



Disability perspective on Regulating Artificial Intelligence

European Disability Forum
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Position Paper on the European Commission Proposal for Regulating Artificial Intelligence (AI)



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Introduction

The European Disability Forum

The European Disability Forum is an independent NGO that advocates for the rights of 100 million Europeans with disabilities. EDF is a unique platform which brings together representative organisation of persons with disabilities from across Europe. EDF is run by persons with disabilities and their families. We are a strong, united voice of persons with disabilities in Europe.

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Executive Summary

We welcome the [European Commission’s proposal for regulating Artificial Intelligence \(AI\) in the EU](#). The proposed Regulation for AI will help ensure protection of fundamental rights of persons with disabilities in the context of new technologies. The Regulation can also help promote AI that will improve accessibility for persons with disabilities and support their participation in society. To ensure this, however, the Commission proposal needs significant improvements with strong safeguards against potential discrimination by AI systems and practices, and proactive

measures to promote AI that will benefit accessibility and equality of persons with disabilities.¹

In view of this, the EU AI Regulation must ensure:

Accessibility

The Regulation must include horizontal and mainstreamed accessibility requirements for AI systems irrespective of level of risk, including for AI-related information and instruction manuals. These accessibility requirements should be consistent with existing EU accessibility legislation, notably with the [European Accessibility Act](#).

Non-discrimination and equality

The Regulation must prohibit several practices listed in Annex III of the current text of the proposal. Particularly, practices of biometric identification and categorisation of natural persons, AI systems determining individuals' access to education, employment, essential private services and public services and benefits, most use of AI by law enforcement and for use in migration, asylum and border control management should be prohibited.²

Privacy and data protection

The AI Regulation must ensure that privacy and data protection of all persons with disabilities, including all persons with intellectual and psychosocial disabilities, including those under substituted decision-making regimes such as guardianship, are protected when their data is processed by AI systems.

The Regulation must also set effective measures for individuals to be informed when their data is being gathered and the possibility to enquire and object to processing of such data by AI systems.

These measures should be accessible for persons with disabilities.

When objecting to data collection by AI systems used by a service provider, individuals should still be able to benefit from that service.

The Regulation must prohibit use of AI for emotion recognition by public authorities and private entities, except for certain well-specified research

¹ Given the extent of issues in need of consideration, EDF will suggest amendments to the text of the proposal which are of particular importance to persons with disabilities (e.g. accessibility, right to privacy and data protection, protection of fundamental rights), and support civil society and other partners on wider issues such as those related to governance and accountability of AI systems and their deployment.

² See detailed in relevant chapter.

purposes subject to strong privacy safeguards, including informed consent and ability to object by individuals subjected to such use.

Strong enforcement mechanisms

The Regulation must ensure measures to flag issues, file complaints to authorised bodies, including collective complaints and complaints launched by civil society actors on behalf of individuals, and seek remedies in case of abuse.

These measures must be accessible for persons with disabilities.

The Regulation must also ensure ex ante human rights impact assessments for high-risk AI systems before putting them into use, including assessing accessibility of these systems for persons with disabilities.

Trustworthy European AI beyond the EU

The Regulation must ensure that AI providers and users whose outputs affect individuals outside of the European Union are subject to same requirements as those whose outputs affect persons within the Union.

Involvement of organisations of persons with disabilities, and disability representation in datasets

EU and Member States, as obliged by article 4.3 of the CRPD³, should closely consult with and actively involve persons with disabilities, including children with disabilities, through their representative organizations in the development, implementation, and monitoring of European and national AI policies, including the [EU coordinated plan for AI](#) and [national strategies for AI](#).

The Regulation should explicitly note proactive measures by the EU and Member States to support AI development for the benefit of people and society, addressing needs of members of marginalised communities, including persons with disabilities. It should promote the development of AI with meaningful participation of experts with disabilities, accessibility experts, and other rights-holders, through financial and other incentives (e.g. allocating EU and State funding for projects lead by organisations of persons with disabilities or direct involvement of accessibility experts).

³ [CRPD article 4.3 – General Obligations](#)

EDF Position on the European Commission Proposal for Artificial Intelligence (AI) Regulation

Introduction

This document summarises our main recommendations to the [European Commission's Proposal for the EU Artificial Intelligence \(AI\) Regulation](#).

