AGENDA

1. Introduction - Tech Trends 2016
   Patrick Laurent - Partner, Technology & Enterprise Application - Deloitte Luxembourg

2. Blockchain, Disruption and Opportunity
   Eric Piscini – Principal at Deloitte US, Deloitte global cryptocurrency center Lead

3. Where do Financial Institutions stand?
   Sebastien Genco – Senior Manager – Deloitte Luxembourg

   Jean Dos Santos – Senior Manager – Deloitte Luxembourg

5. Case Study: Building a Federated KYC for the Isle of Man
   Eric Benz – COO - Credits

6. Panel Discussion – How to go from Hype to Prototype?
   Eric Piscini – Principal at Deloitte US, Deloitte global cryptocurrency center Lead
   Eric Benz – COO - Credits
   Laurent Marochini - Co-Chair of the Blockchain Steering Group at ALFI
   Moderator: Sebastien Genco – Senior Manager – Deloitte Luxembourg
TECH TRENDS 2016

INNOVATING IN THE DIGITAL ERA

Patrick Laurent
Technology Leader
**Information Technology:** Digital (mobile/IoT/social/web), Cloud, Analytics, Core Modernization, Cyber, IT Organization/ Delivery Model Transformation

**Science and Exponentials:** Materials Science, Physical Science, Medical Science, Advanced Mathematics, Information Science, Additive Manufacturing, Sensors and Robotics, Nanotech/Synthetic Bio, Artificial Intelligence, Quantum Computing

**SHIFTING MARKET**
- Customer Experience Expectations
- Extended Ecosystems Exploitation
- Competitor “First-Mover” Advantage
- Globalization

**RISKS & REGULATIONS**
- Risk & Regulatory Requirements
- Cyber Attacks/ Security Threats
- Natural Disasters
FIVE FORCES & TECH TRENDS

- Reimagining Core Systems
- Internet of Things: From Sensing to Doing
- Augmented & Virtual Reality Go to Work
- Social Impact of Exponential Technologies
- Cyber
- Cloud
- Business of IT
- Core
- Digital
- Analytics

- Blockchain: Democratized Trust
- Autonomic Platforms
- Right-Speed IT
- Industrialized Analytics
Right-Speed IT
Not a two-size-fits-all IT operating model
Immersion + context = virtually serious business
INTERNET OF THINGS: FROM SENSING TO DOING
From sensing to doing, from connectivity to impact

AUTHORS
ANDREW DAECHER
ROBERT SCHMID
Modernizing legacy assets to fuel strategic growth

REIMAGINING CORE SYSTEMS

AUTHORS
SCOTT BUCHHOLZ
BEN JONES
PAVEL KRUMKACHEV
“Build once, deploy anywhere” architecture up and down the stack
INDUSTRIALIZED ANALYTICS

Data is the new currency for innovation—treat it as a competitive discipline
Blending social responsibility and R&D to solve the world’s biggest problems

SOCIAL IMPACT OF EXPONENTIAL TECHNOLOGIES

AUTHORS
MARCUS SHINGLES
BILL BRIGGS
JERRY O'DWYER
Institutional trust enabled by cryptography and distributed systems
THANK YOU!

DOWNLOAD THE REPORT AT
BLOCKCHAIN

Disruption and Opportunity

Eric Piscini, Deloitte global cryptocurrency center Lead
Blockchain – What is it?
Blockchain is to Value

what the Internet is to

Information
I THINK WE SHOULD BUILD A BLOCKCHAIN

DOES HE UNDERSTAND WHAT HE SAID OR IS IT SOMETHING HE SAW IN A TRADE MAGAZINE AD?

WHAT COLOR DO YOU WANT THAT BLOCKCHAIN?

