



Andorran Code of Ethics for Artificial Intelligence



Govern d'Andorra

Contents

I.	Introduction	3
II.	Glossary of terms	9
III.	Scope of application.....	12
IV.	Purposes and objectives	14
V.	Values and principles.....	17
	V.1. Values.....	18
	V.2. Principles	20
VI.	Trustworthy AI framework	23
	VI.1. Foundations and requirements for trustworthy AI	24
	VI.2. Methods and techniques to foster trustworthy AI	26
	VI.3. “Human Rights By Design (HRbD)” in the era of AI.....	28
VII.	Artificial Intelligence and ESG criteria.....	29
VIII.	Digital rights and neurorights	31
IX.	Generative AI(GenAI)	33
X.	Fields of action	35
	X.1. Scope of activity 1: public sector.....	36
	X.2. Scope of activity 2: private sector	39
	X.3. Scope of activity 3: citizens	42
XI.	Driving and fostering this Code	44
XII.	Annex. References (bibliography andwebography)	46

I. Introduction

Artificial intelligence (AI) is reshaping society, the economy and the way the public sector, the Government¹ and the private sector alike work, bringing with it new challenges vis-à-vis citizens' rights, not to mention opportunities to make strides when it comes to innovation, competitiveness and the common good.

All of the foregoing must be taken into account with a view to drawing up coherent and balanced strategies, to **develop and get the best out of the potential of this emerging technology without jeopardising people's rights and legitimate interests.**

This calls for a holistic and responsible approach that **builds trust when developing and using this technology (trustworthy AI approach²)** and therefore fosters the responsible and **people-centred deployment thereof** (*human-centred AI³*).

In this regard, the international community is rolling out a number of initiatives with a view to fostering the legal and ethical use of AI at comparative and regional level alike. For the purposes of this Andorran Code of Ethics for Artificial Intelligence (hereinafter, "the Code"), the following are some of the actions worth highlighting:

- a) **The United Nations Educational, Scientific and Cultural Organisation (UNESCO)⁴:** this entity has a clear line of action vis-à-vis AI, having set out the most comprehensive international framework to foster the ethical use thereof. Therefore, the Recommendation on the ethics of AI ⁵ was adopted by 193 member states at the UNESCO General Conference in November 2021 and is currently the most accepted global framework in this regard.

Furthermore, another UNESCO initiative worth highlighting is the Ethical Impact Assessment Model (EIA),⁶ that is part of a more widely implemented plan stemming from the previous recommendation and which, at the same time, complements another UNESCO tool, the Readiness Assessment Methodology (RAM).⁷ The RAM helps governments assess how robust and agile their laws, policies and institutions are vis-à-vis addressing AI risks.⁸ Secondly, the AI initiatives in the field of education and research are also noteworthy,⁹ the lines of action in the field of protecting neurorights¹⁰ and actions in the field of digital ethics and women.¹¹

- b) **The United Nations (UN):¹²** Andorra has been a full member of the United Nations since 1993. In March 2024, the UN General Assembly adopted a historic resolution to foster "safe and trustworthy" AI systems that also benefit sustainable development for all. The text was backed by more than 120 member states. The General Assembly also recognised AI systems' potential to accelerate and enable progress towards reaching the 17 Sustainable Development Goals.¹³

This resolution calls upon Member States and a range of stakeholders, including the private sector, civil society, academic and research institutions and technical communities and individuals, to name but a few, to develop, within their respective roles and responsibilities, regulatory and governance approaches and frameworks vis-à-vis safe, secure and trustworthy systems and to support them. Among others, these approaches and frameworks shall create an ecosystem to foster innovation, entrepreneurship and the dissemination of knowledge and technologies under mutually agreed conditions, pursuant to the

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effective partnerships and cooperation between governments and a range of stakeholders are of utmost importance with a view to developing these approaches and frameworks.

This Code specifically strives to foster this recommendation by offering stakeholders guidance on existing support tools to develop these trustworthy approaches and frameworks at an international level. By the same token, it is of utmost importance to be aware of the UN's guiding principles on business and human rights and to be able to comply therewith (implementation of the United Nations Framework Convention on Climate Change to "Protect, Respect and Remedy").¹⁴

- c) **The Organisation for Economic Co-operation and Development (OECD):**¹⁵ for years, this international organisation has been developing a number of AI-related strategies to ensure that this technology has the biggest benefit for society as a whole, while striving to mitigate the risks to people and their rights, as well as other potential risks thereof. To this end, the OECD backs governments and other organisations by providing information, methodologies, tools¹⁶ and other resources with a view to coming up with national trustworthy AI strategies and policies. In this field, The OECD Artificial Intelligence Policy Observatory (OECD.AI)¹⁷ brings together resources from across the OECD and its partners, while fostering debate and shared reflection by providing impact data of great relevance.¹⁸

In this regard, the Recommendation of the Council on Artificial Intelligence is worth highlighting,¹⁹ defining what AI systems are,²⁰ a definition that has been incorporated into European AI regulations,²¹ **as well as the principles**²² for the responsible management of trustworthy AI.²³ There are other key developments, for example in generative AI (GenAI),²⁴ that shall be looked at throughout this Code.

Along with these principles, specific recommendations are set out for policymakers, among which investment in AI R&D stands out; fostering a digital AI ecosystem; creating an adequate AI political environment; human capacity development, getting ready for the labour market transition²⁵ and international cooperation for trustworthy AI.²⁶

Broadly speaking, the OECD goes to great lengths to foster international cooperation for trustworthy AI (one of the key recommendations for policymakers around the afore mentioned principles) and fosters:

- Organising global and regional forums with a view to sharing AI knowledge and, in turn, best practices, while generating consensus-driven, multi-stakeholder global technical standards for AI trustworthiness and interoperability.
- Through governments, putting in place internationally comparable metrics to measure the research, development and implementation of AI, with a view to evaluating progress vis-à-vis the implementation of the afore mentioned principles.

This organisation's Catalogue of Tools and Metrics for Trustworthy AI is of great use, providing practical resources to put an AI governance framework in place.²⁷ Similarly, worth highlighting is the AI Incidents Monitor (AIM), that pinpoints patterns with a view to collectively understanding AI incidents and the nature thereof, that the OECD itself believes is a trustworthy AI tool of the utmost importance.²⁸

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- d) **The Council of Europe (COE):** the COE has also worked extensively on AI and human rights, ²⁹ and set up the Committee on Artificial Intelligence (CAI), ³⁰ taking over the work of a previous committee (CAHAI) ³¹ that is striving to develop a framework agreement with regard to developing, designing and deploying AI, ³² among other initiatives linked to regulating AI. ³³ Andorra plays an active role in the working groups involved in drawing up this framework agreement, with a view to complying therewith when the opportunity arises to do so.

Furthermore, The European Committee on Legal Co-operation (CDCJ) is working on a number of initiatives to deal with new and emerging challenges that arise in the field of public law, ³⁴ private law and the Administration of Justice, among many other lines of action and studies of interest.³⁵

Without doubt, the Council of Europe is going to great lengths to work on a wide range ³⁶ of interesting issues, looking at (privacy, justice and public administration, health and biomedicine, non-discrimination and gender equality, ³⁷ social rights, children's rights, youth, education, freedom of expression, culture, etc.).

