Digital Ethics Framework

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1   **PURPOSE AND OBJECTIVES**

Telkom SA SOC Limited (hereinafter referred to as "Telkom") subscribes to the principles as prescribed within King IV and is committed to encourage ethical behaviour and values within its employees to promote decision making that is based on the values and standards.

The framework will guide Telkom employees and representatives on how to make decisions that are not only aligned to legal and regulatory requirements, but also respect human rights and the human dignity of our employees, clients, investors and business partners. We will maintain the integrity of our data, as well as the algorithmic processes and systems that guide on the outcomes and decisions made and those that impact the manner in which products and services are presented.

2   **APPLICABILITY AND SCOPE**

This framework will apply to data that is collected, processed and handled, and Information Technology Services, processes or applications that make use of Artificial Intelligence or Machine Learning, whether it is utilised for customer facing services or products or for employee activities. The framework will guide on the principles that data as well as technologies, services and products should adhere to in order to facilitate Telkom in complying to ethical and moral values and principles.

3   **CONTEXTUAL BACKGROUND**

While laws and regulations may govern the manner in which data, technologies, products and services should be managed throughout the lifecycle, the manner in which it should be designed, deployed and managed, should also consider the human element and the rights and dignity of all individuals. Ethical processing and use of data ensures that there is no intentional or unintentional discrimination or bias against the person based on the data available from the person or any other person, with similar data, incorporating Artificial Intelligence or Machine Learning. Data within Telkom is classified and treated throughout its lifecycle as per the data classification standard.

In order to build trust data is collected in a transparent manner, and the user is aware of the future potential use thereof, and that the data that is used for machine learning or Artificial Intelligence, in order to replicate human decision-making processes, is handled in such a manner that it minimises the risk of containing any type of human bias.

4   **FRAMEWORK FOR DIGITAL ETHICS WITHIN TELKOM**

The Ethics Handbook informs into the ethical conduct and undertaking from executive and board Level through to the employees and is underpinned and based on the following principles: Competence, Responsibility ,Accountability, Fairness, and Transparency.

4.1   Digital Ethics alignment to enterprise ethics

In alignment to the principles of Telkom's values and ethical principles, the following digital ethical principles will be used to guide from a data and algorithm perspective: Autonomy, Justice, Beneficence, Non-Maleficence, and Transparent.

5   DIGITAL ETHICS PRINCIPLES FOR BEST PRACTICE

The principles which Telkom shall follow to ensure their digital products and services are managed and offered, throughout their lifecycle, in an ethical manner and shall be supported by the best practices that are supportive of the principles. Information that is collected should always be collected with a clear purpose and in alignment to the utilisation thereof.

Stakeholders from whom information is collected should retain their right to decline or accept the intended use, but understand what the potential effect on decision making processes could be, should they decline to provide certain information.

5.1   Autonomy Principle

The autonomy principle underscores that we will respect the fact that collected data has a human element and that human rights should be honoured at all times while developing our services or products, with the data sourced from clients. We shall ensure that users and clients retain their right to decline or accept the collection and or use of their data for the purposes explained to them, as well as the possible repercussions and impact if they decline. To ensure that we adhere to the autonomy principle, we will use the subset of the below best practices:

5.1.1   Explainability

Data that is collected for use in an algorithm system should be explained to the user by way of what data will be used and how it will be used in an algorithmic system. Where a digital service or product uses an algorithm for decisions or outcomes, the user of the service shall be informed that the outcome or decision was based on an algorithm and to understand how the algorithm result is achieved.

5.1.2   Literacy

Every participant that is involved in the use, development, operation or decision on the deployment of algorithmic systems or services or products, should be competent in their area of expertise and aware of the ethical principles and values of Telkom. The governance structures should support and guide at operational level to ensure that the design of products and or services incorporate the digital ethics principles where uncertainty on possible prejudice may exist.

5.1.3   Privacy

The privacy of individuals who concede to collection and use of their data should be protected throughout the data management lifecycle from collection to interaction with digital service or product and through to the archiving or disposal of data.

5.2   Justice

Telkom undertakes to ensure that access to digital products or services shall be devoid of unfairness or discrimination and that if access to a product or service is denied to a person, it shall be justified, fair and transparent. In the event that a user or customer refuses or declines to make available certain information, which is crucial to the processing and decision making of a service or product offering, the party should be informed that this may impact the decision-making process We will make use of the below justice best practices:

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5.2.1 Impartiality

Data sets that will be used should be assessed and analysed to identify artefacts that may cause unfair bias, whether it is based on cultural, personal experience, religious, or other prejudices. In order to minimise any type of prejudice, diverse perspectives and data sources shall be considered and utilised in algorithmic systems.

5.2.2 Equality

In order to ensure that digital products and services provide equal opportunity of use and benefits to potential users, irrespective of unfairly prejudiced perspective, we should make use of data and algorithms that are void of unfair prejudices, preferences or other unjust barriers. Making use of data that contains unfair bias may impede the fair offering of services and products.

