SDX: Next generation of financial market infrastructure built on DLT

Introduction to SIX Digital Exchange AG

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Agenda

1. Introduction: From FMI to DMI
2. SDX Digital Asset Platform and Service Offering
3. Considerations and Lessons learned
4. Q&A
1. Introduction: From FMI to DMI
SIX Digital Exchange sets the standard for digital assets, embedded in the existing financial market infrastructure environment

Since it was founded in 2018, SIX Digital Exchange (SDX) is an integral part of SIX Group, the infrastructure operator of the Swiss and Spanish financial centers which is owned by 120 Swiss banks.

In addition to market access, SDX offers issuing, trading and custody of digital assets based on innovative distributed ledger technology (DLT). The company operates the digital market infrastructure for digital assets with 120+ employees under a full FINMA license in the form of an integrated central securities depository and stock exchange.

Six Group’s high security and reputational standards are a key element in the issuance, exchange and custody of high-quality assets within a regulated framework.

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1) As of March 2022
2. SDX Digital Asset Platform and Service Offering
We have built a fully integrated stock exchange and CSD - ready to compete in international key markets

**Trading System** same as SSX¹ is using today, integrated to DLT² at matching point.

**Centralized orderbook connected** with distributed ledger technology to enable integrated trading.

**New market model** that supports integrated trading and atomic settlement based on well know price finding mechanism.

**Market surveillance** based on SMARTs, the system that SER³ and SSX¹ is using today.

**Market Data publication** fully integrated in existing SIX Exfeed.

The first **regulated CSD** to distribute holdings of assets based on DLT where the members hold the assets under their private key.

The first company in the world integrating **tokenized CHF** backed by deposits at SNB⁴ to enable DvP⁵ exchange of tokens.

**Fully tokenized DvP settlement** on the CSD⁶ layer.

**Fully integrated in the connectivity layer** of SIX to enable quick onboarding of existing clients.

**First proof of automated asset servicing** based on smart assets for bonds and equities.

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1. SIX Swiss Exchange
2. Distributed Ledger Technology
3. SIX Exchange Regulation
4. Swiss National Bank
5. Delivery vs Payment
6. Central Securities Depository

**02 SDX Digital Asset Platform and Service Offering**
SDX as known and trusted partner to build a Digital Asset Ecosystem and explore new opportunities

<table>
<thead>
<tr>
<th>Lifecycle</th>
<th>Issuance &amp; Listing</th>
<th>Atomic Trading &amp; Settlement</th>
<th>Asset Servicing &amp; Custody</th>
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</thead>
<tbody>
<tr>
<td>Digital assets</td>
<td>▪ Digital assets</td>
<td>▪ Atomic trading and settlement</td>
<td>▪ Asset servicing logic</td>
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<tr>
<td>– smart contracts represent a single source of truth for securities</td>
<td>– Listing</td>
<td>– Atomic trading and settlement</td>
<td>can be performed until end-clients’ custody accounts</td>
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<tr>
<td>– tokenized currency is the foundation for value exchange (CHF for MVP)</td>
<td>– a basis to model and automate complex securities</td>
<td>– eliminates market-risk</td>
<td>Simplify corporate event handling such as coupon and dividend payments</td>
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<td>– access both primary and secondary markets</td>
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<td>– removing the need for a CCP</td>
<td>Relevant transaction details are known on need-to-know basis</td>
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</table>

### SDX Digital Asset Platform and Service Offering

#### Issuance & Listing
- **Listing**
  - **Instant and simple process**
  - **A basis to model and automate complex securities**
  - Access both primary and secondary markets

#### Atomic Trading & Settlement
- **Atomic trading and settlement**
  - Eliminates market-risk
  - Removing the need for a CCP
  - Peer to peer transactions
  - Increased efficiency and risk reduction

#### Asset Servicing & Custody
- **Asset servicing logic**
  - Can be performed until end-clients’ custody accounts
  - Simplify corporate event handling such as coupon and dividend payments
  - Relevant transaction details are known on need-to-know basis
SDX’s initial offering focuses on securities tokens settled and custodied on a private, decentralized infrastructure.

