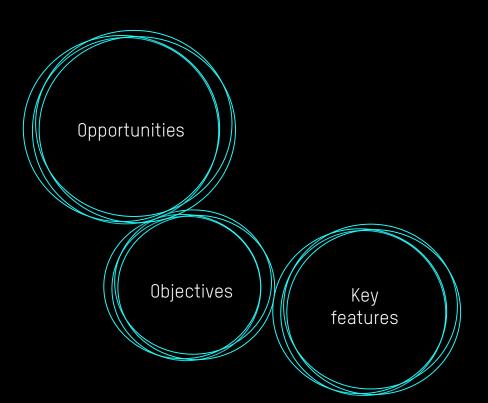
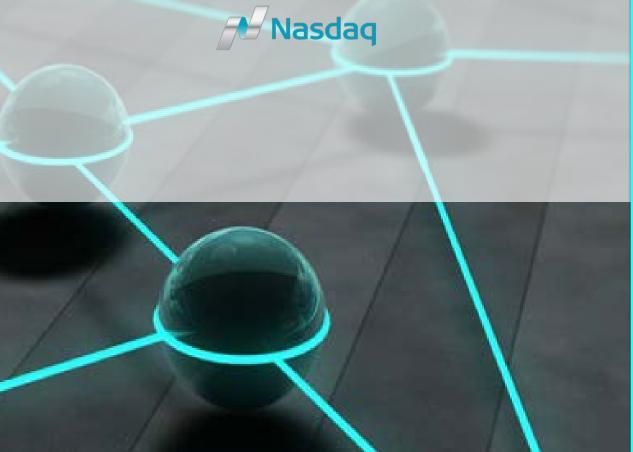
## Nasdaq Proxy and e-voting October, 2016