As signatories to the [United Nations Convention on the Rights of Persons with Disabilities \(CRPD\)](#), the European Union (EU) and all Member States are legally obliged to protect persons with disabilities from discrimination and promote their equality (Article 5). They are also obliged to ensure that persons with disabilities have access, on an equal basis with others, to information and communications technologies and systems, and other facilities and services open or provided to the public (Article 9 on accessibility). Finally, states are obliged to ensure respect for privacy of persons with disabilities (Article 22), and their rights to education (Article 24), health (Article 25), and work and employment (Article 27). Artificial Intelligence is already impacting lives of persons with disabilities in different domains, bringing potential benefits for social inclusion and independent living, but also risks such as those related to privacy and discrimination.

There are two aims which the Proposal seeks to address: to ensure trustworthy AI for people, and to promote excellence in European AI development. For AI to be trustworthy for persons with disabilities, it must be free from bias, it should not lead to discrimination or invasion of privacy, and it should not increase inequalities experienced by persons with disabilities.

In this regard, The AI Regulation proposal makes references to existing EU law as basis for safeguarding rights of individuals. However, much of the EU law the proposal refers to is insufficient to protect persons with disabilities from AI-induced harms. Particularly, for the time being the EU lacks a comprehensive non-discrimination and equality legislation beyond employment, which would protect all persons with disabilities in all areas of life in the context of AI application.⁴ The EU General Data Protection Regulation (GDPR) does not require consent before processing data of persons who are 'physically or legally incapable of giving consent' (Art. 9.2 (c) of the GDPR). This means due to prevalence of outdated and

⁴ At EU level, persons with disabilities are only protected from discrimination in employment and occupation by [Directive 2000/78/EC](#). Even in this case, not all persons with disabilities would be protected, as for example a person with disability who is also an LGBTIQ person would be protected on ground of their disability but not sexual orientation, gender identity or sex characteristics.

discriminatory guardianship laws throughout Europe, many persons with intellectual or psychosocial disabilities would not be able to object to the processing of their data by AI. EU laws on product safety were not developed with AI in mind. Lack of accessibility assurance in relevant product safety laws can lead to safety hazards for persons with disabilities. Likewise, the EU liability legal framework was not developed considering AI technologies. For individuals to identify at which point the problem occurred from the AI development to application cycle, and who is liable for issues, will be extremely difficult, if possible. Therefore, **to ensure that AI does not lead to discrimination, intrusion of privacy, and safety and liability problems, the EU AI Regulation must address these aspects directly within the Regulation text.**

AI excellence for persons with disabilities means development of AI-based solutions that can actively contribute to accessibility for and participation of persons with disabilities in society. AI technologies in fact have huge potential to improve the lives of persons with disabilities, for example by their use in assistive technologies. To ensure this, the AI Regulation must create appropriate conditions and incentives to develop 'AI for good'. One of the main pre-conditions for developing AI that will support rights of persons with disabilities is **involvement of organisations of persons with disabilities** in development and implementation of European and national AI policies, and projects aiming to develop AI-solutions for the benefit of society.

Trustworthy AI

Accessibility

One of the weak points of the EC Proposal is its lack of mandatory accessibility requirements for AI systems and practices. Namely, the proposal only suggests including it as a voluntary commitment in codes of conduct by providers of non-high-risk AI systems (recital 81, Article 69.2).⁵ Even drawing up these codes of conduct is only an encouragement and not a requirement. Suggesting accessibility as a voluntary measure by private enterprises in EU law reinforces the paternalistic approach to disability and falls short of obligations laid out in the CRPD. As State Party to the CRPD, the EU should have a rights-based approach to disability and uphold the right of persons with disabilities to equal access to emerging technologies, instead of suggesting it as an optional ad-on. Such an approach is also inconsistent with existing EU legislation in support of accessibility such as the European Accessibility Act, the Web Accessibility

⁵ environmental sustainability, stakeholders' participation in the design and development of AI systems, and diversity of development teams are also suggested only as voluntary measures.

Directive, the European Electronic Communications Code, and the Audiovisual Media Services Directive. In addition, when AI systems are procured by public bodies, they must also ensure accessibility as required by EU public procurement law.

Technological developments can bring a lot of positive change, but if the rights persons with disabilities are not considered, they will not be able to benefit from emerging technologies. Instead, they will face further and greater barriers in everyday life. In fact, this is already happening, as new technologies for [speech recognition](#), [smart assistants](#), or [crowdsourcing websites for businesses to hire remotely located "crowdworkers"](#), are not developed with persons with disabilities and their access needs in mind. Given the great diversity of persons with disabilities, AI systems should be developed with a 'design for all' approach to avoid exclusion of persons with disabilities.⁶ It is especially important that AI systems that are intended to interact with natural persons, AI subject to human oversight, and the human-machine interface tools of AI-based solutions, are accessible.

