribution that Digital Innovation Hubs have to offer.

Share of respondents that saw tasks of Digital Innovation Hubs as (very) important



SMEs that considered the following tasks (very) important

Open answers:

Many respondents elaborated on (1) how to support partnerships between SMEs, larger enterprises and academia and (2) promoting the knowledge transfer and supporting the development of AI expertise for SMEs. Several respondents mentioned that (economic) innovation should not outweigh ethical considerations. Many suggested that Digital Innovation Hubs should also provide non-technical support, for instance on ethical or legal issues. Nine voices cautioned that there should be no exceptions for SMEs to respect fundamental rights, as they can also cause harm.

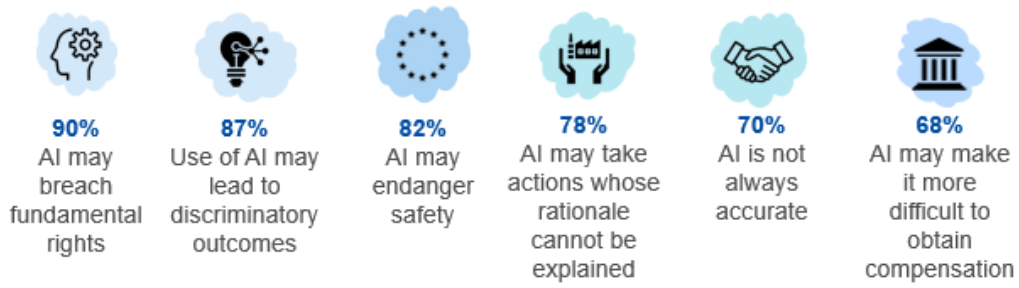
- Civil society often asked to involve civil society in Digital Innovation Hubs.

4. ECOSYSTEM OF TRUST

Main concerns

Respondents' main concerns related to both fundamental rights and safety, followed by issues linked to the functioning of AI.

All concerns ranked by share of respondents that considered them (very) important



Open answers:

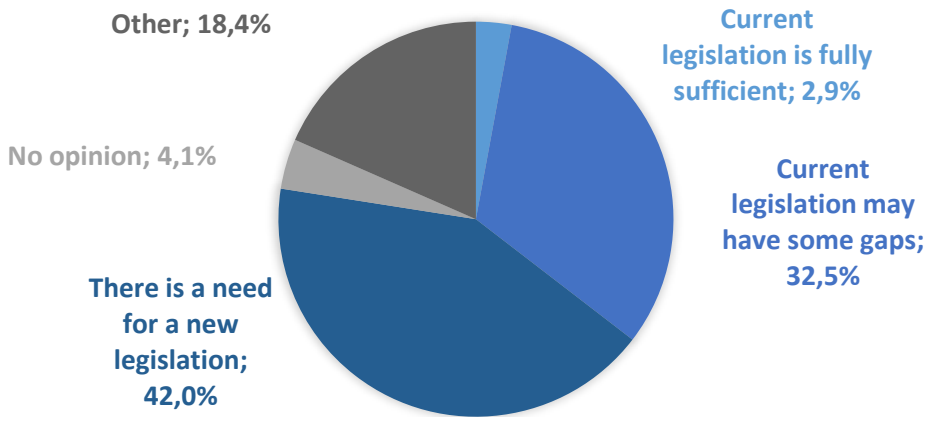
Many respondents highlighted the benefits of AI in their free text answers, or expressed the need for a balanced regulatory approach and avoiding overregulation. Other comments added additional concerns, such as regarding the transparency, the attribution of accountability for decisions and the capacity for human beings to make their own choices.

- Civil society frequently underlined the need for democratic oversight and issues like equality, data quality, labour rights and safety.

Legislation

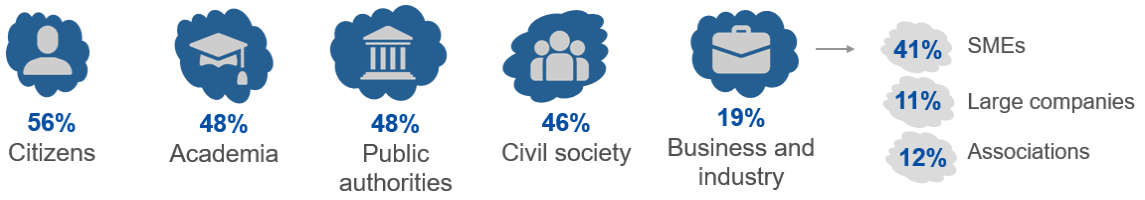
To address such concerns, 42% of respondents requested the introduction of a new regulatory framework on AI; another 33% thought that the current legislation may need to be modified in order to address the gaps identified. Only 3% agreed that current legislation is fully sufficient.

