TASMU Societal Impact Policy

Document Information

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Policy Abstract

This is the TASMU Societal Impact Policy, which seeks to minimise the social cost of adopting new emerging technologies, and ensures oversight that ethical breaches or risks are mitigated as part of the TASMU innovation developing development process.

The policy covers societal impact controls with regards to wellbeing protection, personal autonomy, choice architectures, protection of privacy and intimacy, transparency, artificial intelligence systems, equity and diversity, and finally environmental sustainability controls.

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Requirements Language

The key words “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “NOT RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as follows:

- **SHALL**: This word, means that the definition is an absolute requirement of the policy.
- **SHALL NOT**: This phrase, means that the definition is an absolute prohibition of the policy.
- **SHOULD**: This word, or the adjective “RECOMMENDED”, mean that there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course.
- **SHOULD NOT**: This phrase, or the phrase “NOT RECOMMENDED” mean that there may exist valid reasons in particular circumstances when the particular behaviour is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behaviour described with this label.
- **MAY**: This word, or the adjective “OPTIONAL”, mean that an item is truly optional.

Informative References

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Contents

Definitions

The definitions used in this policy have been written to provide contextual clarity and where necessary specificity, and should not be interpreted to be contradictory to any laws in the State of Qatar.

[Artificial Intelligence]

Refers to the series of techniques which allow a machine to simulate human learning, namely to learn, predict, make decisions and perceive its surroundings. In the case of a computing system, AI is applied to digital data.

[AI Accessibility]

Refers to the impartiality of algorithmic systems and their potential for discriminatory bias, namely data on which the algorithms are trained, as well as data collection or the code itself restricting access of certain groups or social classes.

[Artificial Intelligence System]

Is any computing system using AI algorithms, whether it's software, a connected object or a robot.

[Consent]

Consent is an affirmative, freely given and informed agreement of a Subscriber for the Processing of their data. Natural persons ("individuals") must be able to control the Processing of their Personal Data within the TASMU Ecosystem and where necessary provide explicit Consent, which signifies their agreement, expressly confirmed in words, to specific Processing.

[Chatbot]

A chatbot is an AI system that can converse with a Subscriber in a natural language.

[Data Acquisition and Archiving System]

Data Acquisition and Archiving System (DAAS) refers to any computing system that can collect and record data. This data is eventually used to train AI systems or as decision-making parameters.

[Decision Justifiability]

An AIS decision is justified when there exists non-trivial reasons that motivate this decision, and that these reasons can be communicated in natural language. Justification consists in making transparent the most important factors and parameters shaping the

decision, and should take the same form as the justification we would demand of a natural persons making the same kind of decision.

[Intelligibility]

An AIS is intelligible when a natural person with the necessary knowledge can understand its operations, meaning its mathematical model and the processes that determine it.

[Internet of Things]

The Internet of Things (IoT) is a system of interrelated computing devices, mechanical and digital machines, uniquely identified with the ability to transfer data over a network to Sector Platforms and/or the Central Platform.

[Personal Data]

Data of a natural person ('individual') which is specifically identifiable or can be reasonably identified either by the Personal Data itself or through a combination of other data. An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.

[Processing]

Any operation or set of operations which is performed on data, such as collecting; recording; organizing; storing; adapting or altering; retrieving; consulting; using; disclosing by transmission, dissemination or otherwise making the data available; aligning or combining data, or blocking, erasing or destroying data. Not limited to automatic means.

[Special Personal Data]

Any Personal Data that includes the special nature data relating to:

- Children
- Spousal Relations
- Health, physical or psychological condition
- Religious Beliefs
- Racial or ethnic origin
- Criminal history

[Societal Impact Assessment]

Societal Impact Assessment (SIA) refers to a set of guidelines and principles to identify the societal effects of new technologies, programs, and projects - where new TASMU Smart Service start to shape the everyday life of Subscribers. SIA attempts to establish a broader understanding of technology taking into account the perspective of different stakeholders. A SIA template is provided here (SIC will provide template and link).

[Societal Impact Committee]

The Societal Impact Committee is an objective and diligent committee that covers a value based assessment and a risk/benefit based assessment of the TASMU Smart Service that require it. Referring to Societal Impact Screening, the committee will provide the SIA template and business case pre-qualification questions form to the Operator. The committee will study among the following non-exhaustive considerations and risks:

- Global values and international best practices
- Qatari cultural and Islamic / religious values
- Science and technology advancements and risks

[Subscriber]

An organisation or individual who utilises a TASMU Smart Service. They subscribe to and are authenticated by the TASMU Ecosystem. In some contexts they may be referred to as consumers.

