

**White paper drafted under the
European Markets in Crypto-
Assets Regulation (EU)
2023/1114 for FFG GS4H3VSB1**

Preamble

00. Table of Contents

Preamble	2
01. Date of notification	8
02. Statement in accordance with Article 6(3) of Regulation (EU) 2023/1114	8
03. Compliance statement in accordance with Article 6(6) of Regulation (EU) 2023/1114	8
04. Statement in accordance with Article 6(5), points (a), (b), (c), of Regulation (EU) 2023/1114	8
05. Statement in accordance with Article 6(5), point (d), of Regulation (EU) 2023/1114	8
06. Statement in accordance with Article 6(5), points (e) and (f), of Regulation (EU) 2023/1114	8
Summary	8
07. Warning in accordance with Article 6(7), second subparagraph, of Regulation (EU) 2023/1114	8
08. Characteristics of the crypto-asset	8
09. Information about the quality and quantity of goods or services to which the utility tokens give access and restrictions on the transferability	9
10. Key information about the offer to the public or admission to trading	9
Part A – Information about the offeror or the person seeking admission to trading	10
A.1 Name	10
A.2 Legal form	10
A.3 Registered address	10
A.4 Head office	10
A.5 Registration date	10
A.6 Legal entity identifier	10
A.7 Another identifier required pursuant to applicable national law	10
A.8 Contact telephone number	10
A.9 E-mail address	10
A.10 Response time (Days)	10
A.11 Parent company	10
A.12 Members of the management body	11
A.13 Business activity	11
A.14 Parent company business activity	11
A.15 Newly established	11
A.16 Financial condition for the past three years	11

A.17 Financial condition since registration	12
Part B – Information about the issuer, if different from the offeror or person seeking admission to trading	12
B.1 Issuer different from offeror or person seeking admission to trading	12
B.2 Name	12
B.3 Legal form	12
B.4 Registered address	13
B.5 Head office	13
B.6 Registration date	13
B.7 Legal entity identifier	13
B.8 Another identifier required pursuant to applicable national law	13
B.9 Parent company	13
B.10 Members of the management body	13
B.11 Business activity	13
B.12 Parent company business activity	13
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	14
C.1 Name	14
C.2 Legal form	14
C.3 Registered address	14
C.4 Head office	14
C.5 Registration date	14
C.6 Legal entity identifier	14
C.7 Another identifier required pursuant to applicable national law	14
C.8 Parent company	14
C.9 Reason for crypto-asset white paper preparation	14
C.10 Members of the management body	14
C.11 Operator business activity	14
C.12 Parent company business activity	14
C.13 Other persons drawing up the crypto-asset white paper according to Article 6(1), second subparagraph, of Regulation (EU) 2023/1114	15
C.14 Reason for drawing the white paper by persons referred to in Article 6(1), second subparagraph, of Regulation (EU) 2023/1114	15
Part D – Information about the crypto-asset project	15
D.1 Crypto-asset project name	15
D.2 Crypto-assets name	15

D.3 Abbreviation	15
D.4 Crypto-asset project description	15
D.5 Details of all natural or legal persons involved in the implementation of the crypto-asset project	16
D.6 Utility Token Classification	16
D.7 Key Features of Goods/Services for Utility Token Projects	16
D.8 Plans for the token	17
D.9 Resource allocation	18
D.10 Planned use of collected funds or crypto-assets	19
Part E – Information about the offer to the public of crypto-assets or their admission to trading	19
E.1 Public offering or admission to trading	19
E.2 Reasons for public offer or admission to trading	19
E.3 Fundraising target	19
E.4 Minimum subscription goals	19
E.5 Maximum subscription goals	19
E.6 Oversubscription acceptance	19
E.7 Oversubscription allocation	19
E.8 Issue price	20
E.9 Official currency or any other crypto-assets determining the issue price	20
E.10 Subscription fee	20
E.11 Offer price determination method	20
E.12 Total number of offered/traded crypto-assets	20
E.13 Targeted holders	20
E.14 Holder restrictions	20
E.15 Reimbursement notice	20
E.16 Refund mechanism	20
E.17 Refund timeline	20
E.18 Offer phases	21
E.19 Early purchase discount	21
E.20 Time-limited offer	21
E.21 Subscription period beginning	21
E.22 Subscription period end	21
E.23 Safeguarding arrangements for offered funds/crypto-assets	21
E.24 Payment methods for crypto-asset purchase	21
E.25 Value transfer methods for reimbursement	21
E.26 Right of withdrawal	21

E.27 Transfer of purchased crypto-assets	21
E.28 Transfer time schedule	21
E.29 Purchaser's technical requirements	22
E.30 Crypto-asset service provider (CASP) name	22
E.31 CASP identifier	22
E.32 Placement form	22
E.33 Trading platforms name	22
E.34 Trading platforms Market identifier code (MIC)	22
E.35 Trading platforms access	22
E.36 Involved costs	22
E.37 Offer expenses	22
E.38 Conflicts of interest	22
E.39 Applicable law	23
E.40 Competent court	23
Part F – Information about the crypto-assets	23
F.1 Crypto-asset type	23
F.2 Crypto-asset functionality	23
F.3 Planned application of functionalities	24
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	25
F.4 Type of crypto-asset white paper	25
F.5 The type of submission	25
F.6 Crypto-asset characteristics	25
F.7 Commercial name or trading name	25
F.8 Website of the issuer	25
F.9 Starting date of offer to the public or admission to trading	25
F.10 Publication date	25
F.11 Any other services provided by the issuer	25
F.12 Language or languages of the crypto-asset white paper	25
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	25
F.14 Functionally fungible group digital token identifier	26
F.15 Voluntary data flag	26
F.16 Personal data flag	26
F.17 LEI eligibility	26
F.18 Home Member State	26

