QRN
QURANIUM TOKEN WHITEPAPER

August 29, 2025

Whitepaper under Title II, Article 4 of Regulation (EU) 2023/1114 ("**MiCAR**") for the admission to trading on crypto-asset service providers ("**CASP**") platforms authorized under Article 59 of MiCAR

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01	Date of notification	2025-08-29
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	False.
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.

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	QRN is a crypto-asset to be classified, under Title II of MiCAR, as a crypto-asset other than asset-referenced tokens ("**ART**") or e-money tokens ("**EMT**"). It is a fungible and transferable digital token native to the Quranium blockchain. QRN does not seek to maintain a stable value by referencing one official currency or by referencing another value or right or a combination thereof, including one or more official currencies. Within the Quranium network (the "**Protocol**"), QRN is used to access and use the chain (payment of transaction and execution fees), to participate in network security through staking, and – when opened – to take part in non-financial, on-chain governance of protocol parameters. Acquiring QRN does not grant dividends, interest, redemption rights, or any claim against the issuer or validators. Purchasers have the right to hold and transfer QRN, to use the network by paying fees in QRN, to stake QRN directly or by delegation in order to support network operations, and, where enabled, to vote on governance proposals. Purchasers are responsible for safeguarding their access credentials (e.g., wallet keys), paying applicable fees, and complying with network rules and applicable laws. Staking may involve temporary lock-up periods set by the Protocol and may expose the staker to penalties if the selected validator behaves improperly. These features can be accessed through a compatible wallet that allows users to send transactions, initiate or delegate staking, and participate in governance during announced voting windows. Practical modalities (such as fee schedules, staking parameters, voting thresholds and timelines) are published in advance through official channels. Any modification to the conditions for accessing these features occurs only

		through the Protocol's governance process (proposal, public review, on-chain vote reaching the required quorum and majority, followed by a network upgrade). Such changes do not affect holders' QRN ownership and do not create financial rights. QRN remains freely transferable on-chain, subject to applicable law, network status, and any rules imposed by third-party trading platforms.
09	Only applicable if field 05 is true	Not applicable.
10	Key information about the offer to the public or admission to trading	Quranium Association is seeking the admission to trading of the QRN token on CASP platforms, in accordance with Article 5 of MiCAR. As this does not constitute an offer to the public, there are no minimum or maximum target subscription goals, no subscription fees, no discounted phases and no subscription period. No firm commitment placement or underwriting arrangement exists in connection with this admission.
Part A – Information about the offeror or the person seeking admission to trading		
A.1	Name	Quranium Association
A.2	Legal form	Swiss association
A.3	Registered address	Route des Flumeaux 42–48, 1008 Prilly, VD CH — Subdivision: CH-VD
A.4	Head office	Route des Flumeaux 42–48, 1008 Prilly, VD CH — Subdivision: CH-VD
A.5	Registration date	2025-01-27
A.6	Legal entity identifier	CHE-137.540.136 (Dossier No: 2025/01909)
A.7	Another identifier required pursuant to applicable national law	Not applicable.
A.8	Contact telephone number	None.
A.9	E-mail address	kapil@quranium.org
A.10	Response time (Days)	10 business days.
A.11	Parent company	Not applicable.
A.12	Members of the management body	– Committee member and president, Kapil Kumar Dhiman, Route des Flumeaux 42–48, 1008 Prilly, CH VD – Committee member, Bernard Jahrmann, Route des Flumeaux 42–48, 1008 Prilly, CH VD – Committee member, Zeeshan Khan, Route des Flumeaux 42–48, 1008 Prilly, CH VD – Committee member, Yaduvendra Singh Yadav, Route des Flumeaux 42–48, 1008 Prilly, CH VD
A.13	Business activity	The purpose of the Quranium Association is to promote and develop innovative technologies and applications, particularly in the fields of Distributed-Ledger Technology (DLT) and post-quantum cryptography. As part of this purpose, Quranium Association is acting as the issuing and listing entity for the QRN token.

A.14	Parent company business activity	Not applicable.
A.15	Newly established	False.
A.16	Financial condition for the past three years	Not applicable since the entity seeking admission to trading (Quranium Association) has been formed for less than a year (it was established on 27 January 2025), and as such has not yet completed its first financial year, and therefore does not yet have any available financial statements.
A.17	Financial condition since registration	Since its registration, Quranium Association has no business activity besides carrying out all steps necessary to issue the QRN token and seek its admission to trading.
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	False.
B.2	Name	Not applicable.
B.3	Legal form	Not applicable.
B.4	Registered address	Not applicable.
B.5	Head office	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	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.
C.2	Legal form	Not applicable.
C.3	Registered address	Not applicable.
C.4	Head office	Not applicable.
C.5	Registration date	Not applicable.
C.6	Legal entity identifier	Not applicable.
C.7	Another identifier required pursuant to applicable national law	Not applicable.
C.8	Parent company	Not applicable.
C.9	Reason for crypto-asset white paper preparation	Not applicable.
C.10	Members of the management body	Not applicable.
C.11	Operator business activity	Not applicable.
C.12	Parent company business activity	Not applicable.
C.13	Other persons drawing up the crypto-asset white paper according to Article 6(1), second subparagraph, of Regulation (EU) 2023/1114	Stéphane Daniel, Antonia Teleman and Thomas Letzelter, from the law firm d&a partners