Can these concerns be addressed by existing EU legislation?



There was a large divergence between stakeholder types. 56% of citizens saw a need for a new legislation, as well as 46% of civil society. The largest share of business and industry representatives argued that current legislation may have some gaps (42%). While 19% of overall business and industry responses said that there is a need for new legislation, there were differences between companies: 41% of SMEs saw a need for new legislation, but only 11% of large companies.

Share of respondents by stakeholder type that see a need for a new legislation



Open answers:

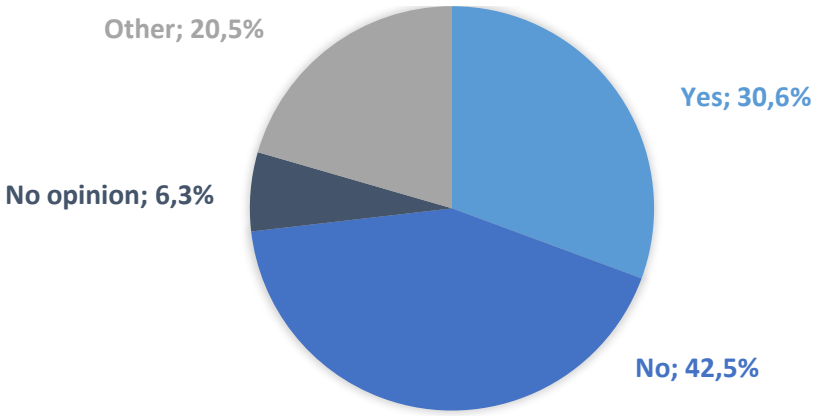
A common comment was the need for a clear and detailed gap analysis of existing legislation. Many respondents also cautioned against regulatory burdens.

- Business and industry often argued that guidelines are a good governance tool.
- Civil society frequently mentioned that AI regulation should not introduce loopholes, for instance on data protection.

High-risk applications

Concerning the scope of this possible new legislation, opinions were less straightforward. While 43% agreed that the introduction of new compulsory requirements should only be limited to high-risk AI applications, another 31% doubt such limitation.

Do you agree that the introduction of new compulsory requirements should be limited to high-risk applications?



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Business and industry

406
Citizens

Industry and business responses were more likely to agree with limiting new compulsory requirements to high-risk applications. 55% of them took this position. Large companies were even more likely to advocate for a limitation: 63% of large companies and 53% of SMEs argued that compulsory requirements should be limited to high-risk AI applications.

By contrast, only 39% of citizens argued that compulsory requirements should be limited to high-risk AI applications.

However, many did not voice a clear opinion on the definition of high-risk: although 59% of given answers supported the definition of high-risk provided by the White Paper, only 449 out of 1 215 responded to this question (37% of consultation participants).

Do you agree with the proposed approach to determine high-risk AI applications (sector and use case approach)?

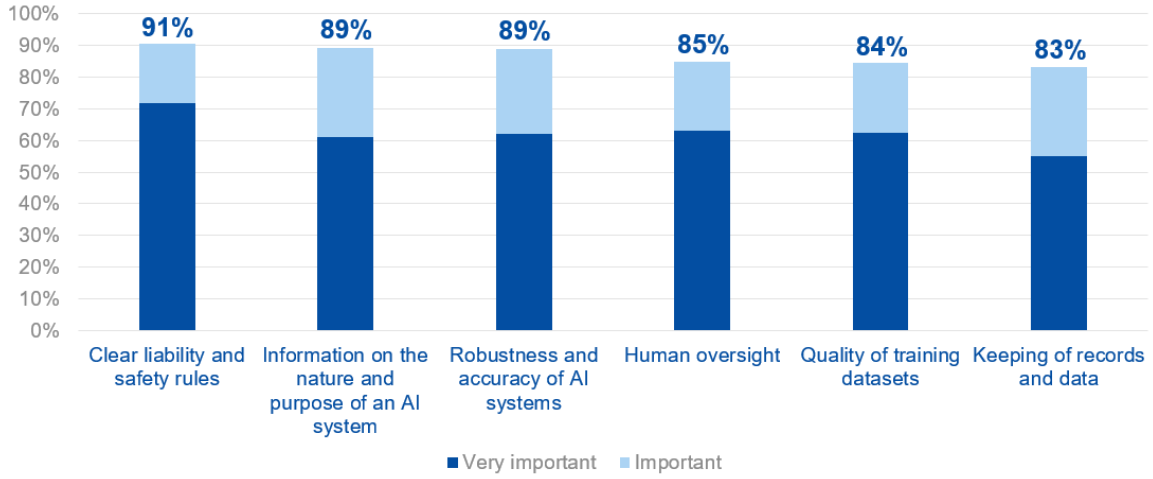
Also includes those that did not answer the question