- e) **The European Union (EU):** without prejudice to foregoing initiatives, as a region, the EU has also put in place its own AI strategy.³⁸ In 2018, the European Commission issued ethics guidelines for trustworthy AI, ³⁹ and, in April 2021, the Commission also launched its AI innovation package, including a communication on fostering a European approach to AI, a review of the Coordinated Plan on Artificial Intelligence (with EU Member States) and the proposed regulatory framework on Artificial Intelligence. This regulatory proposal (European Artificial Intelligence Regulation (AI Act)) will go on to become the world's first transversal regulatory framework, after an agreement on the content therein was reached in December 2023 ⁴⁰ and was subsequently approved by the European Parliament.⁴¹

All of the foregoing is aligned with the strategy set forth in the "European digital compass (Digital Decade)"⁴² and in the Declaration on European Digital Rights and Principles (Declaration on Digital Rights and Principles for the Digital Decade), that fosters a European values-shaped digital transition.⁴³

Furthermore, the European AI Office ⁴⁴ and the AI Innovation Package have recently been created to support start-ups and SMEs in the field of AI.⁴⁵

In any event, the EU continues to work in forums such as the G7, the OECD, the Council of Europe, the G20 ⁴⁶ and the United Nations with a view to fostering agreed standards on trustworthy AI at an international level. For example, it has supported the G7 leaders' agreement under the Hiroshima AI Process on International Guiding Principles and a Voluntary Code of Conduct for Advanced AI Systems.⁴⁷

- f) **Other international initiatives of interest:** apart from the foregoing, there are many others of significant interest in the international field ⁴⁸.

Among others, the work of the Global Partnership on Artificial Intelligence (GPAI) is worth highlighting,⁴⁹ a multi-stakeholder initiative that strives to advance AI. Similarly, the work of the World Economic Forum or Davos Forum (WEF) ⁵⁰ with regard to AI ⁵¹ is also worth mentioning.

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Furthermore, developments in the United Kingdom vis-à-vis artificial intelligence are also of interest,⁵² particularly from a regulatory point of view, focusing on innovation,⁵³ among other policy documents and guidelines.⁵⁴

Also worth highlighting are the initiatives being worked on by the United States⁵⁵ in this field such as the recent Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence.⁵⁶ In this field, the reference framework put forward by the NIST Trustworthy & Responsible AI Resource Centre, in collaboration with the American public and private sectors, also stands out as a reference AI risk control framework.⁵⁷

Within this global context, Andorra has drawn up the **Digital Transformation Programme (PdTDA)**, as part of its 2030 Strategic Digital Transformation Plan, elaborated by the Government of Andorra, whose objectives align with the 2030 European Digital Agenda objectives.

Therefore, Andorra's 2020-2030 digitalisation strategy is currently being rolled out through the four strategic axes that comprise the PdTDA for 2024-27: 1) Make headway in the digitalisation of the Public Administration; 2) Boost the digital transformation of the private business fabric; 3) Consolidate and develop current technology with a view to adopting new cutting-edge technologies, and 4) Safeguard citizen's digital rights and principles.

Within the context of these strategic axes, with a view to setting out PdTDA-centred conditions for trustworthy and sustainable digital transformation, it is of utmost importance to ensure that key emerging technologies, **such as artificial intelligence, are duly adopted develop the country from a socio-economic point of view.** In this regard, Andorra works closely with international working groups that foster trustworthy AI, such as the Council of Europe or UNESCO for example.

Furthermore, the future **Andorran Data Intelligence Agency** shall be responsible for governing and monitoring AI in Andorra, representing a key step towards achieving responsible and trustworthy Artificial Intelligence models in accordance with the PdTDA.

Consequently, with regard to the objectives set forth in the PdTDA, and with a view to shaping Andorra's future AI regulatory framework, **a code of ethics for AI is required to govern certain guidelines, recommendations and guidance on the deployment, use and due application of AI in the public sector, private sector and among the public at large.** These sectors and stakeholders also pertain to the field of education and research.

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To sum up, the Code strives to:

1. **Be used as a guide**, by setting out guidelines and recommendations, for **stakeholders and those who shall follow the Code**, with the sole purpose of providing them with the support or basic resources required to roll out and implement the models and frameworks to drive trustworthy AI throughout the entire life cycle of the corresponding AI systems.⁵⁸
2. **Set out certain conditions for future AI regulatory developments in Andorra**, based on two key aspects: a) foster legal AI, in other words, to ensure that AI systems comply with the applicable regulations in this regard (once it has been developed and published in accordance with the law), and b) foster ethical AI, vis-à-vis the principles and values associated with digital ethics, fully respecting people's fundamental rights.

Therefore, **this Code merely strives to offer guidance on fostering and guaranteeing ethical AI (fundamental rights-based approach).**

To sum up: Andorra, in line with other similar international and national initiatives, with a view to fostering trustworthy AI, as well as in accordance with the country's Digital Transformation Programme (PdTDA) objectives and strategic axes, strives to support trustworthy digital models and ecosystems, firmly committing to innovation without infringing upon the fundamental rights and freedoms of people enshrined in the Andorran Constitution and law. The Andorran Code of Ethics for Artificial Intelligence strives to support and guide the public sector, the private sector and the public alike (stakeholders and those who shall follow the Code), on the steps to take with a view to fully achieving and fostering trustworthy AI in the different fields of action in question.

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II. Glossary of terms

To acquire a better understanding, some terms set forth in this Code are defined and looked at in greater detail:

- **Artificial intelligence (AI) system:** an AI system is a machine-based system that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments. Different AI systems are designed to operate with varying in their levels of autonomy and adaptiveness after deployment.⁵⁹
- **AI System Lifecycle:** broadly speaking, refers to the following phases:
 - i) design, data and models, which is a context-dependent sequence encompassing planning and design, data collection and processing, as well as model building;
 - ii) verification and validation;
 - iii) deployment and
 - iv) operation and monitoring.
 These phases are usually iterative and are not necessarily sequential.
- **Stakeholders:** refers to all public or private organisations and individuals or citizens directly or indirectly involved or affected by AI systems in Andorra. Whether public or private, these organisations include the education and research sectors. AI stakeholders, whether in the public or private sector of Andorra, are a subset of stakeholders.
- **AI stakeholders:** those who play an active role in the life cycle of the AI system in Andorra, are involved in the public or private sector, in the Government, including organisations and people who deploy or operate AI in Andorra or applicable in Andorra.
- **Trustworthy AI:** refers to AI that respects value-based principles as set forth herein. Trustworthiness is a prerequisite for entities, organisations, individuals and societies to develop, deploy and use AI systems. If these systems – and the people behind them – are not trustworthy, unintended consequences can arise that hinder the adoption thereof, and prevent the wealth of economic and social benefits of AI systems. The trustworthiness of artificial intelligence (AI) centres around three components that need to be fulfilled throughout the entire life cycle of the system:
 - **The AI must be lawful,** ensuring that it complies with applicable laws and regulations.
 - **The AI must be ethical;** in other words, it must adhere to the applicable ethical principles and values, and must be used as a guide to be followed by the stakeholders of this Code.

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- **The AI must be robust** and ensure adequate control and mitigate any potential risks, safeguard safety and prevent harm, with a view to people and society being able to trust that AI systems will not cause them any involuntary harm and that it will not affect their fundamental rights and freedoms. In this regard, robustness refers to the ability to withstand or overcome adverse conditions, including digital security threats. AI systems must not pose unreasonable safety and/or security risks – according to the state of the art at any given time – including physical security, under normal or foreseeable conditions of use or misuse throughout the life cycle thereof.

Ensuring the trustworthiness of AI is an individual and collective responsibility assumed by all stakeholders, by AI stakeholders in particular. AI stakeholders may follow a risk management approach to identify, assess, prioritise and mitigate risks.

III.

Scope of application

Andorra's Ethics for Artificial Intelligence addresses ethical issues in the field of artificial intelligence, and is aligned with UNESCO's Recommendation on the Ethics of Artificial Intelligence; the ongoing work of the Framework Convention on the Design, Development and Use of Artificial Intelligence Systems adhering to Council of Europe standards on human rights, democracy and the rule of law, and conducive to innovation; the Recommendation of the Council of the OECD on Artificial Intelligence, and the European Commission's Ethical Guidelines for Trustworthy AI, among other texts, and relevant international documents set forth in section I herein.

In this regard, the Code is a starting point to foster trustworthy AI in all phases of the life cycle of AI systems (design, development, deployment, application or use of AI, etc.), in accordance with the different international initiatives in this regard, setting out, for this purpose, guidelines and recommendation that may evolve over time, geared towards three main areas of action in particular:

- a) The public sector.
- b) The private sector.
- c) Citizens, in general.

