Blockchain Technology for Employee Benefits

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Part 1
Emerging Technologies and Blockchain
Blockchain Offers Several Benefits

Many people are burdened by many pain points that can be solved with Blockchain technology

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<th>Employer Pain Points</th>
<th>Blockchain Benefits</th>
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| ❖ **Huge Volumes of Personal Data** can be handled more securely with a blockchain    | **Automatic Execution of Underwriting & Claims**
| ❖ **Manual data gathering process** can be labor-intensive and susceptible to human error | Underwriting and claims handling can be executed automatically by “smart contracts” that dramatically improve accuracy, increase speed, and reduce costs |
| ❖ Beneficiaries are frequently forced to undergo a series of **time-consuming activities** around basic claims | **Improved Customer Onboarding**
| ❖ **Fraud** accounts for 5-10% of claims costs for US insurers and costs $80B per year across all lines of insurance | Blockchain can facilitate a fast and simple customer onboarding process. It enables know-your-customer (KYC) data to remain secure yet easily accessible |
| ❖ Employers are burdened with **high administrative costs** associated with complying with stringent regulations | **Automatic Fraud Detection and Reconciliation**
| ❖ Data is frequently **stored in silos** across different parts of the insurance company, making it difficult to access | Blockchain technology can be leveraged to automatically detect fraud, perform reconciliation, and resolve disputes; all without human intervention |
| ❖ **Efficient and Accurate Reporting**                                                                                       | **Efficient and Accurate Reporting**
| ❖ **Real-time Transaction Settlements**                                                                                       | Blockchain’s reliance on to immutability of data sources results in faster and more accurate reporting due to complete, consistent, timely, and widely available data |
|                                                                                                                                   | **Real-time Transaction Settlements**
|                                                                                                                                   | All transactions between insurance companies and their intermediaries (e.g., independent agents) can be settled near real-time |
Blockchain Has a Strong Value Proposition in the Many Areas

“According to the FBI, fraudulent claims cost . . . insurers more than $40 billion per year. To . . . detect identity fraud, blockchain can be used as a . . . distributed registry with external and customer data.” – McKinsey

“Personal auto insurers could save $21 billion a year through lower costs, which can be realized through application of blockchain-enabled smart contracts.” – Capgemini

“58% of employers have discovered outright lies on employee resumes, 86% of employees misrepresented facts or experiences” – Deloitte

“The path to broad blockchain adoption looks strikingly well paved. Gartner Inc. projects that blockchain’s business value-add will grow to $200 billion by 2025.” – Deloitte

“Blockchain could be one of the most disruptive innovations since the advent of the internet.” – McKinsey
Part 2
The Building Blocks to the Blockchain
Blockchain Stems From Advances in Technology

Databases

Encryption

Computers

E-commerce

Blockchain
Part 3
What Exactly is a Blockchain?
What Does it Do?
Blockchain Fuses Database With Network and Establishes Trust

Blockchain is a distributed database and shared ledger that maintains a continuously growing list of chronologically added records called blocks. In most blockchains new blocks and the data within (transactions, smart contracts, and so forth) are confirmed and verified through a decentralized consensus process called mining. This verification process removes intermediary validation and establishes trust without the use of a centralized authority.

**Blockchain**

- Adding anything to ledger is permanent
- Solves double-spending problem
- Establishes trust and reduces dependencies, which:
  1) Increases security
  2) Tears down walls
  3) Speeds up transactions
  4) Improves privacy
How the Blockchain Process Works

1. John wants to send a bitcoin to Jane.

2. The pending transaction is broadcast to the network.

3. Every 10 minutes, miners combine pending transactions, like John and Jane’s, into a block.

4. Miners race to solve a computational puzzle. Miners reach consensus and approve the block. The winning miner receives new bitcoins.

5. The block is added to the blockchain.

6. Jane receives the bitcoin from John.
Public, Private and Hybrid Chains

**Public blockchain:** A public blockchain is a platform where anyone on the platform would be able to read or write to the platform. This is a fully decentralized blockchain.

**Private blockchain:** A private blockchain allows only the owner to have the rights on any changes that have to be done. This could be seen as a similar version to the existing infrastructure wherein the owner (a centralized authority) would have the power to change the rules, revert transactions, etc. based on the need.

**Hybrid (or consortium) blockchain:** A consortium blockchain would be a mix of both the public and private. Wherein the ability to read and write could be extended to a certain number of people/nodes. This could be used by groups of organization/firms, who get together, work on developing different models by collaborating with each other. Hence, they could gain a blockchain with restricted access, work on their solutions and maintain the intellectual property rights within the consortium.

We are here
# How Blockchain Will Change Financial Services and Benefits

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<tr>
<th>What does the blockchain offer?</th>
<th>What could this mean?</th>
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<tr>
<td>• Immutability</td>
<td>• Audit trail</td>
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<tr>
<td>• Decentralized Consensus</td>
<td>• Automated Processes</td>
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<td>• Security</td>
<td>• Potential for Self-sovereign Identity</td>
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<tr>
<td>• Trusted Process</td>
<td>• Risk Registries</td>
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<tr>
<td>• Smart Contracts</td>
<td>• Faster Transactions</td>
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<tr>
<td>• Other</td>
<td>• Other</td>
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Blockchain Can Help With Financial Services and Benefits Pain Points

**Customer Pain Points**
- Poor Customer Experience
- High Premiums
- Slow Entry Into Emerging Markets
- Weak Product Innovation

**Company Pain Points**
- High Administrative Costs
- Fragmented Data Sources
- Manual Processes
- Fraud Prone
- Stringent Regulation

**Common Themes**
- Automation
- Improved third party integration
- More extensive market reach
- Greater efficiency
Benefits-Related Applications

- Best Blockchain application characteristics
  - Longitudinal process, many people involved, can’t change, privacy needed

- Examples:
  - Smart contracts for pension plans—event triggers
  - Academic credentials in hiring—record
  - Access—transfer funds seamlessly
  - Claims—faster, smoother, approvals, payouts
  - Less manual processing for many tasks
Part 5
The RiskBlock Alliance
The Institutes RiskBlock Alliance

An industry-led consortium unlocking the potential of blockchain within risk management and insurance (for now)

*RiskBlock™ provides the building blocks for your organization’s leap into blockchain*

**Future Proof and Interoperable**
- We support the foundation of a “build once, use many” approach

**Unlimited Flexibility**
- We develop open-source framework upon which to build competitive advantage

**Business Issue Solutions**
- We make decisions based on your business strategy as opposed to technical details

**Simple Scalability**
- We promote an extensible foundation through standardization of the lexicon
More Information

More information available here:
http://www.theinstitutes.org/blockchain

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Thank you!
Questions?