F.19 Host Member States	26
Part G – Information on the rights and obligations attached to the crypto-assets	26
G.1 Purchaser rights and obligations	26
G.2 Exercise of rights and obligations	26
G.3 Conditions for modifications of rights and obligations	26
G.4 Future public offers	27
G.5 Issuer retained crypto-assets	27
G.6 Utility token classification	27
G.7 Key features of goods/services of utility tokens	27
G.8 Utility tokens redemption	27
G.9 Non-trading request	27
G.10 Crypto-assets purchase or sale modalities	27
G.11 Crypto-assets transfer restrictions	27
G.12 Supply adjustment protocols	28
G.13 Supply adjustment mechanisms	28
G.14 Token value protection schemes	28
G.15 Token value protection schemes description	28
G.16 Compensation schemes	28
G.17 Compensation schemes description	28
G.18 Applicable law	28
G.19 Competent court	28
Part H – information on the underlying technology	28
H.1 Distributed ledger technology (DLT)	28
H.2 Protocols and technical standards	28
H.3 Technology used	31
H.4 Consensus mechanism	33
H.5 Incentive mechanisms and applicable fees	34
H.6 Use of distributed ledger technology	36
H.7 DLT functionality description	36
H.8 Audit	36
H.9 Audit outcome	36
Part I – Information on risks	36
I.1 Offer-related risks	36
I.2 Issuer-related risks	38
I.3 Crypto-assets-related risks	39
I.4 Project implementation-related risks	41

I.5 Technology-related risks	42
I.6 Mitigation measures	44
Part J – Information on the sustainability indicators in relation to adverse impact on the climate and other environment-related adverse impacts	44
J.1 Adverse impacts on climate and other environment-related adverse impacts	44
S.1 Name	44
S.2 Relevant legal entity identifier	44
S.3 Name of the crypto-asset	44
S.4 Consensus Mechanism	44
S.5 Incentive Mechanisms and Applicable Fees	46
S.6 Beginning of the period to which the disclosure relates	48
S.7 End of the period to which the disclosure relates	48
S.8 Energy consumption	48
S.9 Energy consumption sources and methodologies	48
S.10 Renewable energy consumption	48
S.11 Energy intensity	48
S.12 Scope 1 DLT GHG emissions – Controlled	48
S.13 Scope 2 DLT GHG emissions – Purchased	48
S.14 GHG intensity	49
S.15 Key energy sources and methodologies	49
S.16 Key GHG sources and methodologies	49

01. Date of notification

This white paper was notified on 2026-09-01.

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 SPK crypto-asset referred to in this white paper is a crypto-asset other than an e-money token and an asset-referenced token, and is implemented on the Ethereum, Base and BNB Smart Chain networks, according to the DTI FFG shown in section F.14. A total of 10,000,000,000 SPK tokens was initially minted. Additional SPK tokens may be minted under certain conditions, such as to cover bad debt. The crypto-asset is implemented as a token under the ERC-20 token standard on each of the three networks.

The first activity on Ethereum can be identified on 2024-10-28 (source: 0xc20059e0317DE91738d13af027DfC4a50781b066, <https://etherscan.io/token/0xc20059e0317DE91738d13af027DfC4a50781b066>, accessed 2026-08-19).

The first activity on Base can be identified on 2025-06-13 (source: 0x692A07f2306a3bba739e5281A26A5a97C6D7A6cA, <https://basescan.org/token/0x692A07f2306a3bba739e5281A26A5a97C6D7A6cA>, accessed 2026-08-19).

The first activity on BNB Smart Chain can be identified on 2025-06-13 (source: 0xAfF2e841851700D1Fc101995Ee6b81Ae21Bb87D7, <https://bscscan.com/token/0xAfF2e841851700D1Fc101995Ee6b81Ae21Bb87D7>, accessed 2026-08-19).

Spark is a decentralised finance protocol that allocates stablecoin liquidity across networks and lending venues. It originated from Sky, previously known as MakerDAO, and comprises a lending market, a savings product and a liquidity allocation system. The availability, performance and security of these functions cannot be guaranteed.

The SPK token is the governance and staking token of the protocol. It is not used to pay transaction fees and plays no role in the consensus mechanism of any of the three networks, and it does not entitle its holders to any yield, fee share or claim on the protocol's assets.

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 a 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 39120077M9TG001FE242.

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 GmbH 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

SPK Company Ltd.

B.3 Legal form

The legal form of SPK Company Ltd. is 6EH6, which corresponds to "Company limited by shares".

B.4 Registered address

The registered address of SPK Company Ltd. is SHRM Trustees (BVI) Limited of Trinity Chambers, PO Box 4301, Road Town, Tortola,

British Virgin Islands,

VG

B.5 Head office

The head office of SPK Company Ltd. is SHRM Trustees (BVI) Limited of Trinity Chambers, PO Box 4301, Road Town, Tortola,

British Virgin Islands,

VG

B.6 Registration date

SPK Company Ltd. was registered on 2025-02-19.

B.7 Legal entity identifier

SPK Company Ltd. has no Legal Entity Identifier (LEI).

B.8 Another identifier required pursuant to applicable national law

Reg. Number: 2170013

B.9 Parent company

Spark Foundation

B.10 Members of the management body

Name	Function	Business address
Spark Foundation	Director	Suite 3119, 9 Forum Lane, Camana Bay, George Town, Grand Cayman KY1-9006, Cayman Islands

B.11 Business activity

According to the official documentation, the entity's sole activity is the issuance and distribution of the Token.

B.12 Parent company business activity

According to the official documentation, the entity's sole activity is support, promotion and development from and around Spark.

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: "Spark", Short Name: "SPK" according to the Digital Token Identifier Foundation (www.dtif.org, DTI see F.13, FFG DTI see F.14 as of 2026-08-19).

D.2 Crypto-assets name

Long Name: "Spark" according to the Digital Token Identifier Foundation (www.dtif.org, DTI see F.13, FFG DTI see F.14 as of 2026-08-19).

D.3 Abbreviation

Short Name: "SPK" according to the Digital Token Identifier Foundation (www.dtif.org, DTI see F.13, FFG DTI see F.14 as of 2026-08-19).

D.4 Crypto-asset project description

According to publicly available information, Spark is a decentralised finance protocol within the Sky ecosystem. It obtains stablecoin liquidity from Sky, including USDS, and allocates capital across approved decentralised-finance markets, centralised counterparties and tokenised real-world-asset arrangements. Spark states that it was created to address fragmented liquidity, variable returns and stablecoin capital that is not actively deployed (sources: <https://spark.fi>, <https://docs.spark.fi>, accessed 2026-08-19).

Spark has three principal product areas. SparkLend is a permissionless money market through which users may supply supported assets, provide collateral and borrow supported stablecoins, subject to applicable market parameters. Liquidity is also supplied to SparkLend through the Spark Liquidity Layer. The protocol receives a reserve factor from interest paid by borrowers.