I THINK MAUVE HAS THE MOST RAM.
Bob goes online to buy BTC in an Exchange
Bob gets Alice’s Bitcoin address (public key) and sends BTC using his private key in his Bitcoin wallet
Miners all over the network are alerted of the transaction

Miners verify that Bob has enough Bitcoins to make the payment
Miners collate all unincorporated transactions into a block, and race to solve a computationally difficult problem
The miner that solves the problem publishes the block, which is then added to the Blockchain; the miner is awarded 25 Bitcoins and transaction fees
Bob and Alice receive confirmation that their transaction has been executed

Bob and Alice’s transaction is added to the Blockchain. Every subsequent block added further increases the security of the previous blocks

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WHAT IS A BLOCKCHAIN

A blockchain is a record, or ledger, of digital events — one that’s “distributed” between many different parties. It can only be updated by consensus of a majority of the participants in the system. And, once entered, information can never be erased. The blockchain contains a certain and verifiable record of every single transaction ever made.

- **Central authorities** (bank, Fed, notary, escrow, etc.) transfers actual value between two parties
- **Multiple intermediaries and record-keeping** are required to facilitate transfer of assets and create trust

- **Distributed** network of computers (nodes) that maintains a shared source of information
- **Transaction data is immutable**
- **Peer to Peer** transactions using digital tokens to represent assets and value

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WHAT BLOCKCHAIN CAN DO FOR YOU

A Blockchain solution can be initiated as a store of transaction record, but also serve as a platform for further innovation and value extraction

Application Description

- A Blockchain solution can offer automated, high fidelity and low-cost mechanisms for record keeping
- Core mechanism is the maintenance and modification of a distributed ledger
- Requires user-specific “keys” – records are kept in the ledger but only accessible by authorized users

- A Blockchain solution enables secure, near real-time, low-cost transfer of value without an intermediary
- Records can be transferred to other parties using the decentralized distributed ledger
- Allows transfer of value between two parties, removing the need for a trusted intermediary

- A Blockchain solution will transform how contracts are executed
- Protocol is programmable to trigger transfer of value and information under certain conditions
- Smart contracts can be developed, exchanged, and automatically executed on decentralized systems
Blockchain – Market
LARGE COMPANIES AND GOVERNMENT AGENCIES ARE ACTIVELY INVESTING IN THE BLOCKCHAIN TECHNOLOGY

**IBM Bets on Bitcoin Ledger**
Company becomes largest backer of blockchain, which underpins the digital currency

**Mizuho to Develop Blockchain Tech for Internal Recordkeeping**

Mizuho Financial has announced it is seeking to develop a blockchain application for internal recordkeeping.

The move, according to Mizuho, marks the “beginning of a strategic program” that will find the Japan-based financial services firm working with IT consulting firm Cognizant to leverage the technology to cut costs and improve its internal processes.

**Online Retailer Overstock Spent $8 Million on Blockchain Projects in 2015**

Online retailer Overstock.com spent $5m last year on its blockchain-backed securities trading initiative.

In a statement to investors, CEO Patrick Byrne wrote that the firm spent $5m more than originally anticipated on its blockchain research. The firm said in November that it spent $3.2m during the third quarter on the initiative.
BLOCKCHAIN IS RAPIDLY GATHERING MOMENTUM GLOBALLY

Significant levels of venture capital funding is driving market activity in blockchain – key industry players are exploring new and innovative blockchain applications

$1.2B
In investments in past 3 years

$14B
of industry revenue could face downward pressure from Blockchain implementation by 2017

80%
of the world’s largest banks will have initiated Blockchain projects by YE 2016

$20B
In projected annual banking industry savings by 2022

Investment activity in blockchain is showing a trend comparable to the early stage investment in the internet;
Blockchain investment continues to show strong VC funding despite overall VC funding has been decreasing 9% across industries in 2015

“We can re-implement the entire financial system as a distributed system as opposed to a centralized system. We can reinvent the entire thing.”
Marc Andreessen

“The implications of the blockchain for the economy are comparable to those of the Internet for information”
Gartner Research

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WHO IS SHAPING THE INDUSTRY?