C.14	Reason for drawing the white paper by persons referred to in Article 6(1), second subparagraph, of Regulation (EU) 2023/1114	Legal advisors of the person seeking admission to trading.
	Part D – Information about the crypto-asset project	
D.1	Crypto-asset project name	Quranium
D.2	Crypto-assets name	QRN token
D.3	Abbreviation	QRN
D.4	Crypto-asset project description	Quranium is a public, quantum secure Layer-1 blockchain designed for long-term security and broad developer access. The network is secured by Proof-of-Stake validators and uses a native token, QRN, to pay transaction/execution fees, participate in staking, and, when activated, support non-financial, on-chain governance. Under MiCAR, QRN is classified as a crypto-asset other than ART/EMT; holding QRN does not grant financial claims against the issuer. The Quranium Association issues QRN, develops and promotes the Protocol, and administers grants. Validators, which are independent third parties, operate nodes and secure the chain by staking QRN and processing transactions. End-users interact via QSafe (a non-custodial wallet) and QRemix (an IDE with AI-assisted development and auditing). A public block explorer provides network transparency. Users pay network fees in QRN to submit transactions and deploy smart contracts. Validators stake QRN to help secure the network and may receive protocol rewards according to consensus rules; staking may involve lock-up periods and penalties if a validator misbehaves. Governance will be phased in after mainnet launch: proposals are published for review, followed by on-chain votes and, if approved, network upgrades. Changes adopted through this community process do not create financial rights for token holders.
D.5	Details of all natural or legal persons involved in the implementation of the crypto-asset project	• Quranium Association, Swiss association (UID CHE-137.540.136), Route des Flumeaux 42–48, 1008 Prilly, VD, Switzerland • Quranium Ltd, Swiss limited liability company (UID CHE-330.939.280), Prilly, VD, Switzerland • Co-founder and CEO, Kapil Kumar Dhiman, Route des Flumeaux 42–48, 1008 Prilly, CH VD • Co-founder and COO, Zeeshan Khan, Route des Flumeaux 42–48, 1008 Prilly, CH VD • Co-founder and CTO, Yaduvendra Singh Yadav, Route des Flumeaux 42–48, 1008 Prilly, CH VD
D.6	Utility Token Classification	False.

D.7	Key Features of Goods/Services for Utility Token Projects	Not applicable.
D.8	Plans for the token	**Past Milestones (Completed Initiatives):** • Public testnet launched May 2025; QSafe wallet and QRemix IDE released May 2025. • TGE / Mainnet: Targeted September 2025, with QRN genesis allocation and staking live at launch. • Near-term (post-TGE): Security audits and monitoring; validator onboarding; explorer and RPC scaling; initial governance framework **Future Milestones (2025 Roadmap):** Following the TGE focus is mainnet hardening and validator set decentralisation, public staking and governance v1, and rollout of core ecosystem products. The key milestones are listed below: • Activation of staking and on-chain governance; • Production release of QDEX; • QRemix AI v2 (AI-assisted smart-contract development); • First release of the quantum-secure bridge; and • Institution-grade integrations. Throughout 2025, Quranium will expand developer tooling, improve throughput and fee efficiency, and onboard ecosystem partners.
D.9	Resource allocation	Quranium has raised USD 6.15 million secured across Pre-Seed, Seed and other strategic rounds. Use to date (deliverables funded): public testnet (May 2025); releases of QSafe (wallet) and QRemix (AI-assisted IDE); QRNScan block explorer and faucet; completion of a CertiK security audit of the codebase; validator onboarding and core protocol engineering.
D.10	Planned use of collected funds or crypto-assets	The collected funds are allocated to the development of the Quranium Blockchain and its ecosystem as follows: 40% to technology development and R&D (core L1, product engineering, security audits, infra scaling); 25% to business development and partnerships (ecosystem integrations, enterprise adoption, alliances); 25% to community growth and educational awareness (marketing, developer education, events); 8% to legal and professional services (regulatory, audits, governance, licensing); 2% to administration and operations.
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	Admission to Trading (ATTR).

E.2	Reasons for public offer or admission to trading	The purpose of seeking admission to trading is to enable broader access and facilitate secondary market liquidity for the QRN token within a regulated framework, in accordance with Title II of MiCAR. The admission to trading is intended to support the transparency, accessibility, and decentralization of the QRN ecosystem, by notably allowing participants to acquire and exchange QRN tokens on authorized crypto-asset trading platforms. It is also expected to improve market confidence and usability for both retail and institutional users interacting with the Protocol's fixed income infrastructure and governance mechanisms.
E.3	Fundraising target	Not applicable.
E.4	Minimum subscription goals	Not applicable.
E.5	Maximum subscription goals	Not applicable.
E.6	Oversubscription acceptance	False.
E.7	Oversubscription allocation	Not applicable.
E.8	Issue price	Not applicable.
E.9	Official currency or any other crypto-assets determining the issue price	Not applicable.
E.10	Subscription fee	Not applicable.
E.11	Offer price determination method	Not applicable. As this is an admission to trading and not a public offering, the pricing mechanism will be determined by market forces, in accordance with the law of supply and demand.
E.12	Total number of offered/traded crypto-assets	The total maximum supply of QRN tokens is capped at 2,100,000,000 (two billion one hundred million) tokens. This figure represents the maximum number of QRN tokens that could ever be in circulation. However, only a portion of this supply may be admitted to trading at the time of listing.
E.13	Targeted holders	ALL (All types of investors).
E.14	Holder restrictions	The QRN token is not subject to a public offering under this white paper but is expected to be admitted to trading on MiCAR-compliant CASP within the European Union. Holders of QRN must comply with all applicable regulations and requirements established by the relevant CASP(s) to be eligible to purchase and hold the token. These requirements will include, but are not limited to: ● Identity verification (KYC/AML): Users must complete know-your-customer and anti-money laundering procedures, as mandated by the relevant service providers and applicable regulation; ● Jurisdictional eligibility: Access may be restricted based on a user's country of residence or citizenship, particularly where sanctions or local regulatory barriers apply;