Accessibility should be required for all AI systems, irrespective of perceived or actual level of risk ('high-risk' or 'non-high-risk') because lack of accessibility can risk life and well-being of persons with disabilities. For example, if a human oversight system and interface of an AI-based self-driving car is not accessible, this can put the passenger with disability in great danger. Similar risks can occur when trying to operate home appliances through smart home and Internet of Things (IoT) technologies.

AI systems should also be accessible for experts with disabilities working on the development and application of new technologies, hence the possibility for them to be employed by AI 'providers' and 'users'. If this is not ensured, there will be breach of [Council Directive 2000/78/EC on equal treatment in employment and occupation](#), which protects persons with disabilities, among others, from discrimination in employment.

Accessibility for persons with disabilities is also mentioned in Recital 70 in relation to provision of information to individuals when AI interacts with them, generates content (e.g. deepfake videos), or it exposes them to an emotion recognition system or a biometric categorisation system.⁷

⁶ [The High-Level Expert Group on AI has noted in its 2019 Ethics Guidelines for Trustworthy AI](#) that "Accessibility to this technology for persons with disabilities, which are present in all societal groups, is of particular importance. AI systems should not have a one-size-fits-all approach and should consider Universal Design principles addressing the widest possible range of users, following relevant accessibility standards. This will enable equitable access and active participation of all people in existing and emerging computer-mediated human activities and with regard to assistive technologies."

⁷ This is not reflected in the main text of the law, namely in Article 52 - Transparency obligations for certain AI systems – which sets the requirement to provide information.

Irrespective whether or not an AI system qualifies as high-risk, AI-related information, including operation manuals, should be accessible for persons with disabilities. Even a “non-high-risk” AI system can put persons with disabilities at risk of harm if they do not have accessible information about how to abort the system in case of malfunction for example.

- **The Regulation must include horizontal and mainstreamed accessibility requirements for AI systems irrespective of level of risk, including for AI-related information and instruction manuals. These accessibility requirements should be consistent with existing EU accessibility legislation, notably with the [European Accessibility Act](#).**

Non-discrimination and equality

AI uses under Annex III

Annex III of the Proposal lists the areas which are considered high-risk in the Proposal (referred to in Article 6(2)). Such areas include real-time and post remote biometric identification of persons by entities other than law enforcement, use of AI to determine individuals’ access to education, employment, private and public service, AI use for law enforcement, migration and border control, and administration of justice. In all these areas the risk to the rights of persons with disabilities is already disproportionately high. Use of AI risks exacerbating and amplifying discrimination towards persons with disabilities in relation to accessing education, employment opportunities, essential public and private services, seeking asylum and other areas. For example, [persons with disabilities seeking asylum already face additional risks and human rights violations](#), and the potential of AI to increase them is very high as the Annex allows to use AI to assess whether a person might pose a ‘health risk’. In employment, AI-powered video-interviewing systems such as HireVue and software systems using personality tests for job placement assessment, have already been found to greatly discriminate against persons with disabilities. Allowing use of AI for job recruitment purposes, risks amplifying already [disproportionately high unemployment \(and poverty\) rates for persons with disabilities in the EU](#) and jeopardising the aim of [Council Directive 2000/78/EC on equal treatment in employment and occupation](#) protecting persons with disabilities, among others, from discrimination in employment. Given that job candidates often will not even be aware that they were subject to discriminatory algorithmic assessment, enforcing the Directive will become extremely difficult.⁸

⁸ As Whittaker, M., Alper, M., et. al. note in [Disability, Bias, and AI. AI Now Institute, Nov. 2019](#) that this is already the case in the US: “because establishing a pattern of bias

Similar AI-based discrimination can greatly reduce chances of persons with disabilities accessing academic opportunities, public support services, and private services and goods. [See more on these and other examples of discriminatory AI in Annex I of this Position Paper.](#)

As notes, the proposal allows AI systems to be used by law enforcement authorities for predicting potential criminal offences based on profiling of individuals or assessing their personality traits and characteristics or past criminal behaviour of individuals or groups (Annex III, 6(e)). By this, the proposal gives a green light to the use of AI for such discriminatory and abusive practices as racial profiling, and profiling of persons with lower socio-economic status, which will put racialised persons with disabilities, and those with lower socio-economic status, especially persons with psychosocial or intellectual disabilities, who are already [disproportionately affected by police violence](#), at greater risk.

