CRYPTO RISK METRICS
DON'T TRUST. VERIFY.

White paper drafted under the European Markets in Crypto-Assets Regulation (EU) 2023/1114 for FFG KK12JMBTX

Preamble

00. Table of Contents

01. Date of notification

This white paper was notified on 2026-08-03.

02. Statement in accordance with Article 6(3) of Regulation (EU) 2023/1114

This crypto-asset white paper has not been approved by any competent authority in any Member State of the European Union. The person seeking admission to trading of the crypto-asset is solely responsible for the content of this crypto-asset white paper.

03. Compliance statement in accordance with Article 6(6) of Regulation (EU) 2023/1114

This crypto-asset white paper complies with Title II of Regulation (EU) 2023/1114 of the European Parliament and of the Council and, to the best of the knowledge of the management body, the information presented in the crypto-asset white paper is fair, clear and not misleading and the crypto-asset white paper makes no omission likely to affect its import.

04. Statement in accordance with Article 6(5), points (a), (b), (c), of Regulation (EU) 2023/1114

The crypto-asset referred to in this crypto-asset white paper may lose its value in part or in full, may not always be transferable and may not be liquid.

05. Statement in accordance with Article 6(5), point (d), of Regulation (EU) 2023/1114

As defined in Article 3(9) of Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on Markets in Crypto-Assets – amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 – a utility token is “a type of crypto-asset that is only intended to provide access to a good or a service supplied by its issuer”. This crypto-asset does not qualify as a utility token, as its intended use goes beyond providing access to a good or service supplied solely by the issuer.

06. Statement in accordance with Article 6(5), points (e) and (f), of Regulation (EU) 2023/1114

The crypto-asset referred to in this white paper is not covered by the investor compensation schemes under Directive 97/9/EC of the European Parliament and of the Council or the deposit guarantee schemes under Directive 2014/49/EU of the European Parliament and of the Council.

Summary

07. Warning in accordance with Article 6(7), second subparagraph, of Regulation (EU) 2023/1114

Warning: This summary should be read as an introduction to the crypto-asset white paper. The prospective holder should base any decision to purchase this crypto-asset on the content of the crypto-asset white paper as a whole and not on the summary alone. The offer to the public of this crypto-asset does not constitute an offer or solicitation to purchase financial instruments and any such offer or solicitation can be made only by means of a prospectus or other offer documents pursuant to the applicable national law. This crypto-asset white paper does not constitute a prospectus as referred to in Regulation (EU) 2017/1129 of the European Parliament and of the Council or any other offer document pursuant to Union or national law.

08. Characteristics of the crypto-asset

The crypto-asset Gram (GRAM) referred to in this white paper is a crypto-asset other than an EMT or ART and is issued on the TON network, in accordance with the FFG DTI classification shown in Section F.14, as of 2026-07-15. The crypto-asset was previously named Toncoin (TON). Following a community governance vote that concluded on 2026-06-08, with 81.22% of the votes cast in favour, the native crypto-asset of The Open Network was renamed from Toncoin (TON) to Gram (GRAM), with effect from 2026-06-15 (sources: TON Vote proposal "Rename Toncoin to Gram", https://ton.vote/EQDQvywF226NXojPky_9gwbCz0FPoygqY11bGl03SONNBs5V/proposal/EQAv-VS2OM80SYLB0ouRWRcpFg4J0L-egUf1-utF-OJ6h0rK, accessed 2026-07-15; TON Blockchain announcement, https://x.com/ton_blockchain/status/2064322586368970830, accessed 2026-07-15). The Gram crypto-asset had an initial supply of 5,000,000,000 units. The supply is not static and is subject to both inflationary and deflationary mechanisms controlled by the network protocol. The first recorded activity on the TON blockchain occurred on 2019-11-15 (block root hash: 8GYhhrigd8CwZGrRT59iulLDcgiTYuvOAzFJxugc0Ts=, source: https://tonviewer.com, accessed 2026-07-15).

The Open Network (TON) is a scalable, multi-blockchain platform designed to process a high volume of transactions through a Proof-of-Stake consensus mechanism with Byzantine Fault Tolerance characteristics. Gram is the native crypto-asset of the TON network and is used to pay transaction execution fees, storage and network-related fees, and to participate in staking for network validation. Gram is also used within the ecosystem to access protocol-level services and to facilitate value transfers between participants on the network.

The crypto-asset does not grant any legally enforceable or contractual rights or obligations to its holders or purchasers. Any functionalities accessible through the underlying technology are purely technical or operational in nature and do not confer rights comparable to ownership, profit participation, governance, or similar entitlements known from traditional financial instruments.

09. Information about the quality and quantity of goods or services to which the utility tokens give access and restrictions on the transferability

As defined in Article 3(9) of Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on Markets in Crypto-Assets – amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 – a utility token is "a type of crypto-asset that is only intended to provide access to a good or a service supplied by its issuer". This crypto-asset does not qualify as a utility token, as its intended use goes beyond providing access to a good or service supplied solely by the issuer.

10. Key information about the offer to the public or admission to trading

Crypto Risk Metrics GmbH is seeking admission to trading on the Payward Global Solutions LTD ("Kraken") platform in the European Union in accordance with Article 5 of Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on Markets in Crypto-Assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937. The admission to trading is not accompanied by a public offer of the crypto-asset.

Part A – Information about the offeror or the person seeking admission to trading

A.1 Name

Crypto Risk Metrics GmbH is the person seeking admission to trading.

A.2 Legal form

The legal form of Crypto Risk Metrics GmbH is 2HBR, which corresponds to "Gesellschaft mit beschränkter Haftung".

A.3 Registered address

The registered address of Crypto Risk Metrics GmbH is Lange Reihe 73, 20099 Hamburg,

Germany,

federal state of Hamburg.

A.4 Head office

The head office is identical to the registered address.

A.5 Registration date

Crypto Risk Metrics GmbH was registered on 2018-12-03.

A.6 Legal entity identifier

The Legal Entity Identifier (LEI) of Crypto Risk Metrics GmbH is 39120077M9TG0O1FE242.

A.7 Another identifier required pursuant to applicable national law

The national identifier of Crypto Risk Metrics GmbH is HRB 154488.

A.8 Contact telephone number

+4915144974120

A.9 E-mail address

info@crypto-risk-metrics.com

A.10 Response time (Days)

Crypto Risk Metrics GmbH will respond to investor enquiries within 30 calendar days.

A.11 Parent company

Crypto Risk Metrics GmbH has no parent company.

A.12 Members of the management body

Identity	Function	Business Address
Tim Zölitz	Chairman	Lange Reihe 73, 20099 Hamburg, Germany

A.13 Business activity

Crypto Risk Metrics GmbH is a technical service provider that supports regulated entities in fulfilling their regulatory requirements. Among other services, Crypto Risk Metrics GmbH acts as a data provider for ESG data under Article 66(5). In light of the requirements set out in Articles 4(7), 5(4) and 66(3) of Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on Markets in Crypto-Assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937, Crypto Risk Metrics GmbH aims to provide central services for crypto-asset white papers.

A.14 Parent company business activity

Crypto Risk Metrics GmbH does not have a parent company. Accordingly, no business activity of a parent company is to be reported in this section.

A.15 Newly established

Crypto Risk Metrics GmbH has been established since 2018-12-03 and is therefore not newly established (i.e. more than three years).

A.16 Financial condition for the past three years

Crypto Risk Metrics GmbH, founded in 2018 and based in Hamburg (HRB 154488), has undergone several strategic shifts in its business focus since incorporation. Due to these changes in business model and operational direction over time, the financial figures from earlier years are only comparable to a limited extent with the company's current commercial activities. The present business model – centred on regulatory technology and risk analytics in the context of the MiCA framework – has been developed progressively and can realistically be considered fully operational since approximately 2024.

The company's financial trajectory over the past three years reflects the transition from exploratory development towards market-ready product delivery. Profit or loss after tax for the last three financial years is as follows:

2024 (unaudited): loss of EUR 50,891.81

2023 (unaudited): loss of EUR 27,665.32

2022: profit of EUR 104,283.00

The profit in 2022 resulted primarily from legacy consulting activities, which were discontinued as part of the company's repositioning.

The losses in 2023 and 2024 resulted from strategic investments in the development of proprietary software infrastructure, regulatory frameworks, and compliance technology for the MiCA ecosystem. During those periods, no substantial commercial revenues were expected, as resources were directed towards preparing the platform for market entry in a regulated environment.

A fundamental repositioning of the company occurred in 2023 and especially in 2024, when the focus shifted towards providing risk management, regulatory reporting, and supervisory compliance solutions for financial institutions and crypto-asset service providers. This marked a material shift in business operations and monetisation strategy.

Based on preliminary unaudited management information for the financial year 2025, revenues are expected to have exceeded EUR 800,000, while preliminary net profit is expected to exceed EUR 100,000.

These figures are not audited and are not based on a finalised annual financial statement. Accordingly, they remain subject to finalisation and may differ from the figures ultimately reported in the annual financial statements.

With the regulatory environment now taking shape and the platform commercially validated, it is assumed that the effects of the strategic developments will continue to materialise in 2026. The company foresees further scalability of its technology and growing market demand for regulatory compliance tools in the European crypto-asset sector.