Spark Savings comprises tokenised savings vaults through which users may deposit supported stablecoins or ETH and receive vault tokens representing their position. The yield source and applicable rate depend on the relevant vault. Supported assets, product parameters and rates may change through the applicable Spark or Sky governance processes.

The Spark Liquidity Layer is the protocol's capital-allocation system. It provides liquidity to approved venues, including lending markets, vaults and other supported allocation arrangements. The available venues, allocation limits and relevant risk parameters are subject to governance controls.

Spark and Sky governance determine different elements of the protocol's operation, including product parameters, approved integrations, risk settings and capital deployment. SPK holders may participate in Spark governance directly or through delegation.

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
SPK Company Ltd.	Other person involved in implementation	SHRM Trustees (BVI) Limited of Trinity Chambers, PO Box 4301, Road Town, Tortola, British Virgin Islands	British Virgin Islands
Spark Foundation	Other person involved in implementation	Suite 3119, 9 Forum Lane, Camana Bay, George Town, Grand Cayman KY1-9006, Cayman Islands	Cayman Islands
Sam MacPherson	Other person involved in implementation	Cannot be found	Cannot be found
Nadia Alvarez	Other person involved in implementation	Cannot be found	Cannot be found
Spark.fi Inc.	Other person involved in implementation	PH The Century Tower, Via Ricardo J. Alfaro, Office 317, Panama City	Panama
Lucas Manuel	Other person involved in implementation	Cannot be found	Cannot be found
Phoenix Labs Pte. Ltd.	Other person involved in implementation	11 Collyer Quay, #17-11, The Arcade, Singapore 049317	Singapore

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 SPK 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.

According to publicly available information, there is no single formally published roadmap for the SPK token; project plans are communicated through the project's website, blog and public announcements, and each announced protocol change is stated to be subject to approval by Spark governance (sources: <https://spark.fi>, <https://paragraph.com/@spark-11/spark-roadmap-the-next-6-months>, <https://paragraph.com/@spark-11/savings-v2-launches>, <https://paragraph.com/@spark-11/spark-q1-2026-financial-report>, <https://paragraph.com/@spark-11/spark-q2-2026-financial-report>, accessed 2026-08-19).

Past milestones:

- Launch of SparkLend (May 2023): the project launched with SparkLend, a lending protocol built on the project's liquidity infrastructure with governance-defined rates.
- Launch of Spark Savings (August 2023): the first version of Spark Savings enabled users to deposit DAI and earn rewards through the Sky Savings Rate.
- Spark Liquidity Layer on Base (November 2024): the Spark Liquidity Layer was deployed on Base.
- Spark Liquidity Layer on Arbitrum (February 2025): the Spark Liquidity Layer was deployed on Arbitrum, extending Spark Savings to Arbitrum stablecoin users.
- Spark Savings USDC (March 2025): a USDC savings product was launched.
- Ignition airdrop (June 2025): the project distributed SPK tokens to early users and contributors across the ecosystem.
- Launch of Savings V2 (October 2025): the savings vaults were extended to USDC, USDT and ETH on Ethereum mainnet, with progressive rollout to further chains and stablecoins stated to follow.
- SPK buyback programme (first quarter of 2026): the protocol began applying treasury funds to open-market purchases of SPK, reported as USD 986,000 in the first quarter of 2026 and USD 1,310,000 in the second quarter of 2026, the latter acquiring 58,260,000 SPK.

Future milestones:

- Progressive rollout of Savings V2 to further chains and stablecoin denominations beyond the initial launch on Ethereum mainnet.
- Continued scaling of Spark Institutional Lending, a fixed-rate, fixed-term lending structure built on Morpho V2.
- Spark Mobile, an application intended to allow users to save, borrow and pay. No confirmation of launch has been published as at the date of this white paper.
- Further expansion of automated trading operations to over-the-counter desks, exchanges and decentralised exchange venues. Full implementation across all stated venue types has not been confirmed as at the date of this white paper.

Development is organised in a decentralised manner, and each of the items above is conditional on approval by Spark governance.

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 SPK crypto-asset for its holders.

D.9 Resource allocation

According to publicly available information, the project has not been funded through equity fundraising rounds or a public token sale. Development was financed through grants from the Sky ecosystem, and since 1 July 2025 the protocol retains the revenue it generates, following the introduction by Sky of full profit and loss accounting for its Stars (sources: <https://docs.spark.fi/governance/spk-token>, <https://paragraph.com/@spark-11/spark-roadmap-the-next-6-months>, <https://paragraph.com/@spark-11/spark-q2-2026-financial-report>, accessed 2026-08-19).

A total of 10,000,000,000 SPK tokens was minted at genesis and allocated as follows: 6,500,000,000 tokens, being 65 %, to users of the Sky ecosystem, to be distributed by Sky through a farming programme over ten years; 2,300,000,000 tokens, being 23 %, to the Spark ecosystem, of which 17 % of the total supply was available at the token generation event and 6 % one year afterwards; and 1,200,000,000 tokens, being 12 %, to the team, subject to a twelve-month cliff releasing 25 % and vesting of the remainder over three years. As a result of these vesting arrangements and phased distributions, the circulating supply of SPK will fluctuate over time.

The protocol generates revenue at protocol level from its lending, savings and liquidity allocation activities, which accrues to the protocol treasury and funds its operating costs. For the quarter ended 30 June 2026 the project reported gross protocol returns of USD 40,600,000, a net protocol surplus of USD 710,000 and a treasury of USD 48,500,000, against gross protocol returns of USD 31,500,000 and a net protocol surplus of USD 3,460,000 for the preceding quarter. These figures are the project's own internal, accrual-based estimates, are not prepared by a professional accounting service provider and may not conform to international financial reporting standards.

Reported results have varied materially between quarters and no assurance can be given as to future performance.

The natural persons, legal persons, undertakings, organised development teams, governance arrangements or other structures connected to the SPK 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

A total of 10,000,000,000 SPK tokens was initially minted. Additional SPK tokens may be minted under certain conditions, such as to cover bad debt (source: <https://docs.spark.fi/governance/spk-token>, accessed 2026-08-19).

As further tokens may be minted, the total supply of SPK is not fixed, and holders are exposed to a risk of dilution of the relative share, and of a negative effect on the market price, of their existing holdings.

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 to any additional restrictions such 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 PGS�.

