The Evolution of Enterprise DLT and Smart Contract Technology

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Agenda

- Introduction to Digital Asset
- Why DLT and Smart Contract Technology Matters
- Innovation in traditional markets
- Innovation in new markets
- Smart Contracts with DAML
- Industry Adoption
- Proxy Services with DAML
Introduction

Digital Asset is a technology company that builds products based on Distributed Ledger Technology (DLT) for highly regulated institutions, such as financial market infrastructure providers, CCPs, CSDs, exchanges, banks, custodians, health insurers and their market participants.

- We were founded in 2014 and now have over 180 employees across 6 countries
- We deliver flexible infrastructure for market participants to share processes and data securely, on a need-to-know basis, without the need for reconciliation
- We have raised over $115m from more than 15 strategic investors across the financial ecosystem
- In December 2017, the Australian Securities Exchange announced its intention to replace its post-trade clearing and settlement system with DA technology
- In November 2018, HKEX announced its work with Digital Asset on a post-trade allocation and settlement initiation platform for the Northbound Stock Connect program
Why DLT and Smart Contract Technology Matters

Translating from regulations - to lawyer - to coder - to software - is hard, expensive, and error prone.
Why DLT and Smart Contract Technology Matters

And every institution is doing it differently.
Why DLT and Smart Contract Technology Matters

Today, financial institutions are islands.
Why DLT and Smart Contract Technology Matters

Running asynchronous, message based systems that create operational cost.
Markets rely on complex, multi-party processes to deliver services for investors and issuers.
Bespoke technology and data storage formats at each institution are not extensible.
Financial markets need privacy and confidentiality.

Why DLT and Smart Contract Technology Matters
Financial markets need the right building blocks to be able to model any asset class, any workflow and the rights and obligations between parties.
Why DLT and Smart Contract Technology Matters

Financial markets need a state machine.
Financial markets need automation to be predictable and bug-free.
Smart contracts enable innovation in traditional markets

- Shared asset and lifecycle event specifications across market
- Consistent automation of workflows between capital markets participants
- An extensible multi-asset platform for exchanges and their members
- Real-time golden source data
- Get entire picture with a birds-eye view (move beyond simple messaging)
Smart Contracts done right!

Bring new new products and services to market faster

Reduced cost to develop and deploy products & services

Remove technology vendor lock-in

De-risk technology choices/bet on the wrong horse

Migration/portability, e.g. write once, run anywhere
Industry Adoption

Summary
Since January 2016, DA has worked with ASX, the Australian Stock Exchange, on a project to completely replace its 20-year-old clearing and settlement system -- CHESS

Key Opportunities
1. Corporate actions efficiencies
2. Marketplace for applications
3. Real time access to clearing and settlements data
Industry Adoption

Summary
In 2018, DA successfully completed a prototype with the Hong Kong Exchanges and Clearing Limited (HKEX) to bring the power of DAML to its post-trade allocation and processing platform for Northbound Stock Connect trading.

Key Opportunities
1. Tight settlement timeframe for mainland China A shares
2. Data synchronisation across multi-party workflow
3. Timely communication of trade status among participants in workflow
Proxy Services with DAML

Voting is the most common and important way for shareholders to impact corporate governance

- Mergers and Acquisitions
- Takeovers
- Salary and bonuses of Management
- Golden parachute agreements
- Share structure
Proxy voting is fragmented and opaque

Reconciliation of votes and voting rights is burdensome and flawed

- No single source of immutable data
- Under or over voting due to errors in vote tabulation
- Nominee, omnibus account structures make proxy chain complicated

Communication is fragmented and costly

- Issuers face high costs to deliver proxy materials to all shareholders
- Short deadlines for participants to collect, reconcile and forward data
- Lack of confirmation chain
- Difficult cross-border voting (global proxy services)

Security of electronic voting systems are under heavy scrutiny
Ownership of securities can be complex

Beneficial owner

● Can surrender his legal ownership to a custodian (nominee company of the custodian)
● No need for direct communication with all companies, only through legal owner
● Retains voting rights, based on agreement with custodian

Legal owner (nominee company of custodian)

● Usually a custodian, keeping shares on a nominee account
● Omnibus (pooled) accounts
  ○ All securities are registered in the nominee company
● Segregated (designated) accounts
  ○ Customer hold their securities in a designated account, recorded by the registrar
Simplified process diagram of proxy voting (for registered securities)

Tasks: vote allocations, reconciliation of votes, distributing materials, meeting management

Intermediary (e.g: Broadridge): providing voting system and other services for above process

Proxy advisor: provide vote advisory service

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## Opportunities

<table>
<thead>
<tr>
<th>Issuer (company)</th>
<th>Legal owner (custodians, broker-dealer, CSD)</th>
<th>Beneficial owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Expensive process to comply with legal obligations to distribute Proxy materials to legal owners</td>
<td>● Resource intense activity to vote on all company events</td>
<td>● Cumbersome voting process due to proxy allocations, or voting on its own</td>
</tr>
<tr>
<td>● Can’t engage shareholders in the interim voting process</td>
<td>● Informing beneficial owners and collect votes is tedious work</td>
<td>● Data gathering can be expensive or required paying for proxy advisor</td>
</tr>
<tr>
<td>● Lack of information about interim results</td>
<td>● Errors in vote allocation between omnibus accounts, designated accounts and beneficial owners</td>
<td>● Lack of confirmation on votes cast</td>
</tr>
<tr>
<td>● Over or under voting due to incorrect voting right allocations</td>
<td>● Fragmented proxy voting process, collecting information from UBOs</td>
<td>● No feedback on meeting results</td>
</tr>
<tr>
<td>● Undetected errors during tote tabulation</td>
<td>● Necessary intermediary involvement (e.g.: Broadridge or proxy advisor)</td>
<td>● No automatically binding agreement based on vote results between the Issuer and Shareholder</td>
</tr>
<tr>
<td>● Dominance of institutional investors, due to low retail shareholder engagement</td>
<td>● Strict timelines in proxy voting process</td>
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</tbody>
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DRIVEN
Bringing value to all stakeholders with DAML smart contracts & DLT

- Announce Meeting
- Notify Registrar
- Access the list of Legal owners and distribute proxy materials to them.
- Legal owners can forward proxy materials to Beneficial owners
- Beneficial owners can cast votes or assign a proxy
- Real-time vote tabulation
- Vote cancellation and re-casting workflows
- Proxies can assign further proxies
- Share types can be set in the system with assigned voting rules
- Voting rights are calculated based on share types
- Document management features

Issuer

Beneficial Owners

Brokers

CSD

Registrar

Global Custodian

Local Custodian

Proxy agreements
List of owners
Document management
Voting visibility

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Locations

New York
4 World Trade Center, 47th Floor
150 Greenwich St.
New York, NY, USA

London
1 King William Street
London, UK

Sydney
Level 12, 20 Bridge Street
Sydney, Australia

Budapest
Dohány UTCA 33
1074 Budapest, Hungary

Zurich
Thurgauerstrasse 40
8050 Zurich, Switzerland

Hong Kong
Hong Kong Club Building, 3A
Chater Road Central, Hong Kong