		• Platform-specific conditions: CASP may enforce their own onboarding, trading, and custody conditions that holders must adhere to. Quranium Association does not guarantee access to any specific platform, and eligibility to trade or hold QRN which is determined exclusively by the relevant service provider in line with their compliance obligations.
E.15	Reimbursement notice	Not applicable.
E.16	Refund mechanism	This white paper does not relate to a public offering of crypto-assets but to their admission to trading. Therefore, rights of reimbursement, withdrawal or refund do not apply.
E.17	Refund timeline	This white paper does not relate to a public offering of crypto-assets but to their admission to trading. Therefore, rights of reimbursement, withdrawal or refund do not apply.
E.18	Offer phases	Not applicable.
E.19	Early purchase discount	Not applicable.
E.20	Time-limited offer	No.
E.21	Subscription period beginning	Not applicable.
E.22	Subscription period end	Not applicable.
E.23	Safeguarding arrangements for offered funds/crypto-Assets	Not applicable.
E.24	Payment methods for crypto-asset purchase	Holders can trade QRN on third party crypto-assets service providers which will be the sole entities entitled to decide the methods of payment to purchase or sell QRN tokens (i.e. versus fiat currencies or other crypto-assets).
E.25	Value transfer methods for reimbursement	Not applicable.
E.26	Right of withdrawal	As provided in article 13, paragraph 4, of MiCA, “the right of withdrawal referred to in paragraph 1 shall not apply where the crypto-assets have been admitted to trading prior to their purchase by the retail holder.”
E.27	Transfer of purchased crypto-assets	Not applicable. The transferability of purchased crypto-assets depends on the technical and operational capabilities of the CASP listing the token.
E.28	Transfer time schedule	Not applicable.
E.29	Purchaser's technical requirements	Not applicable. The technical requirements that the purchaser is required to fulfil to hold the crypto-assets are subject to the respective capabilities of the CASP listing the crypto-asset.
E.30	Crypto-asset service provider (CASP) name	Not applicable. There is no placement agreement in place with any CASP.
E.31	CASP identifier	Not applicable.
E.32	Placement form	NTAV (Not applicable).
E.33	Trading platforms name	Quranium Association intends to seek admission to trading on Kraken.

E.34	Trading platforms Market identifier code (MIC)	PGSL
E.35	Trading platforms access	Users may access the applicable platforms via their official websites.
E.36	Involved costs	Costs for accessing third party CASP platforms entirely depend on their commercial decisions.
E.37	Offer expenses	Not applicable.
E.38	Conflicts of interest	To the best of Quranium Association's knowledge, there are no conflicts of interest related to the admission to trading of the QRN tokens. No individual or entity involved in the drafting of this white paper or the admission process has any personal or financial interest that could impair their independence or objectivity. This document has been prepared solely in connection with the admission to trading of the QRN token and in accordance with the applicable regulatory requirements. No advisory, underwriting, or placement services have been provided in connection with this admission.
E.39	Applicable law	Not applicable, as it is referred to on "offer to the public" and in this white-paper, the admission to trading is sought.
E.40	Competent court	Not applicable, as it is referred to on "offer to the public" and in this white-paper, the admission to trading is sought.
Part F – Information about the crypto-assets		
F.1	Crypto-asset type	The QRN token is classified as a crypto-asset other than an asset-referenced token or an e-money token under Title II of MiCAR.
F.2	Crypto-asset functionality	The QRN token is designed to support the governance, incentive, and data utility mechanisms of the Protocol, as described below: 1. **Network fees & execution.** QRN is the sole fee unit for L1 activity on the Quranium chain. Each transaction/contract call consumes gas; gas is priced and settled in QRN at execution time. Fees are debited from the sender's balance whether the call succeeds or reverts. Fee formation and any base-fee/tip split follow protocol constants published for the network; mempool admission and inclusion depend on the effective fee offered. 2. **Network security via staking.** The Protocol's Proof-of-Stake (PoS) model uses a staking-based validator reward system. The network relies on validators to propose and attest to blocks, and incentives are structured to maintain network security, decentralization, and long-term participation. Users lock-up a minimum amount of QRN to become validators. Holders may also delegate QRN to validators without transferring ownership of their funds (non-custodial delegation). Validator rewards (when enabled) accrue in QRN in accordance with protocol rules (e.g., pro-rata to stake and performance). Validators that act