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**SDX initial offering includes digital bonds and equities**

**Digital assets**

- **Asset tokens**
- **Utility tokens**
- **Payment tokens**

- **Crypto currencies**
- **“Stable coins”**
- **CBDC**

**Examples:**
- Digital Bonds/Equities
- TaelPay
- Bitcoin
- SDX TCHF
- Project Helvetia

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**Comment**

- **Digital assets** are investable stores of value that can be traded on digital platforms.
- **Digital tokens** include security tokens and utility tokens. 
  - **Security tokens** represent the ownership of assets such as equity, debt, real-estate, commodities or exotic asset classes (e.g., collectables, patents, IP).
  - **Utility tokens** represent future access to a company’s product or service.
- **Digital currencies** include cryptocurrencies and fiat tokens.
  - **CBDC’s** are backed or issued by a government (as issued by central bank) – increasing number of central banks involved with CBDC research and development.
  - **Crypto currencies** are independent digital currency with no underlying asset and no central regulating body (value established through supply and demand) – representing majority share of all digital assets today.

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1) Tokenized commercial bank money
Collaborating with BIS Innovation Hub and Central Banks to lay the foundation for settling tokenized assets in wholesale CBDC

**Helvetia Phase I** (completed in December 2021)
- Issuing a wholesale CBDC onto a distributed digital asset platform;
- and linking the digital asset platform to the existing wholesale payment system (SIC)
- The initiative demonstrated the feasibility and legal robustness of both alternatives

**Helvetia Phase II** (completed in January 2022)
- Integration of wholesale CBDC (wCBDC) in core banking systems
- Settlement of interbank, cross-border and monetary policy transaction using wCBDC
- Legal assessment of solution design and considerations on alternative settlement options

**Jura** (completed in December 2021)
- Settlement of cross-border and cross-currency transactions in wCBDC on a single multilateral platform
- Emphasis on governance, including controls for central banks, when issuing wCBDC on a platform that is owned and operated by a third-party
3. Considerations and Lessons learned
New Opportunities: Adapting the evolving developments in the digital asset industry (incl. challenges)

**A. Client demand**
- Major capital markets clients are now looking beyond PoCs
- Buy-side and many CH institutions positioned as fast followers

**B. Asset class & product trends**
- Tokenization has positive momentum in some bankable assets, while non-bankable asset space is still nascent
- Both areas open up opportunities for SDX

**C. Competitive landscape dynamics**
- Greatest threat comes from incumbent players defending/expanding core business - new players focus on crypto
- SDX maintains a well-balanced position

**D. Regulatory & market developments**
- Globally, regulators are adapting existing rules & regulations for DLT at different paces - overall slower than expected
- CH remaining at forefront putting SDX in a strong position

**E. Technology trends**
- Maturity of blockchain / DLT is still in a developmental stage
- Privately hosted DLT infrastructure (e.g. SDX) better suited to support “regulated” products/solutions

Market dynamic re-confirm SDX’s early mover positioning & investment to build the next generation financial market ecosystem
## 9 Key Lessons learned during the Project life cycle

<table>
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<tr>
<th>Freedom to innovate</th>
<th>Aligned communication strategy to delivery methodology</th>
<th>Consider staffing constraints when establishing the project org</th>
<th>Learn to «fail fast» even faster</th>
<th>Strengthen SIX Spirit and drive group-wide change</th>
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<tr>
<td>Group took decision early in the project life cycle to foster innovation by providing SDX larger degree of independence, decision making &amp; flexibility</td>
<td>While the project was setup to be delivered in an agile way, the project targeted and communicated a fixed timeline as of day 1</td>
<td>Quick ramp-up of the organization led to unclarities around roles and responsibilities Experienced substantial resource and knowledge gap at the beginning of the project</td>
<td>In order to succeed in an emerging space such as the Digital Asset / Crypto space, it is crucial to have the flexibility in place to constantly adapt the approach</td>
<td>Through interactions with the wider group, the project cont. demonstrated the agile mindset, esp. in rapidly devising, and evaluating leaner processes and technology approaches We strove to create a culture that nurtured an entrepreneurial mindset across the organization to ensure our ability to be nimble and agile</td>
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<td>Setup flexible org to retain ability to deliver despite uncertainties</td>
<td>Balance between degree of innovation and client / stakeholder risk appetite</td>
<td>Strong commitment is key for success</td>
<td>Keep focus on MVP when navigating nascent markets</td>
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<td>Usage of SAFe resulted in high administrative overhead and reduced reaction time Global pandemic led to mandated remote work causing silos and slow down effective communication</td>
<td>Coming from a traditional and established corporation naturally implies more boundaries and a lower risk appetite</td>
<td>Group showed strong commitment from the beginning to keep the grand vision and ambition alive and to drive innovation in the context of the Swiss Financial environment</td>
<td>Initial market sentiment and uncertainty in the market resulted in the need to re-focus the scope Limited client readiness resulted in challenges to distill clear USP and get early client commitment</td>
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Questions and Answers
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