Consequently, this Code offers guidance to those that shall adhere thereto (stakeholders), in other words, entities with links to the public sector and the Government, the private sector and citizens. The key objective is to give these stakeholders access to information and resources of interest with a view to addressing the main implications, challenges and opportunities linked to the deployment and ethical use of AI in their respective fields of action, as well as for them to act in a respectful manner vis-à-vis the rights and legitimate interests concerned. It also strives to foster responsible research and innovation.

Stakeholders, and specifically AI stakeholders engaged in trustworthy AI, may choose to follow this Code of their own free will as a way to bring their commitment to fruition. Nevertheless, the public sector may require certain entities to adhere to the Code as part of the requirements to access or participate in certain public procurement processes, or in other types of public processes, provided that it is in accordance with the regulations applicable to Andorra in this regard.

Lastly, the guidelines and recommendations set forth herein **shall not replace any current or future policies or regulations in Andorra, nor shall they prevent the development or future approval thereof.** Furthermore, this Code must be seen **as a living and continuously evolving document, to be reviewed and updated when necessary or deemed appropriate,** specifically to guarantee the consistency thereof with any regulations that may come into force, with evolutions in technology, the social and economic environment or the development of international cooperation and existing agreements in this field.

To sum up: this Code offers guidance to those that shall comply therewith (stakeholders), in other words, organisations with links to the public sector, the private sector and citizens. The key objective is to provide these stakeholders with access to information and resources of interest with a view to addressing the main implications, challenges and opportunities linked to the deployment and ethical use of AI in their respective fields of action, as well as to act in a respectful manner vis-à-vis the rights and legitimate interests concerned. It also strives to foster responsible research and innovation.

IV. | Purposes and objectives

By way of example and without limitation, the following are at the heart of this Code:

- Foster digital transformation and responsible and trustworthy technology, pursuant to legal and ethical design parameters of initiatives, projects, services and products of all kind in the digital environment.
- Foster the common good and public interest.
- At the heart thereof, to protect and defend human dignity, autonomy, as well as people's basic human rights.
- Support digital rights, in particular with regard to algorithmic transparency and the risk of exclusion and the digital divide, while fostering equality and avoiding situations arising from the algorithmic divide.
- Respond to the specific needs of vulnerable people and groups, such as minors, young people, the elderly and people with disabilities, among other possible collectives.
- Take into account situations characterised by power asymmetries or unbalanced relationships.
- Broadly speaking, to prevent risks, threats and harm from AI systems fostering robustness and security.
- Raise awareness of AI and deliver training to boost digital AI-related skills.
- Ensure that the possible deployment of public action through AI systems adheres to transparent and ethical criteria.
- Foster free enterprise and digital ethics in the private sector.
- Support start-ups and SMEs in the field of artificial intelligence.
- Foster responsible innovation and research.
- Broadly speaking, strive to take a diverse, inclusive and sustainable approach.

Therefore, the primary purposes and objectives of the Code are as follows:

Objectives and purposes
People-centred deployment, development and use of AI systems.
Foster and respect human rights and fundamental freedoms.
Assist the private sector to deploy trustworthy AI policies in accordance with digital ethics criteria.
For the public sector to guarantee that responsible, transparent and ethical AI standards are fostered and applied.
Support start-ups and SMEs in the field of artificial intelligence.
Raise awareness, provide information and educate on the risks, challenges and opportunities that AI provides.
Foster responsible innovation and research in the field of AI.
Foster environmental protection, sustainability and achieving ESG indicators.
Foster the use of AI systems for peaceful purposes.
Ensure socio-economic development and the common good with the support of trustworthy AI systems.

To sum up: this Code, in line with other international positions, fosters specific objectives and goals, including people-centred development, deployment and use of AI systems, while protecting fundamental rights and freedoms, without jeopardising business innovation and competitiveness. It is of utmost importance to safeguard the rights of society's most vulnerable groups, such as minors, young people, the elderly and people with disabilities.

Among other aspects, fostering artificial intelligence literacy while bridging the digital divide with sustainability in mind are also key objectives in Andorra.

V. Values and principles

V.1. Values

V.2. Principles

This Code is based on specific values and addresses principles such as fostering trustworthy AI strategies among AI stakeholders in the public and private sectors alike.

V.1. Values

Artificial intelligence must be deployed **as a tool to benefit people and society, with a duty to safeguard well-being and sustainability**. Therefore, it is of utmost importance to call on these values with regard to AI systems. It will come as no surprise that these values are inherent to the same democratic values and to the legal system in force in Andorra, and are summed up in the following points:

- a) **Come up with a people-centred digital transformation strategy:** AI systems must be people-centred, so that stakeholders firmly undertake to use this technology for their own good and for the good of humanity, to achieve their goals, fostering solidarity and, broadly speaking, the common good, making sure nobody is left behind. This calls for getting the most out of the benefits and opportunities of AI systems for society and individuals with a view to the full digital inclusion thereof, ensuring that security and fundamental rights are protected to the highest possible standard.
- b) **Foster the legal and ethical design of AI projects, initiatives, products and services:** criteria that, broadly speaking, take into account the legal and ethical design must be followed from the outset and throughout every stage of developing an AI-based public or private project, initiative, product or service, adhering to the principle of Human Rights by Design (HRbD).
- c) **Follow a responsible and diligent strategy:** that fosters and guarantees responsible and diligent strategies and actions taken by all public and private stakeholders throughout the lifecycle of AI systems.
- d) **Respect, protect and foster dignity, human rights and fundamental freedoms:** Respecting, protecting and fostering human dignity and internationally recognised fundamental rights and freedoms⁶⁰ must be taken into account throughout the entire life cycle of AI systems, with particular emphasis on the rights of particularly vulnerable groups or individuals. Human dignity is the belief in the intrinsic and equal value of every human being, tied solely to their humanity.⁶¹ Likewise, AI systems must be able to assist and help human beings at all times, empower them and help them unleash their capabilities, while respecting their autonomy to ensure that people working with AI systems always maintain full and effective self-determination.
- e) **Safeguard diversity and inclusion:** protecting and fostering diversity and inclusion throughout the life cycle of AI systems is of utmost importance, pursuant to applicable international and national law. To this end, everyone should be encouraged to actively participate, regardless of their personal condition, paying special attention to including particularly vulnerable people or groups, such as people with disabilities.
- f) **Raise awareness, the right to education and the promotion of digital skills:**⁶² each and every human being has the right to information and education, even more so when it is of utmost importance to ensure the full development of their dignity and personality, or when it is important to strengthen respect for their fundamental rights and freedoms. For this reason, the stakeholders that shall comply with this Code must foster these rights⁶³ as much as possible. Particular focus must be given to digital AI literacy for children and young people, as well as other vulnerable groups.

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- g) Prevent any type of harm, manipulation or subjugation, whether physical, mental, financial, social, political or cultural, to a human being:** every individual has the right to life, to freedom, including freedom of thought, conscience and opinion and expression, and to their physical and mental integrity.⁶⁴ No human being or human community should suffer this kind of harm, manipulation or subjugation throughout the life cycle of an AI system. On the contrary, AI systems have a duty to protect and improve the quality of life of human beings, which calls for designing, developing and deploying this technology in an ethical and responsible manner from the outset, preventing, avoiding and controlling, at all times, potential fundamental rights-related risks; for example, by conducting prior analysis and impact assessments of these rights before developing, deploying or using AI systems.
- h) Through AI, facilitate and enhance new resources and tools to defend and exercise human rights, not to infringe upon them:** AI can be used to foster dignity and equality, not to mention other fundamental rights and freedoms, using AI systems to improve the respect thereof and observance therewith on different levels.
- i) Encourage the peaceful and fair application and use of AI:** AI systems must foster peaceful and fair societies, in a way that benefits everyone, making it compatible with human rights and fundamental freedoms and, broadly speaking, social well-being and the common good. AI systems must not divide and pit people or the communities or groups they belong to against each other, and must strive to avoid jeopardising coexistence between human beings and their interconnection with the natural environment and other living beings. On the other hand, they must be able to foster world peace and harmony.
- j) Foster sustainability and environmental protection:** sustainability must be fostered and the environment and ecosystems must be protected throughout the life cycle of AI systems and, by way of example and with this objective in mind, the corresponding environmental impact assessments must be drawn up. The stakeholders involved in the life cycle of AI systems must respect international law and applicable national regulations, as well as globally recognised best practices, such as the UN's 17 Sustainable Development Goals (SDGs)⁶⁵ or the Davos Forum ESG criteria or indicators.⁶⁶

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V.2. Principles

Digital transformation and emerging technology such as AI come with a wealth of opportunities for society, individuals and businesses alike; however, in order to be consistent with certain values fostered in Andorra, as reflected in legislation currently in force, they must also be based on sound ethical principles with a view to better protecting people and their fundamental rights.

