Crypto-Asset Project Description	The Babylon Genesis is a layer 1 protocol enabling Bitcoin to provide security and liquidity to other chains and networks (BSNs). The Token is the native token of the Babylon Genesis. **Participants of the Network**: ▪ **Users**: BTC and Token holders can participate in the validation process and help secure the Network by locking their BTC or Tokens. ▪ **Finality Providers**: Blockchain validators who have received BTC delegations from staking users and contribute their computational power and resources to the Network. ▪ **Validators**: Blockchain validators who have received BABY delegations from staking users and contribute their computational power and resources to the Network. **The Network is a Three-Layer Infrastructure**, composed as follows: ▪ **Babylon Protocol**: The fundamental staking layer which enables BTC and Token holders to lock and use their BTC and Tokens to secure Proof-of-Stake (PoS) chains and rollups. ▪ **Control Plane**: The information layer that coordinates the information flow between the Gensis Babylon (and other BSNs in the future) with the Bitcoin blockchain so that they can efficiently receive Bitcoin security and liquidity with minimal integration efforts. ▪ **BTC Liquidity Hub**: The infrastructure layer that manages Bitcoin liquidity through on-chain applications that are secured by Babylon Genesis. The Babylon Genesis represents the first layer 1 integrating the Babylon Protocol. In others word, the Babylon Genesis is the first BSN. In the future, other BSNs (Layer 1 and Layer 2 committed to integrate the Babylon protocol) are expected to integrate the Babylon Protocol via Babylon Genesis. The Babylon Genesis is meant to serve as the fundamental layer for the further expansion of the ecosystem ("**Babylon Ecosystem**"). The expansion towards the Babylon Ecosystem should be understood as a roadmap. There is no guarantee that these events will occur as planned, and they remain subject to change. By holding Token, Token holders can access a new native use case of Bitcoin, more precisely: § Access the Network: The Token is required to access the transaction capacities of the Network and to facilitate smart contract executions on the Network. § Interact with the Network: The Network relies on the PoS consensus of the CometBFT stack. The Token is required to become a validator of the Network and contribute to the security of the Babylon Genesis.

H.01	Distributed Ledger Technology	The Network does utilise distributed ledger technology. It is a purpose-built Layer 1 blockchain protocol specifically optimized for Bitcoin staking and decentralized trust anchoring.

H.02	Protocols and Technical Standards	**Protocols Supporting Issuance and Transfer** The Token is natively issued and transferred using the Babylon Genesis protocol, a Layer 1 blockchain built on the Cosmos SDK and utilizing CometBFT (a Byzantine Fault Tolerant consensus engine derived from Tendermint Core). All token balances, transfers, and staking operations are recorded on the Network's ledger using protocol-native message types (MsgSend, MsgStake, etc.), rather than through externally deployed smart contracts. This native implementation ensures deterministic execution, enhanced scalability with full compatibility across the Cosmos ecosystem. **The Bitcoin Finality Protocols** Babylon introduces a novel set of protocols to increase the security guarantees of the network. Finalized checkpoints from Babylon's CometBFT consensus are periodically anchored into the Bitcoin blockchain using cryptographic commitments. This mechanism enhances Babylon's resistance to long-range attacks and serves as an immutable timestamping layer with globally recognized settlement assurance. **Messaging and Encoding Standards** The Network uses: • Protobuf (Protocol Buffers) for encoding state transitions and messages between modules • ABCI (Application Blockchain Interface) for communication between the consensus and application layers, • gRPC/REST APIs for external query and transaction submission, • Cosmos SDK module architecture, enabling compatibility with standard tooling (e.g. CosmJS, Keplr Wallet). Transaction data is broadcast over a CometBFT P2P network using a secure gossip protocol, and validated by a quorum of staking validators.

H.03	Technology Used	**Overview** The Token operates on the Network, a purpose-built Layer 1 blockchain leveraging modular, secure, and scalable open-source infrastructure. Babylon Genesis integrates the Cosmos SDK, CometBFT, and a proprietary Bitcoin Finality Protocols (namely Bitcoin Staking Protocol and Bitcoin Timestamping) to achieve high throughput, deterministic finality, and Bitcoin-anchored settlement guarantees. This hybrid design enables Babylon Genesis to offer validator-based consensus, and trust-minimized security inherited from Bitcoin, the most secure blockchain globally by cumulative proof-of-work. **Core Technology Stack** **Protocol Upgrades** Babylon Genesis supports on-chain governance for protocol upgrades. Changes to validator parameters, fee models, or module logic must pass proposal thresholds defined in the governance module. Binary upgrades are executed via scheduled height triggers and require node operator coordination.