- **The Regulation must prohibit under Article 5 several practices listed in Annex III of the current text of the proposal. Particularly, practices of biometric identification and categorisation of natural persons (point 1), AI systems determining individuals' opportunities to access education (point 3), employment (point 4), access to and enjoyment of essential private services and public services and benefits (point 5, except for 5 (c)), use of AI by law enforcement (point 6, except for (c) and (d))⁹ and for use in migration, asylum and border control management: (point 7, except for 7 (c) and (d)) should be prohibited.**

Privacy and data protection

Privacy and data protection related to health status and disability are especially sensitive for persons with disabilities. A person's disability can be detected by their use of assistive technology (e.g. screen-reader) when accessing a website. Revelation of one's disability or health status against their will is not only violation of the right to privacy of the person but can also lead to discrimination, for example from [potential employers](#)

or discrimination requires examining the system's performance across many candidates, those most likely to be harmed by such discrimination (job candidates) lack access to the information they need to bring a suit, while those who do have access (employers) have no incentive to assist. This makes enforcing antidiscrimination laws like the Americans with Disabilities Act extremely difficult in the context of workplace and hiring AI."

⁹ EU Data protection Board and Supervisor recommended forbidding use of AI by law enforcement due to their intrusiveness, inconclusiveness of scientific validity, conflict with EU values and fundamental rights. See [paragraphs 27, 33, and 34 of the joint opinion](#).

or service providers.¹⁰ It can also lead to 'algorithmic discrimination' when AI-based advertisement systems for example could avoid or target persons with disabilities.¹¹

As it was noted above, the **EU Data Protection Regulation (GDPR) does not sufficiently protect all persons with disabilities**, in that not all persons with disabilities will be able to refuse consent for processing their data. This is the case for many persons with intellectual and psychosocial disabilities who are 'legally incapable of giving consent'¹² due to prevalence of discriminatory and outdated guardianship laws which persist throughout Europe.¹³

It is already difficult for individuals to have control of their data processed by companies and public authorities. This will become even more difficult when their data is processed by machines, because it will be more difficult to know how to object to data collection or who to contact in case of a data breach. Additionally, many online services are made available to consumers only when they agree to the terms and conditions of the service, including related to data gathering. This is not a meaningful way of allowing persons to exercise control of their data. The AI Regulation should ensure that when interacting with AI-based services and applications, individuals are not forced to give up their privacy in order to benefit from a service.

It is therefore crucial that the AI Regulation fills existing legislative gaps to ensure that AI-processed data does not jeopardise the right to privacy and expose persons with disabilities to discrimination and harassment risks.

- **The AI Regulation must ensure that privacy and data protection of all persons with disabilities, including all persons with intellectual and psychosocial disabilities, including those under substituted decision-making regimes such as guardianship, are protected when their data is processed by AI systems.**
- **The Regulation must also set effective, accessible for persons with disabilities, measures for individuals to be informed when their data is being gathered and the possibility to enquire and object to processing of such data**

¹⁰ Even though gathered data through AI-based social media or search engines are anonymised, past incidents such as the [AOL search data leak](#), demonstrate that anonymising data remains a challenge.

¹¹ Researcher Sandra Wachter has warned that AI uses sensitive personal traits to target or exclude people in ads through "[discrimination by association](#)".

¹² Article 9.2 (c) of GDPR

¹³ When GDPR does legally protect individuals, violations still occur, such as in the case of a [Swedish municipality using facial recognition in schools](#).

by AI systems. When objecting to data collection by AI systems used by a service provider, individuals should still be able to benefit from that service.

Certain uses of AI, which are allowed in the text of the legal proposal, deserve special attention due to their intrusiveness against privacy and potential harm to persons with disabilities. These are remote biometric identification, biometric categorisation, and emotion recognition by AI systems.

Remote biometric identification by public and private entities

Civil society actors have strongly [warned against allowing indiscriminate or arbitrarily targeted use of biometric identification.](#)

In the current proposal, only “real-time’ remote biometric identification systems in publicly accessible spaces for the purpose of law enforcement’ is noted as a prohibited AI practice in Article 5. However, after a close look, it is clear that the practice is actually not banned but allowed under certain conditions, as the Proposal allows many loopholes for bypassing the legal restrictions. For example, law enforcement authorities are allowed to realise ‘post’ remote biometric identification. This means information can be gathered for example in a public square by CCTVs and later processed by law enforcement. When the footage is processed, it might reveal disability-related data of individuals who were recorded. Authorities are also allowed to implement ‘real-time’ remote biometric identification without court or relevant public authority permission in a “duly justified situation of urgency”. In addition, private entities, such as employers, supermarkets, private security firms, are allowed this practice. In the meantime, the EU has no effective means to prevent or stop possible abusive practices by Member States, and public and private entities.