AI must foster a better quality of life, economic growth and sustainability. To sum up, AI must respect and safeguard human rights and fundamental freedoms, not to mention Andorra's social, economic and environmental objectives.

Therefore, at all times AI must be fair, transparent, **explicable, accountable and non-discriminatory, and must safeguard the dignity, autonomy and these fundamental rights and freedoms, as well as the safety of individuals. AI must also be accessible, inclusive and diverse, and empower individuals and civil society alike.**

For this reason, Andorra fosters the following principles with regard to trustworthy AI:

- a) **Inclusive and sustainable development with the well-being of people and society in mind:** throughout their life cycle, these AI systems must be capable of assisting and helping human beings by empowering them and fostering, at all times, inclusive and sustainable development in a way that benefits people and society alike. Similarly, according to UNESCO, the continuous assessment of the human, social, cultural, economic and environmental impacts of AI technologies should be carried out with full cognizance of the repercussions of these technologies with regard to sustainability as a set of constantly evolving goals across a range of dimensions, as currently set out in the United Nations Sustainable Development Goals (SDGs).
- b) **Human-centred approach to AI and equity:** the rule of law, human rights and democratic values must be respected throughout the life cycle of the AI system, putting people at the heart thereof at all times, while ensuring that these systems are used fairly and in the right manner. Those who shall adhere to this Code should do their utmost to minimise discrimination or bias (algorithmic bias), and to avoid strengthening or prolonging them throughout the life cycle of AI systems, with a view to ensuring the fairness of such systems. Particular attention should also be paid to situations in which AI systems may have adverse effects (or may aggravate existing ones) due to power or information asymmetries inherent to certain relationships or situations.
- c) **Principle of lawful and ethical design from the outset of AI initiatives, projects, services and products (HRbD):** this Code fosters the application and development of this principle, which is recognised internationally by the Council of Europe, among other international organisations and states. This principle strives to guarantee, from the very design and planning of AI-based projects, services and products, to fully protect human rights henceforth.

- d) Proportionality and harmlessness of AI:** AI must be proportional and must not go above and beyond what is strictly necessary to achieve the legitimate purpose or objectives pursued, and must be appropriate for the context. AI must avoid or prevent harming people, their rights, safety or the environment, and must implement risk assessment tools and relevant safeguarding measures.

Therefore, the decision on whether or not to use AI systems must be accompanied by the corresponding documented necessity and proportionality analysis, and must prove that the AI system in question is an appropriate and proportional technique or method to achieve one or more legitimate objectives that have been identified and set out beforehand, without infringing upon fundamental human rights or freedoms. Necessity is a precondition for proportionality and the afore mentioned necessity and proportionality analysis must be maintained throughout the entire life cycle of the AI system. An assessment of the proportionality of an AI system calls for assessing what measures and safeguards are necessary in equal measure in such cases.

- e) Robustness, safety and damage prevention:** AI must be trustworthy and robust. It must also meet quality, safety and efficiency standards throughout the entire life cycle of the AI system in question. Likewise, AI must be subject to appropriate human oversight and allow for human intervention and rectification whenever required. Furthermore, AI must prevent and mitigate the risks of damage or errors, and be capable of withstanding cyber threats and malicious attacks.
- f) Transparency and explainability:** more transparency in turn leads to creating more peaceful, fair, democratic and inclusive societies, that requires fostering a general understanding of AI systems, while raising awareness and informing stakeholders as to their interactions with AI systems, to ensure that those affected by an AI system understand that they are interacting with such systems and how these systems work, and, in short, to be able to understand the outcome and to be in a position to question, in accordance with the applicable law, certain automated decisions that affect them or that may affect them significantly or negatively and/or work against them. Furthermore, transparency and accountability are closely linked to responsibility and accountability, not to mention the trustworthiness of AI systems.
- g) AI risk management and traceability:** the traceability and risk management of AI systems must be ensured, vis-à-vis data sets and the quality thereof, processes and decisions taken during the entire life cycle of the AI system, to prevent harm and to allow the results to be analysed and decisions to be taken at any given time, so that the possible negative impacts of AI on people, society and the environment can be assessed and dealt with.
- h) Right to privacy and data protection:** due to the special implications thereof, attention must be paid to the risks associated with privacy and personal data protection,⁶⁷ as they are fundamental rights when it comes to protecting people's dignity, autonomy and capacity to take action. It is of utmost importance for personal data processed by AI systems to be collected, used, shared, filed and deleted in a manner consistent with applicable law and, where applicable, the guidelines and recommendations issued by the competent supervisory authorities in the interpretation of this law. In many cases it may be mandatory or advisable to conduct data protection impact assessments vis-à-vis the AI systems to be developed or deployed, as the case may be.

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- i) **Human oversight and decision-making:** this entails ensuring human oversight and control over the work processes of AI systems. An AI system can never replace the ultimate responsibility and accountability assumed by human beings, which is why it must be ensured at all times that the ethical or legal responsibility associated with an AI system can be attributed to a human being, at any stage of the life cycle of an AI system.
- j) **Responsibility:** the correct functioning of the AI systems and respect for the principles set forth herein must be guaranteed, depending on the context and in accordance with the state of the art at any given time. Therefore, stakeholders and those who shall comply with this Code must be able to demonstrate their accountability through transparent and auditable actions and processes.

To sum up: the Code fosters key principles recognised on an international level with regard to trustworthy AI, that can be summed up as follows:

- Inclusive and sustainable development for the well-being of people and society alike.
- People- and equity-centred AI.
- Principle of legal and ethical design right from the outset of AI initiatives, projects, services and products (HRbD).
- Proportionality and harmlessness of AI.
- Robustness, safety and damage prevention.
- Transparency and explainability.
- AI traceability and risk management.
- Right to privacy and data protection.
- Human oversight and decision-making.
- Responsibility.

VI. Trustworthy Artificial Intelligence framework

VI.1. Foundations and requirements for trustworthy AI

VI.2. Methods and techniques to foster trustworthy AI

VI.3. “Human Rights By Design (HRbD)” in the era of AI

This Code does not set out any reference framework to foster trustworthy AI; however, it does highlight herein the international principles currently in force and in the final references of the document itself, to be used as a guide for stakeholders in this field. While executing this Code, the Government of Andorra may foster, together with the stakeholders, reference frameworks for keeping on top of AI risks and building trust in this regard, taking into account, if necessary, the existing international reference frameworks.

Stakeholders are free to decide which reference frameworks best suit them and their needs to foster trustworthy AI, and may make use of the international reference frameworks mentioned herein. The international standard ISO/IEC23053:2022 is worth highlighting, A framework for artificial intelligence (AI) systems using machine learning (ML),⁶⁸ which may be useful to stakeholders as a comparative reference framework to keep AI risks under control.

Without prejudice to the foregoing, this section sets out a number of general recommendations on the fundamentals, requirements, methods and techniques set forth in international documents and positions in this regard.

VI.1. Foundations and requirements for trustworthy AI

Trust is a key factor in ensuring that AI can develop in a coherent manner.