No public subsidies or governmental grants have been received to date; all operations have been financed through shareholder contributions and internally generated resources. Crypto Risk Metrics has never accepted any payments in tokens from projects it has worked with and – due to its internal Conflicts of Interest Policy – never will.

A.17 Financial condition since registration

Not applicable. The company has been established for more than three years and its financial condition over the past three years is provided in Part A.16 above.

Part B – Information about the issuer, if different from the offeror or person seeking admission to trading

B.1 Issuer different from offeror or person seeking admission to trading

Yes, the issuer is different from the person seeking admission to trading.

B.2 Name

Based on the available information, the crypto-asset does not appear to be issued through a traditional corporate, foundation, or comparable legal entity structure. The units in present circulation were distributed from 2020 through a proof-of-work process. This followed an earlier 2018 offering of tokens of the same name by Telegram and related entities, which was unwound following securities proceedings in the United States. According to publicly available information, the 2020 distribution was highly concentrated among a limited number of early participants, and it cannot be excluded that a substantial part of the supply accrued to persons or structures that may be relevant for the assessment of issuer-like functions. This does not prevent the issuer from being sufficiently identifiable in the future. In certain cases, legal entities, organised development teams, or natural persons may take central positions around a crypto-asset project and may therefore be considered relevant for the assessment of the issuer or issuer-like functions. For example, according to publicly available information, Telegram, operating through Telegram FZ-LLC (Dubai,

United Arab Emirates), has since 2026 acted as the primary operator of the network and its largest validator, has taken a leading role in the development of the protocol and in directing validator participation, and the network is deeply integrated with the Telegram messaging application. Pavel Durov, as a natural person, is publicly associated with the direction of the project and with Telegram, and Nikolai Durov, as a natural person, authored core elements of the protocol design. The Open Network Foundation, a non-profit foundation established in Switzerland, has coordinated the development of the network and retains oversight functions, and structures such as an organised development team or comparable organisational arrangements could also be identified. Such persons or structures may therefore be relevant for the assessment of issuer-like functions in relation to the crypto-asset.

B.3 Legal form

Not applicable.

B.4 Registered address

Not applicable.

Not applicable.

Not applicable.

B.5 Head office

Not applicable.

Not applicable.

Not applicable.

B.6 Registration date

Not applicable.

B.7 Legal entity identifier

Not applicable.

B.8 Another identifier required pursuant to applicable national law

Not applicable.

B.9 Parent company

Not applicable.

B.10 Members of the management body

Identity	Function	Business Address
Not applicable	Not applicable	Not applicable

B.11 Business activity

Not applicable.

B.12 Parent company business activity

Not applicable.

Part C – Information about the operator of the trading platform in cases where it draws up the crypto-asset white paper and information about other persons drawing the crypto-asset white paper pursuant to Article 6(1), second subparagraph, of Regulation (EU) 2023/1114

C.1 Name

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

C.2 Legal form

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

C.3 Registered address

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

C.4 Head office

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

C.5 Registration date

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

C.6 Legal entity identifier

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

C.7 Another identifier required pursuant to applicable national law

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

C.8 Parent company

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

C.9 Reason for crypto-asset white paper preparation

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

C.10 Members of the management body

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

C.11 Operator business activity

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

C.12 Parent company business activity

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

C.13 Other persons drawing up the crypto-asset white paper according to Article 6(1), second subparagraph, of Regulation (EU) 2023/1114

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

C.14 Reason for drawing the white paper by persons referred to in Article 6(1), second subparagraph, of Regulation (EU) 2023/1114

Not applicable since Crypto Risk Metrics GmbH is not a trading platform.

Part D – Information about the crypto-asset project

D.1 Crypto-asset project name

Long Name: "Gram", Short Name: "GRAM" according to the Digital Token Identifier Foundation (www.dtif.org, DTI see F.13, FFG DTI see F.14 as of 2026-07-15).

D.2 Crypto-assets name

Long Name: "Gram" according to the Digital Token Identifier Foundation (www.dtif.org, DTI see F.13, FFG DTI see F.14 as of 2026-07-15).

D.3 Abbreviation

Short Name: "GRAM" according to the Digital Token Identifier Foundation (www.dtif.org, DTI see F. 13, FFG DTI see F.14 as of 2026-07-15).

D.4 Crypto-asset project description

According to publicly available information (sources: https://docs.ton.org, https://ton.org, accessed 2026-07-15), the crypto-asset project is concerned with the development and operation of The Open Network (TON), a public, open-source Layer-1 distributed-ledger system designed to support large-scale decentralised applications, digital services and on-chain transactions. The network is implemented as a collection of interoperating blockchains (workchains and shardchains) that together form a single logical execution environment, sometimes described as a distributed superserver, intended to process very high transaction volumes in parallel. TON operates under a Byzantine Fault Tolerant Proof-of-Stake consensus mechanism known as Catchain, which is designed to provide fast block production and near-real-time finality, typically on the order of seconds. The protocol was originally conceived in 2018 by the Telegram development team led by Pavel and Nikolai Durov.

The organisational stewardship of the project has changed over time. Following Telegram's withdrawal from the project in 2020, development was continued by an open-source community, and The Open Network Foundation, a non-profit foundation established in Switzerland, became the main coordinating body. According to publicly available information, in 2026 Telegram resumed a central role: it was announced on 2026-05-04 that Telegram would act as the primary operator of the network in place of the Foundation and would operate as the network's largest validator. The Foundation and Telegram remain legally distinct, and the Foundation is reported to retain oversight functions, including a veto over major governance changes. The network is described as continuing to rely on an independent and rotating set of validators.

Within this technical framework, Gram (previously Toncoin) is the native crypto-asset of the TON network. In broad terms it is the unit in which network usage is paid and the stake that validators lock to take part in block production and consensus. The project does not involve the granting of

ownership, profit-participation rights or legal claims against any project entity or its contributors; it centres on the creation of a technical environment in which the Gram crypto-asset serves as a utility and coordination input for certain protocol processes.

The long-term evolution of the project depends on governance outcomes and technical, economic and regulatory considerations, and all future developments remain subject to change.

D.5 Details of all natural or legal persons involved in the implementation of the crypto-asset project

Name of person	Type of person	Business address of person	Domicile of company
The Open Network Stiftung (The Open Network Foundation)	Other person involved in implementation	c/o Sielva Management SA, Gubelstrasse 11, 6300 Zug, Switzerland	Switzerland
Barbara Ursula Schüpbach	Other person involved in implementation	c/o Sielva Management SA, Gubelstrasse 11, 6300 Zug, Switzerland	Switzerland
Seo Ro Yun	Other person involved in implementation	c/o Sielva Management SA, Gubelstrasse 11, 6300 Zug, Switzerland	Switzerland
Maximilian Crown	Other person involved in implementation	c/o Sielva Management SA, Gubelstrasse 11, 6300 Zug, Switzerland	Switzerland
Ton Venture Studio Ltd	Other person involved in implementation	Ground Floor, Coastal Building, Wickhams Cay II, Road Town, P.O. Box 2136, Carrot Bay VG 1130, British Virgin Islands	British Virgin Islands
Toncoin.Fund	Other person involved in implementation	Cannot be found	Cannot be found
Nikolai Durov	Other person involved in implementation	Cannot be found	Cannot be found
Telegram FZ-LLC	Other person involved in implementation	Business Central Towers, Tower A, Office 1003/1004, P.O. Box 501919, Dubai, United Arab Emirates	United Arab Emirates

Name of person	Type of person	Business address of person	Domicile of company
Pavel Durov	Other person involved in implementation	Business Central Towers, Tower A, Office 1003/1004, P.O. Box 501919, Dubai, United Arab Emirates	United Arab Emirates

D.6 Utility Token Classification

As defined in Article 3(9) of Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on Markets in Crypto-Assets – amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 – a utility token is "a type of crypto-asset that is only intended to provide access to a good or a service supplied by its issuer". This crypto-asset does not qualify as a utility token, as its intended use goes beyond providing access to a good or a service supplied solely by the issuer.

D.7 Key Features of Goods/Services for Utility Token Projects

As defined in Article 3(9) of Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on Markets in Crypto-Assets – amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 – a utility token is "a type of crypto-asset that is only intended to provide access to a good or a service supplied by its issuer". This crypto-asset does not qualify as a utility token, as its intended use goes beyond providing access to a good or a service supplied solely by the issuer.

D.8 Plans for the token

This section provides an overview of the historical developments related to the Gram (previously Toncoin) crypto-asset and a description of planned or anticipated project milestones as publicly communicated. All forward-looking elements are subject to significant uncertainty. They do not constitute commitments, assurances or guarantees, and may be modified, delayed or discontinued at any time.

There is no single formally published roadmap for the Gram crypto-asset. Project plans are communicated through the project's technical documentation, development blog and public announcements (sources: https://ton.org, https://docs.ton.org, https://blog.ton.org, accessed 2026-07-15). On this basis, several protocol upgrades, ecosystem initiatives and crypto-asset-related developments have been communicated that affect the evolution of the TON protocol and the role of the Gram crypto-asset.

Past milestones:

- Genesis design phase (2018 to 2019): the initial design of a Layer 1 blockchain intended to support large-scale user adoption was initiated by the Telegram team, including the conceptualisation of the Catchain Byzantine Fault Tolerant Proof-of-Stake consensus mechanism.

- Catchain consensus specification (2020-02): the Catchain consensus protocol, forming the basis of the network's Proof-of-Stake validation model, was formally outlined, defining validator coordination and block finality mechanisms.

