The Institutes RBA Alliance

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Blockchain For Insurance Overview
Why Blockchain or DLT for Insurance?

**Pain Points**

**Insured**
- Poor Customer Experience
- High Premiums
- Slow Entry into Emerging Markets
- Weak Product Innovation

**Insurer**
- High Administrative Costs
- Costly Intermediaries
- Fragmented Data Sources
- Manual Processes
- Fraud Prone
- Stringent Regulation

**Benefits**

- Increased Automation through Smart Contracts
- Permissioned Data Sharing, Automatic Updates
- Streamlined Access to Customer Data
- Increased Trust and Auditability
- Lower Costs
- Improved Record Keeping
Client Benefits

**Increased Efficiency**
Eliminates duplicative processing so that processes can be done once, rather than multiple times by both the carriers and distributors. Streamlined processing can be done in real-time, minimizing transaction completion times, and providing complete transparency to all parties including the end customer.

**Reduced Risk**
Blockchains contain a certain and verifiable record of every single transaction ever made. This mitigates the risk of double-spending, fraud, abuse, and manipulation of transactions. Blockchain security is considered the best in the world globally. In addition, there are strong controls for what data is transparent to other parties, and which is held proprietary. Compliance monitoring can be controlled on a much more granular level.

**Improved Customer Service**
In the insurance batch transactional world, the Distribution Channel has little to no insight into what transactional status is at the Carrier, and the End-Customer has no transparency at all. Blockchain brings the flexibility for all to know instantly the status of any process or transaction by all interested parties. It also enables much more self-service capability by the end customer, reducing the need for call center support personnel.

**New Market Opportunities**
Once the common Blockchain foundation is in place, and select applications are built on top, it will be much easier to bring new products to markets not yet served. These processes will occur much quicker, because of the shared nature of the Blockchain.

**New Delivery Models**
New delivery models such as direct-to-consumer will be greatly simplified through the implementation of Blockchain. Because of the universal access capability, new products can be made available to a wider set of delivery models such as Broker/Dealers, BGAs and Bank Channels.

**Improved Market Position**
Blockchain is an access equalizer for all participating firms. The applications built atop the blockchain allow forward thinking organizations to shine. Aggressively pursuing the development of new and innovative applications on the Deloitte model will enable firms to leverage their investment in innovation to improve their market position.
RBA Overview
RBA Alliance US P&C Launch

**July 2016**
RBA Thought Leadership Begins

**February 2017**
TI Board Requests Launch of Four Working Groups Members Join

**December 2017**
POI Minimum Viable Product with Nationwide

**April 2018**
PSP’s On-boarded

**June 2018**
Framework and Use Case Development Begins

**December 2018**
Engagement of Path to Production Cohort 1

**December 2016**
Recommendations on Blockchain Consortium Circulated to TI Board

**June 2017**
40 Companies Involved. Four POC’s completed. RBA formation approved

**January 2018**
Use Case Committee and Working Groups kicked off Technical Partners selected

**May 2018**
PSP Contracting Complete DLT Platform Selected Use Cases Awarded to PSP’s

**September 2018**
Test version of MVP/MVN completed Canopy 2.0 Framework

**February 2019**
• Demonstrated POI and FNOL production ready use cases
• Completed ROI study and will be published
RBA Alliance US L&A Launch

**September 2017**
- LIMRA Blockchain Advisory Council formed
- LIMRA & RBA Alliance signed memo of understanding

**March 2018**
- RBA introduced to LIMRA Blockchain Advisory Council

**May 2018**
- RBA & Deloitte facilitate 2-day ‘Lab’ @ LIMRA headquarters with 18 LIMRA member companies to identify initial Use-Case opportunities

**October 2018**
- LIMRA Blockchain Advisory Council Meeting

**September 2018**
- LIMRA and RBA advance from MOU to formal contract – appointing LIMRA as L&A, Retirement and Group insurance administrator.
- LIMRA & RBA announce Mortality Monitor as L&A sector inaugural Use Case

**December 2018**
- Mortality Monitor Working Group commences
RBA Components

**Non-Profit Consortium**
- Carriers, Brokers & Reinsurers
- Industry Organizations
- Government Organizations

**Standardized Framework**

**Use Case Development**
- Universal Applications Built By RBA Software Factory Available To All Members
- Proprietary Applications Built By 3rd Parties or Members Who Want To Retain Their IP While Still Having Access to Members
Participants in the RBA Alliance