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, corporate 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, SPK is the governance and staking token of the Spark protocol. Its two functions are participation in the protocol's governance process and staking within the protocol's staking arrangements (sources: <https://docs.spark.fi/governance/spk-token>, <https://docs.spark.fi/governance>, <https://docs.spark.fi/spk-staking>, accessed 2026-08-19).

Governance is conducted off-chain. Holders may vote on proposals through the Snapshot platform, or delegate their voting power to delegates who have been whitelisted for that purpose; delegation to any other address confers no voting power. Proposals may be submitted only by holders of at least 1 % of the total supply, being 100,000,000 SPK, and by nested contributors to the project. Before a proposal reaches a vote it must be cleared by the Spark Risk Council and by an operational facilitator, each of which may prevent it from proceeding. Voting determines amendments to the

parameters recorded for Spark in the Sky Atlas, including budgets, risk settings, asset onboarding and protocol integrations.

Staking is operated through third-party staking infrastructure. Holders who stake SPK receive a staked token representing their position and earn rewards in the form of Spark Points, which are a reward-programme unit and not a payment in SPK or in any other crypto-asset. Staked SPK is used to secure token bridges forming part of the Spark Liquidity Layer, and the project states that it may be used to secure further products in future; the realisation of this intended functionality depends on technical implementation and governance decisions, and no binding assurance can be given that all intended uses will be realised as described. Unstaking is subject to a delay of between two and four weeks.

The SPK 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 Spark protocol environment. The actual usability of SPK depends on factors such as system stability, governance decisions, development progress and the operational conditions of the underlying blockchain networks, which are outside the control of token holders.

F.3 Planned application of functionalities

Future milestones:

- Progressive rollout of Savings V2 to further chains and stablecoin denominations beyond the initial launch on Ethereum mainnet.
- Continued scaling of Spark Institutional Lending, a fixed-rate, fixed-term lending structure built on Morpho V2.
- Spark Mobile, an application intended to allow users to save, borrow and pay. No confirmation of launch has been published as at the date of this white paper.
- Further expansion of automated trading operations to over-the-counter desks, exchanges and decentralised exchange venues. Full implementation across all stated venue types has not been confirmed as at the date of this white paper.

Development is organised in a decentralised manner, and each of the items above is conditional on approval by Spark governance.

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 SPK 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 (Modified white paper).

F.6 Crypto-asset characteristics

The crypto-asset referred to herein is a crypto-asset other than EMTs and ARTs, and is available on multiple networks. The crypto-asset is fungible up to 18 digits after the decimal point on Ethereum, Base and BNB Smart Chain. 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: "Spark" according to the Digital Token Identifier Foundation (www.dtif.org, DTI see F.13, FFG DTI see F.14 as of 2026-08-19).

F.8 Website of the issuer

<https://spark.finance/>

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

2025-09-11

F.10 Publication date

2025-09-11

F.11 Any other services provided by the issuer

It is not possible to exclude the possibility that the issuer of the token provides, or will provide, other services not covered by Regulation (EU) 2023/1114 (i.e. MiCAR).

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

HQZW3VQ7D; N0C5KF8KM; L6Q3MD87L

F.14 Functionally fungible group digital token identifier

GS4H3VSB1

F.15 Voluntary data flag

This white paper has been submitted on a mandatory basis 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

The issuer is eligible for a Legal Entity Identifier (LEI).

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 future offers to the public of crypto-assets was not available at the time of writing this white paper (2026-08-19).

G.5 Issuer retained crypto-assets

The issuer retains no SPK tokens. The genesis allocations to the Spark ecosystem and to the team are held in addresses controlled by the governance arrangements and treasuries of the project rather than by the issuer, and are released over time in accordance with published distribution and vesting schedules (source: <https://docs.spark.fi/governance/spk-token>, accessed 2026-08-19).

Holders should note that additional SPK tokens may be minted under certain conditions, such as to cover bad debt. Any tokens so minted may be allocated to persons or structures connected to the project, so the position stated above may change at short notice and without any action by holders.

The information presented in this section is based on the issuer's own published disclosures and publicly available information, should be considered indicative only, and changes in the issuer's holdings 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 2026-08-19.

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 Base, BNB Smart Chain, and Ethereum networks following the standards described below.

H.2 Protocols and technical standards

The crypto-asset that is the subject of this white paper is available on multiple DLT networks. These include: Base, BNB Smart Chain, and Ethereum. In general, when evaluating crypto-assets, all implementations across different networks must always be taken into account, as spillover effects can be adverse for investors.

The following applies to Base:

Base is an Ethereum Layer-2 rollup introduced by Coinbase and launched in 2023 using Optimism's OP Stack. On 2026-02-18, Base announced a migration towards a unified, Base-operated technology stack. Base does not operate a separate decentralised consensus mechanism comparable to a Layer-1 blockchain. Transactions are currently ordered by a centralised sequencer, while transaction data and state commitments are posted to Ethereum, whose Proof-of-Stake consensus secures the underlying data availability and settlement layer. Since the Azul upgrade in May 2026, Base uses a multi-proof system in which state commitments may be verified by trusted execution environment (TEE) proofs or permissionless zero-knowledge (ZK) proofs, with the ZK path able to override an invalid TEE-backed proposal. If the sequencer becomes unavailable, users may submit transactions through Ethereum Layer-1 for inclusion, subject to the protocol's applicable delay mechanisms.

The following applies to BNB Smart Chain:

BNB Smart Chain (BSC) is a Layer-1 blockchain that utilises a Proof-of-Staked-Authority (PoSA) consensus mechanism. This mechanism combines elements of Proof-of-Authority (PoA) and Delegated-Proof-of-Stake (DPoS) and is intended to secure the network and validate transactions. In PoSA, validators are selected based on their stake and authority, with the goal of providing fast transaction times and low fees while maintaining network security through staking.

The following applies to Ethereum:

The crypto-asset operates on a defined set of protocols and technical standards that are intended to ensure its security, decentralisation, and functionality. Key items are set out below.

1. Network protocols

Ethereum operates as a decentralised, peer-to-peer network. Nodes communicate using the DevP2P networking stack, with RLPx as the encrypted transport layer for peer-to-peer messages.