Consensus Mechanism

The Network runs a Cosmos SDK-based Proof-of-Stake blockchain using CometBFT (Tendermint) consensus. In CometBFT, validators propose and commit blocks via a Byzantine-fault-tolerant ("**BFT**") round of pre-votes and pre-commits. Once ≥2/3 of voting power signs a block, it is committed and final (deterministic finality), meaning no forks beyond that point. CometBFT is BFT by design: it tolerates up to one-third of validators failing or behaving maliciously. In Babylon's live network, CometBFT validators (secured with staked Tokens) produce blocks and commit them.

On top of this PoS block production, the Network adds a Bitcoin-secured finality layer. After each block is committed by CometBFT, a separate *"finality round"* is held among the *Finality Providers* (FPs). FPs (secured by staked bitcoin), cast extra votes using a specialized Extractable One-Time Signature ("**EOTS"**) scheme. Only blocks that pass both CometBFT commit and FP finality rounds become fully finalized. Thus Babylon's consensus achieves deterministic finality twice over: first via CometBFT's 2/3 commit, then via the Bitcoin-staked finality round.

Dual Staking Model

Babylon employs a **dual-staking model** combining BABY-token staking and native bitcoin staking:

- **BABY staking:** BABY token holders delegate to Cosmos/Tendermint validators. BABY-stakers accrue inflationary BABY rewards and voting power (governance rights) proportional to their stake. Validators (BABY-staked) handle block production and network consensus. BABY staking also provides a fast-unbonding mechanism (see below) via Bitcoin anchoring.

- **BTC staking:** BTC holders stake native bitcoin by locking it in self-custodial vault and delegating to **Finality Providers using EOTS**. This BTC is never wrapped or bridged. Each BTC staker selects an FP and locks their BTC in a covenant script on Bitcoin. Staked BTC grants economic security but no BABY voting power. Bitcoin stakers earn token rewards. FPs charge a commission on these rewards, paid out to the delegators.

This dual model adds an additional lawyer if Bitcoin security to the Network: Token staking

H.05	Incentive Mechanisms and Applicable Fees	**Rewards and Slashing** Staking rewards incentivize honest participation, while penalties (slashing) deter malicious behavior. The Network has an inflationary mechanism where the total circulating supply of tokens increases over time with the automatic and programmatic minting of new tokens by the Network. Inflation rates can be changed by a governance vote. Currently it is 8% per annum. 4% is staking rewards for BABY stakers. 4% is staking rewards for Bitcoin stakers. **Validators (BABY staking):** BABY delegators earn inflationary token rewards and validators also charge a commission (assuming the staker does not self-delegate which is possible). The exact reward formula follows Cosmos SDK norms, typically based on each validator's commission rate and total stake. Validator and delegator rewards vest after the (fast) unbonding period. The Network also programmatically charges gas fees which are distributed to validators pro rata to the stake delegated to them. BABY staking includes slashing: a validator can be slashed (loss of staked BABY) if it *double-signs* (i.e. signs two different blocks at the same height). The slashing penalty currently is **5% of delegated tokens**, with the remaining 95% returned to delegators. No other faults (e.g. offline downtime) are currently slashed. All slashing events are recorded on-chain for transparency. **Finality Providers (BTC staking):** Finality Providers (via commission) and their BTC delegators earn staking rewards. Each FP sets a commission rate: delegators' rewards are reduced by this fee, which accrues to the FP as compensation for running the node and providing the services to the staker. Slashing in the BTC staking protocol works in the following manner: if an FP double-signs, its BTC stake *and* any staked BTC delegated to it can be partially slashed. Technically, the Protocol uses the EOTS mechanism and a covenant contract. This process is trustless - in EOTS, signing two different messages with the same key creates an intentional mathematical vulnerability that allows others to reconstruct the private key. This works because the mathematical structure of the two signatures leaks enough information to solve for the private key — a feature intentionally designed into EOTS. The process is secure and does not leave room for abuse in case of honest behaviour on behalf of the finality provider. The leaked

H.06	Use of Distributed Ledger Technology	‘false’ – No, DLT not operated by the issuer or a third-party acting on the issuer’s behalf
H.07	DLT Functionality Description	Not applicable.