- Community transition and development resumption (2020-05 to 2021): following Telegram's withdrawal from the project, open-source contributors resumed development using existing documentation, continuing protocol development under community stewardship.

- Mainnet renaming and The Open Network Foundation formation (2021-05): the stable test network was renamed to Mainnet and development activities were reorganised under The Open Network Foundation.

- Implementation of supply-reducing mechanisms (2023 Q2): changes to protocol rules affecting transaction fee handling introduced supply-reducing dynamics to the crypto-asset's supply.

- Telegram advertising revenue sharing integration (2024-02): Telegram launched a platform-wide advertising and monetisation model integrating the TON blockchain as the settlement layer for advertising payments and creator revenue distribution.

- Introduction of the TOLK programming language (2024): a new high-level programming language, derived from FunC, was introduced to support smart-contract development on the TON protocol.

- xStocks launch on TON (2025-12-18): tokenised US stocks and exchange-traded funds became available on-chain through the TON Wallet.

- Catchain 2.0 consensus upgrade (2026-04-09): following a staged testnet and mainnet rollout during the first quarter of 2026, an accelerated consensus was activated on mainnet, reducing block production times from approximately 2.5 seconds to approximately 400 milliseconds and increasing network throughput. The upgrade also increased the protocol's annualised issuance rate.

- Transaction fee reduction (2026-05-01): a protocol-level reduction of base transaction fees, intended to support micro-transaction and high-volume use cases within the ecosystem.

- Telegram assumes primary network stewardship (2026-05-04): it was announced that Telegram would take over the principal operating responsibilities previously associated with the TON Foundation and operate as the network's largest validator.

- Renaming from Toncoin to Gram (2026-06-15): following an announcement on 2026-06-01 and a community governance vote concluded on 2026-06-08, the native crypto-asset was renamed from Toncoin (TON) to Gram (GRAM). The change affected the name, ticker and logo only; the network retains the name The Open Network (TON).

Future milestones:

- Trustless Bitcoin bridge (planned, 2026 onwards): functionality intended to enable the transfer of Bitcoin into the TON ecosystem is reported to be in development and testing, with the aim of expanding cross-chain interaction capabilities.

- Developer tooling and consensus performance improvements (ongoing): further improvements to developer toolchains and to the performance and reliability of the consensus and node software are anticipated, as communicated in the project's development materials.

- Extended sidechain research and deployment (post-2026): further research into, and potential deployment of, sidechains is anticipated to support additional scalability and specialised execution environments.

Note: All future milestones are subject to significant uncertainty, including but not limited to technical feasibility, regulatory developments, market adoption and community governance decisions. The project may modify, delay or discontinue any of these initiatives at any time. Past implementation or performance outcomes do not constitute an indication of future results, and any such changes may materially affect the characteristics, availability or perceived value of the GRAM crypto-asset for its holders.

D.9 Resource allocation

No proceeds raised or retained by a registered legal-entity issuer for the current Gram crypto-asset project have been identified in the public sources reviewed. Telegram Group Inc. and TON Issuer Inc. raised approximately USD 1,700,000,000 in 2018 for the proposed original Gram issuance. Following proceedings in the United States, a settlement approved on 26 June 2020 required USD 1,224,000,000 to be returned to initial purchasers and imposed a civil penalty of USD 18,500,000. The proposed original Grams were not distributed. The present Gram is the native TON crypto-asset formerly called Toncoin. No public evidence reviewed establishes that any of the 2018 proceeds remains available to the current project.

Public sources describe resources provided through open-source software development, validator infrastructure and ecosystem programmes for grants, audits and user incentives. They do not disclose a consolidated monetary value for these resources or establish which resources remain available specifically to the Gram crypto-asset project. In May 2026, Telegram announced that it would take a leading role in TON and become the network’s largest validator. This indicates an operational contribution but does not establish that Telegram is the sole or primary network operator or disclose an operating budget for the project.

No registered legal-entity issuer has been identified whose financial resources, staffing or operating budget could be stated for the project. The resources allocated specifically to the project therefore cannot be determined from publicly available information.

The natural persons, legal persons, undertakings, organised development teams, governance arrangements or other structures connected to the Gram crypto-asset project have not independently confirmed the occurrence, precise amounts or current status of these reported allocations and fundraising figures. As a result, the referenced allocation figures cannot be independently verified and should be considered indicative only. Token distribution changes can negatively impact the investor.

D.10 Planned use of collected funds or crypto-assets

Not applicable, as this white paper serves the purpose of admission to trading and is not associated with any fundraising activity for the crypto-asset project.

Part E – Information about the offer to the public of crypto-assets or their admission to trading

E.1 Public offering or admission to trading

Crypto Risk Metrics GmbH is the person seeking admission to trading.

E.2 Reasons for public offer or admission to trading

The purpose of seeking admission to trading is to enable the crypto-asset to be listed on a regulated platform in accordance with the applicable provisions of Regulation (EU) 2023/1114 and Commission Implementing Regulation (EU) 2024/2984. The white paper has been drawn up to comply with the transparency requirements applicable to trading venues.

E.3 Fundraising target

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.4 Minimum subscription goals

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.5 Maximum subscription goals

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.6 Oversubscription acceptance

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.7 Oversubscription allocation

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.8 Issue price

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.9 Official currency or any other crypto-assets determining the issue price

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.10 Subscription fee

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.11 Offer price determination method

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.12 Total number of offered/traded crypto-assets

GRAM does not have a fixed maximum supply. It was launched with an initial supply of 5,000,000,000 units and follows an inflationary issuance model, under which new units are created as rewards to the validators that produce and validate blocks. The annualised issuance rate is not fixed; it increased following a consensus upgrade activated on 2026-04-09 and, according to publicly available information, currently stands at approximately 4%. The protocol also includes supply-reducing mechanisms, namely the burning of a fixed share (one half) of transaction fees at protocol level, the burning of staked units confiscated from validators through slashing, and the transfer of units to burn addresses from which they are not intended to be accessed again.

According to publicly available information (source: https://tonscan.org/stats, accessed 2026-07-15), as at 2026-07-15 the total supply was approximately 5,217,195,367 units and the circulating supply was approximately 2,730,010,770 units, being approximately 52% of the total supply. The circulating supply may differ from the total supply, as the effective amount available on the market depends on units released by network participants at any given time and on reductions through burning.

The portion of the supply available for trading at any given time corresponds to units in circulation that are not staked or otherwise subject to lock-up or similar restrictions.

Consequently, the total available Gram supply is subject to continuous change, introducing material uncertainty and the risk of dilution for investors.

E.13 Targeted holders

The admission of the crypto-asset to trading is open to all types of investors.

E.14 Holder restrictions

Holder restrictions are subject to the rules applicable to the crypto-asset service provider, as well as any additional restrictions that provider may impose.

E.15 Reimbursement notice

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.16 Refund mechanism

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.17 Refund timeline

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.18 Offer phases

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.19 Early purchase discount

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.20 Time-limited offer

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.21 Subscription period beginning

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.22 Subscription period end

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.23 Safeguarding arrangements for offered funds/crypto-assets

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.24 Payment methods for crypto-asset purchase

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.25 Value transfer methods for reimbursement

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.26 Right of withdrawal

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.27 Transfer of purchased crypto-assets

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.28 Transfer time schedule

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.29 Purchaser's technical requirements

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.30 Crypto-asset service provider (CASP) name

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.31 CASP identifier

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.32 Placement form

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.33 Trading platforms name

The admission to trading is sought on Payward Global Solutions LTD ("Kraken").

E.34 Trading platforms Market identifier code (MIC)

The Market Identifier Code (MIC) of Payward Global Solutions LTD ("Kraken") is PGSL.

E.35 Trading platforms access

The token is intended to be listed on the trading platform operated by Payward Global Solutions LTD ("Kraken"). Access to this platform depends on regional availability and user eligibility under Kraken's terms and conditions. Investors should consult Kraken's official documentation to determine whether they meet the requirements for account creation and token trading.

E.36 Involved costs

The costs involved in accessing the trading platform depend on the specific fee structure and terms of the respective crypto-asset service provider. These may include trading fees, deposit or withdrawal charges, and network-related transaction fees. Investors are advised to consult the applicable fee schedule of the chosen platform before engaging in trading activities.

E.37 Offer expenses

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.38 Conflicts of interest

MiCA-compliant crypto-asset service providers shall have strong measures in place in order to manage conflicts of interest. Due to the broad audience this white paper addresses, potential investors should always check the conflicts-of-interest policy of their respective counterparty.

Crypto Risk Metrics GmbH has established, implemented, and documented comprehensive internal policies and procedures for the identification, prevention, management, and documentation of conflicts of interest in accordance with applicable regulatory requirements. These internal measures are actively applied within the organisation. For the purposes of this specific assessment and the crypto-asset covered by this white paper, a token-specific review has been conducted by Crypto Risk Metrics GmbH. Based on this individual review, no conflicts of interest relevant to this crypto-asset have been identified at the time of preparation of this white paper.