Transaction ordering and finality are secured through a Proof-of-Stake (PoS) consensus mechanism. Validators on the Beacon Chain propose blocks, attest to them, and finalise them through Casper FFG operating on top of the LMD-GHOST fork-choice rule. Smart contract execution is performed by the Ethereum Virtual Machine (EVM), which interprets EVM bytecode within the gas limits set by the protocol and by the transaction sender.

2. Transaction and address standards

Ethereum addresses are 20-byte identifiers, derived as the last 20 bytes of the Keccak-256 hash of the uncompressed elliptic-curve public key (excluding the 0x04 prefix). They are commonly represented as 40-character hexadecimal strings with a 0x prefix and an optional EIP-55 mixed-case checksum.

The protocol currently supports the following transaction types:

- Type 0: legacy transactions (pre-EIP-1559).
- Type 1: access-list transactions (EIP-2930).
- Type 2: dynamic-fee transactions with base-fee burning (EIP-1559).
- Type 3: blob-carrying transactions (EIP-4844), introduced with the Dencun upgrade on 2024-03-13.
- Type 4: set-code transactions (EIP-7702), introduced with the Pectra upgrade on 2025-05-07, allow externally owned accounts (EOAs) to authorise delegated code execution during transactions, without permanently converting the account into a smart contract. This enables features such as transaction batching, sponsored gas payments and delegated signing.

3. Blockchain data structure and block standards

The Ethereum state consists of accounts (externally owned accounts and smart contracts) together with their associated storage and code, organised in Modified Merkle Patricia Tries to allow efficient verification.

Each block contains:

- a block header, comprising the parent hash, state root, transactions root, receipts root, timestamp, gas limit and gas used, among other fields;
- the ordered list of transactions, including smart-contract executions and value transfers; and
- blob commitments, where applicable, referring to data published to the data availability layer under EIP-4844.

Block size is not fixed in bytes. It is constrained by a per-block gas limit, which is adjustable within protocol-defined bounds and currently targets approximately 60 million gas following EIP-7935 (Fusaka, activated on 2025-12-03). EIP-7825 (Fusaka) also introduces a per-transaction gas cap of 16,777,216 gas to improve block composability and resilience against denial-of-service patterns.

The data availability layer used by Layer 2 rollups, introduced through EIP-4844, was further developed by EIP-7691 (Pectra, 2025-05-07), which raised the maximum number of blob commitments per block, and by EIP-7594 (Fusaka, 2025-12-03), which introduced Peer Data

Availability Sampling (PeerDAS). PeerDAS enables nodes to verify that blob data has been published by sampling small portions of it, rather than downloading every blob in full. Following PeerDAS, Ethereum uses Blob Parameter Only (BPO) forks, introduced by EIP-7892, to adjust blob targets and maxima between major upgrades.

4. Upgrade and improvement standards

Ethereum protocol upgrades are coordinated through the Ethereum Improvement Proposal (EIP) process. EIPs are published openly, reviewed by core developers and the wider community, and bundled into named hard-fork upgrades. The most recent network upgrades are the Pectra upgrade (2025-05-07) and the Fusaka upgrade (2025-12-03). The next named upgrade currently under preparation by the Ethereum core developers is referred to as Glamsterdam.

H.3 Technology used

The crypto-asset that is the subject of this white paper is available on multiple DLT networks. These include: Base, BNB Smart Chain, and Ethereum. In general, when evaluating crypto-assets, all implementations across different networks must always be taken into account, as spillover effects can be adverse for investors.

The following applies to Base:

1. Base-compatible wallets: The tokens are supported by wallets compatible with the Ethereum Virtual Machine (EVM), including MetaMask, Coinbase Wallet and Trust Wallet. These wallets interact with Base in the same manner as with other EVM-compatible networks through standard Web3 interfaces.
2. Distributed ledger: Base operates as a Layer-2 network on Ethereum and maintains its own distributed ledger for recording token transactions. Transaction batches and corresponding state commitments are periodically posted to Ethereum Layer 1, allowing the Layer-2 state to be anchored to Ethereum and verified through the network's security mechanisms.
3. ERC-20 token standard: Base supports crypto-assets implemented using the ERC-20 token standard. As an EVM-compatible network, Base supports the same token interface standards commonly used on Ethereum.
4. Scalability and transaction efficiency: As an optimistic rollup Layer-2 network, Base executes transactions on the Layer-2 network and periodically posts transaction data and state commitments to Ethereum Layer 1. This architecture is intended to reduce the amount of data processed directly on Ethereum Layer 1 and may result in lower transaction costs compared to executing transactions directly on Ethereum Layer 1.

The following applies to BNB Smart Chain (BSC):

1. BSC-compatible wallets

Tokens on BSC are supported by wallets compatible with the Ethereum Virtual Machine (EVM), such as MetaMask. These wallets can be configured to connect to the BSC network and are designed to interact with BSC using standard Web3 interfaces.

2. Decentralised Ledger

BSC maintains its own decentralised ledger for recording token transactions. This ledger is intended to ensure transparency and security, providing a verifiable record of all activities on the network.

3. BEP-20 token standard

BSC supports tokens implemented under the BEP-20 standard, which is tailored for the BSC ecosystem. This standard is designed to facilitate the creation and management of tokens on the network.

4. Scalability and transaction efficiency

BSC is designed to handle high volumes of transactions with low fees. It leverages its PoSA consensus mechanism to achieve fast transaction times and efficient network performance, making it suitable for applications requiring high throughput.

The following applies to Ethereum:

1. Decentralised Ledger: The Ethereum blockchain acts as the decentralised ledger and execution environment for ETH transactions and smart-contract operations, including ERC-20 token transfers, maintaining an append-only record of transfers and account balances to support transparency and verifiable settlement.

2. Account Model: Ethereum uses two account types: externally owned accounts (EOAs), which are controlled through private keys, and contract accounts, which are controlled through deployed smart contract code. Following the Pectra upgrade on 2025-05-07, EOAs can additionally authorise delegated code execution through EIP-7702 transactions without permanently converting the account into smart contracts.

3. Private Key Management: Users must securely store the private keys and recovery material associated with their wallets. Loss or compromise of a private key may result in irreversible loss of access to the associated ETH or ERC-20 token balance.

4. Cryptographic Integrity: Ethereum uses ECDSA over the secp256k1 elliptic curve for key generation and digital signatures on the execution layer. Keccak-256 hashing is used for transaction hashing, state hashing and address derivation. Ethereum addresses are derived from the last 20 bytes of the Keccak-256 hash of the public key. On the consensus layer, BLS (Boneh-Lynn-Shacham) signatures are used to aggregate validator attestations under the Proof-of-Stake consensus mechanism.

