

Public Policy for Safe and Ethical Use of

Artificial Intelligence Systems

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Governance@mtcit.gov.om

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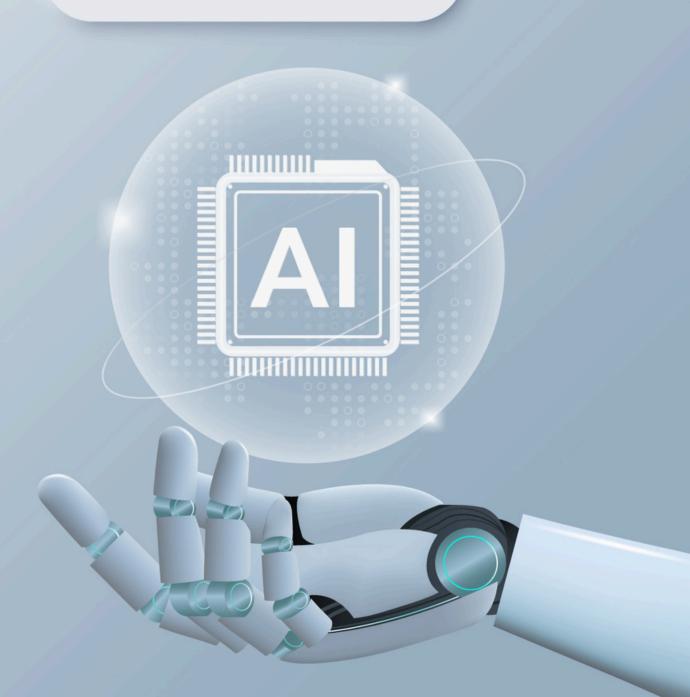




Contents

Introduction	3
Terms and Definitions	5
Objectives	10
Scope of implementation	10
Policy statements	12
First: General statements	13
Second: Requirements and Controls for the Use of Al Systems	15
Third: Requirements and controls for Developing Al Systems	19
Ethical Principles for the Use and Development of Al Systems	23
Policy Compliance	26
Relevant publications	27

Introduction



Artificial Intelligence (AI) serves as a pivotal tool for enhancing efficiency, productivity, and promoting sustainable development across various sectors. However, the rapid advancement of its capabilities and the broad expansion of its applications raise fundamental issues related to privacy, security, trust, and ethical values.

The strategic direction of the Sultanate of Oman in the field of Al is driven by the principle of fostering innovation, emphasizing the safe and ethical use of this technology, and empowering tech startups to develop innovative Al-based solutions and services.

This policy aims to establish a framework and ethical guidelines stemmed from the National Program of Artificial Intelligence and Advanced Digital Technologies, which represents a comprehensive national initiative that considers economic and social aspects, copping with global developments in Al field–especially in the light of the emergence of generative Al technologies. The national program includes a range of specialized initiatives and programs in Al, in alignment with the national directions and Oman Vision 2040.

This policy emphasizes on establishing fundamentals for the use of Al systems that is human-centric and suits the contextual community aspects, at which it ensures respect for the basic human rights such as privacy, equality, justice, and the preservation of human dignity, in consistency with Islamic principles.

Additionally, it aims to enhance trust in AI systems by ensuring their safe and ethical use, including the handling of data. The policy also seeks to enrich the capabilities of both the public and private sectors in adopting ethical standards, thereby contributing to Oman's competitive position regionally and internationally, and supporting its role as a venue for digital innovation and a model for assessing readiness and maturity in the field of AI.

Terms and Definitions





The Ministry

The Ministry of Transport, Communications and Information Technology.





Regulatory Authorities

Include ministries, public authorities, and organizations responsible for regulating other sectors under their supervision.



Artificial Intelligence (AI)

One of the computer science's domains that is focused on developing technologies, algorithms, and systems that analyze data, learn from it, and simulate certain human cognitive abilities such as vision, understanding language, solving problems, and making decisions. These systems can also perform specific tasks based on analyzing patterns and deriving solutions from provided data. All applications vary between the niched domains (those that are specialized in performing specific tasks) and the general domains (which aim to simulate human intelligence comprehensively).