E.39 Applicable law

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

E.40 Competent court

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

Part F – Information about the crypto-assets

F.1 Crypto-asset type

The crypto-asset described in the white paper is classified as a crypto-asset under the Markets in Crypto-Assets Regulation (MiCA) but is neither classified as an electronic money token (EMT) nor an asset-referenced token (ART). It is a digital representation of value that can be stored and transferred using distributed ledger technology (DLT) or similar technology, without embodying or conferring any rights to its holder. The crypto-asset does not aim to maintain a stable value by referencing an official currency, a basket of assets, or any other underlying rights. Instead, its valuation is entirely market-driven, based on supply and demand dynamics, and it is not subject to any stabilisation mechanism. It is neither pegged to any fiat currency nor backed by any external assets, which distinguishes it from EMTs and ARTs. Furthermore, the crypto-asset is not categorised as a financial instrument, deposit, insurance product, pension product, or any other regulated financial product under EU law. It does not grant financial rights, voting rights, or any contractual claims to its holders, and therefore remains outside the scope of regulatory frameworks applicable to traditional financial instruments.

F.2 Crypto-asset functionality

According to publicly available information (source: https://docs.ton.org, accessed 2026-07-15), GRAM (previously Toncoin, TON) is the native crypto-asset of the TON protocol and functions as the primary on-chain economic and coordination unit of the system.

Within the TON environment, GRAM is required to pay transaction fees, smart-contract execution (gas) and persistent on-chain storage, reflecting the protocol's resource-based accounting model in which every account operates as a smart contract under an actor-based architecture. It is also used

to allocate and price the computational and bandwidth resources consumed by users and applications operating on the network.

GRAM plays a role in the network's Proof-of-Stake consensus system, where validators are required to lock substantial amounts of GRAM to participate in block production and network security and may receive rewards in the form of newly issued GRAM and a share of transaction and storage fees. Staked GRAM additionally carries weight in stake-weighted protocol decisions, such as validator configuration parameters and community governance votes conducted on the network's voting platform; the 2026 renaming of the crypto-asset from TON to GRAM was decided through such a vote.

GRAM further serves as the medium of exchange for protocol-level services such as TON DNS, TON Storage and TON Proxy, which rely on GRAM payments for domain registration, decentralised data and hosting. Beyond the base protocol, GRAM is integrated into Telegram's advertising and monetisation infrastructure, where it is used for advertising payments, revenue sharing with channel operators and peer-to-peer transfers within the Telegram application.

The GRAM token does not confer ownership, profit participation, governance rights over the issuer or any related entity in a corporate-law sense, or any form of legally enforceable economic entitlement. All functionalities are technical in nature and relate exclusively to interactions within the TON protocol environment. The actual usability of GRAM depends on factors such as system stability, governance decisions, development progress and the operational conditions of the TON blockchain, which are outside the control of token holders.

F.3 Planned application of functionalities

Future milestones:

- Trustless Bitcoin bridge (planned, 2026 onwards): functionality intended to enable the transfer of Bitcoin into the TON ecosystem is reported to be in development and testing, with the aim of expanding cross-chain interaction capabilities.

- Developer tooling and consensus performance improvements (ongoing): further improvements to developer toolchains and to the performance and reliability of the consensus and node software are anticipated, as communicated in the project's development materials.

- Extended sidechain research and deployment (post-2026): further research into, and potential deployment of, sidechains is anticipated to support additional scalability and specialised execution environments.

Note: All future milestones are subject to significant uncertainty, including but not limited to technical feasibility, regulatory developments, market adoption and community governance decisions. The project may modify, delay or discontinue any of these initiatives at any time. Past implementation or performance outcomes do not constitute an indication of future results, and any such changes may materially affect the characteristics, availability or perceived value of the GRAM crypto-asset for its holders.

A description of the characteristics of the crypto asset, including the data necessary for classification of the crypto-asset white paper in the register referred to in Article 109 of Regulation (EU) 2023/1114, as specified in accordance with paragraph 8 of that Article

F.4 Type of crypto-asset white paper

The white paper type is "Other crypto-assets" (i.e. OTHR).

F.5 The type of submission

The type of submission is MODI, which stands for "Modification".

F.6 Crypto-asset characteristics

The crypto-asset referred to herein is a crypto-asset other than EMT and ART, and is available on the TON network. The crypto-asset is fungible up to 9 digits after the decimal point. The crypto-asset constitutes a digital representation recorded on distributed-ledger technology and does not confer ownership, governance, profit participation, or any other legally enforceable rights. Any functionalities associated with the token are limited to potential technical features within the relevant platform environment. These functionalities do not represent contractual entitlements and may depend on future development decisions, technical design choices, and operational conditions. The crypto-asset does not embody intrinsic economic value; instead, its value, if any, is determined exclusively by market dynamics such as supply, demand, and liquidity in secondary markets.

F.7 Commercial name or trading name

Long Name: "Gram" according to the Digital Token Identifier Foundation (www.dtif.org, DTI see F.13, FFG DTI see F.14 as of 2026-07-15).

F.8 Website of the issuer

Based on the available information, the crypto-asset does not appear to be issued through a traditional corporate, foundation, or comparable legal entity structure. Accordingly, no website of a registered legal-entity issuer has been identified.

General information about the underlying project is made publicly available at: https://ton.org/. This website should not be understood as the website of a registered legal-entity issuer within the meaning of Regulation (EU) 2023/1114 (MiCA).

F.9 Starting date of offer to the public or admission to trading

2026-02-11

F.10 Publication date

2026-02-11

F.11 Any other services provided by the issuer

Based on the available information, the crypto-asset does not appear to be issued through a traditional corporate, foundation, or comparable legal entity structure. Therefore, no other services provided by a registered legal-entity issuer have been identified.

It cannot be excluded that natural persons, organised development teams, or other structures connected to the crypto-asset project provide or may provide additional services outside the scope of Regulation (EU) 2023/1114.

F.12 Language or languages of the crypto-asset white paper

EN

F.13 Digital token identifier code used to uniquely identify the crypto-asset or each of the several crypto assets to which the white paper relates

QBZLT5MT1

F.14 Functionally fungible group digital token identifier

KK12JMBTX

F.15 Voluntary data flag

This white paper has been submitted as mandatory under Regulation (EU) 2023/1114.

F.16 Personal data flag

Yes, this white paper contains personal data as defined in Regulation (EU) 2016/679 (the GDPR).

F.17 LEI eligibility

Based on the available information, the crypto-asset does not appear to be issued through a traditional corporate, foundation, or comparable legal entity structure. Accordingly, no registered legal-entity issuer has been identified for which LEI eligibility could be assessed.

F.18 Home Member State

Germany

F.19 Host Member States

Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden

Part G – Information on the rights and obligations attached to the crypto-assets

G.1 Purchaser rights and obligations

The crypto-asset does not grant any legally enforceable or contractual rights or obligations to its holders or purchasers. Any functionalities accessible through the underlying technology are of a purely technical or operational nature and do not constitute rights comparable to ownership, profit participation, governance, or similar entitlements known from traditional financial instruments. Accordingly, holders do not acquire any legally enforceable claim against the issuer of the crypto-asset or any third party.

G.2 Exercise of rights and obligations

As the crypto-asset does not confer any legally enforceable rights or obligations, there are no applicable procedures or conditions for their exercise. Any interaction or functionality that may be available within the project's technical infrastructure – such as participation mechanisms or protocol-level features – serves operational purposes only and does not create, evidence, or constitute any contractual or statutory entitlement.

G.3 Conditions for modifications of rights and obligations

As the crypto-asset does not confer any legally enforceable rights or obligations, there are no conditions or mechanisms for modifying such rights or obligations. Adjustments to the technical protocol, smart contract logic, or related systems may occur in the ordinary course of development or maintenance. Such changes do not alter the legal position of holders, as no contractual rights exist and no rights arise under applicable law or regulation. Holders should not interpret technical updates or governance-related changes as amendments to legally binding entitlements.

G.4 Future public offers

Information on the future offers to the public of crypto-assets was not available at the time of writing this white paper (2026-07-15).

G.5 Issuer retained crypto-assets

No allocation of Gram retained by a registered legal-entity issuer has been identified. Based on the available information, the crypto-asset does not appear to be issued through a traditional corporate, foundation, or comparable legal entity structure, and no publicly disclosed blockchain addresses have been identified that can be independently and conclusively attributed to such an issuer for the purpose of verifying retained balances. No publicly disclosed vesting schedule or lock-up arrangement has been identified for holdings retained by a registered legal-entity issuer.

The investor should nonetheless be aware that supply is materially concentrated among the persons and structures relevant for issuer-like functions. In particular, Telegram is reported to hold a labelled on-chain allocation of approximately 6.1% of the total supply (approximately 314,000,000 units) as at 2026-03-31, and to operate as the network's primary operator and largest validator. These figures rest on public reporting and cannot be independently verified.

The token distribution can be traced on-chain on the TON network: https://tonviewer.com. The investor must be aware that a public address cannot necessarily be assigned to a single person or entity, which limits the ability to determine exact economic influence or future actions. The information presented in this section is based on publicly available information, should be considered indicative only, and changes in the holdings of project-related persons or structures can negatively impact the investor.

G.6 Utility token classification

No – the crypto-asset project does not concern utility tokens as defined in Article 3(9) of Regulation (EU) 2023/1114.

G.7 Key features of goods/services of utility tokens

Not applicable, as the crypto-asset described herein is not a utility token.

G.8 Utility tokens redemption

Not applicable, as the crypto-asset described herein is not a utility token.

G.9 Non-trading request

The admission to trading is sought.