Former regulators and industry veterans are joining technology innovators

“Distributed ledger technology does have the potential to be disruptive of certain business models. But it has at least as much potential to be enormously empowering of existing business models in terms of making them lower cost, more efficient and less risky”

“So we won’t get there overnight but we will get there. How seriously should you take this? I would take it about as seriously as you should’ve taken the concept of the Internet in the early 1990s. It’s a big deal and it is going to change the way that our financial world operates”
**MAJOR COMPANIES ARE ENGAGING WITH THE BLOCKCHAIN ECOSYSTEM VIA INVESTMENTS AND “LABS/ACCELERATORS”**

<table>
<thead>
<tr>
<th>Company</th>
<th>Disclosed Blockchain-related activity</th>
</tr>
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</table>
| UBS     | • Technology lab exploring how blockchain technology can be used  
          • First experiment is with smart bonds where risk-free interest rates and payment streams are fully automated  
          • Researching the potential of blockchain technology to decentralize operations  
          • Invested in Coinbase, a bitcoin wallet and merchant platform  
          • Signed proof-of-concept with Safello, a bitcoin exchange  
          • Bitcoin-based debit card creators Atlas Card and insurance industry focused Everledger participated in startup accelerator  
          • IBM and Samsung’s are developing a project called ADEPT - Autonomous Decentralized Peer-to-Peer Telemetry, which aims to create a blockchain-powered backbone for IoT devices  
          • Offering a cloud-based service to allow developers to set up blockchain networks and test and deploy related apps  
          • Joined the Hyperledger Project formed by the Linux Foundation, and is now selling zSystems (servers) optimized for blockchain technology  
| USAA    |  |
| Barclays |  |
| IBM     | • Launched an exchange calculated and distributed bitcoin index, NYXBT, in May 2015. Minor investor in Coinbase  
          • Running three systems within “Citigroup Innovation Labs” based on distributed ledger technology at pre-production level  
          • Developed proprietary digital currency “CitiCoin”  
          • Investing in a blockchain based stock exchange with a project called Medici, and launched an exchange platform called T0.com in mid-2015  
          • Gained SEC approval to issue its shares using blockchain technology, making Overstock the first public company listed on blockchains with the approval of the regulator  
| Samsung | • Launched a blockchain development environment on its cloud platform Azure  
          • Microsoft Enterprise clients and developers can now create, develop and test decentralized applications on the Ethereum blockchain, giving its ecosystem a boost  
| NYSE    |  |
| Citi     |  |
| Overstock|  |
| Microsoft|  |
OVER $1B HAS BEEN INVESTED INTO COMPANIES WITHIN THE BLOCKCHAIN

<table>
<thead>
<tr>
<th>Consortium, VC &amp; Organizations</th>
<th>Asset trading</th>
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<tbody>
<tr>
<td>Hyperledger project</td>
<td>Serica</td>
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<tr>
<td>coala</td>
<td>everledger</td>
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<td>Digital Currency Group</td>
<td>clearmatics</td>
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<thead>
<tr>
<th>Payments and remittances</th>
<th>Loyalty and gift cards</th>
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<tr>
<td>ripple</td>
<td>loyala</td>
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<tr>
<td>Bitspark</td>
<td>gyft</td>
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<tr>
<td>stellar</td>
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<td>ABRA</td>
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<td>BitPesa</td>
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<th>Payment processors</th>
<th>Identity</th>
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<tr>
<td>Bitnet</td>
<td>onename</td>
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<tr>
<td>bitpay</td>
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<tr>
<td>GoCOIN</td>
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<tr>
<td>coinbase</td>
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<tr>
<th>Platforms</th>
<th>Hardware</th>
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<tbody>
<tr>
<td>Ethereum</td>
<td>nMiner</td>
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<td>factom</td>
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<tr>
<td>Digital Asset Holdings</td>
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<td>Chain</td>
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<td>CREDITS</td>
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<td>Blockstack.io</td>
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<td>Blockstream</td>
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<td>Symbiont</td>
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<td>BlockCypher</td>
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<td>Bloq</td>
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<td>Counterparty</td>
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Blockchain – Reality
THE BLOCKCHAIN TECHNOLOGY WILL IMPACT EVERY INDUSTRY