To build trust and, at the heart of **trustworthy AI**, **AI systems must respect certain values and ethical principles, and comply with applicable law.**

Furthermore, **AI systems must be technically robust and trustworthy**, with a view to operating safely and predictably in a wide range of conditions and scenarios. Similarly, AI systems must be **transparent and explainable** (without infringing upon other possible rights or legitimate interests, such as freedom of enterprise or trade secrets, etc.), so people can understand how they work, their capabilities and limitations, as well as the possible risks and impacts associated therewith. Lastly, **AI systems must be trustworthy and auditable**, so that the responsibilities of all stakeholders involved in their life cycle can be identified and attributed, and, if need be, corrective or compensatory measures can be taken.

These **foundations of trustworthy AI** are based on **recognising human dignity, autonomy, equality, justice, solidarity, democracy, the rule of law and respect for human rights.**⁶⁹

Similarly, the **requirements of trustworthy AI can be split into seven categories**, containing the values and ethical principles set forth herein. These requirements are as follows:

- **Human action and oversight:** AI systems must be designed in a way that allows humans to effectively oversee them, in a manner that respects human dignity, autonomy and self-control. This calls for designing, developing and deploying AI systems in a way that is conducive to human interaction, participation, intervention and protection at all times.
- **Technical robustness and security:** AI systems must be technically robust and trustworthy, so that they can operate safely and predictably under a range of conditions and in different situations. This implies that AI systems must be resistant to attacks, errors and anomalies, and

1-83: See Annex I of this document for references (bibliography and webography).

must have built-in mechanisms to prevent, detect and correct errors, as well as for recovery and continuity purposes in the event of an emergency.

- **Data protection management:**⁷⁰ AI systems must guarantee the privacy and data protection of the people and organisations involved or affected by these systems, in accordance with the law. This implies that AI systems must ensure the key principles of processing, quality, integrity, legality and traceability of the data used. They must prevent the undue or unauthorised identification of individuals, minimise data usage and guarantee the concurrence of sufficient legal conditions to process the personal data used throughout the life cycle thereof.⁷¹
- **Transparency:** AI systems must be transparent and explainable, so people can understand how they work, their capabilities and limitations, as well as any potential risks and impacts associated therewith. This implies that AI systems must provide clear and accessible information on their objectives, methods, components, data sources, results, uncertainties and biases, not to mention providing mechanisms on explaining and understanding their decisions and actions.
- **Diversity, non-discrimination and equality:** AI systems must respect diversity, non-discrimination and equality, so as not to disadvantage or exclude any group or individual on unfair or arbitrary grounds, while fostering inclusion and participation. This implies that AI systems must avoid and correct any bias, prejudice or stereotypes that could have a negative effect on equal opportunities, treatment and outcomes, while fostering plurality, tolerance and mutual respect.
- **Social and environmental well-being:** AI systems must do their bit for environmental and social well-being, with a view to improving quality of life, sustainable development and respect for ecosystems and natural resources. This implies that AI systems must strive to minimise their environmental impact, vis-à-vis energy and consumption of raw materials, waste and generation of emissions alike. They must also foster the efficient and responsible use of resources, prevent and mitigate environmental risks as well as protect and restore biodiversity.
- **Accountability:** AI systems must be accountable and auditable, so that the responsibilities of all stakeholders involved in their life cycle can be identified, with a view to taking corrective or compensatory measures if need be. This implies that AI systems must be subject to adequate supervision and quality control, and that complaint, recourse and redress mechanisms must be put in place for individuals or organisations affected by their decisions or actions.

These requirements are neither exhaustive nor immutable, but can be adapted or extended depending on the context, purpose and impact of each and every AI system. Similarly, these requirements are neither independent nor hierarchical; they are interrelated and may conflict with one another in certain situations. Therefore, each specific case must be meticulously analysed and assessed, taking into account the ethical principles, values, rights and interests at stake, as well as any possible consequences and alternatives available.

1-83: See Annex I of this document for references (bibliography and webography).

In any case, with a view to ensuring that these requirements are met, technical and non-technical methods are recommended that help, in accordance with the state of the art and technology at any given time, to evaluate the AI systems and continuously foster compliance with these requirements.

To sum up: by calling on the values and principles set forth herein, **it is of utmost importance to lay the foundations and requirements to develop trustworthy AI frameworks. At the heart of trustworthy AI**, AI systems must respect certain values and ethical principles, and comply with applicable law. They also need to be transparent and explainable, as well as accountable and auditable. The main requirements are those vis-à-vis human action and oversight; technical robustness and safety; privacy and data management; transparency; diversity, non-discrimination and equity; social and environmental well-being; and accountability.

VI.2. Methods and techniques to foster trustworthy AI

With a view to ensuring that the foregoing requirements are met, it is of utmost importance to have appropriate technical and non-technical methods to foster trustworthy AI.

The following are among the technical methods that can play their part in creating trustworthy AI systems:

- The use of quality, representative, diverse and relevant data that reflects the characteristics and needs of end-users while preventing bias or undue discrimination.
- The application of software engineering techniques, such as code review, automated testing, debugging, monitoring and auditing, with a view to detecting and correcting errors, vulnerabilities or anomalies in the operation of the AI system in question.
- Incorporate explanation, interpretation or justification mechanisms that make it easier to understand the functioning, results or effects of the AI system, from a technical and human point of view (explainability).
- Implement privacy and data protection measures, including measures vis-à-vis the security of personal information, starting with the design of the AI system, with a view to safeguarding the confidentiality, integrity and availability of the information processed by the AI system, as well as any other applicable legal principles and obligations, in accordance with Andorra's personal data protection regulations.⁷²
- Integrate accessibility, usability and inclusive design criteria with a view to ensuring that the AI system is easy to use, adapts to users' abilities and needs and does not unlawfully exclude or discriminate.
- Adopt recognised technical standards,⁷³ standards or best practices that guide the development, deployment or use of the AI system in accordance with quality, effectiveness, efficiency and accountability criteria.

Among others, the following include the non-technical methods that can support the development, deployment or use of trustworthy AI systems:

1-83: See Annex I of this document for references (bibliography and webography).

- Conduct impact assessments that analyse the potential risks, benefits and consequences of the implementation of the AI system vis-à-vis the rights, values and interests of individuals and society.
- Set objectives, requirements and success criteria that set out the goals, expectations and conditions to be met by the AI system with a view to responding to users' needs and solving their problems.
- Assign roles and responsibilities that set out the functions, obligations of the different stakeholders involved in the life cycle of the AI system, as well as the accountability and repair mechanisms should damage or harm be caused.
- Participation and involvement of stakeholders with a view to fostering consultation and collaboration between developers, suppliers, users and those affected by the AI system, as well as representing the diversity and plurality of society.
- Education and training that fosters the development of AI-related competences and skills of a technical, ethical, social and human nature, among professionals, users and the public at large.
- Communication and dissemination with a view to facilitating the exchange of information, knowledge and experiences about the AI system, its objectives, how it works, results and effects thereof, in a transparent, clear and accessible manner.
- Conduct audits and compliance tests together with time verification methods capable of detecting any anomaly or situation that needs correcting vis-à-vis the AI system at any stage of its life cycle.

To sum up, assessing the trustworthiness of AI in developing, deploying and using AI systems throughout their life cycle is of utmost importance. The objective is to follow a risk-based approach and to identify and apply the most appropriate measures or requirements on a case-by-case basis, taking into account and involving the parties concerned in the process at all times.

To sum up: with a view to ensuring that the foregoing requirements are met, it is of utmost importance to have appropriate technical and non-technical methods to foster trustworthy AI.

There is no exhaustive catalogue setting out these methods or mechanisms, and the most appropriate ones can be applied to this end. Nevertheless, this Code offers a non-exhaustive catalogue of the primary technical and non-technical methods that should be implemented.