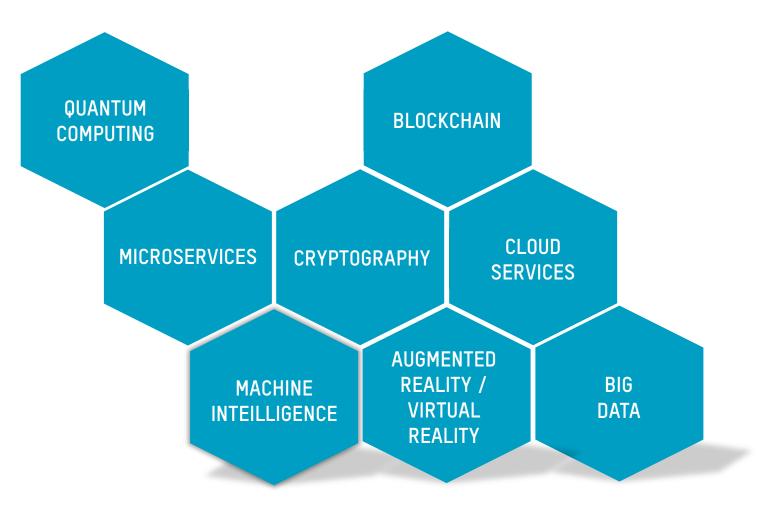






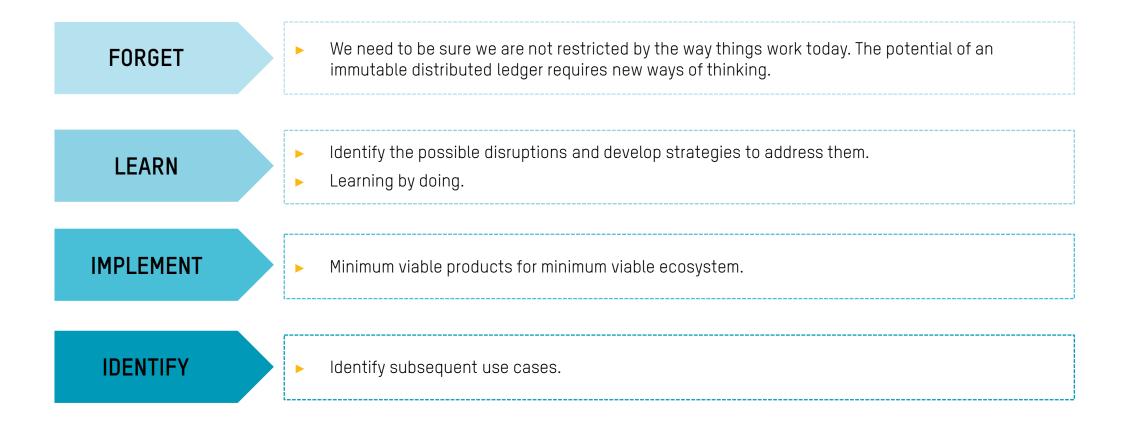


## **TECHNOLOGY TRENDS SHAPING FINANCIAL SERVICES**





## PILLARS FOR INNOVATION





### HOW IS NASDAQ APPROACHING THIS SPACE?

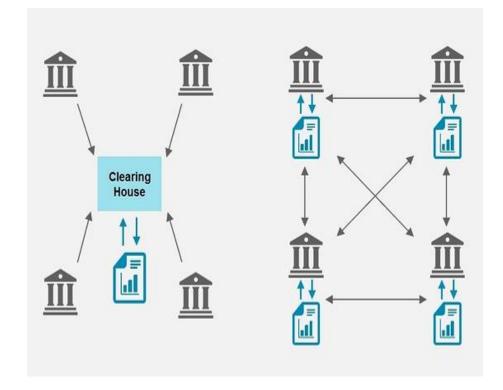
Top-Down Approach to Blockchain Innovation





## **BLOCKCHAIN ENABLES NEW WAYS TO DO BUSINESS**

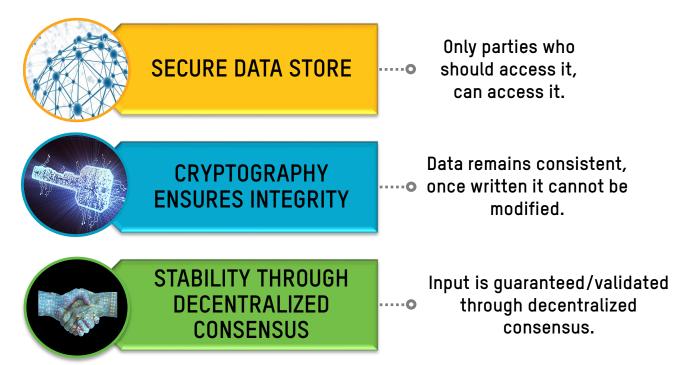
- Can save major financial institutions billions of dollars on the cost of settling trades and other financial transactions
- Brings robustness, transparency and innovation together to transform the marketplace
- Improves efficiency and reduces errors within your business
- Applies to a wide variety of use cases



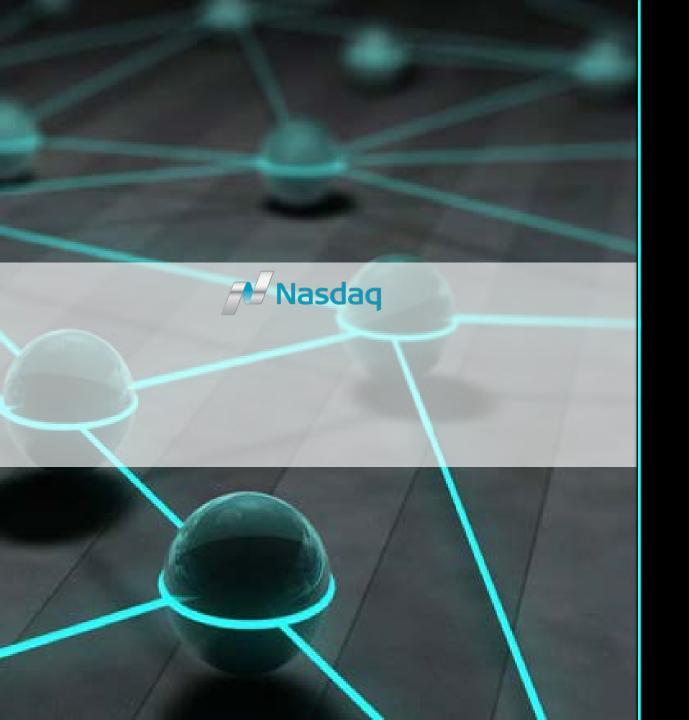


## NASDAQ INTEREST IN BLOCK CHAIN. BLOCKCHAIN VALUE PROPOSITION. SECURITY. INTEGRITY. STABILITY.

- Decentralized databases
  - coupled with decentralized compute power
- Managed by many nodes and controlled by many users at the same time
  - No single point of trust, no single point of failure.
- All execution is transparent, history recorded in perpetuity
- Blockchains can be public (i.e. on the open internet) or private (on a closed network / restricted nodes)

