

Annex I: Research methodology

OVERVIEW AND DEFINITIONS

This annex to the report '*Getting the future right: Artificial intelligence and fundamental rights*' describes the methodology used in the fieldwork research, which was based in five EU Member States. On behalf of and under the close supervision of FRA, the fieldwork was carried out by Ecorys¹ in cooperation with universities.

The methodology for the research is grounded in social science methodology and legal analysis. The data collection comprised several stages:

- desk research and preparation of country reports,
- preparation of the fieldwork,
- interviewing and fieldwork monitoring,
- reporting (transcription and preparation of interview reports),
- analysis of interviews.

Desk research mainly included mapping of data and information on the use of artificial intelligence (AI) and big data in the EU.

To provide comparative and contextual information about the policy and legal situation in the five EU Member States covered, FRA's contractor prepared **country-specific information**. This includes a description of the institutional context and policy developments relevant to AI, an overview of applicable national laws governing the use of AI in general and in selected sectors from a fundamental rights perspective, as well as possible future developments.

The fieldwork research is based on 101 semi-structured interviews. These include 91 interviews with representatives from public administration and private companies who are involved in the use of AI for their services and businesses, and 10 with experts working in the field of AI.

The **target group** of interviewees included representatives of public administration at various levels of responsibility, who are developing or using AI. For this project, AI was defined broadly with reference to the definition provided by the High-Level Expert Group on Artificial Intelligence (AI HLEG). For example, in public administration, this could be a software system that automatically allocates resources or supports the decisions of civil servants. A longer working definition of AI (including a working definition of big data) is provided below.

In addition to the interviews with businesses and public administration, ten experts were interviewed. These included two experts per country who were involved in the monitoring or observation of potential fundamental rights violations around the use of algorithms, artificial intelligence and big data, including civil society, lawyers and oversight bodies. Per country, there was one expert interviewed with experience in defending the rights of people who are subjected to artificial intelligence systems and algorithms (including, for example, disadvantaged groups), from a legal perspective, and one expert who represents a national or large regional body that is involved in oversight,

¹ www.ecorys.com/nl/netherlands

such as an ombudsperson, a data protection supervisor/commissioner, an equality body, or others and is involved in cases or complaints, or policy making in relation to AI.

***Artificial intelligence (AI)** is understood broadly as systems and applications that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals. AI-based systems can be purely software-based, acting in the virtual world (e.g. voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g. advanced robots, autonomous cars, drones or Internet of Things applications).*

Often such systems take over tasks that were previously undertaken by humans and relate to processes that were usually associated with human intelligence. The focus of the project is on applications that support decision-making based on data (e.g. through machine learning), and applications and systems that contribute to automating tasks that are usually undertaken by humans or that cannot be undertaken by humans due to their large scale. It does not involve the simple digitisation of workflows that used to be paper-based, nor does it mean the simple use of statistics to support decisions. The definition of AI strongly relates to the use of algorithms for systems based on machine and statistical learning, and the use of neural networks (such as deep learning) and other machine learning algorithms. However, the definition also includes other types of learning that are not necessarily based on supervised and unsupervised learning – for example, reinforcement learning.

Big data generally refers to technological developments related to data collection, storage, analysis and applications. It is often characterised by the increased volume, velocity and variety of data being produced, and typically refers (but is not limited) to data from the internet.

PREPARATION OF THE FIELDWORK

The preparation of the fieldwork included developing a recruitment strategy for research interviewees, preparing interview guidelines and a training manual, translating fieldwork materials, preparing data-protection documents needed for the fieldwork, and conducting a training session for interviewers.

The **recruitment strategy** for interviewees was developed to mitigate the potential risk of not finding enough interviewees, and included a description of strategies for accessing interviewees as well as strategies for ensuring the participation of interview candidates who were approached to take part. This information was included in a **training manual**, which was provided to the interviewers to ensure a harmonised approach across the five countries and to support interviewers in their efforts to recruit and interview respondents. The training manual furthermore included guidance for interviewers to prepare and conduct the interviews as well as guidance on how to report back from the interviews, including transcriptions and interview summary reports.