[Surveillance Capitalism]

The process of commodifying personal data with the core purpose of profit-making

[TASMU Ecosystem]

This is the Smart Qatar (TASMU) platform and any TASMU Smart Service that is either connected to this Central Platform or is branded as TASMU compliant. Refer to (A) in the TASMU Conceptual Diagram.

[TASMU Smart Nation Regulator]

The entity in the State of Qatar who regulates the TASMU Ecosystem. It is responsible for drafting, promoting, governing, updating, monitoring compliance with, and enforcing this policy.

[TASMU Service Operator]

This is the owner and operator of the TASMU System, who has overall responsibility for its secure, compliant operation.

[TASMU Smart Service]

A TASMU Smart Service is a national service, leveraging one or multiple technologies, to resolve an identified challenge or enable a desired outcome and that operates in the TASMU Ecosystem. Collectively, they focus on detailing and contextualizing services relevant for the State of Qatar.

[TASMU System]

This is owned by the Service Operator and refers to any of the following elements from the TASMU Conceptual Diagram :

- (C) Any TASMU Smart Service
- (D) Any networking between platforms and (C)
- (E) Sector data analytics platforms
- (F) Central data analytics platform
- (G) Any networking between platforms and devices (H)
- (H) Any smart devices
- (I) The TASMU Control Centre
- (K) Security Management of the TASMU Ecosystem
- (L) Operations Management of the TASMU Ecosystem

1. Introduction

1.1 TASMU

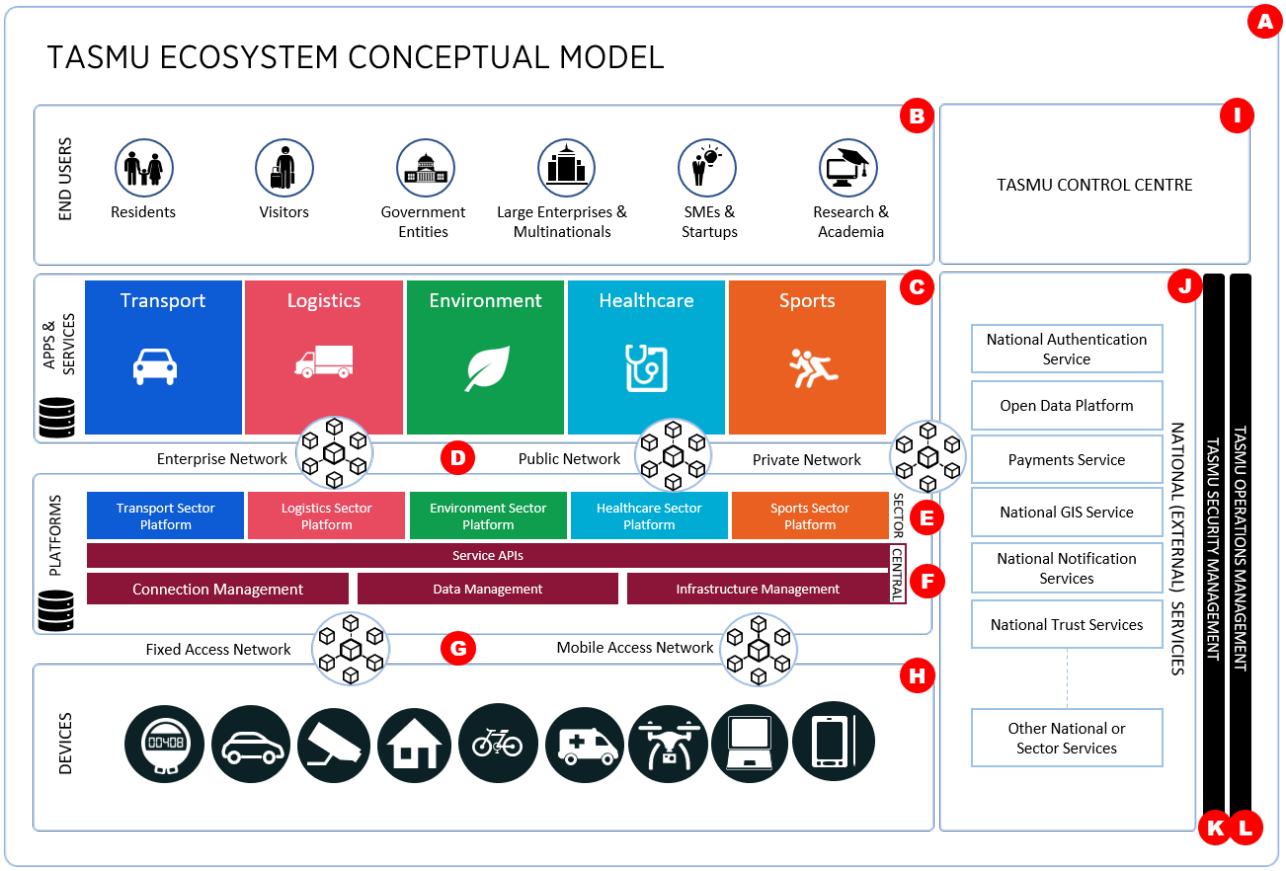
The Qatar National Vision 2030 aims to “transform Qatar into an advanced society capable of achieving sustainable development.” TASMU, or the Smart Qatar program, is a digital response to the goals that have been set out in the National Vision 2030. It is about harnessing technology and innovation to improve quality of life and help drive economic diversification.