61% did not answer the question

23% agree with proposed definition of high-risk
4.8% do not agree with proposed definition of high-risk
7.2% have **another opinion**
4.3% have **no opinion**

The White Paper on AI proposed six requirements for high-risk AI systems to ensure that they are safe, trustworthy and in line with EU values. A large majority of respondents found the proposed mandatory requirements (very) important, with high percentages ranging from 83% to 91% for each requirement.

Share of respondents who find the proposed mandatory requirements (very) important



Open answers:

The common argument by respondents was that a clear definition and legal clarity is important.

- Academia often criticised the binary distinction between high- and low-risk AI as too simplistic. They commonly proposed remote biometric identification as a high-risk AI application.
- Civil society also argued that the binary distinction between high- and low-risk is too simple. A common call was for a fundamental or human rights impact assessment.
- Business and industry often argued that more details are needed on the definition of high-risk AI. They cautioned not to disregard the benefits of AI. They saw the 'exceptional instances' clause (for instance always considering recruitment as high-risk) as problematic. Some said that high-risk AI applications are those making automated decisions and affecting human rights.

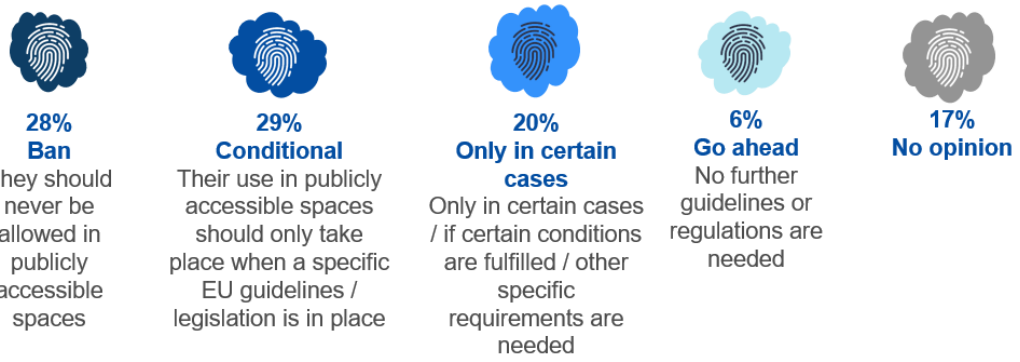
Open answers: Proposed high-risk AI applications

Biometric identification

Another topic of the AI White Paper is the use of remote biometric identification systems in publicly accessible spaces. Remote biometric identification refers to the use of technology for identifying – out of a mass of people – individuals through the use of unique biological characteristics, such as face, gait or voice, at a distance in publicly accessible spaces (biometric mass surveillance). The sensitive nature of biometric data is recognised in the EU legal framework, which currently makes it subject to special protection: the processing of biometric data is prohibited in principle - but there are a limited number of conditions under which such processing can be lawful.

Respondents voiced doubts on the public use of remote biometric identification systems, with 28% of them supporting a general ban of this technology in public spaces. Another 29% required a specific EU guideline or legislation before such systems may be used in publicly accessible spaces. 20% wanted to see more requirements or conditions for remote biometric identification. Just 6% of respondents argued that the current situation is sufficient.