Remote biometric identification, which goes beyond facial recognition and includes biometric features or even movements of a person, keystrokes and other biometric and behavioural signals, can expose disability and health-related information of an individual without their knowledge and consent not only in the offline but also in the online public domain. This is an extreme intrusion of privacy of persons with disabilities and can increase risk of discrimination and bias against them. Therefore, such practice by public and private entities should be banned. This view is in line with views of many civil society actors, and the [joint opinion of the Data Protection Board and Supervisor.](#)¹⁴

¹⁴ From the Opinion: “Article 5(1)(d) of the Proposal provides an extensive **list of exceptional cases** in which ‘real-time’ remote biometric identification in publicly

- **The Regulation must prohibit use of AI for remote biometric identification by public and private entities in publicly accessible spaces, including in online spaces.**

Biometric categorisation

The proposal defines biometric categorisation systems as “AI systems for the purpose of assigning natural persons to specific categories, such as sex, age, hair colour, eye colour, tattoos, ethnic origin or sexual or political orientation, on the basis of their biometric data” (Article 3(35)). The idea that a person’s sexual orientation or political views can be determined based on their biometric data is scientifically unfounded and highly problematic. The EU Fundamental Rights Agency has also warned that such practices are “[highly controversial from an ethics perspective](#).” Additionally, article 9 of the EU General Data Protection Regulation (GDPR) notes that “Processing of personal data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a natural person, data concerning health or data concerning a natural person's sex life or sexual orientation shall be prohibited.” Allowing biometric categorisation by AI systems therefore raises questions of scientific validity, ethics, and tension with existing EU data protection law, and should not be allowed.

- **The Regulation must prohibit use of biometric categorisation AI systems by public and private entities.**

Emotion recognition

[Recent research concludes that there is no scientific evidence supporting claims of AI-based emotion recognition](#),¹⁵ despite [wide use of such technologies](#). Therefore, the Regulation should not allow their use by

accessible spaces is permitted for the purpose of law enforcement. The EDPB and the EDPS consider **this approach flawed** on several aspects: First, it is unclear what should be understood as “a significant delay” and how should it be considered as a mitigating factor, taking into account that a mass identification system is able to identify thousands of individuals in only a few hours. In addition, the intrusiveness of the processing does not always depend on the identification being done in real-time or not.”

¹⁵ Feldman Barrett et. al., “Emotional Expressions Reconsidered: Challenges to Inferring Emotion From Human Facial Movements.” Write that “The available scientific evidence suggests that people do sometimes smile when happy, frown when sad, scowl when angry, and so on, as proposed by the common view, more than what would be expected by chance. Yet how people communicate anger, disgust, fear, happiness, sadness, and surprise varies substantially across cultures, situations, and even across people within a single situation. Furthermore, similar configurations of facial movements variably express instances of more than one emotion category. In fact, a given configuration of facial movements, such as a scowl, often communicates something other than an emotional state.”

public and private entities, except for research purposes, and for the purpose of use by individuals as assistive technologies. Even if AI technologies do allow at some point to correctly predict a person's emotions the practice would be very intrusive and put individuals in a very vulnerable position vis-a-vis public authorities and private enterprises. Therefore, its use should still be limited to purposes of social inclusion and research, with strong safeguards for privacy of individuals subject to emotion recognition, including informed consent and ability to object such use.

- **The Regulation must prohibit use of AI for emotion recognition by public authorities and private entities, except for certain well-specified research purposes subject to strong privacy safeguards, including informed consent and ability to object by research subjects.**

Enforcement

Feedback, complaint, redress

[The European Consumer Organisation \(BEUC\) has raised the point that the EC proposal lacks measures to protect the rights of consumers,](#) including their right to contest an algorithmic decision and obtain human oversight. There are also no remedies foreseen in case something goes wrong. Similar concerns have been expressed by [the European Digital Rights network \(EDRi\), which notes that the proposal does not outline any mechanisms by which those harmed by AI systems may seek recourse and redress from the user of AI systems.](#)

We support the call of BEUC and EDRi ensuring robust measures within the AI Regulation for individuals to flag issues and file complaints to authorised bodies and seek remedies in case of violation of their rights as individuals, including as consumers, by AI providers and users in relation to privacy, non-discrimination and accessibility. We highlight that feedback, complaints and redress mechanisms and measures must be accessible for all persons with disabilities.