Generative Artificial Intelligence (GenAI)

A modern branch of AI that relies on artificial neural networks to generate new or derivative content from its training data. This type of AI works through learning patterns and features from original data provided and re-applies those using innovative methods to produce new content that reflects the patterns and characteristics of the training data. GenAI depends on large and diverse datasets, enabling it to generate text, images, music, and other forms of content based on patterns learned from a training data, with the ability to produce new and innovative content.





Software or computing devices that use artificial intelligence to perform specific tasks, with variety levels of independence–starting with systems requiring continuous human supervision to those capable of adapting and making decisions based on inputs without direct intervention.



AI Ethics

A set of principles and values that guide the design, development, and use of Al systems in a way that benefits humanity, minimizes risks, and respects human rights such as fairness, privacy, and equality.



Al System User Entity

Any public or private organization that uses or operates AI systems to achieve specific objectives.



AI System Developer Entity

Any public or private organization that develops Al systems.



A set of letters, numbers, symbols, or images used in the analysis and development of Al systems to provide solutions and predictions related to economic, social, or technical aspects.



Personal Data

Data that identifies or makes a natural person identifiable, directly or indirectly, by reference to one or more identifiers such as name, civil number, electronic identifiers, geolocation data, or by reference to factors related to genetic, physical, mental, psychological, social, cultural, or economic identity.



Fairness

Ensuring that AI systems are designed and used fairly and objectively, in a way that ensures equal representation of all groups within the used data and avoiding bias or discrimination in system outputs or decisions.



Transparency

Ensuring that Al systems are designed and used in a way that provides a clear understanding of their working mechanisms behind their decision-making processes. This includes explaining different stages and operations to all relevant stakeholders, enabling traceability of significant decisions and their impacts, and clarifying how results are to strengthen trust and accountability.





Accountability/Responsibility

Ensuring Al systems are subject to thorough monitoring and periodic evaluation of their impacts, with setting full responsibility of the outcomes on developers and users. This includes addressing potential errors and providing clear mechanisms to contest decisions that affect individuals, society, or institutions.



Inclusiveness

Ensuring that Al systems are designed and used in a manner that fairly represents all segments of society without bias or discrimination, whether in data collection, analysis, or usage of results.



Human-Centeredness (Humanity)

Ensuring that AI systems are designed and used in a way that promotes fundamental human values such as dignity, equality, and justice, while protecting basic human rights. This includes respecting individuals' right to human intervention in decisions that directly affect their lives or rights, and ensuring that systems serve the interests of humanity as a whole without harming any groups or communities.

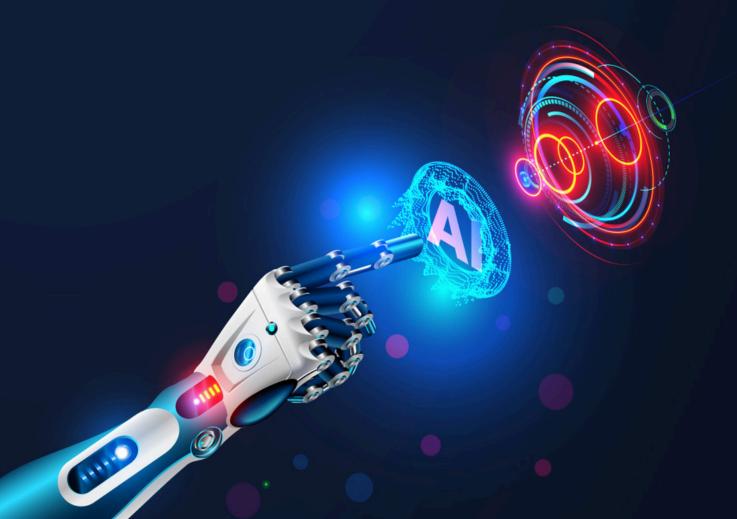


Explain ability

The ability of Al systems to provide clear and understandable justifications of their decisions and outcomes, allowing stakeholders to comprehend how the system works and thereby enhancing transparency and trust in its use.



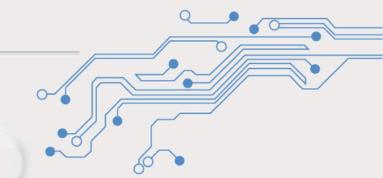
Policy Objectives



Policy Objectives



the policy aims to govern the use and development of Artificial Intelligence (AI) systems in the Sultanate of Oman by establishing a comprehensive framework that combines technical controls and ethical principles, in order to ensure the responsible and secure use of these systems, enhance trust in AI technologies, and contribute to fostering innovation and achieving competitiveness at both regional and international levels.