		maliciously (e.g., double-signing, chain reorg attempts) face slashing, losing a portion of their staked QRN. Withdrawals from staking are subject to a lock-up period enforced by the Protocol. 3. **On-chain governance.** When enabled, QRN confers the ability to propose and vote on non-financial protocol changes (parameters, upgrades). Voting is on-chain and token-weighted unless otherwise specified; proposals, quorums, majorities, voting windows, and timelocks are defined in the governance module and published in advance. Governance does not convey claims on assets, cash flows, or any revenue.
F.3	Planned application of functionalities	• **Network fees & execution**: Active at mainnet. All transactions and smart-contract calls require QRN for gas from genesis. • **Staking**: Active at or immediately after mainnet, with validator staking, delegation, and rewards governed by initial protocol parameters. Lock-up delay and slashing rules (fault set, penalties, caps) are enforced by the consensus/staking modules and will be published prior to activation. • **Governance**: Phased activation after initial decentralization milestones. The governance framework (proposal lifecycle, quorum/majority thresholds, voting period, execution timelocks, emergency procedures) will be published before the first vote and enforced on-chain once enabled. Any legacy admin controls (if any) will be reduced/removed according to that timeline.
F.4	Type of crypto-asset white paper	OTHR
F.5	The type of submission	NEWT
F.6	Crypto-asset characteristics	QRN is the native, fungible and freely transferable token of the layer-1 Quranium blockchain. Under MiCAR, it is classified as a crypto-asset other than ART or EMT (Title II). The network is account-based with an quantum secure execution environment; all transactions and smart-contract calls are settled in QRN (gas). Consensus is Proof-of-Stake with validator staking and non-custodial delegation; protocol-enforced controls include a lock-up period and slashing for consensus faults. Rewards, where enabled, accrue in QRN pursuant to on-chain rules and are sourced from fees and/or pre-allocated emissions within the fixed cap. Supply is capped at 2,100,000,000 QRN; at TGE approximately 1.95 % of max supply is minted. Divisibility and fee-distribution mechanics (e.g., any base-fee/tip split or burn) follow protocol parameters published for the network. The issuer does not custody user stakes and has no claim on staking proceeds. Holding QRN confers no financial rights (no dividends, interest, redemption, or peg) and QRN does not seek to maintain a stable value by reference to any currency, asset, right, or basket. Cryptography is post-quantum-oriented, with transaction authentication based on stateless hash-based signatures (SPHINCS+ / SLHDSA) as specified in the Protocol.

F.7	Commercial name or trading name	Quranium token (QRN)
F.8	Website of the issuer	https://www.quranium.org
F.9	Starting date of offer to the public or admission to trading	2025-09-26
F.10	Publication date	2025-09-26
F.11	Any other services provided by the issuer	Not applicable.
F.12	Language or languages of the crypto-asset white paper	English
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, where available	QRN
F.14	Functionally fungible group digital token identifier, where available	Not applicable.
F.15	Voluntary data flag	False.
F.16	Personal data flag	True.
F.17	LEI eligibility	True.
F.18	Home Member State	Ireland.
F.19	Host Member States	Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, 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 QRN tokens are designed to allow their holders to (i) pay network transaction/execution fees in QRN, (ii) participate in network security through staking – either by operating a validator subject to the Protocol's technical and minimum-stake conditions or by delegating stake to a validator – and (iii) when governance is opened, take part in non-financial, on-chain votes regarding Protocol evolution. QRN does not grant any financial rights vis-à-vis the issuer (no dividends, no interest, no redemption guarantee) and is not designed to maintain a stable value. Purchasers are responsible for safeguarding their access credentials (e.g., private keys), ensuring lawful use, paying applicable network fees, and accepting protocol-level risks including possible lock-up periods and slashing penalties tied to validator performance. Use of intermediaries (e.g., trading venues such as Kraken, custodians, or staking providers) may entail separate onboarding, KYC/AML and other requirements under applicable law and the intermediary's terms.
G.2	Exercise of rights and obligations	Rights are exercised with a compatible wallet: send transactions (fees in QRN), initiate or delegate staking, and – when ballots are open – cast governance votes via the on-chain interface. Governance proposals follow the Quranium Improvement Proposal (QIP) process: (i) proposal publication, (ii) community discussion and review, (iii) voting and consensus building, (iv) implementation and testing on testnet, and (v) deployment and monitoring of the upgrades. Upgrades are communicated in advance with timelines; node operators/validators must update their software for network changes

		to take effect. For staking, the Protocol defines the minimum stake, reward logic, lock-up period and any slashing conditions; these parameters and any changes are announced ahead of time.
G.3	Conditions for modifications of rights and obligations	Rights and obligations linked to the on-chain use of QRN can be changed only through Quranium's community governance. Any change must follow the Quranium Improvement Proposal (QIP) path: a proposal is published, discussed publicly, tested on testnet, and then submitted to an on-chain vote that must meet the quorum and approval thresholds announced for that vote. If approved, the change is deployed in a scheduled network upgrade, with prior public notice and an implementation window so node operators can update. Changes are limited to non-financial aspects of protocol use (for example: fee schedules, staking minimums and reward logic, lock-up/slashing parameters, block/epoch timings, or voting mechanics). Such changes do not grant financial rights, do not create redemption or profit claims, and do not affect holders' ownership of their QRN. Quranium distinguishes soft forks (backward-compatible rule/parameter updates) from hard forks (non-backward-compatible upgrades that require software updates). In urgent security situations, an expedited QIP path with enhanced disclosure and a defined rollback plan may be used; once the issue is resolved, the change is documented and, where appropriate, ratified through the standard process. Off-chain factors (e.g., new laws or the terms of trading venues, custodians, or staking providers) may introduce additional requirements for users of those services without altering the token's on-chain characteristics There is no unilateral authority that may modify token-related rights or obligations outside the scope of community governance. As provided by Article 12 of MiCAR regulation, any significant new factor, any material mistake or any material inaccuracy that would be capable of affecting the assessment of QRN will be described in a modified version of this white paper and notified to the competent authorities and published on the Protocol's Website.
G.4	Future public offers	Not applicable.
G.5	Issuer retained crypto-assets	The issuer (and/or its related entity/entities) is expected to retain ten (10%) of the total QRN token supply in the Protocol treasury. The remaining QRN tokens will be allocated to various purposes, such as community rewards, liquidity provisioning, etc.
G.6	Utility token classification	False.
G.7	Key features of goods/services of utility tokens	Not applicable.
G.8	Utility tokens redemption	Not applicable.
G.9	Non-trading request	True.
G.10	Crypto-assets purchase or sale modalities	Not applicable.
G.11	Crypto-assets transfer restrictions	QRN tokens are freely transferable on supported blockchain networks.