- **The Regulation must ensure protection of fundamental rights of individuals within the context of AI application, including measures to flag issues, file complaints to authorised bodies, including collective complaints and complaints launched by civil society actors on behalf of individuals, and seek remedies in case of abuse.**
- **The Regulation must ensure that such measures are accessible for persons with disabilities.**

Conformity Assessment

Except for AI systems intended to be used for remote biometric identification of persons¹⁶, the proposal leaves assessment of high-risk AI systems to internal control by providers. Leaving high-risk AI to self-regulation by companies which have commercial interest in declaring AI to comply with the requirements of the Regulation is not a sufficient way of safeguarding individuals against potential harm from the application of high-risk AI. The Proposal also does not foresee conformity assessment requirements for users of AI systems, even in cases defined as high-risk (Article 29). As AI has ‘learning’ abilities and the same AI application might be used for different purposes and have different effects depending on the context of use, the same AI system may lead to different, at times harmful, outcomes for individuals.¹⁷

We agree with [BEUC’s position](#) that third party assessment should be the rule to assess the conformity of ‘high-risk AI systems’. We also support [EDRI](#) and the [European Center for Not-for-Profit Law \(ECNL\)](#) calls to mandate users to conduct and publish an ex ante human rights impact assessment before putting a high risk AI system into use. **We highlight that conformity assessments should include accessibility of AI systems and their use for persons with disabilities.** At the moment, conformity assessment procedures set in Annex VI (for internal controls) and Annex VII (for external control) of the EC Proposal, do not require assessment of accessibility of AI systems for persons with disabilities.

- **The Regulation must ensure ex ante human rights impact assessments for high-risk AI systems before putting them into use.**
- **Once accessibility requirements for AI systems are included in the Regulation, accessibility checks should be part of conformity assessments.**

Ensuring trustworthy European AI beyond the EU

The current Proposal aims to regulate all providers and users of AI which effect people within the EU. It does not matter if a provider or user is established in or outside the EU. For example, an American or Chinese AI provider or user must obey the EU AI Regulation (Article 2). The Regulation does not apply to providers and users established in the EU which will affect individuals in third countries. This is contrary to the

¹⁶ National competent authorities must designate an independent and competent notified body for assessment, which is free from conflicts of interests (Recitals 64, 65, and Article 43).

¹⁷ For example, [smart home technologies can greatly support independent living for persons with disabilities, but can also be used as domestic violence tools.](#)

objective of ‘shaping global norms and standards for trustworthy AI consistent with EU values’ as stated in the explanatory memorandum of the Proposal (page 5).

Leaving EU based AI providers and users unchecked when their outputs affect individuals in third countries, places persons with disabilities in third countries at risk of discrimination, surveillance, and abuse through technologies developed in the EU. Similar damaging examples already exist in other areas, such as [hazardous pesticides banned in the EU produced by European companies for export to third countries](#), or [technologies produced by EU companies used in destructive weapons used against civilian populations by third countries](#). It is therefore vital that EU based AI producers and users are held to the same ethical and human rights standards as those whose outputs affect persons in the EU. For example, if an EU AI provider has reason to believe that their system will be used in ways that contradict the AI Regulation or EU and international human rights frameworks, they should not sell that system to a third party outside of the EU.

- **The Regulation must ensure that AI providers and users whose outputs affect individuals outside of the European Union are subject to same requirements as those whose outputs affect persons within the Union.**

AI of excellence

AI has the potential to bring many benefits to persons with disabilities. [AI-based assistive technologies can help persons with disabilities in everyday situations by removing many accessibility barriers](#): for example, computer vision can help people who are blind better sense the visual world, speech recognition and translation technologies offer real-time captioning for people who are hard of hearing, and new robotic systems can be useful for people with mobility limitations.

But technological innovation will not inevitably lead to positive outcomes even if sufficient safeguards against harm are put in place. AI technologies are powerful tools which will not only replicate but aggravate existing patterns and practices even if they do not cause imminent visible harm to individuals and social groups. They have the potential to expand equality gaps unless technologies are developed with the objective of solving societal issues and improving wellbeing of individuals, especially those belonging to marginalised groups, instead of prioritising productivity, efficiency, and profitability outcomes. **Proactive and targeted measures need to be taken to ensure that innovation is inclusive and that new technologies are developed for people rather than for profit.**

Involvement of organisations of persons with disabilities and accessibility experts

Given the great potential impact of AI on our societies, AI development is not solely a technical process requiring involvement of data specialists and IT professionals but requires involvement of social partners, and a range of human rights defenders including representative organisations of persons with disabilities. Involvement of accessibility experts is also crucial to ensure that new technological solutions benefit all members of society, including persons with disabilities.