G.10 Crypto-assets purchase or sale modalities

Not applicable, as this white paper is written to seek admission to trading, not for the initial offer to the public.

G.11 Crypto-assets transfer restrictions

The crypto-assets themselves are not subject to any technical or contractual transfer restrictions and are generally freely transferable. However, crypto-asset service providers may impose restrictions on buyers or sellers in accordance with applicable laws, internal policies or contractual terms agreed with their clients.

G.12 Supply adjustment protocols

No – there are no fixed protocols that can increase or decrease the supply of the crypto-asset in response to changes in demand as of 2026-07-15.

However, it is possible to decrease the circulating supply by transferring crypto-assets to so-called "burn addresses". These are addresses from which the tokens are no longer intended to be transferred or accessed, effectively removing them from circulation.

G.13 Supply adjustment mechanisms

Not applicable.

G.14 Token value protection schemes

No – the crypto-asset does not have any mechanisms or schemes in place that aim to stabilise or protect its market value. Its value is determined solely by market supply and demand, and may be subject to significant volatility.

G.15 Token value protection schemes description

Not applicable, as the crypto-asset in scope does not have any value protection scheme in place.

G.16 Compensation schemes

No – the crypto-asset does not have any compensation scheme.

G.17 Compensation schemes description

Not applicable, as the crypto-asset in scope does not have any compensation scheme in place.

G.18 Applicable law

This white paper is submitted in the context of an application for admission to trading on a trading platform established in the European Union. Accordingly, this white paper shall be governed by the laws of the Federal Republic of Germany.

G.19 Competent court

Any disputes arising in relation to this white paper or the admission to trading may be brought before the competent courts in Hamburg, Germany.

Part H – information on the underlying technology

H.1 Distributed ledger technology (DLT)

The crypto-asset in scope is implemented on the TON network following the standards described below.

H.2 Protocols and technical standards

The crypto-asset in scope is implemented on the TON network following the standards described below.

The following applies to the TON protocol:

Networking and general data propagation are handled through the Abstract Datagram Network Layer (ADNL), the peer-to-peer communication layer of the TON network. Network nodes communicate using 256-bit ADNL addresses. Peer and service discovery uses a Kademlia-based distributed hash table with 256-bit keys, while overlay networks support the propagation of messages, blocks and other network data among participating nodes.

Formal protocol rules and binary data layouts are defined using TL-B (Type Language - Binary), a schema language used to define and serialise blocks, transactions, messages, account states and other TON data structures. Technical standards for the ecosystem are developed through TON Enhancement Proposals (TEPs). These include TEP-64, which defines token metadata standards, and TEP-74, which defines the standard smart-contract interface for fungible Jetton tokens. TEP-74 applies to contract-based Jettons and not to Gram, which is the native crypto-asset of the TON blockchain.

For cryptographic authentication and data integrity, TON uses SHA-256-based representation hashes and Ed25519 digital signatures. TON data is represented through cell-based structures. Merkle proofs allow selected data to be verified against a larger cell tree, while TON dictionaries use cell-based Patricia-style tree structures. These mechanisms allow the integrity and inclusion of specific state elements to be verified without reproducing the complete underlying state.

H.3 Technology used

The crypto-asset in scope is implemented on the TON network following the standards described below.

The following applies to the TON protocol:

TON is an account-based distributed ledger implementing an Actor model. Smart contracts are hosted on individual accounts and interact asynchronously by sending messages. Each active smart-contract account has its own address, balance, executable code and persistent state. Wallet functionality is also implemented through smart contracts.

1. Ledger architecture and scalability structure

TON is a multi-chain system comprising a masterchain and one or more workchains. The masterchain maintains the global network configuration, protocol parameters, validator information, system smart contracts and references to the latest states of the workchains and their shards. The basechain is the principal workchain and hosts most user accounts and smart contracts. The architecture permits additional workchains with different rules or execution environments to be introduced. Under the Infinite Sharding Paradigm, workchains may be divided into shardchains. Shardchains can split or merge dynamically according to processing requirements, allowing transactions affecting different shards to be processed in parallel.

2. Execution environment and transaction processing

Smart contracts execute in the TON Virtual Machine (TVM), a stack-based virtual machine designed for deterministic execution. Tolk is the current official high-level language for developing TON smart contracts. Existing contracts may also have been written in FunC, which is now treated as a legacy language. Contract source code is compiled into executable TVM code. Smart contracts may receive internal messages sent by other accounts or smart contracts within TON and external messages submitted from outside the blockchain, including messages used to initiate wallet transactions. Depending on the transaction and message configuration, processing may involve storage, credit, compute, action and bounce phases.

3. Data representation and storage model

TON represents data using the Bag of Cells model. A cell is an immutable data structure containing up to 1,023 data bits and up to four references to other cells. Connected cells form a directed acyclic graph. Collections of cells may be serialised into the Bag of Cells format for transmission and storage. Blocks, transactions, messages, smart-contract code and account states are represented using these cell-based structures.

4. Additional network services

The wider TON ecosystem includes additional services such as TON Storage, a distributed file-storage and data-sharing service, and TON Proxy, a service supporting access to TON Sites and the routing of traffic through the TON network. These services are separate from the core TON ledger, the TVM execution environment and the consensus mechanism.

H.4 Consensus mechanism

The crypto-asset in scope is implemented on the TON network following the standards described below.

The following applies to the TON protocol:

1. Proof of Stake and validators

TON uses a Proof-of-Stake Byzantine Fault Tolerant consensus mechanism. Validators are required to stake Gram to participate in block production and validation. Each validator is assigned a validator weight determined under the applicable staking, election and protocol rules. Validators verify proposed blocks, participate in consensus voting and contribute to the operation of the masterchain and the shardchains.

2. Catchain 2.0 and Simplex consensus

Since its mainnet activation on 9 April 2026, TON has used Catchain 2.0, a modified version of the Simplex Byzantine Fault Tolerant consensus protocol adapted to the TON architecture. Catchain 2.0 replaced the previous Catchain 1.0 and Block Consensus Protocol architecture. Consensus is organised into numbered slots, which are grouped into leader windows. The validator assigned to a leader window proposes block candidates for the corresponding slots. Other validators verify each candidate and, where it is considered valid, submit weighted notarisation votes. A notarisation certificate is formed when the supporting votes represent more than two-thirds of the applicable validator weight. Validators may then submit finalisation votes. A finalisation certificate supported by the required validator weight commits the corresponding block to the finalised ledger. Where a slot does not progress to finalisation within the applicable time, validators may issue skip votes. A skip certificate allows consensus to proceed to subsequent slots without finalising a block for the affected slot. Notarisation, finalisation and skip certificates therefore allow the protocol to continue operating where a leader is inactive, a block candidate is not accepted or communications are interrupted.

3. Byzantine Fault Tolerance

Catchain 2.0 is designed to maintain consensus safety where Byzantine or otherwise faulty validators represent less than one-third of the relevant total validator weight. Notarisation, finalisation and skip certificates require votes representing more than two-thirds of the applicable validator weight. Validator voting is therefore weighted and is not determined by a simple count of participating validator nodes.

4. Masterchain and shardchain consensus

Separate validator groups and consensus instances apply to the masterchain and the relevant shardchains. This allows blocks associated with different parts of TON's sharded architecture to be proposed and validated in parallel. Shardchain blocks are subsequently referenced through the masterchain, which maintains information concerning the overall state and configuration of the network.

5. Consensus communication

Consensus participants communicate through private validator overlay networks. Block candidates are propagated using a two-step forward-error-correction erasure-coding mechanism, while consensus votes and certificates are exchanged between validators. Under the current mainnet configuration, QUIC is used for the Catchain 2.0 consensus communication path.

6. Validator elections and proposer rotation

Validator sets are selected periodically through the Elector system contract. Prospective validators submit election applications and stake Gram, after which the validator set and the corresponding validator weights are determined for the following validation period. Within an active validation period, responsibility for proposing block candidates rotates between validators according to protocol-defined slots and leader windows. This proposer rotation is separate from the periodic election and activation of the overall validator set.

H.5 Incentive mechanisms and applicable fees

The crypto-asset in scope is implemented on the TON network following the standards described below.

The following applies to the TON protocol:

1. Validator rewards

Validators receive rewards denominated in Gram for successful participation in block production and consensus. Validator rewards comprise protocol-defined block rewards and collected gas fees. Following the applicable validation period, the Elector system contract releases the validators' frozen stakes and distributes the corresponding rewards proportionally among the past validators in accordance with the applicable protocol rules. The amount of the block rewards and the rules governing their distribution are determined through the TON network configuration and may be changed through the applicable protocol governance and configuration procedures.

2. Staking

Validators must lock Gram as stake when applying to participate in a validation period. The applicable election rules determine which applicants are included in the validator set and the validator weight assigned to each selected validator. The stake remains frozen for the protocol-defined period. This creates an economic commitment by the validator and allows an approved fine to be deducted from the stake where the validator fails to comply with the applicable protocol requirements.

3. Applicable fees

Transactions and smart-contract operations on TON require fees paid in Gram. Depending on the transaction, the applicable charges may include:

- storage fees for maintaining account and smart-contract data on the blockchain;

- gas fees for executing instructions in the TON Virtual Machine;

- action fees relating to actions generated during transaction execution; and

- forwarding fees for transmitting messages through the network.