TASMU aims to leverage innovative applications of technologies to provide targeted services for residents, businesses and government across priority sectors. The foundation of this whole-of-nation effort relies on the ability to collect and manage vast amounts of data, share and open it up for spawning broad-based innovation and entrepreneurship within a set of defined rules and regulations. This is then processed and analysed by different actors

for the build-up of innovative services and applications. As such, governance of TASMU on a national level has been designed to harmonize efforts across the different actors and drive Smart Qatar development with a key focus on ensuring efficiency and building resilience and interoperability.

TASMU Smart Services are services designed to solve evolving challenges targeted constituents (people, businesses, or government) face, leveraging technology and innovation. TASMU Smart Services cut across industry sectors focusing on human, social, economic, and environmental development. They can be focused on providing convenience or entertainment, or could address critical needs such as national safety and security. As such, the type of information they leverage can range from publicly open to sensitive or private information.

The policy covers the TASMU Ecosystem and interactions with it. The diagram below shows the TASMU Ecosystem in context to this policy.



Only the following elements are within the scope of this policy:

- A: is the overall ecosystem
- B: is the end-user ecosystem
- C: is the TASMU Smart Services and services ecosystem
- D: are the network connections from the Central Platform, over enterprise, public and private networks
- E: are the sector data analytics platforms ('Sector Platforms')
- F: is the central TASMU data analytics platform ('Central Platform')
- G: is the Internet of Things (IOT) access network, either over fixed of wireless networks
- H: is the IOT devices ecosystem
- I: is the TASMU Control Centre
- J: is the ecosystem of national services/platform that connects to the TASMU Central Platform and (C) above

- K: is the TASMU security management ecosystem
- L: is the TASMU operations ecosystem

1.2 TASMU Societal Impact Policy

The policy seeks to minimise the social cost of adopting new emerging technologies, and ensures that thoughtful oversight raises the spectre of security, privacy, and ethical breaches as part of the TASMU innovation development process.

The objective of this policy is to ensure that the TASMU Service Operator defines measures and processes to effectively manage risks and enhance positive impacts. The policy endeavours to mitigate societal and environmental risks, and encourages the Service Operator to adopt an Ethics By Design approach, which reveals ethical, legal and social issues at design-phase, but also during implementation, use and governance. The policy covers societal impact controls with regards to wellbeing protection, personal autonomy, choice architectures, protection of privacy and intimacy, transparency, artificial intelligence systems, equity and diversity, and finally environmental sustainability controls.

At a high-level, this policy provides deliberate controls that entrust the TASMU Service Operator to develop and design their respective TASMU Smart Service with the intent to do good, prosper wellbeing and promote social cohesion in the State of Qatar.

This TASMU Societal Impact Policy is regulated by the TASMU Smart Nation Regulator.

1.3 Compliance

All TASMU Service Operators SHALL:

1. Comply with this policy where they operate a TASMU System or provide a TASMU Smart Service to a Subscriber, prior to operating in the TASMU Ecosystem and on a regular basis as directed by the TASMU Smart Nation Regulator.

2. Ensure that this policy is applied to all aspects of the TASMU System, whether that is maintained or operated by a third party, prior to operating in the TASMU Ecosystem.

3. Ensure this policy is considered in conjunction with the specific TASMU Smart Service sector policy issued by the TASMU Smart Nation Regulator or the sector regulator, which will cover specific requirements of the TASMU Smart Service.

4. Allow for an independent audit to check compliance, as and when necessary, or as directed by the TASMU Smart Nation Regulator.