Depending on how the technique and the state of the art evolves, new standards, best practices or regulations may emerge that foster trustworthy AI, so it is advisable to explore, update and periodically review the methods and mechanisms applied in this regard, with a view to adopting the most appropriate ones depending on the AI system in question.

VI.3. “Human Rights By Design (HRbD)” in the era of AI

This Code is based on an approach to AI ethics pursuant to fundamental rights enshrined in the Constitution and legislation of Andorra⁷⁴ and in the applicable international human rights law. In this regard, international human rights law and, in particular, the European Convention on Human Rights are binding on Andorra.⁷⁵

Accordingly, respect for fundamental rights, within a framework of democracy and rule of law as fostered in Andorra, provides the soundest basis to identify the values and ethical principles that can be put into practice within the context of AI. It is for this reason that identifying these values and ethical principles set forth herein are based thereon and responds thereto.

In this regard, fundamental rights are therefore the primary component of trustworthy AI (lawful AI), guaranteeing compliance with the law in force in Andorra.

Therefore, as a general principle, the principle of legal and ethical design of any initiative, project, product or service in the digital environment must be fostered, in particular vis-à-vis emerging technologies such as artificial intelligence.

This general principle refers to the “Human Rights by Design (HRbD)”⁷⁶ principle recognised by international organisations such as the Council of Europe.

With a view to looking into the potential negative impact of AI systems on human beings, it is highly advisable to conduct a human rights impact assessment (HRIA)⁷⁷ vis-à-vis the AI systems that are to be developed, deployed or implemented by the stakeholders and those who shall comply with this Code. When conducting this HRIA, the potential impact that may occur during the entire life cycle of the AI system in question should be taken into account.

To sum up: with a view to addressing fundamental rights and freedoms in a coherent manner, the starting point should be the “Human Rights by Design (HRbD)” principle, so that, as a general principle, the principle of legal and ethical design of any initiative, project, product or service within the digital environment should be fostered, in particular when using emerging technologies such as artificial intelligence.

With a view to looking into the potential negative impact of AI systems on human beings, it is highly advisable to conduct a human rights impact assessment (HRIA) vis-à-vis the AI systems that are to be developed, deployed or implemented by the stakeholders and those who shall adhere to this Code.

1-83: See Annex I of this document for references (bibliography and webography).

VII. Artificial Intelligence and ESG criteria

Artificial intelligence (AI) has the potential to contribute to the Environmental, Social and Governance (ESG) sustainability of ⁷⁸ organisations, by coming up with innovative solutions to global challenges such as climate change, poverty and inequality.

However, AI also poses ethical risks and dilemmas, which must be addressed in a responsible and transparent manner. For example, intensive use of data and IT resources can lead to soaring levels of energy and water consumption, not to mention leaving a larger carbon footprint. Furthermore, AI can infringe upon people's human rights, privacy, security, inclusion and non-discrimination, depending on how it is designed, developed and deployed.

For this reason, an ethical and human rights-based approach must be adopted vis-à-vis developing and using AI, taking into account ESG criteria and the principles of trust, social benefit, justice and accountability. This is recommended by international bodies such as the OECD, the Council of Europe or the European Union, that have drawn up regulatory frameworks and practical guidelines to foster people-centred AI that is aligned with democratic values.

These initiatives strive to ensure that AI respects human rights, fosters social well-being and protects the environment, while driving innovation and economic growth.

To name but a few, the following are just some of the benefits of AI vis-à-vis adhering to ESG indicators and metrics:

- AI can play its part in optimising the use of natural resources while cutting down on the environmental impact of human activities by analysing data, predicting situations, automating processes and coming up with efficient solutions. For example, AI can do its bit to improve water management, precision agriculture, renewable energy production, smart transport or the circular economy.
- AI can foster social development and inclusion by making it easier to access education, health, culture, information and public services, in particular for vulnerable or marginalised groups. AI can also boost citizen participation, transparency and accountability, by fostering communication, collaboration and co-creation between social stakeholders.
- AI can drive innovation and competitiveness, by coming up with new products, services, business models and employment opportunities that respond to society's needs and expectations. Furthermore, AI can improve the quality, productivity, effectiveness and efficiency of organisations by providing support tools that can be used in decision-making, learning and continuous improvement.

To sum up: artificial intelligence (AI) has the potential to contribute to the environmental, social and governance (ESG) sustainability of organisations, by coming up with innovative solutions to global challenges such as climate change, poverty and inequality.

However, AI also poses risks and problems that affect a number of ESG criteria and indicators, that need to be taken into account in AI-based projects and initiatives.

For example, intensive use of data and IT resources can lead to soaring levels of energy and water consumption, not to mention leaving a larger carbon footprint. Furthermore, AI can have a significant impact on human rights, privacy, security, inclusion and non-discrimination, depending on how it is designed, developed and implemented, while also going against ESG indicators and metrics.

1-83: See Annex I of this document for references (bibliography and webography).

VIII. | Digital rights and neurorights

It is becoming increasingly important to protect and fully safeguard the fundamental rights and freedoms of people in the digital environment. In Andorra, fostering and drawing up a revamped comprehensive digital rights protection framework is one of the key priorities, which is also being seen all over the world.

Within digital rights, attention must be paid to digital rights in the field of AI and, in particular, on protecting the right to mental privacy, among other rights that are of particular relevance in this field. Protecting neurorights should also be taken into account.

Neurorights could be defined as ethical, legal, social or natural principles of freedom or entitlement related to a person's cerebral and mental domain, which strive to protect the integrity, freedom, privacy and identity of people against possible threats arising from the use of neuroscientific technologies and AI. These rights stem from recognising that the brain is the source of consciousness, personality, thought, memory, emotion and human behaviour, and that any alteration or manipulation thereof may affect people's dignity and autonomy, not to mention their fundamental rights.

UNESCO, the United Nations organisation entrusted with fostering education, science, culture and communication for sustainable human development, has shown great concern about the ethical, social and legal implications of neuroscientific and artificial intelligence ⁷⁹ that can affect the human brain and its cognitive, affective and social capacities.

In this regard, UNESCO has started working with experts, representatives of civil society, governments and international organisations, to draw up a recommendation on the ethics of AI that includes neurorights-related aspects.

This recommendation will be the first international normative instrument to address the principles and ethical values to guide the development and use of AI, to be used as a reference framework for cooperation and global action in this field.

The stakeholders and addressees of this Code shall pay particular attention to the digital dimension of fundamental rights and freedoms (digital rights and neurorights), in particular vis-à-vis developing, using and deploying intellectual AI systems.

To sum up: artificial intelligence (AI) has the potential to contribute to the environmental, social and governance (ESG) sustainability of organisations, by coming up with innovative solutions to global challenges such as climate change, poverty and inequality.

However, AI also poses risks and problems that affect a number of ESG criteria and indicators, that need to be taken into account in AI-based projects and initiatives.

For example, intensive use of data and IT resources can lead to soaring levels of energy and water consumption, not to mention leaving a larger carbon footprint. Furthermore, AI can have a significant impact on human rights, privacy, security, inclusion and non-discrimination, depending on how it is designed, developed and implemented, while also going against ESG indicators and metrics.

1-83: See Annex I of this document for references (bibliography and webography).

IX. | Generative AI (GenAI)⁸⁰

1-83: See Annex I of this document for references (bibliography andwebography).

Generative AI comes with a wealth of opportunities for innovation, creativity, education and social well-being, however, it also poses significant ethical and legal challenges. Other challenges and risks include the risk of creating false, misleading or harmful content and disinformation potentially being disseminated, as well as implications vis-à-vis copyright, privacy, security and democratic governance, to name but a few.

It is therefore of utmost importance to draw up and implement principles and best practices with a view to ensuring that Generative AI is used responsibly in a manner that respects human rights, not to mention other principles and legitimate interests.