The amount charged depends principally on the computational, storage and messaging resources used by the transaction and on the fee parameters contained in the TON network configuration. The fees are therefore not determined solely by transaction value or current network demand.

4. Validator complaints and penalties

A validator suspected of protocol violations or material underperformance may be the subject of a complaint submitted to the Elector system contract. The complaint must include supporting evidence, such as a Merkle proof demonstrating the alleged failure, and a proposed fine reflecting the severity of the conduct. Validators participating in the applicable voting round verify and vote on the complaint. Approval requires votes representing more than two-thirds of the total validator weight. Where the complaint is approved, the applicable fine is deducted from the affected validator's frozen stake in Gram. The complaint-based penalty mechanism creates a financial incentive for validators to comply with the protocol rules and perform their validation responsibilities reliably. It does not constitute an automatic deduction for every individual missed block or unsuccessful validation activity.

H.6 Use of distributed ledger technology

No – DLT is not operated by the issuer, the offeror, the person seeking admission to trading, or any third party acting on their behalf.

H.7 DLT functionality description

Not applicable, as the DLT is not operated by the issuer, the offeror, the person seeking admission to trading, or any third party acting on their behalf.

H.8 Audit

Given the breadth of the term "technology", it cannot be confirmed that all elements or aspects of the technology employed have undergone a comprehensive and systematic technical examination. Accordingly, no comprehensive audit of the technology used can be confirmed. This white paper focuses primarily on risk-related aspects and therefore does not imply, nor should it be interpreted as implying, that a full assessment or audit of all technological elements has been conducted.

H.9 Audit outcome

Not applicable, as no comprehensive audit of the technology used has been conducted or can be confirmed.

Part I – Information on risks

I.1 Offer-related risks

1. Regulatory and Compliance

Regulatory frameworks applicable to crypto-asset services in the European Union and in third countries are evolving. Supervisory authorities may introduce, interpret, or enforce rules that affect (i) the eligibility of this crypto-asset for admission to trading, (ii) the conditions under which a crypto-asset service provider may offer trading, custody, or transfer services for it, or (iii) the persons or jurisdictions to which such services may be provided. As a result, the crypto-asset service provider admitting this crypto-asset to trading may be required to suspend, restrict, or terminate trading or withdrawals for regulatory reasons, even if the crypto-asset itself continues to function on its underlying network.

2. Trading venue and connection risk

Trading in the crypto-asset depends on the uninterrupted operation of the trading venues on which it is listed and, where applicable, on its technical connections to external liquidity sources or venues. Interruptions such as system downtime, maintenance, faulty integrations, API changes, or failures at an external venue can temporarily prevent order placement, execution, deposits, or withdrawals, even when the underlying blockchain is functioning. In addition, trading platforms in emerging markets may operate under differing governance, compliance, and oversight standards, which can increase the risk of operational failures or disorderly market conditions.

3. Market formation and liquidity conditions

The price and tradability of the crypto-asset depend on actual trading activity on the venues to which the service provider is connected, whether centralised exchanges (CEXs) or decentralised exchanges (DEXs). Trading volumes may at times be low, order books thin, or liquidity concentrated on a single venue. In such conditions, buy or sell orders may not be executed in full or may be executed only at a less favourable price, resulting in slippage.

Volatility: The market price of the crypto-asset may fluctuate significantly over short periods, including for reasons that are not linked to changes in the underlying project or protocol. Periods of limited liquidity, shifts in overall market sentiment, or trading on only a small number of CEXs or DEXs can amplify these movements and lead to higher slippage when orders are executed. As a result, investors may be unable to sell the crypto-asset at or close to a previously observed price, even where no negative project-specific event has occurred.

4. Counterparty and service provider dependence

The admission of the crypto-asset to trading may rely on several external parties, such as connected centralised or decentralised trading venues, liquidity providers, brokers, custodians, or technical integrators. If any of these counterparties fail to perform, suspend their services, or apply internal restrictions, the trading, deposit, or withdrawal of the crypto-asset on the listing crypto-asset service provider can be interrupted or halted.

Quality of counterparties: Trading venues and service providers in certain jurisdictions may operate under regulatory or supervisory standards that are lower or differently enforced than those applicable in the European Union. In such environments, deficiencies in governance, risk management, or compliance may remain undetected, which increases the probability of abrupt service interruptions, investigations, or forced wind-downs.

Delisting and service suspension: The crypto-asset's availability may depend on the internal listing decisions of these counterparties. A delisting or suspension on a key connected venue can materially reduce liquidity or make trading temporarily impossible on the admitting service provider, even if the underlying crypto-asset continues to function.

Insolvency of counterparties: If a counterparty involved in holding, routing, or settling the crypto-asset becomes insolvent, enters restructuring, or is otherwise subject to resolution measures, assets held or processed by that counterparty may be frozen, become temporarily unavailable, or be recoverable only in part or not at all, which can result in losses for clients whose positions were maintained through that counterparty. This risk applies in particular where client assets are held on an omnibus basis or where segregation is not fully recognised in the counterparty's jurisdiction.

5. Operational and information risks

Due to the irrevocability of blockchain transactions, incorrect transaction approvals or the use of wrong networks or addresses will typically make the transferred funds irrecoverable. Because trading may also rely on technical connections to other venues or service providers, downtime or faulty code in these connections can temporarily block trading, deposits, or withdrawals even when the underlying blockchain is functioning. In addition, different groups of market participants may have unequal access to technical, governance, or project-related information, which can lead to information asymmetry and place less informed investors at a disadvantage when making trading decisions.

6. Market access and liquidity concentration risk

If the crypto-asset is only available on a limited number of trading platforms or through a single market-making entity, this may result in reduced liquidity, greater price volatility, or periods of inaccessibility for retail holders.

I.2 Issuer-related risks

Interpretative note for this section: The risk factors set out in this Part I.2 follow the structure of the applicable MiCA white paper template for crypto-assets other than asset-referenced tokens or e-money tokens under Title II of MiCA, including references to issuer-related risks. For the purposes of this Part I.2, references to an "issuer", "issuer-related risks" or similar terms should be read in line with the definition of "issuer" under MiCA, including any natural or legal person, or other undertaking, that issues crypto-assets.

Based on the available information, the crypto-asset does not appear to be issued through a traditional corporate, foundation, or comparable legal entity structure. Accordingly, the risk descriptions in this Part I.2 should be understood as referring, as applicable, to any natural persons,

legal persons, undertakings, organised development teams, governance arrangements, or other project-related structures that may materially influence the crypto-asset or the related project, to the extent such persons or structures can be identified from available information.

1. Absence or insolvency of an identifiable issuer

Where an identifiable issuer exists, that issuer may face insolvency risks. These may result from insufficient funding, low market interest, mismanagement, legal or regulatory developments, or external shocks, including pandemics or armed conflicts. In such a case, ongoing development, support, communication, or governance of the crypto-asset project may be reduced, suspended, or discontinued, potentially affecting the viability, availability, market acceptance, or tradability of the crypto-asset.

2. Legal and regulatory risks

The issuer operates in a dynamic and evolving regulatory environment. Failure to comply with applicable laws or regulations in relevant jurisdictions may result in enforcement actions, penalties, or restrictions on the project's operations. These may negatively impact the crypto-asset's availability, market acceptance, or legal status.

3. Operational risks

The issuer may fail to implement adequate internal controls, risk management, or governance processes. This can result in operational disruptions, financial losses, delays in updating the white paper, or reputational damage.

4. Governance and decision-making

The issuer's management body is responsible for key strategic, operational, and disclosure decisions. Ineffective governance, delays in decision-making, or lack of resources may compromise the stability of the project and its compliance with MiCA requirements. High concentration of decision-making authority or changes in ownership/control can amplify these risks.

5. Reputational risks

The issuer's reputation may be harmed by internal failures, external accusations, or association with illicit activity. Negative publicity can reduce trust in the issuer and impact the perceived legitimacy or value of the crypto-asset.

6. Counterparty dependence

The issuer may depend on third-party providers for certain core functions, such as technology development, marketing, legal advice, or infrastructure. If these partners discontinue their services, change ownership, or underperform, the issuer's ability to operate the project or maintain investor

communication may be impaired. This could disrupt project continuity or undermine market confidence, ultimately affecting the crypto-asset's value.

I.3 Crypto-assets-related risks

1. Valuation risk

The crypto-asset does not represent a claim, nor is it backed by physical assets or legal entitlements. Its market value is driven solely by supply and demand dynamics and may fluctuate significantly. In the absence of fundamental value anchors, such assets can lose their entire market value within a very short time. Historical market behaviour has shown that some types of crypto-assets have become worthless. Investors should be aware that this crypto-asset may lose all of its value.

2. Market volatility risk

Crypto-asset prices can fluctuate sharply due to changes in market sentiment, macroeconomic conditions, regulatory developments, or technology trends. Such volatility may result in rapid and significant losses. Holders should be prepared for the possibility of losing the full amount invested.

3. Liquidity and price-determination risk

Low trading volumes, fragmented trading across venues, or the absence of active market makers can restrict the ability to buy or sell the crypto-asset. In such situations, it is not guaranteed that an observable market price will exist at all times. Spreads may widen materially, and orders may only be executable under unfavourable conditions, which can make liquidation costly or temporarily impossible.