- Digitizing warranties for management and transferability
- Preventing trade of stolen goods
- Distributing and trading in digital assets
- Verification of videos and photos authenticity
- Decentralized sharing of goods and services as part of the Shared Economy
- Transforming mobile phones to portable Blockchain wallets
- Setting industry standards for migrating Real Estate management onto Blockchain
- Transferring existing land deeds
- Migrating the entire land registry of Honduras onto Blockchain
- Cryptocurrency integration to existing gas stations
- Enabling oil commodities Investment Trading in carbon emissions
- Seamless cross currency settlement
- Replacing legacy FSI networks with Blockchain Infrastructure
- Direct peer-to-peer payments
- Preventing medical data forgery
- Tracing and preventing counterfeit pharmaceuticals
- Creating an exact representation of a person’s genetic map on Blockchain
- Managing very large volume arrays of devices such as manufacturing sensors
- Enabling machinery to autonomously manage service times and supply schedules
- Full supply chain transparency enabling secure traceability for materials

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# Banking and Securities

## Use Cases

<table>
<thead>
<tr>
<th>Cross-border payments</th>
<th>Asset Management</th>
<th>Syndicated Loans</th>
<th>KYC Processes</th>
<th>Trading &amp; Settlements</th>
<th>Trade Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>No correspondent banks</td>
<td>Enhanced client interaction</td>
<td>T+0 settlement</td>
<td>Minimal documentation</td>
<td>Higher trade accuracy</td>
<td>Lower regulatory costs</td>
</tr>
<tr>
<td>Payment transfer in sec</td>
<td>Reduced compliance costs</td>
<td>Faster consensus process</td>
<td>Quick re-KYC</td>
<td>Faster settlements</td>
<td>Improved record keeping</td>
</tr>
<tr>
<td>Lower transaction costs</td>
<td>Increased transparency</td>
<td>No document forgery</td>
<td>Reduced transaction risk</td>
<td>Faster turnaround time</td>
<td>Faster turnaround time</td>
</tr>
</tbody>
</table>

## Industry Players

- **Westpac, ANZ** – Low-cost payments platform with Ripple
- **Citi** – ‘Citicoin’, bitcoin equivalent for cross border payments
- **Schroders, Aberdeen, Columbia Threadneedle, Aviva, Henderson** – Trade of illiquid securities over blockchain
- **UBS** – ‘Smart-bond’ to recreate bond’s issuance, interest calculation, coupon payments and maturation
- **Mizuho, Microsoft Japan, ISID, Currency Port** – Blockchain in syndicated loans post-trade process
- **JP Morgan, Digital Asset Holdings** – Private blockchain to streamline syndicated loan trading process
- **BNP Paribas Securities Services** – Equity crowdfunding on the blockchain with SmartAngels
- **Overstock** – World’s first public offering using blockchain
- **Barclays** – Blockchain applications in trade finance with WAVE
- **Bank of America** – Blockchain trial for trade finance

## Adoption

- **High adoption** – Major financial institutions and Blockchain startups are working on solutions to realize the

## Barriers to Adoption

- **Legal / regulatory acceptance**
  - B&S subject to federal, state and international regulations
- **Financial risk**
  - Concerns over possible breach and financial losses
- **On-boarding stakeholders**
  - Convincing various stakeholders about their concerns over security and getting them onboard
- **Data Security and Privacy**
  - Security loopholes in Blockchain yet to be explored
- **Integration with legacy systems**
  - Integration with complex legacy systems likely to cause delays

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Cross Border Payments

- Ripple is the creator and developer of the Ripple payment protocol, a decentralized and open source global payments network that allows customers to bypass major international settlement channels and transfer value instantly point-to-point.
- Ripple has joined the International Payments Framework Association (IFPA), whose members include ACH, NACHA and SWIFT.
- The IFPA provides rule sets, best practices and guidance on how to improve cross-border payments.