Interviewers for this project were experienced in carrying out interviews. In addition, they were trained in a dedicated **one-day training session** organised by FRA's contractor, Ecorys, in cooperation with FRA, which also included going through the interview guidelines and instructions for carrying out semi-structured interviews.

The **interview guidelines** can be found at the end of this document.

Interviews were carried out anonymously. As a consequence, no information identifying the organisation or interviewee concerned is provided in the report. In addition, certain details of the applications described – most notably the country – were left out to protect respondents' anonymity. This helped to increase the level of trust among respondents, allowing them to speak more freely about their work. It also proved useful for recruiting respondents. Importantly, the research did not include companies selling AI to other companies – except for two interviews – but rather those using AI to support their own operations.

RECRUITMENT OF INTERVIEWEES AND FIELDWORK OUTCOMES

Overall, **101 interviews** were carried out, including 10 expert interviews. 20 interviews were carried out in each of the five countries covered (including two expert interviews), except for Spain, where 21 interviews were conducted. Among the 91 interviews with users of AI, 44 (48 %) included representatives of public administration and 47 (52 %) people working for private companies. Among public sector interviewees, 9 interviewees (20 % of public sector interviews) were working in the area of law enforcement. Most interviewees in the private sector worked in the area of retail, marketing and pricing (14 interviews, 30 % of private sector interviews), followed by health services (10 interviews, 21 % of private sector interviews), but also included the areas of financial services, energy, insurance, and others.

Despite efforts to obtain a heterogeneous sample, only 17 % of interviewees were women (for one interviewee, the gender was not recorded). This result strongly reflects the **lack of gender diversity** of people working in the area of AI.

Almost two thirds of respondents (64 %) were aged between 30 and 50 years, and 20 % were over 50.

The interviewees included staff at different levels of responsibilities and positions to provide a variety of views. Mainly staff in management positions was interviewed (around 80 %), including top and intermediate management positions.

The average **duration of interviews** was 70 minutes, ranging from 27 minutes to 123 minutes. The fieldwork interviews were carried out between 7 November 2019 and 1 June 2020.

At the beginning of the project, the fieldwork aimed to conduct as many interviews as possible in person (**face-to-face interviews**), and allowed video or telephone interviews only in exceptional circumstances. Whilst the vast majority of interviews was conducted face-to-face up until 2 March, the measures linked to the COVID-19 pandemic beginning in March required FRA to relax this condition and continue to conduct interviews remotely. In the end, 37 interviews were carried out remotely, via video or phone call.

The fieldwork achieved a high response rate in the Netherlands, France and Estonia (ranging from 47 % to 54 %), meaning that about every second person approached could be interviewed. It proved more difficult to recruit interviewees in Finland and Spain, with response rates of 16 % and 36 % respectively. This was partly influenced by the timing of fieldwork in these countries continuing during the COVID-19 pandemic, when the response rate was lower.

INTERVIEW GUIDELINES FOR INTERVIEWS WITH PUBLIC ADMINISTRATION

The guidelines for private sector interviews were exactly the same, but contained some terminology adapted to the private sector, where appropriate.

INTERVIEW GUIDELINES

PUBLIC ADMINISTRATION

Notes: This is not a questionnaire but interview guidelines. The document includes several questions that should be addressed during the interview, but the interview should follow the pattern of a natural conversation. If the flow of the interview requires it, the interviewer can change the order of the questions. It is important that the interviewer is very familiar with the guidelines in order to cover all topics and questions included. The interview should last between 45 and 90 minutes.