In accordance with the OECD Principles on Artificial Intelligence, below are some guidelines to help creators and users of generative AI get the most out of it while minimising the risks thereof as much as possible:

- Foster the design and development of generative AI systems that are robust, secure, trustworthy, explainable and auditable, while respecting the most stringent technical and ethical standards.
- Before being deployed, ensure that generative AI systems undergo quality control and an impact assessment, in particular vis-à-vis fundamental rights. Furthermore, they need to be regularly monitored and updated with a view to identifying and correcting any incidents or risks that needs to be mitigated.
- Put in place the appropriate measures to protect the privacy, security and intellectual property rights of all stakeholders, guaranteeing the traceability of the data and sources used to create content from these foundation and generative models.
- Set out transparency, traceability and accountability mechanisms vis-à-vis AI-generated content, while making it easier to verify, attribute and correct information when need be.
- Respect the dignity, autonomy and human rights of those affected by AI-generated content, preventing the dissemination of false, offensive, discriminatory or harmful content.
- Foster the ethical and beneficial use of generative AI for people and society alike, supporting diversity, inclusion and equity, with a particular focus on respecting for culture, art, education and scientific activities.

To sum up: generative AI comes with a wealth of opportunities for innovation, creativity, education and social well-being, however, it also poses significant ethical and legal challenges. Other challenges and risks include the risk of creating false, misleading or harmful content and disinformation potentially being disseminated, as well as implications in terms of copyright, privacy, security and democratic governance, to name but a few.

It is therefore of utmost importance to draw up and implement principles and best practices with a view to ensuring that Generative AI is used responsibly in a manner that respects human rights, not to mention other principles and legitimate interests.

X. **Fields of action**

X.1. Scope of activity 1: public sector

X.2. Scope of activity 2: private sector

X.3. Scope of activity 3: citizens

X.1. Scope of activity 1: public sector

Artificial intelligence (AI) poses major challenges and opportunities for the public sector,⁸¹ and potential must be harnessed to improve public relations while boosting the quality and efficiency of public services, not to mention fostering transparency, accountability and citizen participation.

Similarly, the public sector must go to great lengths to ensure that AI is developed and used in accordance with ethical principles and democratic values, while respecting fundamental rights and freedoms and protecting the general interest at all times.

To this end, the public sector must approach AI in a responsible manner, with trust, equity and sustainability in mind when developing, implementing or deploying *ad intro* AI systems when exercising its public functions and when participating in establishing *ad extra* legal and governance frameworks for the deployment of trustworthy AI across the board.

Building trust is, without doubt, of utmost importance as there are several applications of AI in the public sector that could fall into the high-risk category; for example, AI systems designed to assess the eligibility of individuals to benefit from key public assistance services or benefits, including health care services, as well as to grant, reduce or withdraw these services and benefits or claim them back. Another example could be AI systems to assess and classify possible emergency calls made by physical persons, to name just a few AI systems in the public domain.

Below are guidelines with a number of recommendations that this Code strives to achieve for the public sector:

BEST PRACTICES AND RECOMMENDATIONS FOR THE PUBLIC SECTOR:

Objective recommended	Description
Put in place AI-related regulatory and governance frameworks for the public sector	Draw up an appropriate regulatory and governance framework with a view to ensuring that AI applications in the public sector are transparent, fair, safe and accountable.
Align AI use in the public sector with democratic values, human rights and the common good	Align AI use in the public sector with democratic values, human rights and the common good, taking into account the possible social, economic, environmental and ethical impacts of AI.
Foster participation and collaboration between the different stakeholders involved	Foster participation and collaboration between the different stakeholders involved in developing, implementing and evaluating AI in the public sector, including, for example, citizens, companies, educational or academic institutions and broadly speaking, civil society.
Foster training of civil servants in the field of AI	Foster training of civil servants in the field of AI, whether in

1-83: See Annex I of this document for references (bibliography and webography).

Objective recommended	Description
(AI literacy for civil servants)	technical, legal and ethical matters, as well as creating professional profiles specialised in AI in the Public Administration.
Foster innovation and responsible experimentation with AI in the public sector	Foster innovation and responsible experimentation with AI in the public sector, supporting pilot projects, best practices and platforms to exchange knowledge and experience in this field.
Drive the use of open, interoperable and quality data to feed AI systems	Foster the use of open, interoperable and quality data to feed AI systems, while respecting the principles of confidentiality, privacy and personal data protection at all times.
Ensure accountability and oversight of AI applications in the public sector	Ensure accountability and oversight of AI applications in the public sector putting in place identification, inventory, classification, control, auditing, explainability and human feedback mechanisms.
Draw up adequate and proportional normative and regulatory frameworks to ensure that human rights and democratic values are protected	Foster the development and implementation of national regulatory and governance approaches and frameworks, in accordance with the respective national policies and priorities and with Andorra's obligations pursuant to international law. Support shall be given to innovation and responsible and inclusive investment in artificial intelligence for sustainable development, fostering safe, secure and trustworthy AI systems, and ensuring, in all cases, that human rights and existing democratic values, responsibility and accountability in the field of AI are protected at all times.
Foster artificial intelligence systems that promote, protect and preserve Andorra's linguistic and cultural diversity of Andorra	Develop artificial intelligence systems that foster, protect and preserve Andorra's linguistic and cultural diversity of Andorra, taking into account multilingualism in the data used to train them and throughout their life cycle.
Foster diversity, inclusion and equality	Foster diversity, inclusiveness and equity when designing, developing and using AI, preventing discrimination and bias while ensuring accessibility and affordability of AI solutions.
Foster training and continuous education of professionals, companies and other stakeholders (general population)	Raise public awareness and foster knowledge vis-à-vis the opportunities, risks and, broadly speaking, appropriate use by civilians of artificial intelligence systems, through education and training, for example. Furthermore, foster continuous training on the

Objective recommended	Description
	AI of professionals, companies and other interested parties.
Foster the creation and strengthening of dynamic and competitive trustworthy AI ecosystems	Foster creating and strengthening dynamic and competitive, trustworthy AI ecosystems that drive investment, entrepreneurship and collaboration between the public, private, academic and social sectors.
Support research into and development of AI solutions that respond to social, economic and environmental challenges	Support the research and development of AI solutions that respond to social, economic and environmental challenges, and that play their part in well-being and democratic progress.
Foster open and collaborative innovation in the field of AI	Foster open and collaborative innovation in the field of AI, making it easier to access and exchange data, knowledge, resources and results between different public and private stakeholders.
Engage in international dialogue and cooperation vis-à-vis developing and governing trustworthy AI	Engage in international dialogue and cooperation vis-à-vis developing and governing trustworthy AI, respecting ethical principles and sustainable development objectives, while fostering solidarity and cooperation between countries and regions.
Broadly speaking, foster international research and cooperation with a view to understanding and addressing the potential benefits and risks that come with artificial intelligence systems, striking the perfect balance between them	Broadly speaking, foster international research and cooperation with a view to understanding and addressing the potential benefits and risks that come with artificial intelligence systems, striking the balance and preventing possible digital divides while fostering the 17 Sustainable Development Goals. ⁸²
Become involved in public consultation and deliberative processes on AI regulation and governance	Foster public consultation and deliberative processes on AI regulation and governance.

1-83: See Annex I of this document for references (bibliography and webography).

X.2. Scope of activity 2: private sector

Artificial intelligence (AI) comes with a wealth of opportunities for the private sector, such as in innovation, efficiency, competitiveness and economic growth.

However, AI poses significant challenges and risks for businesses, consumers, workers and society as a whole, that need to be addressed in a responsible and ethical manner.

Therefore, it is of utmost importance for the business sector to adopt a values-based and human rights-based approach to develop and use AI. Furthermore, it must collaborate with other stakeholders with a view to ensuring effective AI governance and accountability.

This calls for focusing on putting in place responsible models when developing, using or deploying AI, so as to better protect fundamental rights, freedoms and safety. Moreover, all this should be in alignment with the digital ethics fostered by organisations such as the Davos Forum vis-à-vis duly fostering ESG criteria and indicators.

Without doubt, the private sector is under increasing pressure to foster responsible innovation, with trustworthiness being used as a way to stand out from the rest in the market.