		However, the transfer or use of QRN tokens may be subject to restrictions imposed by CASP, such as exchanges or custodians, in accordance with applicable laws, regulations, or their internal compliance policies.
G.12	Supply adjustment protocols	False.
G.13	Supply adjustment mechanisms	Not applicable.
G.14	Token value protection schemes	False.
G.15	Token value protection schemes description	Not applicable.
G.16	Compensation schemes	False.
G.17	Compensation schemes description	Not applicable.
G.18	Applicable law	Switzerland
G.19	Competent court	Courts of Switzerland
Part H – Information on the underlying technology		
H.1	Distributed ledger technology (DTL)	Quranium is a public, permissionless, single-layer (L1) blockchain operated as decentralized Distributed Ledger Technology ("**DLT**"). It enables the trustless execution of smart contracts and decentralized applications (dApps) without intermediaries. Network security and finality are provided by a Proof-of-Stake ("**PoS**") consensus with a globally distributed set of independent validators who propose and attest blocks in proportion to staked QRN; staking rewards and protocol-level penalties (including slashing and a lock-up period) align incentives for honest participation. Transactions and consensus messages are authenticated using stateless hash-based digital signatures (SLH-DSA, SPHINCS+ family) in place of elliptic-curve signatures, providing post-quantum resilience. Smart contracts run in a quantum secure runtime (the "Quranium Virtual Machine", QVM) in order to allow standard Ethereum tooling (e.g., Solidity, typical JSON-RPC methods) being used. Token holders may delegate to shared validator pools without transferring ownership of their QRN. The Protocol is designed to interoperate with scaling solutions (e.g., rollups and sidechains) to improve throughput and costs; such deployments are community-driven and subject to governance and technical readiness. Fees are paid in QRN, and if and when activated by governance a QIP-1559-style base-fee burn may offset issuance. Total supply is capped at 2,100,000,000 QRN; net supply evolution over time reflects issuance, fee burn (if enabled), and network activity but does not exceed the cap. Protocol upgrades and, where necessary, forks follow the Quranium Improvement Proposal (QIP) process with open discussion, testnet validation, and coordinated mainnet deployment.
H.2	Protocols and technical standards	• Post-quantum signatures: SLH-DSA (SPHINCS+) for transaction and consensus key material.

		• Smart-contract runtime: quantum secure execution environment (Solidity and typical Ethereum tooling support). • Node interfaces: JSON-RPC–style endpoints for wallet and dApp interoperability • On-chain governance artifacts: Quranium Improvement Proposals (QIPs) recorded and referenced on-chain when voting is enabled. • Networking & data: standard P2P gossip and Merkle/Patricia-style authenticated data structures for blocks and state.
H.3	Technology used	• Clients / nodes: full nodes and light clients are supported. Indicative hardware: ~16 GB RAM and ~512 GB storage for full nodes; ~4 GB RAM and ~16 GB storage for light nodes (subject to change as software matures). • Wallets & tooling: QSafe (non-custodial, multichain, quantum secure) and QRemix (AI-assisted IDE) are provided to interact with the network and develop smart contracts. • Upgrades & forks: governed via QIP process, with testing on testnet prior to mainnet deployment; soft forks for backward-compatible changes and hard forks for rule changes requiring node upgrades. • Focus areas: quantum-resilience first, with ongoing scalability research to offset larger post-quantum signature footprints.
H.4	Consensus mechanism	Quranium uses a Proof-of-Stake consensus with a stake-weighted, randomized leader-election process. Validators join the active set by staking a protocol-defined minimum of QRN, running a full node, and registering SLH-DSA (SPHINCS+) validator keys. Time is partitioned into slots/epochs. For each slot, one validator is pseudo-randomly selected to propose a block, while a committee of validators attests to the block's validity and its position in the chain. Blocks accumulate stake-weighted attestations and achieve finality once quorum thresholds are met across epochs, after which re-organizations beyond the finalized checkpoint are economically and procedurally discouraged. All consensus messages (block proposals, attestations, and validator registry operations) are signed with post-quantum SLH-DSA, replacing elliptic-curve signatures. Random assignment of proposers/committees is derived from on-chain entropy and a coordination layer described in the project's QIP/governance materials (client-provided brief refers to a *beacon-like* component that maintains the validator registry and schedules duties). Incentives align security: proposers and attesters earn rewards for timely, correct participation; penalties apply for missed duties or extended