4. Crypto-asset security risk

Loss or theft of private keys, unauthorised access to wallets, or failures of custodial or exchange service providers can result in the irreversible loss of assets. Because blockchain transactions are final, recovery of funds after a compromise is generally impossible.

5. Fraud and scam risk

The pseudonymous and irreversible nature of blockchain transactions can attract fraudulent schemes. Typical forms include fake or unauthorised crypto-assets imitating established ones, phishing attempts, deceptive airdrops, or social-engineering attacks. Investors should exercise caution and verify the authenticity of counterparties and information sources.

6. Legal and regulatory reclassification risk

Legislative or regulatory changes in the European Union or in the Member State where the crypto-asset is admitted to trading may alter its legal classification, permitted uses, or tradability. In third

countries, the crypto-asset may be treated as a financial instrument or security, which can restrict its offering, trading, or custody.

7. Absence of investor protection

The crypto-asset is not covered by investor-compensation or deposit-guarantee schemes. In the event of loss, fraud, or insolvency of a service provider, holders may have no access to recourse mechanisms typically available in regulated financial markets.

8. Counterparty risk

Reliance on third-party exchanges, custodians, or intermediaries exposes holders to operational failures, insolvency, or fraud of these parties. Investors should conduct due diligence on service providers, as their failure may lead to the partial or total loss of held assets.

9. Reputational risk

Negative publicity related to security incidents, misuse of blockchain technology, or associations with illicit activity can damage public confidence and reduce the crypto-asset's market value.

10. Community and sentiment risk

Because the crypto-asset's perceived relevance and expected future use depend largely on community engagement and the prevailing sentiment, a loss of public interest, negative coverage or reduced activity of key contributors can materially reduce market demand.

11. Macroeconomic and interest-rate risk

Fluctuations in interest rates, exchange rates, general market conditions, or overall market volatility can influence investor sentiment towards digital assets and affect the crypto-asset's market value.

12. Taxation risk

Tax treatment varies across jurisdictions. Holders are individually responsible for complying with all applicable tax laws, including the reporting and payment of taxes arising from the acquisition, holding, or disposal of the crypto-asset.

13. Anti-money-laundering and counter-terrorist financing risk

Wallet addresses or transactions connected to the crypto-asset may be linked to sanctioned or illicit activity. Regulatory responses to such findings may include transfer restrictions, reporting obligations, or the freezing of assets on certain venues.

14. Market-abuse risk

Due to limited oversight and transparency, crypto-assets may be vulnerable to market-abuse practices such as spoofing, pump-and-dump schemes, or insider trading. Such activities can distort prices and expose holders to sudden losses.

15. Legal ownership and jurisdictional risk

Depending on the applicable law, holders of the crypto-asset may not have enforceable ownership rights or effective legal remedies in cases of disputes, fraud, or service failure. In certain jurisdictions, access to exchanges or interfaces may be restricted by regulatory measures, even if on-chain transfer remains technically possible.

16. Concentration and large-holder liquidation risk

A substantial part of the total supply is held in a limited number of allocations and addresses. Four allocations, being the units locked in the TON Believers Fund contract, the frozen early-miner addresses, the holding of Telegram (approximately 314,000,000 units, approximately 6.1% of the total supply) and the ecosystem reserve, together represented approximately 58% of the total supply at the most recent labelled on-chain snapshot. The units held in the TON Believers Fund contract, being approximately 25% of the total supply, were deposited into that contract by holders of the crypto-asset; the number and the identity of those depositors cannot be determined from publicly available information. Third-party on-chain analyses further report that a large majority of the supply distributed through the 2020 proof-of-work process is concentrated among a limited number of interconnected addresses associated with early participants. Decisions taken by holders of concentrated allocations, including transfers to trading venues, disposals, or the exercise of voting weight in community votes, may materially affect market stability, price levels, and investor confidence, and may enable market manipulation or governance dominance. A public address cannot necessarily be assigned to a single person or entity, so neither the actual degree of economic influence nor the intentions of those holders can be determined from publicly available information. Investors should be aware that concentrated holdings of this magnitude can result in sudden large-scale liquidations at any time and without notice.

I.4 Project implementation-related risks

As this white paper relates to admission to trading of the crypto-asset, the risk description below reflects general implementation risks typically associated with crypto-asset projects and relevant for the crypto-asset service provider. The person seeking admission to trading is not involved in the implementation of the crypto-asset project and does not assume responsibility for its governance, funding, development, maintenance, operation, or execution.

The principal project implementation-related risks for the crypto-asset are as follows:

1. Key-contributor and concentration risk: The continued development, maintenance, and upgrading of the crypto-asset and the related network may depend on a limited number of core protocol contributors, client-software development teams, and supporting organisations such as foundations. The departure, incapacity, loss of funding, or strategic misalignment of such contributors or organisations, or an over-reliance on a dominant client implementation, may delay,

fragment, or otherwise adversely affect the implementation and ongoing evolution of the crypto-asset.

2. Timeline and milestone risk: Protocol upgrades, feature releases, scaling improvements, or other initiatives set out in any public roadmap or technical documentation may not be delivered as announced, may be delayed, or may be abandoned. Such delays or changes can undermine market confidence and affect the adoption, use, or perceived value of the crypto-asset.

3. Delivery risk: Even where an upgrade or feature is delivered as planned, it may not perform as intended, may introduce unintended effects, or may be scaled back during or after deployment, which may limit the practical functionality or expected benefits of the crypto-asset.

4. Ecosystem and single-platform dependency risk

The development, distribution, and everyday use of the crypto-asset depend to a material degree on a single platform. According to publicly available information, Telegram has since 2026 acted as the primary operator of the network and its largest validator, has taken a leading role in the development of the protocol and in directing validator participation, and the network is closely integrated with the Telegram messaging application, which is the principal channel through which users access wallets and applications built on the network. The implementation of the project is therefore exposed to decisions taken by that platform in its own commercial interest, to a withdrawal or reduction of its involvement, to operational failures affecting it, to legal or regulatory action against it or against the persons directing it, and to restrictions on the availability of the application in individual jurisdictions. Any of these may delay or curtail development, reduce user access and adoption, and adversely affect the use and the value of the crypto-asset. As set out above, the person seeking admission to trading is not involved in the implementation of the project and has no influence over the involvement of that platform or ability to secure its continuation.

I.5 Technology-related risks

As this white paper relates to admission to trading of the crypto-asset, the following risks concern the underlying distributed ledger technology (DLT), its supporting infrastructure, and related technical dependencies. Failures or vulnerabilities in these systems may affect the availability, integrity, or transferability of the crypto-asset.

1. Blockchain dependency risk

The functionality of the crypto-asset depends on the continuous and stable operation of the blockchain(s) on which it is issued. Network congestion, outages, or protocol errors may temporarily or permanently disrupt on-chain transactions. Extended downtime or degradation in network performance can affect trading, settlement, or the usability of the crypto-asset.

2. Protocol and software vulnerability risk

The protocol rules, client software implementations, execution and consensus layer components, or related technical elements that define the crypto-asset's parameters or govern its transfers may

contain coding errors or security vulnerabilities. Exploitation of such weaknesses can result in unintended consequences, including loss of funds or disruption of network functionality.

3. Wallet and key-management risk

The custody of crypto-assets relies on secure private key management. Loss, theft, or compromise of private keys results in irreversible loss of access. Custodians, trading venues, or wallet providers may be targeted by cyberattacks. Compatibility issues between wallet software and changes to the blockchain protocol (e.g. network upgrades) can further limit user access or the ability to transfer the crypto-asset.

Outdated or vulnerable wallet software:

Users relying on outdated, unaudited, or unsupported wallet software may face compatibility issues, security vulnerabilities, or failures when interacting with the blockchain. Failure to update wallet software in line with protocol developments can result in transaction errors, loss of access, or exposure to known exploits.

4. Network security risks

Attack risks: Blockchains may be subject to denial-of-service (DoS) attacks, 51% attacks, or other exploits targeting the consensus mechanism. These can delay transactions, compromise finality, or disrupt the accurate recording of transfers.

Centralisation concerns: Despite claims of decentralisation, a relatively small number of validators or a high concentration of stake may increase the risk of collusion, censorship, or coordinated network downtime, which can affect the resilience and operational reliability of the crypto-asset.

5. Bridge and interoperability risk

Where tokens can be bridged or wrapped across multiple blockchains, vulnerabilities in bridge protocols, validator sets, or locking mechanisms may result in loss, duplication, or misrepresentation of assets. Exploits or technical failures in these systems can instantly impact circulating supply, ownership claims, or token fungibility across chains.

6. Forking and protocol-upgrade risk

Network upgrades or disagreements among node operators or validators can result in blockchain "forks", where the blockchain splits into two or more incompatible versions that continue separately from a shared past. This may lead to duplicate token representations or incompatibilities between exchanges and wallets. Until consensus stabilises, trading or transfers may be disrupted or misaligned. Such situations may be difficult for retail holders to navigate, particularly when trading platforms or wallets display inconsistent token information.

7. Economic-layer and abstraction risk

Mechanisms such as gas relayers, wrapped tokens, or synthetic representations may alter the transaction economics of the underlying token. Changes in transaction costs, token demand, or utility may reduce its usage and weaken both its economic function and perceived value within its ecosystem.

8. Spam and network-efficiency risk

High volumes of low-value ("dust") or automated transactions may congest the network, slow validation times, inflate ledger size, and raise transaction costs. This can impair performance, reduce throughput, and expose address patterns to analysis, thereby reducing network efficiency and privacy.