5.2.3 Proportionality

Data that is collected is to be proportionate to the purposeful use thereof. The aim will be on collecting data that will be free of bias but meaningful in the decision-making process.

5.3 Beneficence

The design and offering of digital products and services shall be beneficial by either addressing the needs or the well-being of the user from a short-, medium- and long-term perspective. In order to achieve beneficence with our digital products and services, we shall use the below best practices:

5.3.1 Sustainability

Products and services should be designed to be sustainable and usable in the future by ensuring our data and readability thereof is compatible for future software systems and prudent in considering the future use thereof in algorithmic systems.

5.3.2 Security

Data that is collected, stored and managed throughout its lifecycle should be safe and protected from unauthorised access and or editing in order to protect the integrity and validity. The security of the algorithmic system shall be attained by understanding what data will be used in the calculation or decision making of an algorithm system and to ensure that only factual data that cannot be altered or contaminated is used.

5.3.3 Responsibility

Any person or party participating in the development or management of digital products or services, shall take ownership and responsibility of their respective areas of expertise and understand the impact of unethical treatment or the processing of data or the use of biased artefacts or data within an algorithmic system.

5.4 Non-Maleficence

When a potential digital product or service is assessed, the feasibility as well as potential risks should be assessed. At all times, the advantages and potential disadvantages should be assessed, while ensuring the benefit and "no harm" rule towards the human element is at the

centre of the assessment. In order to ensure that digital products and services at all times are free of potential harm to the users of the product or service, we should follow the following best practices during assessment:

5.4.1 Reliability

The reliability and availability of the offered digital products and services are crucial and the responsible parties should therefore take care in ensuring that the products and services and supportive data processes and algorithmic systems are properly supported and managed in alignment to ensure that the services and products are reliable in their availability.

5.4.2 Controllability

The responsible business area or person should ensure that they always have control over their data and algorithmic systems and that authorised human intervention is possible if so required. The responsibility of the data and algorithmic outcomes shall remain the responsibility of a person and shall not be assigned to a system or process in isolation.

5.4.3 Accountability

A clear structure that will stipulate who will be responsible and accountable for the handling of data and algorithmic systems and the associated processes shall form part of the digital product or service design that clarifies the associated responsibilities and accountabilities of stakeholders. Behaviour that can be considered negligent, bias promoting, unethical and or detrimental to the ethical functioning and reliability of the product or service may lead to incorrect decision making by algorithmic systems or impact the integrity of data and cannot be tolerated.

5.5 Transparency

Open communication on the use of data and algorithmic systems will enable the best possible transparency for planned or deployed digital products and services. It will ensure that our subsequent behaviour is appropriate and truthful.

5.5.1 Traceability

The origin of the data should be from qualified and verified sources. It should also be traceable and communicable with regards to how data is associated and interlinked as well as enriched throughout its lifecycle.

5.5.2 Interactivity

Telkom Group shall ensure that they undertake an interactive approach towards the users of digital services and products by enabling open communication channels where the user can contact us directly and their concerns, problems or enquiries are addressed and resolved.

5.5.3 Comprehensibility

The presentation and communication of digital products and services shall be offered in such a manner that it considers the potential user's cultural and or social background and be explainable in a respectful manner until we can reasonably ensure that the potential user has a clear understanding of the requirements and benefits.

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6   APPENDIX A: DEFINITIONS, REFERENCE DOCUMENTS, LAWS & REGULATIONS

6.1   Definitions

Definitions	Description
Algorithm	The process or set of rules to be followed in calculations or other problem-solving operations, especially by a computer.
Autonomy	The right and capacity of an entity to self-govern and make informed and un-coerced decisions.
Algorithmic Systems	Systems comprised of one or more algorithms used in a software to collect and analyse data as well as draw conclusions as part of a process designed to solve a pre-defined problem.
Beneficence	Ethical concept which prescribes that the welfare of the test subject or participant is the ultimate goal.
Digital Model Training	Phase in the data science development lifecycle where practitioners try to fit the best combination of weights and bias to a machine learning algorithm to minimise a loss function.
Ethics	Moral justification for what is morally just, fair and right.
Justice	Principle used to ensure someone obtains or gets what they deserve.
Non-Maleficence	The principle that prescribes the obligation to ensure that no harm is inflicted on other.
Transparency	To be open and without secrets regarding intent and subsequent processes.

6.2   Reference Documents

    I.   Ethics Handbook

    II.   King IV Code on Corporate Governance

    III.   IT Risk Framework

    IV.   Information Security Incident Management Procedure

    V.   IT Incident Management Policy

6.3   Laws and Regulations

    I.   Protection of Personal Information Act 4 of 2013

    II.   Cybercrimes Act 29 of 2020