Remote biometric identification systems



406 Citizens	Citizens were most likely to call for a ban in publicly accessible spaces (55%). They were very vocal on this issue: only 5% had no opinion.	55% Ban
160 Civil society	Civil society was critical of remote biometric identification. 29% of them called for a ban. The largest share of 36% argued that their use in publicly accessible spaces should only take place when a specific EU guideline or legislation is in place.	36% Conditional
152 Academia	Academia supported specific EU guidelines/legislation before using such systems in public spaces (39%). They were less likely to call for a ban (15%).	39% Conditional
73 Public authorities	Only 4% of public authorities called for a ban of remote biometric identification systems in public spaces. However, the majority of them (58%) wanted to see specific EU guidelines/legislation before using them in public spaces.	58% Conditional
352 Business and industry	Business and industry was more permissive towards remote biometric identification systems. 30% would allow it in certain cases. Only 4% of them would ban it and a full 13% said that no further guidelines or regulations are needed. However, 30% of them had no opinion.	31% Only in certain cases

Open answers:

- In their open answers, business and industry commonly referred to existing regulations in the General Data Protection Regulation[4].
- Civil society stressed that biometric identification threatens fundamental rights. It endangers privacy, enables mass surveillance and leads to imbalances in power.
- Citizens argued that biometric surveillance endangers the freedom of expression and assembly.

Enforcement and voluntary labelling

To make sure that AI is trustworthy, secure and in respect of European values, the White Paper on AI suggests a series of mechanisms. 62% of respondents supported a combination of ex-post and ex-ante market surveillance systems. 3% of respondents supported only ex-post market surveillance. 28% explicitly selected external conformity assessment of high-risk applications as an answer. 21% of respondents specifically supported ex-ante self-assessment.

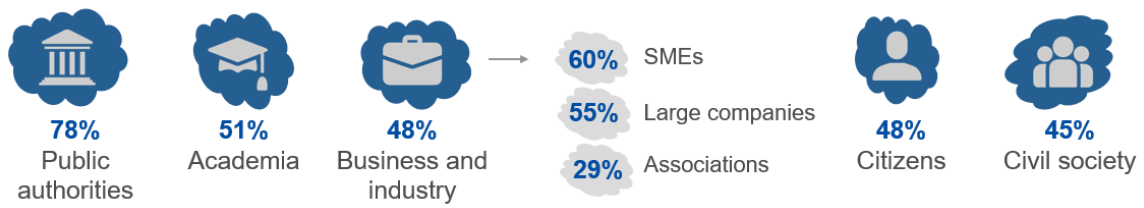
Open answers:

Some respondents argued that AI requires continuous assessment.

- Civil society proposed the involvement of independent bodies and civil society experts. They argued for a fundamental or human rights impact assessment. A common worry was the resource constraints among authorities.
- Business and industry voiced their preference for self-assessment. They would like to avoid an overly burdensome procedure that hampers innovation. Guidance documents mattered to companies.
- Academia raised the idea of standardised validation datasets for an assessment.

Voluntary labelling systems could be used for AI applications that are not considered high-risk. 50% of respondents believe (very) much in voluntary labelling, while another 34% do not agree with it. 16% of respondents did not have an opinion on the matter.

Share of respondents by stakeholder type that believe (very) much in a voluntary labelling system



[4] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (General Data Protection Regulation), available on: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02016R0679-20160504&qid=1532348683434

Open answers:

The tendency of the open answers was rather negative towards voluntary labelling – but due to different reasons: (1) Some respondents voiced their scepticism towards a voluntary label or self-regulation in general. (2) Others are sceptical of the cost of a voluntary label or its negative effect on innovation. (3) Some respondents argued that a voluntary label benefits bigger players who can afford this.

Respondents called for more details on this issue. They stressed that the enforcement or control of a potential voluntary label is important.

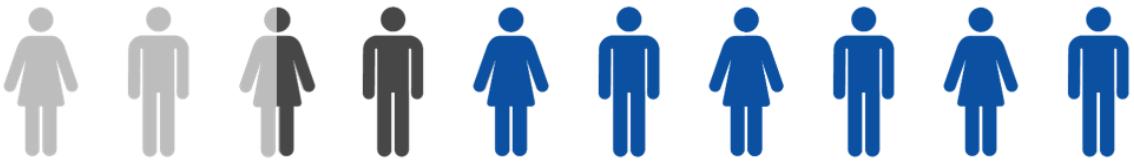
- Business and industry often worried about impacts on innovation. They argued that stakeholders need to be involved in the development of a voluntary label.
- Civil society also called for stakeholder involvement. They are sceptical of self-regulation and worry about labels giving a false sense of security.