Scope of implementation

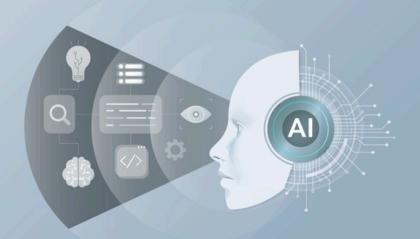


This document applies to all government administrative units and private sector organizations regulated by the relevant regulatory authorities that are involved in the development or use of Al systems. It covers all stages of implementation, including data collection, system design, training, operation, and continuous evaluation.

Policy statements



First: General statements



1

All entities subject to this policy shall fully comply with the implementing the required technical controls and ethical principles outlined herein for the use and development of Al systems, including Generative Al systems.

2

Entities that use or develop AI systems shall periodically evaluate the performance of these systems, including Generative AI, to ensure compliance with the technical and ethical controls requirements of this policy. This includes ensuring data integrity, accuracy of outputs, and rectifying biases and harmful content.

3

The Ministry is committed to facilitate a supportive legislative environment for the use and development of Al systems and contributing to building a stimulating environment for technological innovation in the Sultanate of Oman.

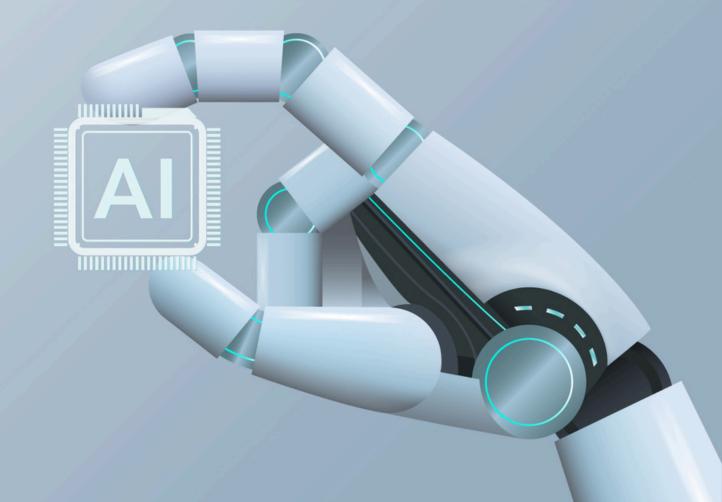
4

Regulatory authorities shall align the provisions of this document and its associated regulatory frameworks, and circulate it to all affiliated or associated organizations to ensure proper alignment and achievement of the intended objectives of this policy.

5

Regulatory authorities may, with the Ministry's approval (MTCIT), establish additional provisions to regulate the use of AI technologies and algorithms, provided they do not conflict with the terms of this policy.

Second: Requirements and Controls for the Use of Al Systems



Entities utilizing Al systems shall adhere to the following:

1

Provide mechanisms for human supervision and control over sensitive and impactful decisions made by Al systems, ensuring the ability to interpret, trace, and analyze the outcomes and their effects on individuals, society, and institutions.

2

Ensure that used AI systems are practically viable and offer clear benefits compared to available alternatives, delivering tangible added value in terms of efficiency, quality, or cost. Systems must be objectively evaluated prior to adoption to confirm alignment with the entity's needs and operational goals.

3

Ensure that AI systems are capable of providing understandable explanations of the decisions they make, particularly in applications that affect individuals, such as employment, healthcare, and financial services.

4

Continuously monitor the performance of Al systems, documenting any errors, deviations, or negative impacts as soon as they are detected, and taking necessary corrective actions. 5

Submit all relevant documents and information related to the system's use to regulatory authorities for compliance check in the event of an official investigation regarding the outcomes of Al deployment.

6

Restrict the use of personal data in AI systems in accordance with local laws and regulations, ensuring it is used solely for authorized and specific purposes, while taking necessary measures to protect it from any unauthorized or illegal use.