5. Undertake an initial Societal Impact Screening as a first step ahead of applying this policy, to determine whether they SHALL refer approval to the Societal Impact Committee , which will assess the Service Operator's application.

1.4 Societal Impact Screening

1. The TAMSU Service Operator SHALL carry out a Societal Impact Screening (SIS) to assess whether their Smart Service has any of the following characteristics:

   a. a systematic and extensive evaluation of the Subscriber's Personal Data, including profiling, scoring and systematic monitoring
   b. processing is likely to result in a high risk to the rights and freedoms of individuals
   c. processing of Personal Data or Special Personal Data
   d. processing data about incapacitated persons or those with limited ability to act
   e. systematic monitoring of public areas

f. automatic decisions which lead to legal consequences for those impacted
g. aggregation of data which would lead to the likelihood of identifying a Subscriber
h. data is transferred and/or stored in countries outside Qatar[1]
i. data processing which hinders those involved in exercising their rights
j. invokes Qatari, Arab and religious cultural rulings or customs or norms or identity
k. Surveillance Capitalism as a core component of the business model.

2. In the instance that a TAMSU Service Operator meets any one (1) of the SIS criteria above, for their respective Smart Service processes or services, then they SHALL seek to document the following:

   a. fill out the pre-qualification questions about the Smart Service business case
   b. conduct a Societal Impact Assessment
   c. submit the application to the TASMU Societal Impact Committee for final approval[2]
   d. repeat this screening every 3 years or preceding any change in the functional design of the TASMU Smart Service

2. Societal Impact Controls

2.1 Wellbeing Protection

The development and use of TASMU Smart Services are for the benefit of Subscribers and hence they should not have any adverse impact on their wellbeing. The TASMU Smart Nation Regulator will monitor the TASMU Smart Service and Subscriber feedback to evaluate wellbeing impact.

The TASMU Service Operator SHALL ensure that the TASMU Smart Service does not:

1. Facilitate the deterioration of a Subscriber's living conditions, their health, or their working conditions.
2. Prevent the Subscriber from pursuing their preferences, so long as they do not cause harm to others.
3. Impact the Subscriber's rights to exercise their mental and physical capacities.
4. Contribute to increasing stress, anxiety, or a sense of being harassed by the Subscriber's digital environment.

2.2 Personal Autonomy

TASMU Smart Services should be developed respecting the Subscriber's autonomy, and should not limit or restrict the Subscriber's control over their lives and their surroundings. The TASMU Smart Nation Regulator will monitor the TASMU Smart Service and Subscriber feedback to evaluate personal autonomy impact.

The TASMU Service Operator SHALL ensure that the TASMU Smart Service:

1. Does not prevent a Subscriber from fulfilling their own moral objectives and their conception of a life worth living.
2. Avoids creating dependencies through attention-capturing techniques or the imitation of human characteristics (appearance, voice, etc.) in ways that could cause confusion between AIS and natural persons.

2.3 Choice Architecture

Choice architecture is the design of different ways in which choices can be presented to Subscribers and the impact of this design choice on their decision making process. During the development and operation of a TASMU Smart Service, the TASMU Service Operator SHALL:

1. Be transparent to the TASMU Smart Nation Regulator by providing the methodology upon request, should there be any choice architecture applied to incentivise commercial gain to the TASMU Service Operator.
2. Ensure the Subscriber knows and understands when an intervention or suggestion influences their behaviour and/or choice and is able to consciously opt out.
3. Use default choice to influence Subscriber's behaviour towards reducing negative internalities.
4. Not impose a particular lifestyle on the Subscriber, whether directly or indirectly, by implementing oppressive surveillance and evaluation or incentive mechanisms.
5. Not spread untrustworthy information, lies, or propaganda, and should design the TASMU Smart Service with a view to containing their dissemination.

2.4 Protection of Privacy and Intimacy

The TASMU Service Operator SHALL ensure that:

1. Personal spaces in which people are not subjected to surveillance or digital evaluation are protected from the intrusion of AIS and Data Acquisition and Archiving Systems (DAAS).
2. The Subscriber's intimacy of thoughts and emotions are strictly protected from AIS functions capable of causing harm, especially functions that impose moral judgements on people or their lifestyle choices.
3. The Subscriber always has the right to digital disconnection in their private lives, and the Service Operator SHOULD explicitly offer the option to disconnect at any time, without encouraging Subscribers to stay connected.