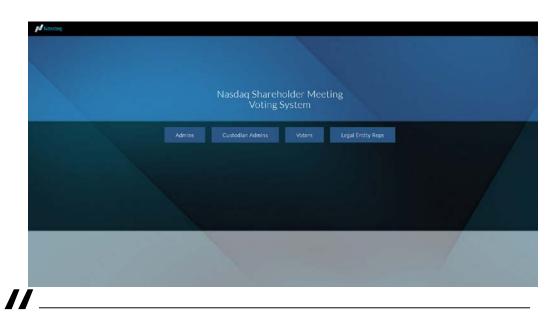








#### NASDAQ PROXY AND E-VOTING SECOND OFFICIAL BLOCKCHAIN PROJECT



We are going to put proxy voting on the blockchain, on the immutable ledger and obviously enable people to do that with their cell phone and have that record with them forever."

- Nasdaq CEO Bob Greifeld in Bloomberg, Oct 2015

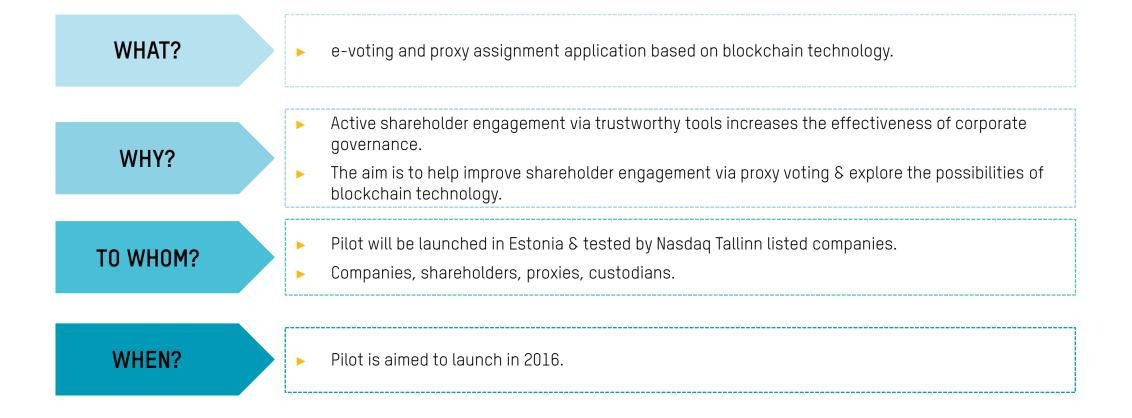


"Nasdaq is to use blockchain technology to streamline proxy voting on companies listed on the Tallinn Stock Exchange"

- Streamlined service for proxy voting
- Votes will be tracked stored in the immutable ledger
- Digital authentication to onboard users
- Issue and record votes on the blockchain

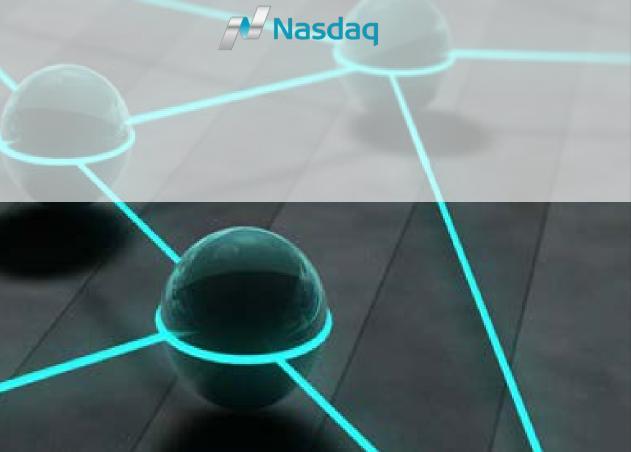


## WHAT? WHY? TO WHOM? WHEN?









Key features of the e-voting system

## WHY ESTONIA, TALLINN?

#### Know-how

over 15 years of experience in providing general meeting service

#### Loyal customer base

communication with different stakeholders

#### ▶ 1-tier CSD

owned by Nasdaq, availability of ownership data

#### Supportive environment

<image><text><text>

Estonia's open-minded attitude towards IT & FinTech innovation

Secure remote identification

Estonian ID solutions for citizens & for eigners, cooperating with e-Residency initiative

Source: e-Estonia, https://e-estor



## **BENEFITS FOR COMPANIES**

- Identify shareholders.
- Monitor chain of proxies.
- Reach quorum faster by engaging more retail investors.
- Receive voting results instantly.
- Vote & proxy transactions are stored in an immutable blockchain ledger.
- **Engage** investors in leading the company.