9. Front-end and access-interface risk

If users rely on centralised web interfaces or hosted wallets to interact with the blockchain, service outages, malicious compromises, or domain expiries affecting these interfaces may block access to the crypto-asset, even while the blockchain itself remains fully functional. Dependence on single web portals introduces a critical point of failure outside the DLT layer.

10. Decentralisation claim risk

While the technical infrastructure may appear distributed, the actual governance or economic control of the project may lie with a small set of actors. This disconnect between marketing claims and structural reality can lead to regulatory scrutiny, reputational damage, or legal uncertainty – especially if the project is presented as 'community-governed' without substantiation.

I.6 Mitigation measures

None.

Part J – Information on the sustainability indicators in relation to adverse impact on the climate and other environment-related adverse impacts

J.1 Adverse impacts on climate and other environment-related adverse impacts

S.1 Name

Crypto Risk Metrics GmbH

S.2 Relevant legal entity identifier

39120077M9TG0O1FE242

S.3 Name of the crypto-asset

Gram

S.4 Consensus Mechanism

The crypto-asset in scope is implemented on the TON network following the standards described below.

The following applies to the TON protocol:

1. Proof of Stake and validators

TON uses a Proof-of-Stake Byzantine Fault Tolerant consensus mechanism. Validators are required to stake Gram to participate in block production and validation. Each validator is assigned a validator weight determined under the applicable staking, election and protocol rules. Validators verify proposed blocks, participate in consensus voting and contribute to the operation of the masterchain and the shardchains.

2. Catchain 2.0 and Simplex consensus

Since its mainnet activation on 9 April 2026, TON has used Catchain 2.0, a modified version of the Simplex Byzantine Fault Tolerant consensus protocol adapted to the TON architecture. Catchain 2.0 replaced the previous Catchain 1.0 and Block Consensus Protocol architecture. Consensus is organised into numbered slots, which are grouped into leader windows. The validator assigned to a leader window proposes block candidates for the corresponding slots. Other validators verify each candidate and, where it is considered valid, submit weighted notarisation votes. A notarisation certificate is formed when the supporting votes represent more than two-thirds of the applicable validator weight. Validators may then submit finalisation votes. A finalisation certificate supported by the required validator weight commits the corresponding block to the finalised ledger. Where a slot does not progress to finalisation within the applicable time, validators may issue skip votes. A skip certificate allows consensus to proceed to subsequent slots without finalising a block for the affected slot. Notarisation, finalisation and skip certificates therefore allow the protocol to continue operating where a leader is inactive, a block candidate is not accepted or communications are interrupted.

3. Byzantine Fault Tolerance

Catchain 2.0 is designed to maintain consensus safety where Byzantine or otherwise faulty validators represent less than one-third of the relevant total validator weight. Notarisation, finalisation and skip certificates require votes representing more than two-thirds of the applicable validator weight. Validator voting is therefore weighted and is not determined by a simple count of participating validator nodes.

4. Masterchain and shardchain consensus

Separate validator groups and consensus instances apply to the masterchain and the relevant shardchains. This allows blocks associated with different parts of TON's sharded architecture to be proposed and validated in parallel. Shardchain blocks are subsequently referenced through the masterchain, which maintains information concerning the overall state and configuration of the network.

5. Consensus communication

Consensus participants communicate through private validator overlay networks. Block candidates are propagated using a two-step forward-error-correction erasure-coding mechanism, while consensus votes and certificates are exchanged between validators. Under the current mainnet configuration, QUIC is used for the Catchain 2.0 consensus communication path.

6. Validator elections and proposer rotation

Validator sets are selected periodically through the Elector system contract. Prospective validators submit election applications and stake Gram, after which the validator set and the corresponding validator weights are determined for the following validation period. Within an active validation period, responsibility for proposing block candidates rotates between validators according to protocol-defined slots and leader windows. This proposer rotation is separate from the periodic election and activation of the overall validator set.

S.5 Incentive Mechanisms and Applicable Fees

The crypto-asset in scope is implemented on the TON network following the standards described below.

The following applies to the TON protocol:

1. Validator rewards

Validators receive rewards denominated in Gram for successful participation in block production and consensus. Validator rewards comprise protocol-defined block rewards and collected gas fees. Following the applicable validation period, the Elector system contract releases the validators' frozen stakes and distributes the corresponding rewards proportionally among the past validators in accordance with the applicable protocol rules. The amount of the block rewards and the rules governing their distribution are determined through the TON network configuration and may be changed through the applicable protocol governance and configuration procedures.

2. Staking

Validators must lock Gram as stake when applying to participate in a validation period. The applicable election rules determine which applicants are included in the validator set and the validator weight assigned to each selected validator. The stake remains frozen for the protocol-defined period. This creates an economic commitment by the validator and allows an approved fine to be deducted from the stake where the validator fails to comply with the applicable protocol requirements.

3. Applicable fees

Transactions and smart-contract operations on TON require fees paid in Gram. Depending on the transaction, the applicable charges may include:

- storage fees for maintaining account and smart-contract data on the blockchain;

- gas fees for executing instructions in the TON Virtual Machine;

- action fees relating to actions generated during transaction execution; and

- forwarding fees for transmitting messages through the network.

The amount charged depends principally on the computational, storage and messaging resources used by the transaction and on the fee parameters contained in the TON network configuration. The fees are therefore not determined solely by transaction value or current network demand.

4. Validator complaints and penalties

A validator suspected of protocol violations or material underperformance may be the subject of a complaint submitted to the Elector system contract. The complaint must include supporting evidence, such as a Merkle proof demonstrating the alleged failure, and a proposed fine reflecting the severity of the conduct. Validators participating in the applicable voting round verify and vote on the complaint. Approval requires votes representing more than two-thirds of the total validator weight. Where the complaint is approved, the applicable fine is deducted from the affected validator's frozen stake in Gram. The complaint-based penalty mechanism creates a financial incentive for validators to comply with the protocol rules and perform their validation responsibilities reliably. It does not constitute an automatic deduction for every individual missed block or unsuccessful validation activity.

S.6 Beginning of the period to which the disclosure relates

2025-01-12

S.7 End of the period to which the disclosure relates

2026-01-12

S.8 Energy consumption

1419120.00000 kWh/a

S.9 Energy consumption sources and methodologies

For the calculation of energy consumption, the so-called "bottom-up" approach is used. Nodes are considered the primary contributors to the network's energy consumption. The underlying assumptions are based on empirical findings derived from publicly available information sources, open-source crawlers and crawlers developed in-house. The main factors used to estimate the hardware operating within the network are the technical requirements for running the client software. The energy consumption of the relevant hardware devices was measured in certified testing laboratories.

Where available, the Functionally Fungible Group Digital Token Identifier (FFG DTI) is used to identify all implementations of the crypto-asset falling within the scope of the assessment. These mappings

are updated regularly based on data provided by the Digital Token Identifier Foundation. Information regarding the hardware used and the number of network participants is based on assumptions that are verified on a best-effort basis using empirical data.

In general, network participants are assumed to act in an economically rational manner. In accordance with the precautionary principle, where uncertainty exists, conservative assumptions are applied, resulting in higher estimates of adverse environmental impacts.

S.10 Renewable energy consumption

37.9124101186 %

S.11 Energy intensity

0.00003 kWh

S.12 Scope 1 DLT GHG emissions – Controlled

0.00000 tCO2e/a

S.13 Scope 2 DLT GHG emissions – Purchased

472.30168 tCO2e/a

S.14 GHG intensity

0.00001 kgCO2e

S.15 Key energy sources and methodologies

To determine the proportion of renewable energy usage, the locations of the nodes are determined using public information sites, open-source and in-house-developed crawlers. Where no information is available on the geographic distribution of nodes, comparable reference networks are used, taking into account similarities in incentivisation structure and consensus mechanism. This geographic information is then combined with publicly available data from Our World in Data. The resulting intensity is calculated as the marginal energy consumption with respect to one additional transaction.

Ember (2025); Energy Institute, Statistical Review of World Energy (2024), with major processing by Our World in Data. “Share of electricity generated by renewables - Ember and Energy Institute” [dataset]. Underlying sources: Ember, “Yearly Electricity Data Europe”; Ember, “Yearly Electricity Data”; Energy Institute, “Statistical Review of World Energy”. Retrieved from: https://ourworldindata.org/grapher/share-electricity-renewables

S.16 Key GHG sources and methodologies

To determine GHG emissions, the locations of the nodes are determined using public information sites, open-source crawlers, and crawlers developed in-house. Where no information is available on the geographic distribution of nodes, comparable reference networks are used, taking into account similarities in incentivisation structure and consensus mechanism. This geographic information is then combined with publicly available data from Our World in Data. The resulting intensity is calculated as the marginal emission intensity with respect to one additional transaction.

Ember (2025); Energy Institute, Statistical Review of World Energy (2024), with major processing by Our World in Data. "Carbon intensity of electricity generation – Ember and Energy Institute" [dataset]. Underlying sources: Ember, "Yearly Electricity Data Europe"; Ember, "Yearly Electricity Data"; Energy Institute, "Statistical Review of World Energy". Retrieved from: https://ourworldindata.org/grapher/carbon-intensity-electricity. Licensed under CC BY 4.0.

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