In this regard, and in accordance with the UN Guiding Principles on Business and Human Rights, states must clearly state what is expected of all companies domiciled in their country and/or jurisdiction vis-à-vis respect for human rights in all their activities, with a view to fully protecting these rights from being infringed upon. This Code governs this need.

To sum up, companies must prevent their activities from provoking or playing their part in negatively affecting human rights, and must be held accountable for these consequences should they occur.

Similarly, they must do their utmost to prevent or mitigate the negative consequences on human rights directly related to operations, products or services they develop, or that they are involved in, following legal and ethical design criteria from the outset.

Below are guidelines with a number of recommendations that this Code strives to achieve for the private sector:

BEST PRACTICES AND RECOMMENDATIONS FOR THE PRIVATE SECTOR:⁸³

Objective recommended	Description
Trustworthiness of AI	Ensure that AI is trustworthy, robust and secure, adopting the most appropriate policies, systems or processes at any given time to achieve these objectives.
Respect ethical values and principles	Right from the design stage, foster the development and implementation of AI systems that respect ethical principles, values and human rights, as well as relevant international regulations and standards, by adopting preventive, corrective and accountability measures throughout the entire life cycle of these systems.
Respect the rights and freedoms of humans	People-centred, in particular: respect the dignity, autonomy, equality, non-discrimination, privacy and security of people affected by AI systems, among other fundamental rights and freedoms.
With a view to fulfilling their responsibility to respect human rights, companies must have policies and procedures in place that are aligned with their size and circumstances	With a view to fulfilling their responsibility to respect human rights, companies must have policies and procedures in place that are aligned with their size and circumstances. This includes the following: 1) Undertake to assume the responsibility to respect human rights; 2) Processes and due diligence on human rights to identify, prevent, mitigate and be held accountable for how they address human rights impacts; 3) Processes to redress any negative human rights impacts that they have caused or contributed to.
Identify and assess negative AI-associated impacts	Identify and assess the real or potential negative impacts associated with company projects, initiatives, products and services on people's fundamental rights and freedoms, safety and sustainability.

1-83: See Annex I of this document for references (bibliography and webography).

Objective recommended	Description
Prevent the negative impacts of AI	Stop, identify and assess the real or potential negative impacts associated with company projects, initiatives, products and services on people's fundamental rights and freedoms, safety and sustainability.
Diligence, accountability and transparency mechanisms	Foresee due diligence, accountability and transparency mechanisms when designing, developing and using AI, taking into account the aforementioned impacts and negative effects thereof.
Complaint and redress mechanisms	Put in place effective and accessible complaint, recourse and redress mechanisms for people harmed or threatened by AI systems.
Put in place risk management and control systems for AI systems	Put in place risk management and control systems that guarantee the long-term security, trustworthiness and robustness of the AI systems.
Transparency, traceability and explainability of AI systems	Safeguard the transparency, traceability and explainability of AI systems, providing clear and accessible information on the objectives, capabilities, limitations, functioning and data sources thereof, as well as on the roles and responsibilities assumed by the stakeholders involved.
Data quality	Guarantee the quality, integrity, diversity, representativeness and security of the data used to train, deploy and operate AI systems, preventing biases, discrimination, stereotypes and prejudices that are unjustified or infringe upon people's rights.
AI Training and Literacy	Foster acquiring digital skills and artificial intelligence literacy, in particular for employees and those with equivalent status, and throughout the company's management and administrative bodies.
Foster a culture of responsible innovation	Broadly speaking, foster a culture of responsible innovation that benefits business and society alike, by collaborating and cooperating with between the different stakeholders and sectors concerned, including the competent authorities, civil society, academia and end-users.
Participate in public consultation and deliberative processes on AI regulation and governance	Participate in public consultation and deliberative processes on AI regulation and governance and express opinions and concerns. To support initiatives that benefit innovation, business competitiveness, people and the planet.

X.3. Scope of activity 3: citizens

Artificial intelligence (AI) has the potential to improve our lives in many ways. However, it also poses ethical challenges and risks to fundamental rights and, in turn, people's digital rights.

Therefore, it is of utmost importance that citizens are aware of the benefits and limitations of AI, as well as the principles and rules that govern it. They must also be aware of the significant opportunities that comes with this technology and foster provide adequate information and training on this technology.

Many of the recommendations indicated below comply with the aforementioned parameters and are the key to creating a responsible ecosystem while, at the same time, fostering AI-related innovation and the common good.

BEST PRACTICES AND RECOMMENDATIONS AIMED AT CITIZENS:

Objective recommended	Description
Be aware of the risks and opportunities linked to AI	Ascertain what AI is, how it works, how it is used and the implications thereof for society and your individual rights alike. Seek trustworthy and diverse sources of information in this regard, particularly from reputable organisations.
Cultivate a critical and reflective attitude towards AI	Cultivating and adopting a critical and reflective attitude towards AI is also of utmost importance, questioning the trustworthiness, accuracy, relevance and added value thereof, along with the positives it can offer.
Educating and training for the AI era	Citizens should acquire the necessary skills and knowledge to with a view to understanding, using and leveraging AI in a responsible and creative manner. They should also work on developing transversal skills such as critical thinking, communication, collaboration and problem-solving with a view to adapting and thriving in a world that is becoming increasingly digitalised and intelligent.
Be diligent vis-à-vis protecting their rights (and those they represent)	Verify how AI is deployed in services and products that are consumed or used, and ask how personal data is collected, processed and used, as well as the types of algorithms used and for what purpose.

Objective recommended	Description
<p>Call for AI to be trustworthy</p>	<p>Call for AI to be trustworthy and therefore developed and used in accordance with the principles of legality, necessity, proportionality, non-discrimination, fairness, transparency, explainability and accountability. Therefore, that AI systems must respond to legal and ethical criteria. Call for impact assessments and independent audits be conducted on AI systems and that effective control and oversight mechanisms are put in place.</p>
<p>Protect and defend their fundamental rights</p>	<p>Flag situations in which AI has been deemed to infringe upon your rights or those of others, or if AI has negative effects on the public interest or the common good.</p> <p>Turn to the competent authorities, human rights organisations, consumer associations or civil society organisations to exercise your rights to redress. Pay particular attention to duly protecting digital rights in the field of artificial intelligence.</p>
<p>Foster inclusive and diverse AI</p>	<p>Citizens should champion an AI that respects cultural, social and gender diversity, and that does not reproduce or strengthen existing stereotypes, prejudices and inequalities. They should also call for more representation and participation of vulnerable or marginalised groups in the field of AI; users and creators alike.</p>
<p>Participate in public consultation and deliberative processes on AI regulation and governance</p>	<p>Participate in public consultation and deliberative processes on AI regulation and governance and express opinions and concerns vis-à-vis the ethical, social and political aspects of AI. Support citizen and collective initiatives that foster an AI that benefits people and the planet, and that defend democratic values and human dignity.</p>

XI. | Drive and foster this Code

The following can be done to foster and implement this Code of Ethics in the field of artificial intelligence:

- Create a network of stakeholders interested in the ethics of AI in Andorra, comprising Government representatives and those from the public-parapublic sphere, the academic sphere, the business sector, civil society and users, and that fosters dialogue, exchange and collaboration vis-à-vis the development of the purposes, values and principles set forth herein.
- Draw up and disseminate additional guides, tools and other resources to make it easier to understand and implement the Code.
- Foster possible frameworks and mechanisms to assess, verify, audit and certify AI that ensure compliance with ethical and legal standards.
- Support research and innovation in the field of AI ethics that contributes to coming up with solutions and measures that respect human rights and democratic values.
- Involve and raise awareness among citizens, companies and other entities on the importance of AI ethics through specific initiatives and plans, and encourage them to participate in fostering trustworthy AI as much as possible.

This shall always be carried out in accordance with recognised fundamental rights and freedoms and applicable regulations.

XII.

Annex.

References (bibliography and webography)

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Govern d'Andorra