Providers
- Accenture
- R3
- C-RDA
- Deloitte
- EY
- Capgemini

Civics
- ...to be announced soon

P&C Members
- Munich RE
- State Farm
- AMERISURE
- FARMERS INSURANCE
- ASSURANT
- EVEREST
- SELECTIVE
- BB&T
- ARGM
- Erie Insurance
- Marsh & McLennan Companies
- GEICO
- Travelers
- W.R. Berkley Corporation
- Ohio Mutual Insurance Group
- The Hartford
- CNA
- Liberty Mutual
- Renaissance Re
- CHUBB
- Penn National

L&A Members
- John Hancock
- USAA
- AMERICAN FIDELITY
- AMERICAN FAMILY
- Nationwide
- The Hartford
- Horace Mann

Non-Profits
- LIMRA
- BITA
- American Insurance Association
- RIMS
- PCI
- ACORD

Collaborators
- ...to be announced soon

The Institutes – RBA Alliance
Canopy Overview
Benefits of Canopy

Canopy leverages a permissioned ledger for recording business transactions with trusted parties

**REAL-TIME TRANSACTIONS**
Canopy optimizes workflows and enables the sharing of previously siloed data necessary to triage and communicate, in real-time, across the insurance industry.

**NOTARIES**
No double spending with the potential for transaction validation across different consensus algorithms.

**SEMI-PRIVATE LEDGER**
The need for consensus across all parties in the network has been limited between the participants of a transaction. This architecture affords scalability and data privacy.

**REVERSIBILITY**
Canopy allows for failed contracts to be disputed by entities involved in the transaction.

**PERMISSIONED NETWORKS**
All code contracts are backed by a legal attachment. This makes transacting parties aware of whom they are transacting with.
Canopy 1.x – 2.x

2017

• Canopy 1.0 – Limited production

2018-2019

Focus on Adoption

• Application Programming Interface
• Canopy 2.1 – Minimum Viable Network (In progress)
• Canopy 2.2 – Production deployment (Expected early 2019)
Canopy 3.0

Focus on Adoption

- POI (BUILD)
- FNOL (BUILD)
- Subrogation (WORKING GROUP)
- Parametric (WORKING GROUP)

Focus on Features

- Multi-Ledger
- 2019 Use Case (BUILD)
- 2019 Use Case (BUILD)
- 2019 Use Case (BUILD)
- 2019 Use Case (BUILD)

- IoT
- Analytics

2018 - 2019

• Application Programming Interface
• Canopy 2.1 – Minimum Viable Network (In progress)
• Canopy 2.2 – Production deployment (Expected early 2019)

2019 - 2020

- 2020 Use Case (BUILD)
- 2020 Use Case (BUILD)
- 2020 Use Case (BUILD)
- 2020 Use Case (BUILD)

2020

- Module 3
- Module 4
Use Cases
## Blockchain and DLT Use Cases Range Across Entire Insurance Value Chain

<table>
<thead>
<tr>
<th>Products, Pricing &amp; Distribution</th>
<th>Underwriting &amp; Risk Management</th>
<th>Policyholder Acquisition &amp; Servicing</th>
<th>Claims Management</th>
<th>Finance, Payments &amp; Accounting</th>
<th>Regulatory &amp; Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parametric Insurance</td>
<td>Provenance</td>
<td>Policyholder Acquisition</td>
<td>First Notice of Loss Data Sharing</td>
<td>Subrogation</td>
<td>Motor Vehicle Proof of Insurance</td>
</tr>
<tr>
<td>Oracle aggregation service</td>
<td>Data Sharing and Risk Registries</td>
<td>Document Reconciliation (Placement Documentation)</td>
<td>Asset Transfer (Certificate of Title–IoT)</td>
<td>Workers Comp Bill Review and Medical Claims Processing</td>
<td>Real-time Regulatory Reporting</td>
</tr>
<tr>
<td>Telematics or IoT-Based Use Cases</td>
<td>Self-sovereign IDs Linked to Insurance</td>
<td>Surety Bonds (verification/validation)</td>
<td>Worker’s Compensation (EMR)</td>
<td>Reinsurance (Premium/Loss Cessions/Execution of Treaties)</td>
<td>Agent/Broker Licensing</td>
</tr>
<tr>
<td>Insurance for transactional purchases</td>
<td>Digital Twinning</td>
<td>Certificates of Insurance</td>
<td>Fraud Registry</td>
<td>Technical Accounting (maintaining/sharing of financial records)</td>
<td>Sovereign ID (KYC/AML)</td>
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<td>Microinsurance Mobile Insurance for Developing Countries</td>
<td>Marine Use Cases</td>
<td>Policy Cancellation and Non-Payment (use of smart contract to trigger)</td>
<td>Multi-layer claims settlement</td>
<td>New Forms of Raising Capital (Crowd Sourcing)</td>
<td>Auto Titles</td>
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<td>Peer-to-Peer Insurance</td>
<td>Creation of a Repository of Truth for Underwriters</td>
<td>Onboarding and Policy Administration/Customer Service Requests</td>
<td>Marine Claims Management</td>
<td>Multiple Payees</td>
<td>Education Licensing</td>
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This Year’s Use Case Goal: 19 Use Cases This Year (4 Underway, More to Come)