[FRA 2020 report on AI and fundamental rights](#) showed that there is limited knowledge among public administrators and staff of private companies about fundamental rights – other than data protection and, to some extent, non-discrimination. This confirms the need for active involvement of human rights defenders, including of persons with disabilities in deployment and monitoring of impact of AI systems.

- **EU and Member States, as obliged by article 4.3 of the CRPD¹⁸ should closely consult with and actively involve persons with disabilities, including children with disabilities, through their representative organizations in the development, implementation, and monitoring of European and national AI policies, including in relation to the EU coordinated plan for AI and national strategies for AI.**

They should also promote research and development of affordable AI technologies that will benefit persons with disabilities, as required by CRPD article 4.1(g). They can do this by:

- Promoting the use of the [European Standard EN 17161 on “Design for All - Accessibility following a Design for All approach in products, goods and services - Extending the range of users”](#)
- Allocating public funds for the development of AI aiming to solve societal issues, including:
 - Providing targeted funding for the development of AI-based assistive technologies for persons with disabilities
 - Prioritising projects which are led by organisations of persons with disabilities, or where they are main project partners
- Raising awareness among AI developers and users about human rights and equality implications of AI
- Fostering meaningful discussion and cooperation between stakeholders and rightsholders
- Building digital skills in relation to AI technologies

¹⁸ [CRPD article 4.3 – General Obligations](#)

- Creating accessible public campaigns for awareness-raising among people about their individual, consumer rights in the context of AI
- Fostering sharing and promoting of best practices of AI development and use.
- **The Regulation should explicitly note proactive measures by the EU and Member States to support AI development for the benefit of people and society, addressing needs of members of marginalised communities, including persons with disabilities.**

Involvement of persons with disabilities is also important in ensuring that algorithmic datasets represent the vast diversity of persons with disabilities. The opposite can lead to mass scale algorithmic discrimination against persons with disabilities and in some cases risk their lives. For example, if the data used to train a pedestrian recognition system in a self-driving car doesn't include representations of people using scooters or wheelchairs, it's likely that such people won't be "recognised" as pedestrians, risking the car running over the person using a wheelchair.

High quality datasets for persons with disabilities therefore mean datasets which are representative of the diversity of persons with disabilities (i.e., different types of disabilities, as well as intersection of disability with other individual characteristics such as age, gender, sexual orientation, ethnicity, etc.) and which are authentic (i.e., disability data produced through authentic disability representation).

Data generated by users simulating disabilities, for example a sighted person wearing a blindfold, is not the same as those produced representing persons with disabilities, in this case a blind person with lived experience. Disability simulated data will feed into the dataset existing prejudices and stereotypes about persons with disabilities and will surely result in discriminatory algorithmic outcomes.

For now, as mentioned earlier, stakeholder participation and diversity of AI development teams is a suggestion in the EC Proposal as a voluntary measure which non-high-risk AI developers can implement. If the EU is serious about preventing discriminatory outcomes especially in the case of high-risk AI, representation of concerned rightsholders is essential in developing AI-based solutions.

- **The EU AI Regulation should promote the development of AI with meaningful participation of experts with disabilities, accessibility experts, and other rights-holders, through financial and other incentives (e.g. allocating EU and State**

funding for projects lead by organisations of persons with disabilities or direct involvement of accessibility experts).

Annex I – Cases of discriminatory AI

As mentioned above in relation to privacy and data collection, the revelation of disability or health data can lead to discrimination by those having access to such data, but also by algorithms which could treat users differently based on inferred disability status. AI-based discriminatory outcomes against persons with disabilities are not rare, as often algorithms duplicate and aggravate biases and discrimination present in historic data. This could lead to denying persons with disabilities the same educational, work, and other opportunities or to denial of potentially life-saving medical treatment.

Below are a few examples of discriminatory AI which have occurred or can occur.

Education

"Parcoursup", an algorithmic platform introduced by the French government to select students and assign them to undergraduate courses in an equitable way, uses school records data in order to make a decision which includes the student's place of residency. The Defender of Rights of France has expressed concern about this system because Parcoursup moderates students' grades in light of how prestigious their high school is perceived to be. The [Defender has also stated that disability is inadequately addressed within the algorithm](#). This system is then even more damaging to students with disabilities who due to socio-economic or other reasons might not have access to 'prestigious' academic institutions.