7

Classify data used in AI systems to ensure appropriate protection through employing advanced security measures such as encryption, multi-factor authentication, and anonymization techniques to safeguard classified data.

8

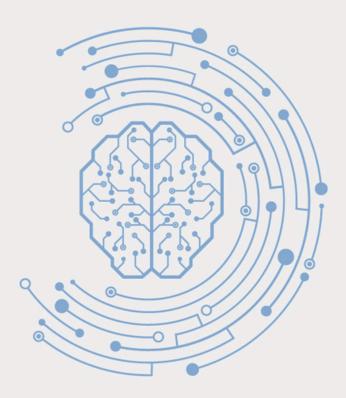
Ensure that AI systems operate with transparency in decision-making mechanisms, with accountability frameworks and documentation of all processes to enable possible future verification and analysis.

9

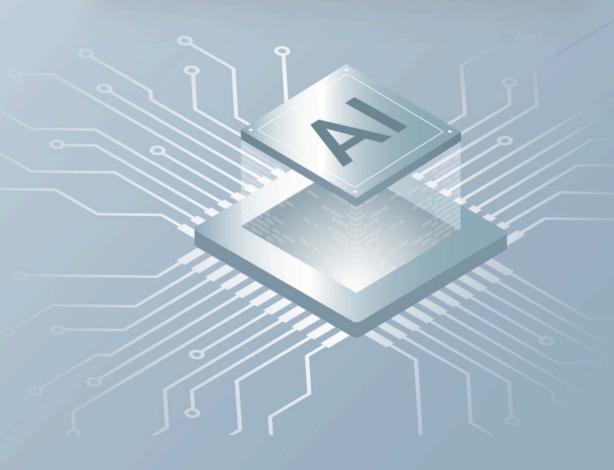
Implement clear policies for data management and retention, including recommended retention periods and secure deletion once the data is no longer needed.

10

Restrict the use of analyzed outcomes from AI systems to the purposes at which they were originally intended only, ensuring that such use is aligned with the specified reasons and objectives.



Third: Requirements and controls for Developing Al Systems



Entities developing Al systems shall adhere to the following:

1

Document the Al system development process in a transparent and clear manner, including the system's purpose, technology components, and data used. Then retain this documentation for future reference.

2

Develop environmentally and technologically sustainable solutions that ensure reducing environmental impact and sustainability of the system's performance on the long-run.

3

Conduct assessments on the ethical, social, and environmental effects of Al systems prior to deployment and use, and retain the results as part of the system documentation.

4

Ensure transparency in generated content and implement measures to prevent the misuse of systems for generating harmful or misleading content. This includes providing mechanisms to identify generated content through labeling or explanatory notices to prevent misuse.

5

Ensure transparency in algorithm functionality by providing documentation that explains decision-making logic and data analysis processes.

6

Commit to regularly reviewing and updating systems to keep pace with the latest technological advancements and international standards.

7

Conduct periodic assessments to verify system accuracy, including independent technical audits to improve performance.

8

Submit all relevant documentation and information related to system development to regulatory authorities for compliance check in the event of an audit or official investigation.

9

Continuously monitor and assess potential biases in system outputs, and ensure that required measures are in place to reduce data or algorithm-related biases by conducting verification checks of fairness and inclusiveness in system's outcomes.

10

Implement protective measures that ensure data privacy and security, using mechanisms such as access control and data encryption.

11

Provide analytical tools and reports that clarify how decisions are made and enable regulatory authorities and users in assessing the system's logic, fairness, and accuracy.

12

Grant individuals the right to access their data, including the ability to review processing records, correct errors, or request data deletion, and ensure having user-friendly interfaces to facilitate these actions.

13

Apply cybersecurity best practices to handle threats (such as regularly updating software and conducting routine penetration tests).

Ethical Principles for the Use and Development of Al Systems



Humanity and Society

- Respect human dignity and ensure his/her right to human intervention in sensitive decisions making process that may directly effect on his/her life, safety, or rights.
- Harness Al technologies to promote societal well-being, such as: developing intelligent solutions in the fields of healthcare, education, and social services.
- Promote the use of AI systems to support sustainable development and protecting the environment via improving energy efficiency, avoiding the depletion of natural resources, and reducing all forms of pollution.
- Consider the economic and social dimensions of the widespread use of these technologies, and set policies to ensure that the benefits achieved through Al are distributed fairly across different social groups, and that these technologies do not contribute to increasing economic disparities.