<table>
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<tr>
<th>Problem Addressed</th>
<th>Solution Provided</th>
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<td><strong>Proof of Insurance</strong></td>
<td>▪ Institute electronic safekeeping ▪ Enable real-time access to information</td>
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<td>Insurance policy validation is performed both physically and digitally, but the process can be complex and costly</td>
<td>▪ Expand parametric insurance offerings ▪ Automate data collection and contract execution</td>
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<td><strong>Parametric Insurance</strong></td>
<td>▪ Optimize information flow and notifications ▪ Facilitate data sharing ▪ Act as immutable record</td>
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<td>Insurance product that is triggered when a low-frequency, high-severity event occurs; only represents a small portion of the P&amp;C market, but has large potential to expand</td>
<td>▪ Facilitate netting of payments ▪ Optimize costs and streamline process</td>
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<tr>
<td><strong>First Notice of Loss</strong></td>
<td>▪ Facilitate netting of payments ▪ Optimize costs and streamline process</td>
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<tr>
<td>Initial claim made to insurance provider following the loss, theft, or damage of an insured asset; process can be made simpler</td>
<td>▪ Optimize information flow and notifications ▪ Facilitate data sharing ▪ Act as immutable record</td>
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<td><strong>Subrogation</strong></td>
<td>▪ Facilitate netting of payments ▪ Optimize costs and streamline process</td>
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<tr>
<td>Exchange between insurers to collect money from the party legally responsible for a loss; opportunity for process to be streamlined</td>
<td>▪ Optimize information flow and notifications ▪ Facilitate data sharing ▪ Act as immutable record</td>
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**Potentially Improved Operational Areas of P&C Value Chain**

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</table>
Premium Tax Automation

Current Manual Process

5% → Nationwide® × = ?%

Automated With RBA

5% → Nationwide® × = 10%

10% vs. 5%
Potential Insurance Use Cases

**Life & Annuity**
- Intermediary Elimination
- Improving Back-Office Operations
- "Simplified In-Force Transactions"
- Automated App Triage
- Health Records
- Client Onboarding
- Insurance "smart contracts"
- Near Real-Time Data/Dynamic Pricing
- New Policy Applications
- Scanned Documents For Associated Transactions
- Settlement Information For Transactions
- Additional Policy Payments
- Disclosures Associated With Transactions
- Product Exchanges
- Product Data and Associated Rider Data
- Agent Profile Data
- Client Profile Data
- Product and Agent Certifications
- Product Illustrations
- Agent Compliance Information
- Claims Data (Life Insurance Only)
- Policy Documents For Delivery To End Client

**Property & Casualty**
- Proof of Insurance
- First Notice of Loss
- Parametric Insurance
- Subrogation
- Fraud Prevention
- Automated rule-based claim processing
- Claim assessment
- Claim payment
- Improved transparency in compliance
- Improving value-added service capabilities for brokers / agents
- Innovation of P2P Insurance
- Providing history of assets / client events (KYC)
- Loyalty Programs
- Enhancing direct sales opportunities
- Better placement of non-standardized or specialized risks
- Underwriting among multiple insurers / co-insurance
- Underwriting / risk assessment
- Quoting and premium collection
- Online Insurance "Navigators"
- Fine Art Tracking

**Reinsurance**
- Contracts & Claims
- Operating Entity Standardization
- Global Risk and Financial Management
- Transactional Accounting
- Cat Bonds and ILWs
- Reinsurance Facilities and Exchanges
- Multi-Layer Application/Burn-Down

**Multi-Line/Miscellaneous**
- Peer-to-Peer Insurance
- Group Formation
- Predictive Risk front end to Reinsurance Exchange
- Investor Program
- Group Financial Activities
- Behavior Based/Risk Based Need
- Increase the types of insurance covered by online insurance aggregators
- More personalized (differentiated) quote and coverage support
- Micro Insurance
- Identity Management
- Surety Bonds
- Group Insurance
- Workers Comp

**Regulatory/State Gov**
- Premium Tax Automation
- Uninsured Motorist
- Auto Title
- Regulatory Reporting
- Premium Tax Automation
- Uninsured Motorist
- Auto Title
- Regulatory Reporting
Questions