H.4 Consensus mechanism

The crypto-asset that is the subject of this white paper is available on multiple DLT networks. These include: Base, BNB Smart Chain, and Ethereum. In general, when evaluating crypto-assets, all implementations across different networks must always be taken into account, as spillover effects can be adverse for investors.

The following applies to Base:

Base does not operate a decentralised validator set comparable to a Layer-1 blockchain. Transaction ordering is currently performed by a single sequencer, while transaction data and state commitments are posted to Ethereum and ultimately benefit from Ethereum's Proof-of-Stake consensus. Following the Azul upgrade, Base uses a multi-proof system for Layer-2 checkpoints associated with withdrawals to Ethereum: TEE proofs support the normal path, while permissionless zero-knowledge proofs provide an independent verification and challenge path. The sequencer remains a central component of transaction ordering.

The following applies to BNB Smart Chain:

BNB Smart Chain (BSC) uses a hybrid consensus mechanism called Proof-of-Staked-Authority (PoSA), which combines elements of Delegated-Proof-of-Stake (DPoS) and Proof-of-Authority (PoA). This method is intended to support fast block times and low fees while maintaining a level of decentralisation and security.

Core components

1. **Validators (Cabinet and Candidates):** Validators are responsible for producing blocks, validating transactions, and maintaining network security. The validator set consists of up to 45 validators, including 21 "Cabinet" validators and 24 "Candidate" validators, selected based on bonded stake. A subset of validators is selected per epoch to participate in block production.
2. **Delegators:** Token holders may delegate BNB to validators to support their selection. Delegators share in the rewards generated by validators, providing an economic incentive to participate in staking.
3. **Candidates:** Validator candidates are nodes that have staked BNB but are not part of the primary validator subset for a given epoch. They may be selected into the active set based on staking rank and can participate in block production with lower probability.

Consensus process

4. **Validator selection:** Validators are ranked based on the amount of bonded BNB and are updated periodically (approximately every 24 hours). The highest-ranked validators form the active validator set, with Cabinet validators having a higher probability of participating in block production.

5. Block production: Validators take turns producing blocks in a PoA-like manner. For each epoch, a subset of validators is selected to produce and validate blocks sequentially, ensuring high throughput and low latency.
6. Transaction finality: BSC achieves short block times (approximately 0.45 seconds) and fast finality. With Fast Finality enabled, blocks are typically finalised within approximately one second, subject to validator participation.
7. Staking: Validators must stake BNB as collateral and may be subject to slashing in cases of misbehaviour, including double-signing, malicious voting, or prolonged downtime.
8. Delegation and rewards: Validators and delegators are rewarded through transaction fees collected in each block. Validators may share rewards with delegators to attract stake.
9. Transaction fees: BSC does not rely on inflationary block rewards; instead, validators are compensated primarily through transaction fees paid in BNB, aligning incentives with network usage.

The following applies to Ethereum:

Ethereum uses a Proof-of-Stake (PoS) consensus mechanism introduced with The Merge on 2022-09-15, which replaced the previous Proof-of-Work consensus model. The PoS mechanism is implemented through Gasper, combining Casper-FFG for finality with the LMD-GHOST fork-choice rule for chain selection. Validators participate in consensus by staking ETH through the Beacon Chain. Validators are pseudo-randomly selected to propose new blocks, while other validators attest to the validity of proposed blocks. The network operates using 12-second slots grouped into epochs of 32 slots. Under normal network conditions, finality is typically achieved after two epochs, approximately 12.8 minutes, through Casper-FFG. The LMD-GHOST fork-choice rule determines the canonical chain based on the accumulated weight of validator attestations. Validators that engage in certain malicious behaviour, such as equivocation or contradictory attestations, may be subject to slashing penalties, while offline validators may incur inactivity penalties. Subsequent network upgrades, including Dencun (2024-03-13), Pectra (2025-05-07) and Fusaka (2025-12-03), introduced protocol changes affecting Ethereum's consensus mechanism and Layer 2 functionality.

H.5 Incentive mechanisms and applicable fees

The crypto-asset that is the subject of this white paper is available on multiple DLT networks. These include: Base, BNB Smart Chain, and Ethereum. In general, when evaluating crypto-assets, all implementations across different networks must always be taken into account, as spillover effects can be adverse for investors.

The following applies to Base:

Base uses ETH for transaction fees and does not issue a separate Base network token or operate a staking or validator-reward mechanism. Fees comprise a charge for Layer-2 execution and a component reflecting the cost of posting transaction data to Ethereum. The checkpoint-verification

system also uses proposal bonds, which may reward a successful challenge to an invalid checkpoint proposal.

The following applies to BNB Smart Chain:

BNB Smart Chain (BSC) uses the Proof-of-Staked-Authority (PoSA) consensus mechanism to support network security and incentivise participation from validators and delegators.

Incentive mechanisms

1. Validators: Validators must self-delegate BNB in order to participate in the validator system. Validator selection is staking-based, and validators that rank highly enough enter the active set and participate in block production and transaction validation. Validators are rewarded from transaction fees collected on the network. When a block is produced, most of the block fee is allocated to the validator that proposed the block. A portion is retained as validator commission, while the remainder is allocated for distribution through the validator credit structure.

2. Delegators: BNB holders may delegate BNB to validators. This increases the validator's total stake and may improve its position in the validator ranking. Delegators share in the rewards earned by the validator they support, after deduction of the validator's commission.

3. Candidates: BSC distinguishes between Cabinet, Candidate and Inactive validators. The current model provides that the top 21 validators form the Cabinet, while the validators ranked from 22 to 45 are Candidates. Candidate validators have a smaller chance of producing blocks, but they remain part of the broader validator structure and support network resilience. Validator roles are updated every 24 hours based on the latest staking information.

4. Economic Security: Validators may be penalised for misconduct or poor performance. Slashable events include double signing, malicious fast-finality voting and unavailability. Depending on the violation, consequences may include removal from the validator set, loss of staking rewards and slashing of part of the validator's self-delegated BNB. The staking model therefore creates an economic incentive for validators and delegators to support reliable validator performance.