Employment

In employment, [HireVue](#), an AI-powered video-interviewing system used by large firms such as Goldman Sachs and Unilever, was found to massively discriminate against many persons with disabilities who have out of the 'norm' facial expressions and voice. Among others, this affected deaf, blind and deafblind persons, as well as those with speech impairments and people who survived a stroke.

[AI systems are widely deployed in the US to use personality characteristics](#) as a signal of job success for specific kinds of roles, even though studies have shown they have no correlation with job performance. These tests tend to disproportionately screen out people with disabilities, specifically persons with psychosocial disabilities.

[AI-based application screening tools often negatively score gaps in candidates' employment](#). This can result in a lower score for a candidate with disability who might have taken a break from work due to health reasons. Gaps in employment is a proxy that also tends to discriminate against women (connected to having children), which means women with disabilities are even at greater risk of being discriminated as women and as persons with disabilities.

Persons with disabilities who have intersecting identities, for example trans* persons with disabilities, are also subject to discrimination risk even if not on the ground of disability, as in [the case of Uber suspending trans* drivers' accounts](#). The Uber security feature that required drivers to take a selfie to verify their identity. If the photo did not match to other photos on file, it was flagged, and driver's account was suspended. This type of security software can also discriminate against a person who acquired a scar due to a burn for example.

Public services

In provision of public support services, an [algorithm deployed by the Austrian Public Employment Service \(AMS\)](#), which matched potential candidates with vacancy positions, was found to score women, persons with disabilities and people aged over 30 lower. Women with children were also negatively weighted but men with children were not. This means that the system would have grave negative consequences for a mother with disability over the age of 30. Another example of algorithmic discrimination in provision of public services occurred in Estonia, which is a leading country in the EU when it comes to e-governance. Following a reform of the work ability support system in Estonia, machines and algorithms were used to automatically re-evaluate incapacity levels. Reportedly, [the incomplete data in the e-health platform, coupled with a lack of in-person interviews, resulted in loss of social benefits for some persons with disabilities and older persons with disabilities](#).

Private services

Discrimination in the provision of insurance services exacerbated by AI systems is highly probable. For example, an insurance company website can detect that the person visiting the website is using a screen reader, therefore infer that they have some type of disability. The obtained data is collected and archived for decision-making purposes. [This not only puts the individual's privacy at risk but can lead to discriminatory decisions against persons with disabilities applying for an insurance scheme, which will be very difficult to prove](#).

Healthcare

AI systems have also shown to produce biased and erroneous outputs in healthcare. For example, dermatological [diagnostic systems work poorly for people with dark skin.](#)

Employing [triage chatbots to replace non-emergency hotlines](#) by national health systems to cope with shortage of professionals and increase efficiency, rather than with the aim of improving patients' experience and wellbeing is also ripe with risks. In fact, use of AI systems risks replicating the eugenical [triage approaches to provision of healthcare during COVID-19 patients which resulted in rejecting life-saving treatment to persons with disabilities.](#)

Related Documents

1. [UN Convention on the Rights of Persons with Disabilities \(UN CRPD\)](#)
2. [Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence \(Artificial Intelligence Act\) and Amending Certain Union Legislative Acts](#)
3. [European Accessibility Act \(Directive \(EU\) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services \(Text with EEA relevance\)\)](#)
4. [EN 301 549 V3.2.1 \(2021-03\) -Accessibility requirements for ICT products and services](#)
5. [Union of Equality: Strategy for the Rights of Persons with Disabilities 2021-2030](#)
6. [Red lines for the use of Artificial Intelligence – joint open letter \(EDRi, EDF, and other partners\)](#)
7. [We need Artificial Intelligence that does not discriminate](#) – EDF feedback to public consultation on EC White Paper on AI
8. [Plug and Pray? – A disability perspective on emerging technologies](#) – EDF Report
9. [Council of Europe's Common European Framework of Reference for Languages](#)
10. [European Standard EN 17161 on "Design for All - Accessibility following a Design for All approach in products, goods and services - Extending the range of users"](#)
11. [ECNL position statement on EU AI Act](#)
12. [EDRi response to the European Commission AI adoption consultation](#)
13. [BEUC Position Paper on the EU AI Act](#)

14. [FRA 2020 report on AI and fundamental rights](#)
15. [Equinet report on regulating for an equal AI](#)

Document credits

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