INTRODUCTION BY THE INTERVIEWER

Thank you for taking the time to do the interview. I am [NAME OF INTERVIEWER] from [ORGANISATION OF INTERVIEWER]. This interview is part of a project on artificial intelligence, big data and fundamental rights commissioned by the EU Agency for Fundamental Rights. The project aims to identify to what extent the use of artificial intelligence and related technologies have a positive and negative impact on fundamental rights. The interviews aim to get a better understanding of how artificial intelligence and related technologies are currently being used or can be used in the near future by *public administration*. Your input to the project is very important, because the analysis should be based on real examples of the use of AI or related technologies, which are of relevance to public administration.

Artificial intelligence (AI) is understood broadly as systems and applications that display intelligent behaviour by analysing their environment and taking actions to achieve specific goals. For example, in public administration this could be a software system that automatically allocates resources or supports the decisions of civil servants. *[Note to interviewer: Use the longer definition from the training manual if needed.]*

The EU Agency for Fundamental Rights will use information from the interviews to produce research outputs and advise the EU institutions and Member States on questions related to AI and fundamental rights. All interviews will be anonymised in any final reporting. In participating in the interview you can find out about what questions are important in the area of artificial intelligence from a fundamental rights perspective.

All personal data collected in this interview will be treated confidentially and only anonymised information will be published. [INTERVIEWER HANDS OUT PRIVACY NOTICE]

Please let me know if you agree to the recording of this interview so that I can focus on our conversation and can write a summary afterwards.

Do you have any questions?

1. MANDATE AND AREA OF WORK

[Note to interviewer: This section includes questions about the main tasks of the interviewee's organisation, and their specific task within the organisation. It should

be kept short and serves to open the interview.]

1.1 Could you please tell me about the main activities of your organisation?

1.2 What is your role and area of work in your organisation?

2. PURPOSE AND PRACTICAL APPLICATION OF AI

[Note: This section includes questions that should serve to understand in detail what the purpose of using AI is and how AI-related technology works at the organisation.]

2.1 What type of AI technologies is your organisation using or planning to use?

[Note for interviewer: make sure that the technology is something that is considered AI for the purpose of the project. If the organisation uses AI for more than one task, please list them and select one for the interview. Please select the technology that has the greatest impact on the work of the organisation, according to the interviewee.]

2.1.1 What is the main purpose of this use of AI?

2.1.2 Which tasks are taken over or supported by the use of AI? For example, is AI helping you to take any decisions?

2.1.3 Could these tasks be completed without the use of AI? What is the benefit of using AI?

2.2 Could you describe in more detail how the system(s) works in practice?

[Note for interviewer: if the interviewee cannot explain in detail how the system (or at least the process around the system) works, this is also important to note and discuss.]

2.3 Did you build the system(s) in-house or do you rely on an external provider?

2.4 What data are used by the system, if any? Please explain, (i) what data were used to build the system, (ii) what data are fed into the system on a regular basis and (iii) what data or actions are produced by the system.

2.5 Where do the data used by the system come from?

[Note: Interviewer, please try to find out as much as possible about [i] the source of the data (e.g. purchased or collected), [ii] manipulation/recording of the data and [iii] updating of the data used.]

2.6 Who in your organisation (i) or outside your organisation (ii) is using or interacting with the system?

3. IMPACT ASSESSMENT, LEGAL FRAMEWORK AND OVERSIGHT

3.1 What sort of testing was done before the system was deployed?

[Note for interviewer: if the interviewee does not mention it, ask whether alternatives to the current system were considered when developing or procuring it.]

3.2 Are you assessing the way the system works? If yes, what does the assessment involve and how often is this done?

[Note to interviewer: If the system was developed (partially) outside of the organisation, how does this affect the assessment(s) you conduct?]

3.3 What risks have been identified when using the AI system?

- 3.4 What is the legal framework governing the use of the system/ process using AI?
- 3.5 Could you briefly mention any national or international standards that apply to the use of the technology in your sector or more generally?
- 3.6 Please describe any guidelines your organisation has developed to support staff when designing or using the system.
- 3.7 Who checks or controls the tasks that are impacted by or taken over by the AI-related technology? Could you describe any oversight bodies – either within or outside your organisation – that check the impact of the AI system?