5. SAFETY AND LIABILITY ASPECTS

The overall objective of the safety and liability legal frameworks is to ensure that all products and services, including those integrating emerging digital technologies, operate safely, reliably and consistently, and that damage that has already occurred is remedied efficiently.

61% of respondents supported a revision of the existing EU legislative framework for liability, the Product Liability Directive, to cover particular risks engendered by certain AI applications.

Do you think that the current EU legislative framework for liability (Product Liability Directive) should be amended to better cover the risks engendered by certain AI applications?



27% No opinion 12.5% No 60.5% Yes

160
Civil society

Civil society was mostly in favour: 74% argued for amending the Product Liability Directive.

152
Academia

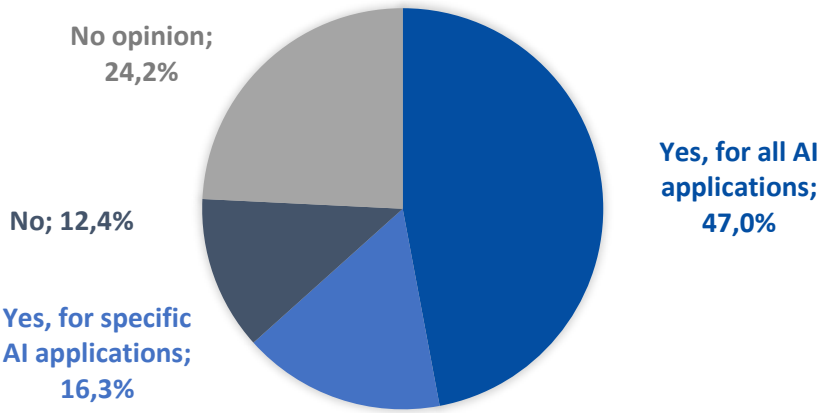
65% of academia supported the revision of the EU framework for liability.

352
Business and industry

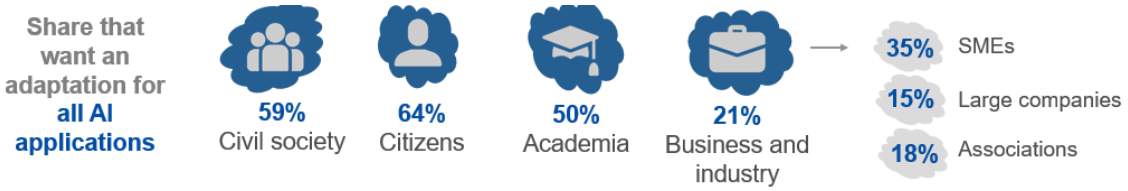
Business and industry was divided. Overall, 38% supported a revision of the Product Liability Directive, 30% were opposed. While the largest share of SMEs was in favour of revising the EU framework for liability (62%), only 32% of large companies agreed.

On a national level, the public consultation asked whether national liability rules need to be adapted to ensure proper compensation in case of damage and a fair allocation of liability. 47% of respondents saw a need to adapt this for all AI applications. A further 16% argued that specific AI applications require an adaptation of national liability rules.

Do you think that the current national liability rules should be adapted for the operation of AI to better ensure proper compensation for damage and a fair allocation of liability?



Share of respondents by stakeholder type that want an adaptation for all AI applications



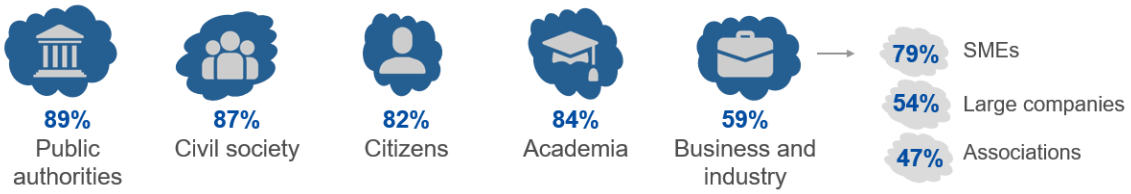
Among the particular AI-related risks to be further spelled out to provide legal certainty, respondents often raised the issue of cyber risks (78%) and personal security risks (77%). Mental health risks followed with 48% of respondents flagging them. Risks related to the loss of connectivity were voiced by 43% of respondents.