Trading Private Companies’ Stocks

- Nasdaq announced the issuance of shares by Chain.com to a private investor using its blockchain-powered trading platform, Linq.
- The transfer of shares represents the first-ever successful private issuance of shares using blockchain technology.
- Nasdaq Linq benefits from blockchain by significantly reduced settlement times and the complete negation of paper stock certificates.

→ Transaction volume today is still low for these blockchain solutions

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The new business model enabled by Blockchain technology allows individuals to invest into a fund using its associated Blockchain, without the help of any intermediary.
## Business Case Identification

- Operational effectiveness assessment
- Risk Assessment

## Stakeholder Alignment

- Incorporate industry standards
- Regulatory assessment

## Design

- Design Blockchain stack
- Define roles and location of nodes

## Proof of Concept Testing

- Sandbox Testing
- Extended pilot phase with high confidence counterparties

## Solution Commercializing

- Identify key partners and divisions to pilot solutions
- Work with partners & advocate approach to increase reach

### Key Activities

- Consider both hard and soft dollar cost.
- Assess the one time and recurring cost

### Considerations

- Socialization of distributors and clients and ensuring compliance
- Security, scalability, speed & robustness
- Identify elements from existing system to be replaced
- Stakeholders to be brought on equal technical footing
- Partners from all industries to be onboarded
- Pick partners more open to innovation & adopting radical change

## SO WHAT?

Think big, start small, work on the edges first, iterate

<table>
<thead>
<tr>
<th>Business Case Identification</th>
<th>Stakeholder Alignment</th>
<th>Design</th>
<th>Proof of Concept Testing</th>
<th>Solution Commercializing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set up innovation lab</td>
<td>Partner</td>
<td>Collaborations</td>
<td></td>
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</tr>
<tr>
<td>Create Blockchain solutions from scratch</td>
<td>Work with startups and consultancies to develop tailored prototypes and solutions</td>
<td>Collaborate with other players and develop a solution that has potential to be industry-standard</td>
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</tbody>
</table>

#### Permissioned ledger

- Closed Ledger architecture where only verified nodes are allowed to participate

#### Permissionless ledger

- Open ledger like Bitcoin Blockchain where there is no restriction on the identity of nodes

#### Create Own Infrastructure

- Develop enterprise grade distributed ledger framework based upon protocols, policies & regulatory standards

#### Leverage Existing Infrastructure

- Leverage existing distributed ledger platforms like Bitcoin Blockchain and Ethereum

### Implementation Roadmap
Deloitte on Blockchain
DELOITTE BLOCKCHAIN OFFERING

1. Innovation and Ideation
   - We identify relevant use cases to harvest the benefits of blockchain technologies.
   - Our thought leadership, developed in conjunction with our ecosystem of innovation and blockchain companies, enables you to make sense of the broad innovation landscape.
   - We track over 200 blockchain companies.

2. Strategy Development
   - We lead you to define “where to play and how to win”.
   - We drive business, technology, integration and talent strategy.
   - We develop strategies to pilot and implement blockchain based solutions.
   - We define an iterative and flexible approach to match the rapid changes in the ecosystem.

3. Prototyping
   - We accelerate prototyping by using our existing technology capabilities and industry experience.
   - We have prototypes up and running: Digital Bank, Loyalty & Rewards and Smart Identity.
   - We have over 20 prototypes in development.