[Note for interviewer: these could include independent oversight bodies, such as data protection authorities, ethics boards or bodies within or outside the organisation, etc.]

4. AWARENESS OF HUMAN RIGHTS AND POTENTIAL SAFEGUARDS IN PLACE

- 4.1 Are any human rights impacted by the use of AI by your organisation?

[Interviewer: Don't mention any specific rights at this stage! Only if the person indicates not knowing what human rights are, you should mention examples, such as non-discrimination and data protection.]

- 4.2 Has your organisation put in place any measures, processes or internal guidelines to protect the human rights affected by the use of your AI system?

[Interviewer: if the person does not know any, you can provide examples. For instance, limitations on the use of the system or ways to challenge results of the system.]

- 4.3 Did you assess the impact on human rights of the AI system? If yes, what has been done and what was the outcome?

- 4.4 Can the use of AI discriminate against individuals based on their gender, age, ethnic origin, sexual orientation or political opinion or any other reasons?

[Note: If the interviewee says it does not discriminate, please find out why. If the interviewee says it does, ask how]

- 4.5 Did you conduct a privacy or data protection impact assessment of the AI system? If yes, what has been done and what was the outcome?

- 4.6 Are you aware of the General Data Protection Regulation (GDPR) *[or Law Enforcement Directive in the area of law enforcement]* and its requirements when processing personal data? If yes, please explain how data protection rules influenced your organisation's use of the AI system.

- 4.7 Individuals might want to complain about a decision that has been made involving AI. Are there procedures in place for individuals to lodge a complaint with your organisation and how are those complaints handled?

- 4.8 Has your organisation received any complaints so far? If yes, what was the outcome?

- 4.9 Has your organisation taken steps to enhance transparency around the use of AI? For example, is it possible to obtain a detailed explanation of why any AI-supported decision has been taken?

5. FUTURE PLANS

- 5.1 What are the next steps for the development and implementation of AI-related technology in your organisation?
- 5.2 Do you want to add any final remarks? Is there anything else you think is important that we have not talked about that you would like to mention?

At the end of the interview, information about respondents and other interview metadata were systematically collected.

INTERVIEW GUIDELINES FOR INTERVIEWS WITH EXPERTS

INTERVIEW GUIDELINES

EXPERTS

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Artificial intelligence (AI) is understood broadly as systems and applications that display intelligent behaviour by analysing their environment and taking actions to achieve specific goals. For example, in public administration this could be a software system that automatically allocates resources or supports the decisions of civil servants. *[Note to interviewer: Use the longer definition from the training manual if needed.]*

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you can find out about what questions are important in the area of artificial intelligence from a fundamental rights perspective.

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Please let me know if you agree to the recording of this interview so that I can focus on our conversation and can write a summary afterwards.

Do you have any questions?

1. EXPERTISE AND AREA OF WORK

[Note to interviewer: The first two questions are about the main area of work, experience and expertise of the interviewee and their organisation. The first two questions should be kept short and serve to open the interview.]

- 1.1 Could you please briefly tell me about your work and your main area of expertise?
- 1.2 Could you describe the type of AI technologies that were involved in specific cases you have dealt with in your professional capacity or at your organisation?
- 1.3 Could you please describe **one example where the use of AI**, based on your own experience as [CSO/lawyer/DPA], had an impact one or several fundamental rights?