		downtime; and slashing applies for provable consensus faults (e.g., double-signing or submitting contradictory votes). Staked funds are subject to a protocol-defined lock-up period; during lock-up, stake remains slashable for faults attributable to the validator. Holders may secure the network directly as validators or by delegation to validators (where supported), without transferring ownership of their QRN to the validator. Consensus/participation parameters – such as the minimum staking, reward/penalty coefficients, lock-up duration, and slashing fractions – are governance-controlled and can be adjusted only through the Quranium Improvement Proposal (QIP) process (publication, community review, on-chain vote meeting quorum/majority, and scheduled network upgrade).
H.5	Incentive mechanisms and applicable fees	Transactions and contract execution consume gas. Quranium uses an EIP-1559-like mechanism ("QIP-1559") in which each block specifies a base fee per gas that rises/falls automatically toward a target block gas utilization. The base fee is burned (permanently removed from supply), while users can add a priority tip to incentivize inclusion; that tip is paid to the block proposer. Users submit transactions with caps (e.g., max fee / max priority fee); any unused allowance is refunded. Contract deployment and high-complexity calls incur proportionally higher gas usage. Validators secure the chain by staking QRN and performing block proposal/attestation duties. They earn protocol rewards allocated in QRN for timely, correct participation and collect priority tips from included transactions. Rewards are stake-weighted and depend on participation rate and network parameters. Missed duties lead to gradual penalties; provable faults (e.g., double-signing, equivocation) trigger slashing of a portion of the staked QRN. A protocol-defined lock-up period applies on exit; during lock-up, stake may remain slashable for earlier faults. Where delegation is supported, delegators retain ownership of their QRN and typically share in validator rewards subject to an on-chain commission set by the validator. Net validator return combines (i) a portion of transaction fees from included transactions and (ii) a protocol level block reward issued in newly minted QRN, offset by (iii) base-fee burns and any penalties/slashing. Quranium targets a hard cap of 2.1 billion QRN; issuance and burn mechanics are calibrated so total supply never exceeds the cap. Depending on network activity, net issuance can be lower than gross issuance if base-fee burning outpaces reward issuance. Any future adjustments to reward rates, burn parameters, or supply mechanics require the QIP governance process (proposal, review, on-chain vote, scheduled upgrade).

		Validator economics include priority tips from included transactions and protocol block rewards. Their economics are structured as follows: • Commission: both fixed-rate rewards for early holders and variable/dynamic commission for validators over their lifetime (per on-chain configuration). • Unbonding: a lock-up period applies to validator exit and delegator withdrawals, consistent with EVM-style PoS chains; parameters (duration, withdrawal address pre-binding) are set at protocol level. • Slashing/penalties cover (i) non-participation, (ii) malicious behaviour/manipulation, (iii) node downtime; application is contract-driven per the published slashing specification. Detailed schedules will be published prior to activation.
H.6	Use of distributed ledger technology	True.
H.7	DLT functionality description	Quranium is a public, permissionless Layer-1 distributed ledger secured by Proof-of-Stake (PoS). Independent validators, selected via stake-weighted randomness, propose and attest blocks; finality is reached after epoch checkpoints. All user transactions and consensus messages are authenticated with SLH-DSA (SPHINCS+) using the 256f parameter set, providing post-quantum resilience at the protocol layer and avoiding reliance on elliptic-curve assumptions. Staking and delegation are non-custodial; an unbonding period applies on exit; and slashing is enforced for defined faults (e.g., equivocation, manipulation attempts, extended downtime). The execution environment is quantum secure; fees are paid in QRN per gas consumed. An EIP-1559-style base-fee/burn may be activated by governance. State is maintained with Merkle/Patricia-style authenticated structures and propagated over a peer-to-peer gossip network. Protocol upgrades are coordinated through the project's governance process and scheduled client releases. The ledger is permissionless and is not operated by the issuer nor by any third party on its behalf.
H.8	Audit	True.
H.9	Audit outcome	CertiK completed a full security audit of the Quranium codebase on August 16, 2025. Public details are available on CertiK Skynet – Quranium. The audit identified issues of varying severities; all material findings were addressed prior to mainnet launch, and informational items were triaged with remediation plans. A summary of findings and fixes will be linked from the Protocol's website: https://skynet.certik.com/projects/quranium.
Part I – Information on risks		
I.1	Offer-related risks	Although no public offering is conducted in connection with this white paper, the admission of the QRN token to trading on trading platforms entails the following risks:

		Custody and counterparty risks: Users relying on third-party custodians or centralized exchanges may face loss or inaccessibility of funds in the event of platform insolvency, technical failure, or hacking. **Delisting or suspension**: Crypto-asset trading platforms may suspend or delist QRN tokens for legal, technical, or commercial reasons without prior notice. **Ecosystem engagement risk**: The value and utility of QRN depend on sustained community, developer, and partner involvement. A drop in ecosystem participation could reduce token demand or hinder protocol operations. **Market volatility**: QRN tokens may experience significant price fluctuations due to macroeconomic conditions, protocol developments, investor sentiment, or regulatory announcements. **Liquidity risk**: Limited trading activity may lead to price slippage, inefficient price discovery, or inability to execute buy or sell orders promptly. **Open-source vulnerability**: Despite public audits and transparency, undetected bugs may persist in smart contracts, which could be exploited before they are corrected. **Regulatory risk**: Future regulatory developments in the European Union or other jurisdictions may impose restrictions or obligations that affect the token's transferability, listing, or legal treatment. Moreover, QRN tokens may be reclassified under future legislative frameworks, possibly altering its compliance status and the obligations of token holders or service providers. **Trading abuse risks**: In the absence of strict market surveillance, QRN tokens could be exposed to manipulation practices such as spoofing, wash trading, or front running.
I.2	Issuer-related risks	Quranium Association, the entity issuing the QRN tokens, does not offer financial services but supports the Protocol. Relevant risks include: **Financial risk**: While Quranium Association does not act as a custodian of user assets, its financial health may indirectly influence the broader ecosystem. For example, failure to sustain adequate funding or attract developer talent could reduce protocol activity and stakeholder confidence. **Key personnel dependence**: The Protocol's advancement depends heavily on a small group of core contributors. Any departure, misalignment, or incapacity among key team members could delay critical upgrades, hinder decision-making, or disrupt operational continuity. **Operational continuity**: The functioning of the Protocol relies on internal systems, processes, and controls. Failures related to human error, infrastructure outages, or organizational inefficiencies could adversely affect the ability to maintain the Protocol, publish updates, or coordinate governance procedures. **Regulatory and jurisdictional risk**: Regulatory actions in EU and non-EU jurisdictions may pose legal, operational, or reputational challenges. Diverging

		compliance frameworks could require costly adaptations or restrict the ability to mint or distribute QRN tokens in certain markets. **Reputational risk**: Any association with smart contract failures, security incidents, or governance disputes, even if Quranium Association or its affiliates are not directly liable, may undermine market confidence in the token. **Third-party dependency**: Quranium Association relies on external service providers (auditors, infrastructure providers, or partners) to support parts of the ecosystem. Service disruptions, cybersecurity issues, or breach of contractual obligations by such third parties could interfere with the protocol performance. **Token-concentration Risk**: A large portion of QRN tokens is allocated to internal purposes such as strategic investors, team, or treasury reserves. If these tokens are released too quickly or without clear transparency, it could impact market confidence, affect price stability, and raise concerns around potential manipulation or unfair advantage.
I.3	Crypto-assets-related risks	The QRN token is a fungible token and shares many general risks associated with crypto-assets: **AML/CTF enforcement risks**: Platforms and regulators may freeze or restrict tokens associated with suspected illicit activity. This could affect holders' ability to access or trade their QRN tokens if involved or flagged by association. **Cybersecurity threats**: Token holders are fully responsible for securing their private keys and wallet access. Loss or compromise of credentials, phishing attacks, or malware infections may result in permanent and irreversible loss of tokens. **Governance risks:** Protocol governance is community driven. If decision-making power becomes concentrated in a few large holders or if voter participation remains low, protocol development may become ineffective, misaligned, or subject to capture by special interests. **Market volatility**: The price of QRN may fluctuate significantly in short periods due to speculative activity, macroeconomic factors, shifting demand for the Protocol's services, or broader digital asset market sentiment. Such volatility may result in substantial losses for holders, particularly those unfamiliar with crypto-asset markets. **Network risks**: Network congestion, rising gas fees, or processing delays could affect the usability of QRN, limiting users' ability to interact with protocol functions in a timely or cost-efficient manner. **No intrinsic value or redemption**: QRN tokens does not represent a claim on any asset or service, nor does it provide income or redemption rights. Its value is driven solely by supply and demand. **Phishing and impersonation**: Fraudulent contracts, fake websites, or impersonation attempts may mislead users into interacting with malicious addresses. **Regulatory uncertainty**: Future legislation or regulatory enforcement in the EU or abroad may affect QRN legal treatment, listing eligibility, or transferability. Changes

		in classification or compliance obligations could lead to delistings or restrictions on use. **Taxation risks**: Tax treatment of QRN depends on jurisdiction. Holders are solely responsible for understanding and fulfilling their tax obligations, which may vary across countries and include capital gains or income taxes. **Technological vulnerabilities**: Any bugs, exploits, or flaws in the Protocol's contracts (e.g., staking, reward distribution, or governance logic) could lead to unintended behavior, service disruption, or token loss. **Utility dependence**: The utility and perceived value of QRN rely on active adoption of the Protocol and its core components. Reduced usage or failure to gain market traction may diminish the token's relevance. **Vesting and token release risks**: QRN tokens allocated to the team and early contributors may be subject to vesting. Once unlocked, such tokens could exert sell pressure and affect market prices.
I.4	Project implementation-related risks	The Protocol is under continuous development. Risks specific to project delivery include: **Dependence on Key Development Teams**: Quranium Association and its associated development teams are key drivers of protocol evolution. Operational issues, funding constraints, or loss of critical talent may disrupt progress and reduce the community's confidence in the project's sustainability. **Ecosystem adoption risk**: QRN long-term utility is directly tied to the integration of Quranium components by other DeFi protocols and trading platforms. If key components fail to achieve meaningful adoption, token demand and relevance could diminish. Competing solutions offering similar functionalities may further dilute market interest. **Governance risks**: The Protocol's governance relies on community participation. If token voting power becomes concentrated or apathy persists, governance may be ineffective or misaligned with broader ecosystem interests. **Integration dependencies**: The usefulness of QRN depends on the adoption of Quranium infrastructure by third parties. Low adoption may hinder utility growth. **Market Adoption risks**: Quranium operates in a highly dynamic and competitive environment. A lack of differentiation or failure to achieve product-market fit could limit adoption. Additionally, the success of QRN depends on building and sustaining an engaged community. **Milestone risks**: The delivery of key project milestones may face delays due to technical challenges or limited resources. Furthermore, listings on centralized exchanges are subject to financial and technical requirements, and delays in meeting these conditions could limit liquidity and hinder broader token accessibility. **Technical complexity and development delays**: The Protocol introduces advanced functionalities, which rely on smart contract interactions, staking systems, and data