Fees on the Binance Smart Chain

5. Transaction fees: Transaction fees on BSC are paid in BNB and are intended to compensate validators for maintaining the network. BSC is designed as a comparatively low-fee network, and smart-contract transactions and transfers require gas fees in BNB.

6. Validator rewards: BSC does not rely on a separate protocol-level block reward. Instead, staking rewards are derived from transaction fees. Most of the block fee is allocated to the proposing validator, then split between validator commission and delegator-linked reward distribution.

7. System-level fee allocation: Part of transaction-fee revenue is collected through the System Reward Contract and used for designated system purposes, including fast-finality rewards.

8. Smart contract fees: Deploying and interacting with smart contracts on BSC requires payment of gas fees in BNB. These fees depend on the computational resources required and form part of the network's overall fee and validator-incentive model.

The following applies to Ethereum:

Ethereum's Proof-of-Stake (PoS) mechanism secures the network through validator incentives and protocol-defined penalties. Validators are required to stake ETH in order to participate in block proposal and attestation activities. A minimum of 32 ETH is required to activate a validator. Following the Pectra upgrade on 2025-05-07, EIP-7251 increased the maximum effective balance per validator from 32 ETH to 2,048 ETH. Validators may receive protocol-defined rewards for proposing blocks, attesting to valid blocks and participating in sync committees. Rewards consist of newly issued ETH and transaction-related fees. Transaction fees on Ethereum follow the mechanism introduced by EIP-1559, under which each transaction includes a base fee that is burned at the protocol level and an optional priority fee paid to the validator proposing the relevant block. Validators that engage in certain malicious behaviour, including equivocation or contradictory attestations, may be subject to slashing penalties. Validators that fail to participate correctly in consensus activities may also incur inactivity penalties. These mechanisms are intended to support validator participation and the economic security of the Ethereum network.

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

1. Insolvency of the issuer

As with any commercial entity, the issuer may face insolvency risks. These may result from insufficient funding, low market interest, mismanagement, or external shocks (e.g. pandemics, armed conflicts). In such a case, ongoing development, support, and governance of the project may cease, potentially affecting the viability and 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 risk

A large proportion of the total supply may be held by a small number of holders. This can enable market manipulation, governance dominance, or sudden large-scale liquidations that adversely affect market stability, price levels, and investor confidence.

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 party admitting the crypto-asset to trading is not involved in

the project's implementation and does not assume responsibility for its governance, funding, or execution.

Delays, failures, or changes in the implementation of the project as outlined in its public roadmap or technical documentation may negatively impact the perceived credibility or usability of the crypto-asset. This includes risks related to project governance, resource allocation, technical delivery, and team continuity.

Key-person risk: The project may rely on a limited number of individuals for development, maintenance, or strategic direction. The departure, incapacity, or misalignment of these individuals may delay or derail the implementation.

Timeline and milestone risk: Project milestones may not be met as announced. Delays in feature releases, protocol upgrades, or external integrations can undermine market confidence and affect the adoption, use, or value of the crypto-asset.

Delivery risk: Even if implemented on time, certain functionalities or integrations may not perform as intended or may be scaled back during execution, limiting the crypto-asset's practical utility.

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. Smart contract vulnerability risk

The smart contract that defines the crypto-asset's parameters or governs its transfers may contain coding errors or security vulnerabilities. Exploitation of such weaknesses can result in unintended token minting, permanent loss of funds, or disruption of token functionality. Even after external audits, undetected vulnerabilities may persist due to the immutable nature of deployed code.

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

39120077M9TG001FE242

S.3 Name of the crypto-asset

Spark

S.4 Consensus Mechanism

The crypto-asset that is the subject of this white paper is available on multiple DLT networks. These include: Base, BNB Smart Chain, and Ethereum. In general, when evaluating crypto-assets, all implementations across different networks must always be taken into account, as spillover effects can be adverse for investors.

The following applies to Base:

Base does not operate a decentralised validator set comparable to a Layer-1 blockchain. Transaction ordering is currently performed by a single sequencer, while transaction data and state commitments are posted to Ethereum and ultimately benefit from Ethereum's Proof-of-Stake consensus. Following the Azul upgrade, Base uses a multi-proof system for Layer-2 checkpoints associated with withdrawals to Ethereum: TEE proofs support the normal path, while permissionless zero-knowledge proofs provide an independent verification and challenge path. The sequencer remains a central component of transaction ordering.

The following applies to BNB Smart Chain:

BNB Smart Chain (BSC) uses a hybrid consensus mechanism called Proof-of-Staked-Authority (PoSA), which combines elements of Delegated-Proof-of-Stake (DPoS) and Proof-of-Authority (PoA). This method is intended to support fast block times and low fees while maintaining a level of decentralisation and security.

Core components

1. **Validators (Cabinet and Candidates):** Validators are responsible for producing blocks, validating transactions, and maintaining network security. The validator set consists of up to 45 validators, including 21 "Cabinet" validators and 24 "Candidate" validators, selected based on bonded stake. A subset of validators is selected per epoch to participate in block production.
2. **Delegators:** Token holders may delegate BNB to validators to support their selection. Delegators share in the rewards generated by validators, providing an economic incentive to participate in staking.
3. **Candidates:** Validator candidates are nodes that have staked BNB but are not part of the primary validator subset for a given epoch. They may be selected into the active set based on staking rank and can participate in block production with lower probability.

Consensus process

4. **Validator selection:** Validators are ranked based on the amount of bonded BNB and are updated periodically (approximately every 24 hours). The highest-ranked validators form the active validator set, with Cabinet validators having a higher probability of participating in block production.
5. **Block production:** Validators take turns producing blocks in a PoA-like manner. For each epoch, a subset of validators is selected to produce and validate blocks sequentially, ensuring high throughput and low latency.
6. **Transaction finality:** BSC achieves short block times (approximately 0.45 seconds) and fast finality. With Fast Finality enabled, blocks are typically finalised within approximately one second, subject to validator participation.
7. **Staking:** Validators must stake BNB as collateral and may be subject to slashing in cases of misbehaviour, including double-signing, malicious voting, or prolonged downtime.

8. Delegation and rewards: Validators and delegators are rewarded through transaction fees collected in each block. Validators may share rewards with delegators to attract stake.

9. Transaction fees: BSC does not rely on inflationary block rewards; instead, validators are compensated primarily through transaction fees paid in BNB, aligning incentives with network usage.