2.5 Transparency Rules

The TASMU Service Operator SHALL:

1. Ensure that the TASMU Smart Service or related AIS processes that make decisions affecting a Subscriber's life, quality of life, or reputation meet Intelligibility, Decision Justifiability, and AI Accessibility criteria.
2. Immediately report the discovery of TASMU Smart Service operating errors, unexpected or undesirable effects, security breaches, and unforeseen societal impacts to the relevant public competent authorities, the TASMU Smart Nation Regulator, and those parties affected by the situation i.e. third party contractors or Subscriber.

2.6 Artificial Intelligence Systems and Agents

For TASMU Smart Services that employ AIS, which have a significant impact on the life of residents, the TASMU Service Operator SHALL ensure that:

1. Subscribers have the opportunity and skills to deliberate on the social parameters of these AIS, their objectives, and the limits of their use.
2. The TASMU Smart Nation Regulator is at all times able to verify that AIS are doing what they were programmed for and what they are used for. This could require the provision of the design of AIS algorithms to the relevant competent authorities and the TASMU Smart Nation Regulator for verification and control purposes using the appropriate compliance mechanism.
3. It is clear and known to any Subscribers if a decision concerning them or affecting them was made by an AIS.
4. Chatbots are easily identifiable to Subscribers, alerting them to whether they are interacting with an AIS or a real person.
5. The development and use of AIS does not contribute to lessen the responsibility of natural persons when decisions are made.
6. Only natural persons can be held accountable for decisions stemming from recommendations made by AIS, and the actions that proceed therefrom.
7. In all areas where time and circumstance permit, where a decision that affects a Subscriber's life, quality of life, or reputation is made, the final decision is taken by a natural person and that decision is free and informed.
8. It is clear and made known to any Subscriber, that if they authorise AIS to commit a crime or an offence, or demonstrate negligence by allowing AIS to commit them, that the Subscriber is responsible for this crime or offence.
9. It meets strict reliability, AI Accessibility, and integrity requirements and is subjected to tests that do not put the Subscriber's life in danger, harm their quality of life, or negatively impact their reputation or psychological integrity. These tests SHALL be open to the relevant competent authorities and the TASMU Smart Nation Regulator.

2.7 Equity, Diversity, Inclusion and Solidarity

The development and use of AIS in all TAMSU Smart Services should contribute to the creation of a just and equitable society and be compatible with maintaining social and cultural diversity. Hence the TASMU Service Operator SHALL ensure that the Smart Service:

1. Does not aid relationships of domination between groups and people based on differences (e.g. power, wealth, gender or knowledge).
2. Does not affect social and economic benefits for Subscribers by increasing social inequalities and vulnerabilities.
3. Development and deployment takes into consideration the multitude of expressions of social and cultural diversity present in the Qatari society.
4. Development environments are inclusive and reflect the diversity of the Subscribers and groups of society.
5. As much as possible, is tested to analyse any adverse consequences of the use of the TAMSU Smart Service and takes the appropriate measures to avoid them.

6. Is developed with the goal of collaborating with natural persons on complex tasks and fosters collaborative work between natural persons.
7. Is compatible with maintaining the bonds of solidarity among people and generations.
8. Enhances Qatari cultural content and Arabic content where applicable, thus promoting social cohesion as well as the local economic fabric.
9. Does not create, reinforce, or reproduce discrimination based on – amongst other things – social, gender, ethnic, cultural, or religious differences.
10. Does not restrict the scope of lifestyle choices or personal experiences or limit the free expression of ideas or the opportunity to hear diverse opinions.
11. Does not lock the Subscriber into a user profile, fix their personal identity, or confine them to a filtering bubble, by the use of DAAS .
12. Does not threaten the preservation of fulfilling moral and emotional human relationships.

2.8 Environmental Sustainability Controls

The TASMU Service Operator SHALL ensure that hardware, its digital infrastructure and the relevant objects on which it relies, such as data centres:

1. Aim for the greatest energy efficiency and mitigate greenhouse gas emissions over their entire life cycle.
2. Aim to optimise usage of resources and resource conservation.
3. Aim to generate the least amount of electric and electronic waste and to provide for maintenance, repair, and recycling procedures.
4. Minimise the impact on ecosystems and biodiversity at every stage of its life cycle, notably with respect to the extraction of resources and the ultimate disposition of the equipment when it has reached the end of its useful life.

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1. this can be ignored while hosting is temporarily overseas, and local facilities are not live 🈂️
2. the SIC MAY reject and/or provide recommendations to include mitigations for the Smart Service and resubmit the application 🈂️