4. Product Development
   - We mobilize our global practitioners to your organization to re-engineer business processes or design new ones.
   - We bring our broad set of services, across compliance, technology, talent, operations and tax, to effectively integrate your blockchain solution.
   - We deliver as one team in collaboration with external companies.

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WHERE DO FINANCIAL INSTITUTIONS STAND?

Deloitte EFMA KBC Blockchain Survey Overview

Sebastien Genco – Senior Manager - Deloitte Luxembourg
The EFMA Deloitte joint EMEA blockchain survey

The EMEA blockchain survey is closed! Here is an overview of the results

**Survey highlights**

- 3,000 C-Level Contacts across EMEA
- 11th March Survey published
- 20th April End of survey

**Respondents breakdown**

- 80% Banking
- 14% Insurance
- 6% Others
The EFMA Deloitte joint EMEA blockchain survey

The majority of respondents think that the financial services industry will be disrupted by blockchain in the next five years, but they are intrigued by permissioned solutions: are they focusing on the right use cases?

92% FSI will be disrupted by blockchain

64% Permissioned blockchains are the key for large-scale adoption

Blockchain main characteristics

- based on an immutable ledger
- shared among a planetary-scale network
- without a central authority
- allow to create new business opportunities

… but currently FSI players seems to be focused on use cases that can be developed leveraging on existing technologies
The EFMA Deloitte joint EMEA blockchain survey

Among permissioned blockchains the preference is to achieve scale and trust in a consortium led manner, but even the most important consortiums are currently not working on groundbreaking solutions.

53%
Consortium is the preferred solution by Financial Institutions

Blockchain can be leveraged for transactions of value in absence of trust

Consortiums need to balance stakeholders interests which might slow down changes

“We are not building a blockchain. Unlike other designs in this space, our starting point is individual agreements between firms… We reject the notion that all data should be copied to all participants, even if it is encrypted”

Richard G Brown
Chief Technology Officer, R3 CEV
The EFMA Deloitte joint EMEA blockchain survey

Companies who have embarked on a blockchain journey are awaiting for the regulator to set a framework for cryptocurrencies and blockchain technology.

49%

Regulatory uncertainty is the biggest concern

- Over-regulation could threaten the technology evolution
- Under-regulation and absence of a regulatory framework could also slow down the evolution
- Regulators tend to have an open-mind when addressing the cryptocurrency topic
The EFMA Deloitte joint EMEA blockchain survey

The majority of the participants are hesitant to make their first steps in the blockchain world, some collaborate in consortiums but only a few are currently developing of a solution.

None of our respondent firms have developed a centre of excellence.

Although the majority believe in consortium-owned permissioned blockchain, only 17% are actually collaborating in such initiatives.

11% have invested in start-ups developing blockchain solutions or are building Proof-of-Concepts.

71% have not started started their blockchain journey yet.
The EFMA Deloitte joint EMEA blockchain survey

Payments have undoubtedly been an initial focus area for blockchain projects and the participants confirmed this trend.

60%
Are considering International money transfers as a use case for their first Proof-of-Concept

Beyond payments, Financial Institutions are ready to work on Blockchain solutions covering all parts of their value chain.

In addition to payments, KYC/AML as well as clearing and settlement processes are two major areas of focus.
The EFMA Deloitte joint EMEA blockchain survey

The participants want to improve the way of working by improving business models and efficiency

57%
Cost efficiency and new businesses opportunities are driving Financial Institutions into the technology

Respondents are not afraid of FinTech or Disruption

Experienced firms focus on opportunities to improve their own value propositions, investing in new business models

Developing an understanding of the technology and the competitors position in the blockchain space are motivations too
CASE STUDY: ARTTRACKTIVE

Our Blockchain proof of concept to solve traceability issues in art

Jean Dos Santos, Senior Manager, Deloitte Luxembourg
Rational for ArtTracktive
ART MARKET AT A GLANCE