The following applies to Ethereum:

Ethereum uses a Proof-of-Stake (PoS) consensus mechanism introduced with The Merge on 2022-09-15, which replaced the previous Proof-of-Work consensus model. The PoS mechanism is implemented through Gasper, combining Casper-FFG for finality with the LMD-GHOST fork-choice rule for chain selection. Validators participate in consensus by staking ETH through the Beacon Chain. Validators are pseudo-randomly selected to propose new blocks, while other validators attest to the validity of proposed blocks. The network operates using 12-second slots grouped into epochs of 32 slots. Under normal network conditions, finality is typically achieved after two epochs, approximately 12.8 minutes, through Casper-FFG. The LMD-GHOST fork-choice rule determines the canonical chain based on the accumulated weight of validator attestations. Validators that engage in certain malicious behaviour, such as equivocation or contradictory attestations, may be subject to slashing penalties, while offline validators may incur inactivity penalties. Subsequent network upgrades, including Dencun (2024-03-13), Pectra (2025-05-07) and Fusaka (2025-12-03), introduced protocol changes affecting Ethereum's consensus mechanism and Layer 2 functionality.

S.5 Incentive Mechanisms and Applicable Fees

The crypto-asset that is the subject of this white paper is available on multiple DLT networks. These include: Base, BNB Smart Chain, and Ethereum. In general, when evaluating crypto-assets, all implementations across different networks must always be taken into account, as spillover effects can be adverse for investors.

The following applies to Base:

Base uses ETH for transaction fees and does not issue a separate Base network token or operate a staking or validator-reward mechanism. Fees comprise a charge for Layer-2 execution and a component reflecting the cost of posting transaction data to Ethereum. The checkpoint-verification system also uses proposal bonds, which may reward a successful challenge to an invalid checkpoint proposal.

The following applies to BNB Smart Chain:

BNB Smart Chain (BSC) uses the Proof-of-Staked-Authority (PoSA) consensus mechanism to support network security and incentivise participation from validators and delegators.

Incentive mechanisms

1. Validators: Validators must self-delegate BNB in order to participate in the validator system. Validator selection is staking-based, and validators that rank highly enough enter the active set and participate in block production and transaction validation. Validators are rewarded from transaction fees collected on the network. When a block is produced, most of the block fee is allocated to the validator that proposed the block. A portion is retained as validator commission, while the remainder is allocated for distribution through the validator credit structure.
2. Delegators: BNB holders may delegate BNB to validators. This increases the validator's total stake and may improve its position in the validator ranking. Delegators share in the rewards earned by the validator they support, after deduction of the validator's commission.
3. Candidates: BSC distinguishes between Cabinet, Candidate and Inactive validators. The current model provides that the top 21 validators form the Cabinet, while the validators ranked from 22 to 45 are Candidates. Candidate validators have a smaller chance of producing blocks, but they remain part of the broader validator structure and support network resilience. Validator roles are updated every 24 hours based on the latest staking information.
4. Economic Security: Validators may be penalised for misconduct or poor performance. Slashable events include double signing, malicious fast-finality voting and unavailability. Depending on the violation, consequences may include removal from the validator set, loss of staking rewards and slashing of part of the validator's self-delegated BNB. The staking model therefore creates an economic incentive for validators and delegators to support reliable validator performance.

Fees on the Binance Smart Chain

5. Transaction fees: Transaction fees on BSC are paid in BNB and are intended to compensate validators for maintaining the network. BSC is designed as a comparatively low-fee network, and smart-contract transactions and transfers require gas fees in BNB.
6. Validator rewards: BSC does not rely on a separate protocol-level block reward. Instead, staking rewards are derived from transaction fees. Most of the block fee is allocated to the proposing validator, then split between validator commission and delegator-linked reward distribution.
7. System-level fee allocation: Part of transaction-fee revenue is collected through the System Reward Contract and used for designated system purposes, including fast-finality rewards.
8. Smart contract fees: Deploying and interacting with smart contracts on BSC requires payment of gas fees in BNB. These fees depend on the computational resources required and form part of the network's overall fee and validator-incentive model.

The following applies to Ethereum:

Ethereum's Proof-of-Stake (PoS) mechanism secures the network through validator incentives and protocol-defined penalties. Validators are required to stake ETH in order to participate in block proposal and attestation activities. A minimum of 32 ETH is required to activate a validator. Following the Pectra upgrade on 2025-05-07, EIP-7251 increased the maximum effective balance

per validator from 32 ETH to 2,048 ETH. Validators may receive protocol-defined rewards for proposing blocks, attesting to valid blocks and participating in sync committees. Rewards consist of newly issued ETH and transaction-related fees. Transaction fees on Ethereum follow the mechanism introduced by EIP-1559, under which each transaction includes a base fee that is burned at the protocol level and an optional priority fee paid to the validator proposing the relevant block. Validators that engage in certain malicious behaviour, including equivocation or contradictory attestations, may be subject to slashing penalties. Validators that fail to participate correctly in consensus activities may also incur inactivity penalties. These mechanisms are intended to support validator participation and the economic security of the Ethereum network.

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

2024-08-13

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

2025-08-13

S.8 Energy consumption

4123.88347 kWh/a

S.9 Energy consumption sources and methodologies

The energy consumption of this asset is aggregated across multiple components: To determine the energy consumption of a token, the energy consumption of the Base, BNB Smart Chain and Ethereum networks is calculated first. For the energy consumption of the token, a fraction of the energy consumption of the networks is attributed to the token, which is determined based on the activity of the crypto-asset within the respective network. When calculating the energy consumption, the Functionally Fungible Group Digital Token Identifier (FFG DTI) is used, if available, to determine all implementations of the asset in scope. The mappings are updated regularly based on data from the Digital Token Identifier Foundation. The information regarding the hardware used and the number of participants in the networks is based on assumptions that are verified on a best-effort basis using empirical data. In general, participants are assumed to be largely economically rational. As a precautionary principle, we make assumptions on the conservative side when in doubt, i.e. making higher estimates for the adverse impacts.

S.10 Renewable energy consumption

37.9125488544 %

S.11 Energy intensity

0.00006 kWh

S.12 Scope 1 DLT GHG emissions – Controlled

0.00000 tCO₂e/a

S.13 Scope 2 DLT GHG emissions – Purchased

1.37265 tCO₂e/a

S.14 GHG intensity

0.00002 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.

