

Changing the Face of Market Infrastructure Technology

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Presented by
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Nasdaq

A Tech Company with Capital Markets Roots

Mission critical technology provider to the capital markets and beyond



HOME OF TECHNOLOGY

Over 600 technology companies are listed on Nasdaq's exchanges. Robust relationships with Silicon Valley and other technology centers



TECH PROVIDER TO MULTIPLE INDUSTRIES

Award-winning portfolio of market infrastructure and regulatory technology solutions for over 10,000 corporate clients



ACTIVE INVESTMENTS IN EXPERIMENTATION & INNOVATION

Established Nasdaq Ventures in 2017 to broaden & deepen portfolio Active in think tanks & universities: MIT, Columbia, more+



FOCUS ON COMMERCIALIZING NEW TECHNOLOGIES

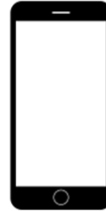
One of the first 'exchanges' to go beyond proof-of-concept and leverage machine intelligence, blockchain and cloud in practice

Technology Trends
Shaping Financial
Services:

Innovations
Advancing the
FinTech Landscape



Cloud Services



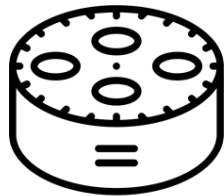
Smartphone Ecosystem



Blockchain



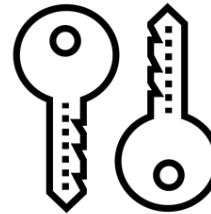
Internet of Things



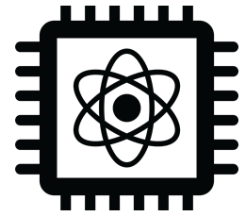
Personal /Intelligent
Assistant



Machine Intelligence



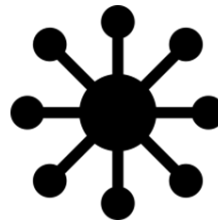
Cryptography



Quantum Computing



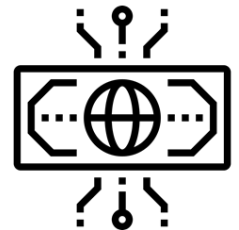
Behavioral Analytics



Microservices



Augmented Reality/
Virtual Reality



Digital Money

Comprehensive Steps For Catalyzing Change



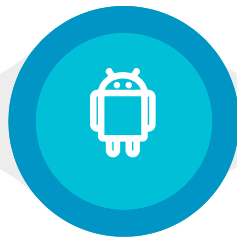
Emerging Technologies Focus: What is Nasdaq Doing?

Beyond Proof-of-Concept in All Areas



Cloud

- Our internal Revenue Management Systems in the US and Nordics
- Nasdaq Financial Framework (NFF) Cloud-enabled and deployable at multiple cloud providers
- Analytics Hub



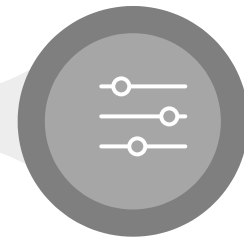
Machine Intelligence

- Implemented in Nordic Surveillance Program for QA & Alert Scoring
- Available in commercial marketplace surveillance offering



Behavioral Analytics

- Acquisition of Sybenetix
- Used to detect market manipulation on the buy-side
- Exploring other uses internally



Blockchain

- Nasdaq Private Market
- eVoting
- Exchange client's OTC Post-Trade
- Broker client's Mutual Funds
- Blockchain Matching Patent

Startup market opportunities powered by cloud

Formation new markets and asset classes

CLOUD EARLY ADOPTERS:
Nasdaq Non-Financial Engagements

1 LOWER BARRIERS TO ENTRY

2 QUICKER TIME TO MARKET

3 SCALES FOR GROWTH

4 ONLY USE REQUIRED CAPACITY



Loyalty Points



Crypto Assets



Sports



Logistics



Advertising



Ticketing



Airlines



Healthcare



Insurance

Cloud Predictions

- Due to environmental factors and technology innovation, exchanges must adapt and differentiate to meet regulatory, efficiency and data needs
- Paradigm shift causing further re-architecture of technology and service models in market infrastructure space
- Increased operation of key systems/ functions to cloud or outsourced to third-party
- Ability for market infrastructure organizations to create “Service Universes”
- Conversion of networks and infrastructures to a world of platforms

SERVICING A HYPER-
CONNECTED WORLD

Networks >> World of platforms

SERVICING YOUR
ECO-SYSTEM

Market Operators Service Universes

THE TECHNOLOGY
FOUNDATION

Mission-critical software deployed as a service

Thank You

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