Key numbers

Global sales
$63.8 Billion\textsuperscript{1}

Volume of transactions
$38.1 Million\textsuperscript{1}

Key actors

- DONORS
- MUSEUM
- ART FAIRS
- ARTISTS
- FOUNDATIONS
- OWNER
- ART CONSULTANT
- DEALERS
- ART INVESTMENT SERVICES
- MEDIA
- BANK
- CUSTOMS
- ART HISTORIANS
- INSURANCE COMPANIES

Source: Arts Economics 2016
TRACEABILITY ISSUES SOLVED BY ARTTRACKTIVE

Common questions
- Where did the art piece go?
- Who transported it?
- How to be sure the artist is the correct one?
- Who owned it the past?

Key challenges
- Security of information
- Trust of all parties
- Transparency
- Alternative to paper trail

Key question
How to develop a common referential across the art industry and ensure traceability?
TRACEABILITY IN ART TODAY
Inefficient, time costly and paper based process

Some of the challenges identified

- Traceability
- Full history record
- Trust
- AML/KYC
- Link to “real world” work of art
TRACEABILITY IN ART WITH BLOCKCHAIN

A centralized solution allowing efficiencies gain

Benefits of Blockchain

- Monitoring and traceability of information
- Immutable history
- Validation through consensus
- Pseudonymous

Challenge not resolved by blockchain

- Link to “real world” work of art
What we have developed and lessons learned
User interfaces

- Users
- Work of arts details

MongoDB

- Account to manage pseudonyms
- Token smart contract to represent the work of art
- Smart contract to manage signed transactions/process steps
- Chaining of transactions for traceability

Ethereum
LESSONS LEARNED

Ethereum

- State machine with transaction proof → use native functionalities (account, transaction, events, logs)
- No native mechanism to trace back chain of transactions → implement own trace-back chaining mechanism
- The “bigger” the Smart contract, the bigger its cost → code very specialized smart contracts with minimum data (fit-for-purpose)

App architecture

- Use Blockchain for transactional
- Implement app database for referential
- Develop Blockchain access API (Rubix)
- Use standard frameworks (node.js, bootstrap, etc.)

Explorative iterative development

- Start small
- Experiment
- Fail (very) quickly

Define the use case
Develop the contract
Test the process flow
Develop the GUI
What’s next?
WHAT’S NEXT?

1 Art industry
   • Showcase ArtTrackTive and partner with Art Industry actors to experiment / develop the PoC further
   • Demonstrate rationale of blockchain (e.g. international customs initiative to trace high-value items)

2 Other industries
   • Develop PoCs in other industries by re-using knowledge acquired with ArtTracktive (e.g. financial transaction reporting)

3 EMEA Grid Blockchain Lab
   • Use case development
   • Learning and development
   • Client engagement and go to market support
   • Eminence and ecosystem development
BRIEF VIEW ON HOW WE CAN HELP

Awareness

- Awareness workshops to present the concept and discuss potential impacts for an industry or a specific business.

Strategy and operating model design

- Impact analysis (on business and operating model).
- Market analysis (what are the trends? What are others doing?)
- Strategy definition.
- Operating model design.
- Solution analysis.

Use cases / PoC development

- Development of use cases / Proof-of-concept to better understand a concept, learn lessons, and see how to integrate it.
- Prove a solution / startup.
- Use of Rubix, Ethereum or other platforms.

Integration

- Integration of Blockchain processing with information systems.
Do you have any question?
Credits is a Blockchain infrastructure provider offering a Platform-as-a-Service (PaaS) with tools for building secure and scalable Blockchains to power enterprise applications. The Credits platform enables enterprises to quickly and easily build robust Blockchains that address the challenges of establishing provenance, authentication and reconciliation faced by many industries. The Credits framework is purpose-built to be seamlessly and securely interoperable with other legacy systems and Blockchain providers.