#### **BENEFITS FOR USERS** SHAREHOLDERS, PROXIES, CUSTODIANS

- Remote participation and proxy assignment.
  - **Voting before** and/or **during** the general **meeting**.
- Secure identification of shareholders and their representatives via Estonian ID solutions.
- Information about meetings, agenda items and management proposals is easily reachable.
- Track record of assigned proxies (i.e. chain of proxies) and casted votes.
- Access to voting results.
- **Data** is saved **in** an **immutable ledger**.

eting Type  🔶	Record Date 🔶	Pre-Voting Date	Meeting Date	Status 🔶
ual General	Oct 7, 2016 12:15 PM	Oct 8, 2016 12:00 AM - Oct 14, 2016 12:00 AM	Oct 17, 2016 12:00 AM	Not started
aordinary General	Oct 2, 2016 12:00 PM	Oct 3, 2016 12:00 AM - Oct 6, 2016 12:00 AM	Oct 8, 2016 12:00 AM	Completed
	ual General	ual General Oct 7, 2016 12:15 PM	ual General Oct 7, 2016 12:15 PM Oct 8, 2016 12:00 AM - Oct 14, 2016 12:00 AM   aordinary General Oct 2, 2016 12:00 PM Oct 3, 2016 12:00 AM -	ual General Oct 7, 2016 12:15 PM Oct 8, 2016 12:00 AM - Oct 14, 2016 12:00 AM Oct 17, 2016 12:00 AM   aordinary General Oct 2, 2016 12:00 PM Oct 3, 2016 12:00 AM - Oct 3, 2016 12:00 AM Oct 8, 2016 12:00 AM

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have	Voting Right Owner	Total Votes	Vote			
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genda items 3. Approval of the annual results and the prospectiv The Supervisory Board pr 2015 and to create the Mar	ex roposes to approve the annua	e report of the financia	ic M yezz		12	



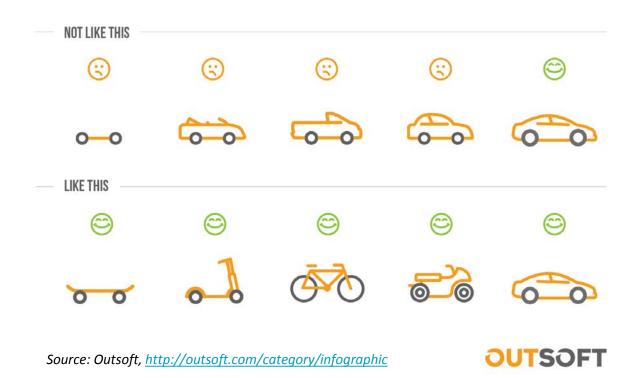
# PROCESS FLOW

Create a client Create a meeting & Obtain ownership Store owners data on company & add add agenda items data from CSD blockchain ledger security details Create asset wallets KYC – identify users User votes or assigns & issue voting rights securely proxy Transactions are Monitor signed recorded in the proxies & votes immutable ledger

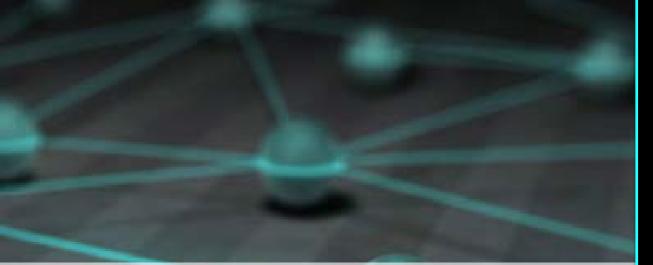


## **OUR APPROACH ON E-VOTING MVP**

#### HOW TO BUILD A MINIMUM VIABLE PRODUCT









#### Nasdaq

## Thank you! Any Questions?



Hedi Uustalu Head of Issuer Services Tallinn / e-voting Project Manager

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