Project mBridge

a digital-native corporate issuance

FORGE

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➤ Description of Use Case

Opportunity:
Securities markets activities and infrastructures are fragmented, resulting in a value chain with many intermediaries and systems to deliver, settle and handle the assets. Each of these layers and intermediaries cumulatively generate ongoing costs and potential inefficiencies, which is particularly evident in bond markets.

Thanks to project **mBridge**, Societe Generale Forge develops a compliant solution which allows global issuer and investors reach. Create an operationally efficient, frictionless cross-border DvP solution that will pave the way to a cost-competitive market infrastructure, automated with programmable delivery and settlement features, reducing massively issuance and asset servicing costs.

Solution:
• A security token coupled with a cross-border CBDC mechanism designed for the primary issuance of debt securities could potentially increase automation thus efficiencies and reduce delivery and settlement time.
• Besides **mBridge** is the first of his kind in-depth tests for a bond issuance that can be settled across multiple CBDCs. This project will validate a "DLT cross border ready" model, combining delivery and payment on-chain features. Multiple central banks will be able to test the feasibility of the first global Asian CSD aiming to improve counterparty risks frameworks and reduce settlement risk.

mBridge features :
• A security token issued on Ethereum public blockchain;
• **mBridge** facilitates the cross-border payment leg between the security investor and issuer in an automatic delivery-versus-payment manner; and
• A programmable settlement transaction is created on the Ethereum public blockchain and acts as a digital intermediary between the security token and the **mBridge**. The settlement transaction initiates the investor's cross-border payment when the security token is set-up and conversely initiates the transfer of the security token to the Investor when payment is received

Case description :
• Transaction : a HK Corporate primary bond issuance via private placement with investors across several jurisdictions (CN, TH, UAE)
• Bond issuance is agreed, programmed and initiated via the Societe Generale Forge platform and CAST framework (perfectly fitted for on-chain interoperable settlement agent such as **mBridge**)
• Societe Generale - Forge creates security token and settlement transaction on Ethereum public blockchain and locks the token on the Issuer's address
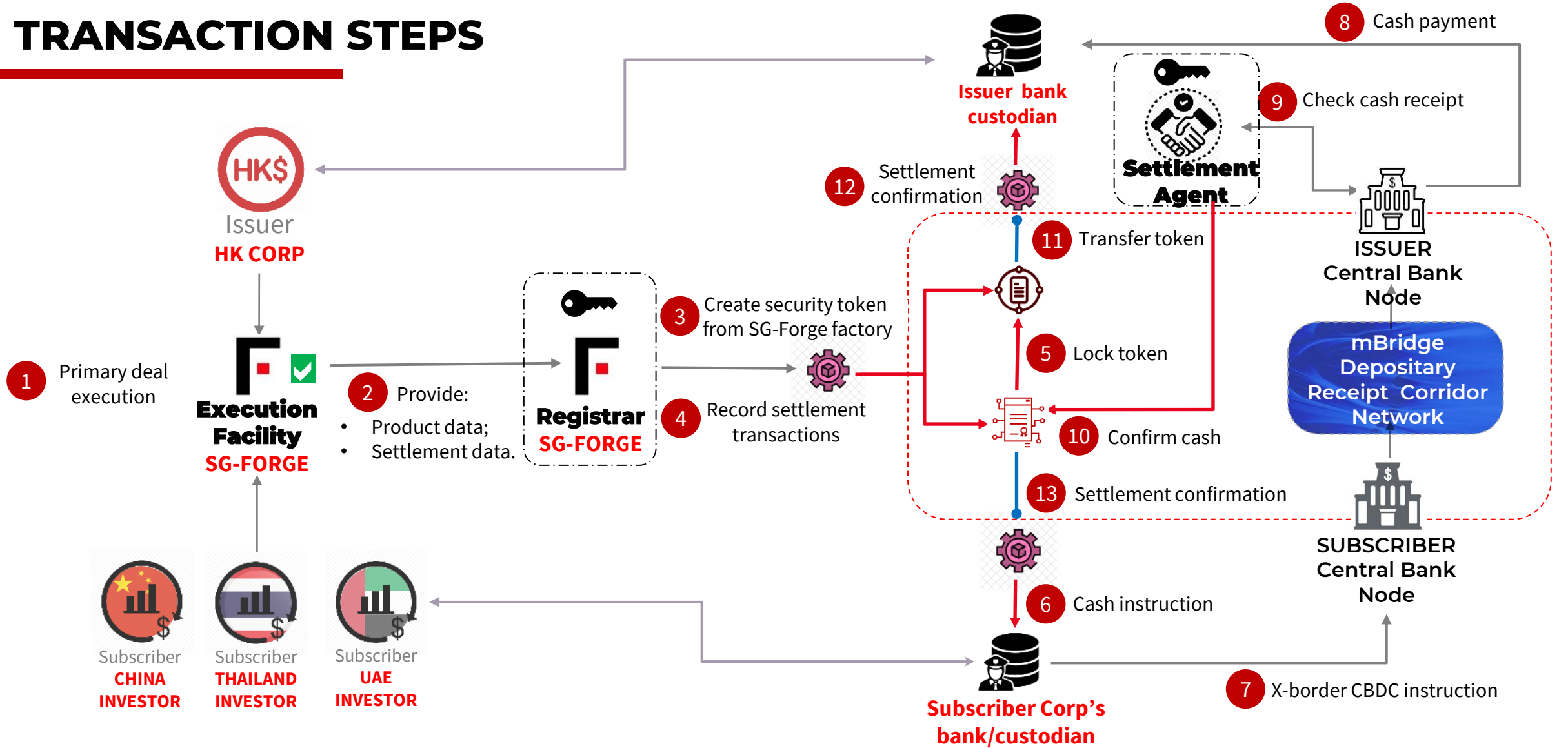• Societe Generale - Forge sends settlement instruction to the investors' banks, which initiates a payment to the issuer's bank via **mBridge.**
• Once payment is confirmed by the Settlement Agent and receipt confirmed by the Issuer's bank, a smart contract instruction is sent to the Custodian to transfer token.
• Societe Generale - Forge solution is agnostic to a persistent CBDC or with a conversion into FIAT. Both can be tested by Central Banks participating to this project.