THE CREDITS ADVANTAGE – The Credits platform offers all the benefits of Blockchain technology, enabling a wide range of scalable, enterprise applications because it is:

INTEROPERABLE
Interact and connect with other Blockchains, legacy and third-party systems. Use data from any source while removing potential duplication.

CUSTOMISABLE
Customise access rights to individual data elements enabling a greater degree of flexibility and control.

ENTERPRISE-READY
Process high volumes at near real-time.

EASY TO USE
A range of tools, modules and support to easily develop and deploy applications.
The Credits platform enables enterprises to quickly and easily build robust Blockchains that address the challenges of establishing provenance, authentication and reconciliation faced by many industries. This positions Credits to become a market leader in Blockchain technology.

**IDENTITY**
Creating encrypted digital identities to substitute dozens of usernames and passwords while offering greater security features would save enterprises, institutions, governments and customers, time, energy and money. A golden record for identity which would work not only at a bank level but across the globe in all electronic environments.

**FINANCIAL SERVICES**
The Credits Blockchain platform is based on a cryptographically secured distributed ledger which enables financial services to automate, speed up and simplify the processing of any asset class whilst reducing settlement, counterparty and custodial risk. Credits is working with global payment and capital market institutions.

**GOVERNMENT**
Credits has been working in direct partnership with the Isle of Man Government on many varied use cases. A great deal of government services can benefit directly from Blockchain technology and for Credits being able to showcase this has now attracted other government and institutional interest.
USE CASE EXAMPLE: FEDERATED ‘KNOW YOUR CUSTOMER’

Know Your Customer (KYC) is one of the most painful, manual, and expensive processes plaguing Financial Services today. This is largely caused by a combination of extreme duplication of process (from forced 1-to-1 verification in a many-to-many world), expense associated with manual process, and fundamental inability to truly verify physical documents online. As a result, we are seeing immense interest to engage on this project.

KYC is a necessary layer to any regulated financial services product and will serve as an underlying layer for most use cases built on top of our platform.

As a result, identity is one of the few verticals we are spending a substantial amount of time exploring and building out solutions directly with partners and customers.

**BLOCKCHAIN**
- Use the Blockchain as a more modern form of PKI.
- Composable, interoperable, and portable proofs of identity.
- Validity of Proof of Identity doesn’t weaken over repeated use.

**IDENTITY ISSUERS**
- Traditional KYC validation process augmented with Blockchain technology.
- Establish revenue streams based on verifying an individual’s or organization’s identity and providing proof of identity when authorized.

**ADVANTAGE OVER LATENCY**
- Less ambiguity over validity.
- Instant, cheap, secure, portable.
- Removes duplication.
- Focuses on outcome, not process.
- Retain pseudonymity, while attaining compliance.
+ First public service to use DLT

+ Credits and IoM have created a blockchain registry for companies on the IoM

+ Registry highlights potential government use cases using blockchain

+ IoM pilot phase being publicly released later this quarter
SKYSCAPE CLOUD PARTNERSHIP

+ Skyscape is the number one provider of cloud services to UK Government & public sector

+ Strategic partnership to deliver Credits BaaS via Skyscape infrastructure

+ Skyscape is used by government departments, including central government, local government, health care & more
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PANEL DISCUSSION

How to go from hype to prototype and start building proof of concepts?

Moderated by Sebastien Genco, Senior Manager, Deloitte Luxembourg
PANEL DISCUSSION

ERIC PISCINI
Global Blockchain Lead
Deloitte US

ERIC BENZ
COO
Credits

LAURENT MAROCHINI
Co-Chair of the Blockchain Steering Group
ALFI
THANK YOU

- Reimagining Core Systems
- Internet of Things: From Sensing to Doing
- Augmented & Virtual Reality Go to Work
- Social Impact of Exponential Technologies
- Blockchain: Democratized Trust
- Autonomic Platforms
- Right-Speed It
- Industrialized Analytics
AND SEE YOU ON THE 12th OF OCTOBER!