		aggregation mechanisms. Delays or errors in deploying these features, especially those requiring extensive audits or community governance coordination, may affect ecosystem functionality and timeline expectations. **Third Party risk**: The Protocol relies on support from third-party partners, including exchanges, oracle providers, and market makers. If these partners fail to deliver, delay implementation, or withdraw from the collaboration, it could disrupt protocol operations and jeopardize the project's continuity or growth.
I.5	Technology-related risks	The QRN token is deployed on the Quranium blockchain. Related technological risks include: **Blockchain infrastructure limitations**: QRN tokens' transactions depend on Quranium's operational performance. Network congestion, high gas fees, change, updates, or node outages may delay execution, reduce usability, or increase the cost of interacting with protocol features. **Cybersecurity threats and user risks:** Users bear sole responsibility for managing their wallets and private keys. Phishing attacks, compromised interfaces, or misuse of third-party wallets can lead to permanent loss of token. Additionally, malicious actors may use publicly available transaction data to identify and exploit users through fraudulent schemes or unauthorized surveillance. **Interoperability issues**: Future integration with Layer 2 or cross-chain infrastructure may introduce compatibility risks not fully under the control of the Protocol. **Irreversible transactions**: Transactions involving QRN tokens are final once confirmed on the Quranium blockchain. If tokens are sent to an incorrect, inaccessible, or invalid address, they may be permanently lost with no possibility of recovery. **Smart contract vulnerabilities**: Malicious exploitation of bugs or logic flaws in smart contracts could result in partial or total loss of tokens or disrupt protocol functions. **Unforeseen risks:** As blockchain and decentralized finance technologies continue to evolve, additional risks may emerge that cannot currently be predicted. Some risks may also arise as unexpected combinations or consequences of known risks. **Validator concentration**: While Quranium is a decentralized network, validator dominance by a small number of entities could introduce systemic risk over time.

I.6	Mitigation measures	The following measures have been adopted or are planned to reduce risks: **Community governance**: The Protocol functions with an on-chain governance model that enables token holders to participate in key protocol decisions. This decentralized structure distributes power, mitigates centralization risks, and increases responsiveness to evolving ecosystem needs. **Ensure regulatory compliance**: Ongoing monitoring of regulatory developments and cross-border compliance requirements helps align the Protocol's operations with MiCAR and other applicable legal frameworks. **Progressive deployment**: Functionalities are introduced in phases over time. **Third-party audits**: The Protocol's smart contracts are subject to external code audits prior to deployment to identify and mitigate critical vulnerabilities.
Part J – Information on the sustainability indicators in relation to adverse impact on the climate and other environment-related adverse impact		
J.1	Adverse impacts on climate and other environment-related adverse impacts	The QRN token operates on the Quranium blockchain using Proof-of-Stake (PoS) consensus mechanism that eliminates the need for energy-intensive mining processes traditionally associated with Proof-of-Work (PoW) systems. Validators secure the network by staking QRN rather than performing high-power computations, which results in a lower energy profile per transaction when compared to PoW-based networks. Overall, the infrastructure supporting QRN is considered environmentally efficient and aligned with sustainability goals.
General information		
S.1	Name	Quranium Association
S.2	Relevant legal entity identifier	Not applicable.
S.3	Name of the crypto-asset	QRN token
S.4	Consensus Mechanism	H.4
S.5	Incentive Mechanisms and Fees	H.5
S.6	Beginning of reporting period	2025-08-01
S.7	End of reporting period	2026-07-31
Mandatory Key Indicator on Energy Consumption		
S.8	Energy consumption	2390166.00000 kWh/a
S.9	Energy consumption sources/methods	Exact figures cannot be provided prior to mainnet launch, as consumption will depend on realised network activity, validator participation and scaling dynamics. Any values disclosed before launch are indicative only.
Supplementary Energy & GHG Indicators		
S.10	Renewable energy consumption	17.41 %
S.11	Energy intensity	0.00010 kWh
S.12	Scope 1 GHG emissions (controlled)	0.00000 tCO2e/a

S.13	Scope 2 GHG emissions (purchased	795.47849 tCO2e/a
S.14	GHG intensity	0.00003 kgCO2e
Sources and Methodologies		
S.15	Energy sources & methods	Exact figures cannot be provided prior to mainnet launch, as consumption will depend on realised network activity, validator participation and scaling dynamics. Any values disclosed before launch are indicative only.
S.16	GHG sources & methods	Exact figures cannot be provided prior to mainnet launch, as consumption will depend on realised network activity, validator participation and scaling dynamics. Any values disclosed before launch are indicative only.

–Warning –

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