[note to interviewer: it is important to focus, to the extent possible, on one concrete use case of AI throughout the interview]

2. LEGAL FRAMEWORK AND FUNDAMENTAL RIGHTS

- 2.1 To your knowledge, **which standards** (including laws and non-binding guidelines) apply to the use of AI (with respect to the use case discussed)? *[note to interviewer: non-binding guidelines may also include standardisation schemes, such as ISO, certification schemes or codes of conduct]*
- 2.2 In your view, do these standards include provisions which sufficiently **safeguard fundamental rights when it comes to the use of AI**?
 - 2.2.1 *[Interviewer probe]* Based on your experience, what specific rights are not safeguarded sufficiently? Non-discrimination? Data protection? Access to a fair trial and effective remedy? Others?
- 2.3 Do you see any gaps in the current laws and standards covering the case you described above?
 - 2.3.1 Do you find the current laws and standards governing the use of AI to be **clear** enough?
 - 2.3.2 In your opinion, are the laws and standards related to AI systems sufficiently **adapted** to current technical developments?

[interviewer: make sure to ask about which laws and standards the interviewee is talking about]

- 2.4 What reforms (changes) would contribute to ensuring the fundamental rights compliance of AI systems (with reference to the concrete case discussed)? Or are the current laws and standards enough?

3. COMPLAINT MECHANISMS AND REMEDIES

- 3.1 How do **complaints mechanisms** work concerning the use of AI? Can you describe potential challenges for people subjected to the use of AI to file complaints and access remedies effectively?

3.1.1 [*probe: What about judicial avenues? What about non-judicial avenues?*]

3.1.2 [*probe: What about the most important challenges **preventing** people from filing their complaint and seeking effective remedies?*]

3.1.3 Do you think it is easier or more difficult to file complaints and access remedies effectively depending on whether an AI system was used by private companies as compared to public administration?

- 3.2 Could you tell me about any complaints you have dealt with or are aware of from people who felt mistreated by the use of AI? [*interviewer: you can focus on the concrete case selected above, or select a different one, if no complaint was filed with the use case selected above*]

3.2.1 Could you let us know what was the **most challenging aspect** of dealing with such complaints? Were there any specific challenges linked to the use of AI systems? [*interviewer, please probe the following: awareness of potential impact of AI use; lack of transparency of and knowledge about AI-systems; access to data/evidence; understanding of AI systems (complexity of the systems); copyright of AI systems; confidentiality/national security*]

3.2.2 (probe for lawyers or CSOs:) Have you been in contact with specific **organisations** (for example DPAs, equality bodies, National Human Rights Institutions (NHRIs), other lawyers or organisations [concrete name in country to be added by interviewer]) to support you in your claim?

3.2.3 Do you feel the remedies offered were sufficient to prevent similar misuse of AI in the future?

- 3.3 What further reforms or legal changes would make complaints mechanisms **more effective** for individuals who feel their rights have been violated by the use of AI systems?

4. OVERSIGHT

- 4.1 In your view, what is the role of national data protection authorities in protecting fundamental rights concerning the use of AI?

4.1.1 In your opinion, are Data Protection authorities **sufficiently equipped** to address AI-related challenges? If not, could you explain why? [INTERVIEWER: this could mean lack of human and financial resources, lack of expertise/

knowledge, sanction powers, or capacities to handle the number of complaints]

4.2 In your view, what is the role of equality bodies and NHRIs [concrete name of body added by interviewer in respective country] in protecting fundamental rights concerning the use of AI?

4.2.1 In your opinion, are equality bodies **sufficiently equipped** to address AI-related challenges? If not, could you explain why? [INTERVIEWER: this could mean lack of human and financial resources, lack of expertise/knowledge, sanction powers, or capacities to handle the number of complaints]

4.3 Are there any other bodies tasked with oversight in relation to the use of AI-related technologies? If yes, please describe them and their potential challenges when dealing with AI-related oversight?

4.4 In your opinion, is there a need for any additional body to oversee the use of AI by private and public sector organisations or do you think the existing authorities are sufficient? If you think there is a need for another authority, please explain why.

5. FUTURE DEVELOPMENTS

5.1 Do you think that further regulation on AI is needed? If yes, what are the most important provisions any future regulation on AI should include? If not, why not?

5.2 Do you want to add any final remarks? Is there anything else you think is important that we have not talked about that you would like to mention?

At the end of the interview, information about respondents and other interview metadata were systematically collected.

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