Inclusivity and Justice

- Design systems that ensure no bias occurs based on race, gender, religion, or any other personal characteristic by applying algorithms auditing techniques and excluding factors that may lead to discrimination; in alignment with Islamic principles and ethical values.
- Ensure the diversity of data used in training systems, including representation from different societal groups such as minorities and individuals with disabilities, to ensure fairness and inclusivity.
- Ensure that technologies are made accessible to everyone in a fair manner through collaboration between the government and the private sector to provide these technologies at affordable and equitable prices, while focusing on enhancing access for low-income groups.

Responsibility and Accountability

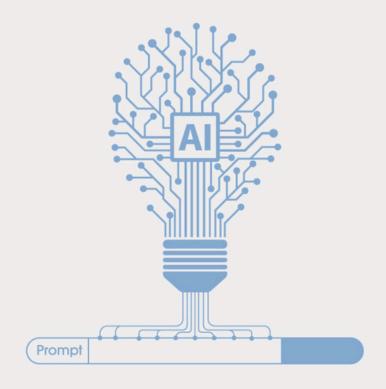
- Ensure that systems are secure from breaches and do not cause any physical or psychological harm.
- Provide clear and effective mechanisms for accountability when errors or damages occur as a result of system use, ensuring easy and clear access of users to complaint channels, and apply rectification fairly and transparently.
- Ensure the audit-ability of systems to guarantee compliance with ethical standards, using tools such as audit reports, performance logs, and external independent audits.
- 4 Use of technological tools to ensure transparency, such as: documenting decision-making processes within the system and publishing regular reports that highlight system's performance and improvement actions with involvement from users and stakeholders
- Provide mechanisms to enable tracking the sources of data and standards for their use, making it possible to analyze the produced content and understand its impacts, thereby enhancing trust in the systems and ensuring responsible use.

Policy Document Management

- This policy is owned by the Ministry of Transport, Communications and Information Technology and will be subject to revision whenever necessary.
- This policy shall be implemented by the date of its approval and circulation by the Ministry of Transport Communications and Information Technology.

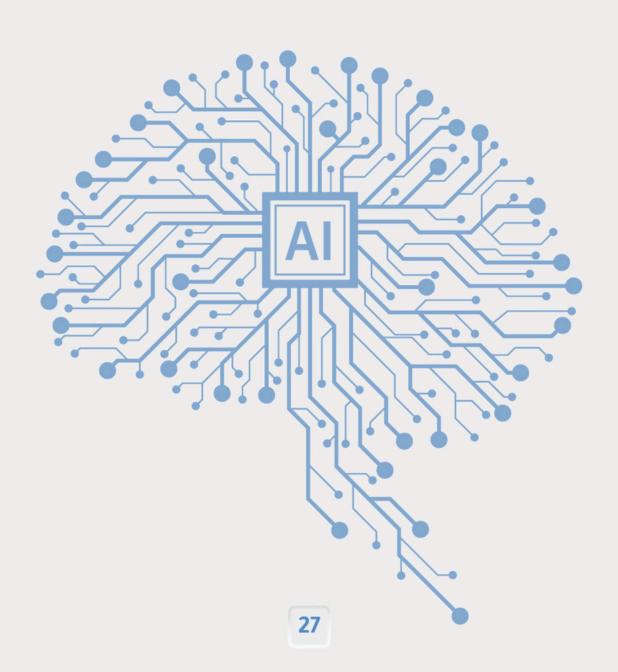
Policy Compliance

- The Ministry of Transport, Communications and Information Technology shall monitor the compliance of the government administrative units and present the results of compliance to the Council of Ministers.
- Regulatory authorities shall be responsible for monitoring the compliance to this policy with organizations within their sectors.



Related Documents

- Personal Data Protection Law (2022)
- Executive Regulations of the Personal Data Protection Law (2024)
- National Program for Artificial Intelligence and Advanced Digital Technologies (2024)
- Personal Data Protection Policy for State Administrative Units (2024)
- ► IT Risk Management Framework (2014)
- Cybercrime Law (2011)
- National Records Law (52/2024)



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