Open answers:

Respondents suggested additional risks in their open answer questions. These included the risk of discrimination (including in online advertisement), the risk of differentiated pricing, financial detriments, filter bubbles or the interference in political processes, as well as risks to privacy or specifically to people with disabilities. Respondents mentioned the risk of profiling and manipulation, as well as risks to health, a loss of control or choice, and risks linked to automated decisions.

Moreover, 77% of participants supported the statement that the safety legislative framework should consider a risk assessment procedure for products subject to important changes during their lifetime.

Share of respondents by stakeholder type that argue that a risk assessment procedure should be considered for products subjected to important changes during their lifetime



Open answers:

Respondents wanted to see a clear definition of 'important changes' to AI systems. Some called for a specialised agency for continuous learning AI.

6. POSITION PAPERS

Stakeholders submitted slightly more than 400 position papers in the course of the public consultation.

A main point by business and industry was that the definition of high-risk AI is still unclear and needs improvement.

Some members of the business and industry community argued that the definition of AI is too broad. Business stakeholders tended to broadly agree with the Commission's approach for mandatory requirements for high-risk AI applications. For those who expressed other opinions, they mainly highlighted that new rules/requirements are not needed or that requirements should be proportionate. Business and industry stakeholders were most likely to mention the issue of compliance, as well as administrative burdens. They were sceptical of a formal institutionalisation of the governance mechanism of a potential AI legislation. Concerning liability, many business associations and large companies thought that existing rules were probably already sufficient or they were sceptical of strict liability rules and possible regulatory burdens.

Civil society's main concern was the definition of high-risk AI and the importance of fundamental rights. The issue of discrimination and bias was often mentioned.

The proposed definition of AI was seen as too narrow by some, who would like to see an inclusion of automated decision-making.

While a few civil society organisations saw the White Paper approach as too precautionary and damaging to innovation, a large majority argued that the Commission should go further in the protection of fundamental rights vis-à-vis AI. A repeated proposition was to make a human rights (or fundamental rights) impact assessment mandatory for all AI applications. Four arguments on the risk-based approach stand out:

1. Civil society explicitly argued to ban certain AI applications. Most commonly mentioned was remote biometric identification, but also other AI applications, such as those profiling, scoring and manipulating individuals.
2. Civil society sometimes proposed a more nuanced approach to risk with more risk levels, such as the German Data Ethics Commission[5] risk classification.
3. High-risk also stems from power and vulnerabilities. Civil society argued that public sector use of AI (for instance in the field of justice or migration) are specifically high risk.
4. Risk should also include risks to society at large and not just to individuals.

An additional repeated proposition was to have a public register of automated decision-making systems. Efficient remedies are important. Civil society had a slight preference for an EU agency as a governance mechanism, though the issue was not commonly discussed in position papers.

Citizens expressed their thoughts on a variety of issues.

Europe needs investments in jobs, social funds and education to include everybody. A commitment to diversity and inclusion was stressed. A number of citizens expressed their worry about AI systems' effects on jobs. Some worried about AI systems' manipulative capacity and the effects on the right to freedom of thought. The power of tech companies was raised as an issue. Some citizens argued that most issues stemming from AI are also apparent in the larger digital domain. Risk management needs to be

[5] Opinion of the Data Ethics Commission, available on: https://www.bmjv.de/SharedDocs/Downloads/DE/Themen/Fokusthemen/Gutachten_DEK_EN_lang.pdf?__blob=publicationFile&v=3

improved. The focus of many contributions by citizens lied on transparency and discrimination, showing their relevance to citizens. Liability mattered, too, especially the burden of proof.

Academia covered a wide variety of topics and views. Common main arguments related to the definition of high-risk and the importance of fundamental rights. Academia also proposed sector-specific comments and ideas.

Position papers included the call to link the ecosystem of excellence and trust more. AI literacy should be raised throughout society.

On regulation, some academics argued that the scope should be limited to machine learning. Others argued that the requirements, for instance the record keeping requirement, focus too narrowly on machine learning specificities.

On conformity assessments, there were also diverging views. Some argued in favour of keeping mandatory conformity assessments for high-risk AI applications carried out by independent testing centres. Others argued that the regulation of AI does not fit well with ex-ante conformity assessment frameworks, and that ex-ante conformity tests for AI would become a new non-tariff barrier to digital trade and be a barrier to market entry.

Some proposed an algorithmic impact assessment based on the data protection impact assessment. Another idea was an AI incidents database. The idea of an AI compensation fund was also raised.