Expected benefits:
• Issuers: global investor reach, lower transaction and operational costs.
• Investors: implicit liquidity improvements mid-term if such tokens can be traded via regular markets (stock exchanges) or multilateral trading facilities (MTF). Also, lower back-office processing costs (since confirmation / reconciliation / late settlement are fully automated by design). Both corridor and token allow issuers and investors to become agnostic to local execution constraints.
• Regulators: create an operationally efficient, frictionless cross-border DvP solution that will pave the way to a cost-competitive market infrastructure, automated with programmable delivery and settlement features, reducing massively issuance and asset servicing costs.

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TRANSACTION STEPS

DETAILED PROCESS

#	Action
1	Primary deal is considered as executed through SG-Forge execution platform. HK Corp issues a HK$ private placement corporate bond to multiple subscribers
2	The Forge Execution Platform provides product data and settlement data to the Registrar (data transmission).
3	The oracle of the Registrar creates the Security Tokens on the Ethereum public blockchain. The issuance total amount is credited to the public address of the Issuer.
4	The oracle of the Registrar creates the settlement transaction (ST) on the Ethereum public blockchain, corresponding to each subscription order.
5	Once ST deployed, Security Tokens are locked on the issuer's public address.
6	Once ST deployed, the event is captured by the Investor's oracle. The oracle sends payment instruction to each subscriber's custodian. Each subscriber receive instruction to pay the Issuer in HK$ for security token delivery.
7	Subscriber's custodians use cross-border **mBridge** for payment.

#	Action
8	**mBridge** receives from subscribers custodians corresponding CBDC payments and then converts the value into a HK$ CBDC format to the benefit Issuer bank/custodian. Issuer's bank/custodian then allocates the amount in the account of HK Corp.
9	Once ST deployed, the event is captured by the Settlement Agent's Oracle. The oracle sends ST information to the Settlement Agent (e.g. SSI of Issuer, CBDC account,…). The Settlement Agent check HK$ CBDC received within HK Corp's bank/custodian CBDC account.
10	The Settlement Agent confirms cash payment to ST through the Settlement Agent's Oracle.
11	Upon this confirmation, ST triggers an instruction to unlock the Security Tokens and to perform the transfer to the subscribers.
12	Once Security Tokens transferred, the event is captured by the oracle of the Issuer. The Oracle sends the settlement confirmation to Issuer's bank/custodian.
13	Once Security Tokens transferred, the event is captured by the Investor's oracle. The Oracle sends the settlement confirmation to the subscriber's Bank/custodian.