



# Blockchain Technology & Related Implications

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# 01. Blockchain Applications



# Insurance companies are exploring Blockchain across multiple areas

Blockchain efficiencies within the Insurance industry are initially targeting the settlement and operations areas.

	<b>Transparent Claims Process</b>	<b>Allianz</b> - is working with Everledger to create a blockchain-based system to allow for a claim settlement process where insurance companies, owners, claimants, and law authorities can access a distributed ledger for an efficient claim-handling process.
	<b>Smart Insurance Contracts</b>	<b>Allianz</b> – is exploring smart contracts as a means to handle catastrophe swaps and bonds. The technology could boost marketability of the financial instruments that allow issuers to guard against huge potential losses following a major catastrophe and are triggered under predefined parameters.
	<b>KYC Platform</b>	<b>Lloyds and Manulife</b> - A blockchain solution for digitizing and validating customer information where a notary networks can verify the identity of the customers and store it in a shared ledger. Any new customer coming to the network will submit his identity proof and the notary will be able to validate the data by comparing it with the government databases which will be executed outside the network.(Tradle KYC solution)
	<b>Payments</b>	<b>Mastercard</b> - cross border B2B payments and remittances. Blockchain based payments and smart tags for predefined events under insurance policy allows for increasingly eased reimbursement experience as well as speed of funds recived. (Ripple payments blockchain solution)
	<b>Counterfeit Products</b>	<b>Swiss company</b> - counterfeit product identification and source tracing. Blockchain based solution that provides improves anti counterfeiting measures by tracking a product throughout the supply chain. (Blockverify anti-counterfeit solution)
	<b>Fraud &amp; Theft Detection</b>	<b>Major certificate house plus major insurance company</b> out of London, developing a blockchain solution to track, trace and record any theft or fraudulent activity on a blockchain in order to protect consumer against buying stolen product in good faith. (Everledger is permanent register for diamond certification and related transaction history)
	<b>Agent Licensing</b>	A blockchain solution for digitizing and validating agent information where a networks can verify the identity of the brokers and agents and store it in a shared ledger in order to ensure that insurance policy are executed with valid insurance brokers who are in good standing. (Tradle Smart Data solution)

# Insurance Value Chain



Insurance Products

Underwriting

Servicing

Claims

Accounting & Payments

Process

Policy Construction

Risk Assessment

Sales Execution

Policy Administration

Account Coverage

Incident Management

Claim Submission

Investigation

Settlement

Activity

- Insurance contract
- KYC
- Negotiate Terms

- Risk assessment
- Onboarding
- Underwriting of contract

- Receive information
- Process contracts
- Enforce contract terms

- File claim
- Investigate incident
- Provide assessment

- Reimburse funds
- Update accounts
- Validate payment

Key Issues

Low primary and secondary sales visibility

Customer experience is driven based on processing experience

Insurance data is mostly paper based and inefficiently shared within organizations

Manual processing

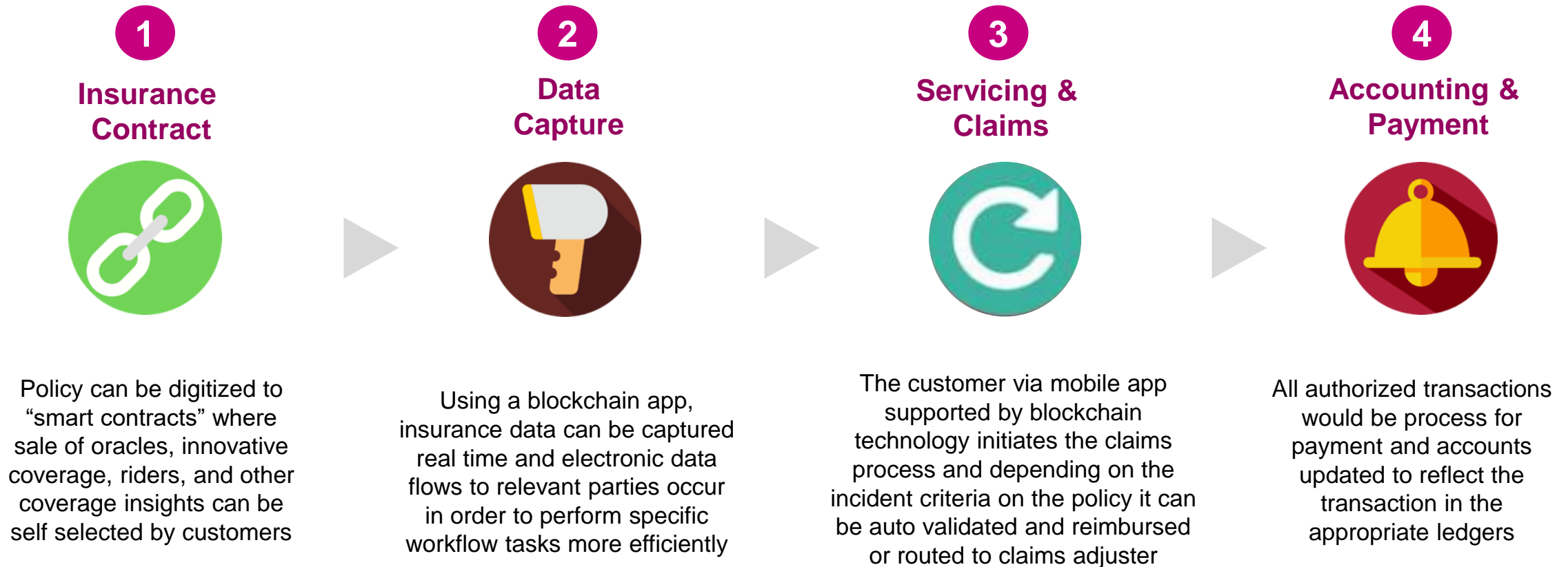
Insurance contracting is long and tedious

Lengthy process for incident validation

Delayed payments

Broker / Agent licensing and contract review are manual

# Blockchain claims process can drive efficiencies across Insurance industry





1

Insurance Contract

# All details are logged onto blockchain for claims processing

A

Customer



- Recently purchased an Auto Policy on blockchain smart contract for her new car

B

Incident Occurrence

- Due to recent accident, customer submits the incident via her mobile phone



- The authorities were informed and filled the incident report



C

Claim Submission



- Customer files a claims form on line for reimbursement of damages sustained to new car

2

Data Capture

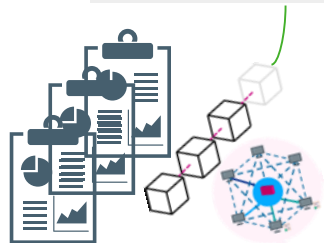
# The data submission are checked against policy riders



**D**

## Review Policy Riders

- Review customer incident claim against policy riders for authorized events and payment instructions



**E**

## Submit Claim for Validation



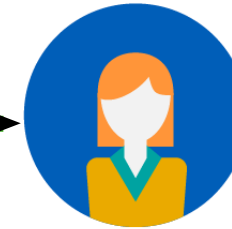
- Claim submission will either be handled by auto rule and move to settlement or will be routed to insurance agent for further validation



- insurance agent reviews and authorizes claim

**F**

## Claim Receipt confirmed



- Claim receipt confirmed and claim settlement instructions captured





3

# Claim data is processed for payment



Servicing & Claims

G

### Dispatch Claim for Processing

- Review approved claim and dispatch for payment instructions



H

### Approve Payment



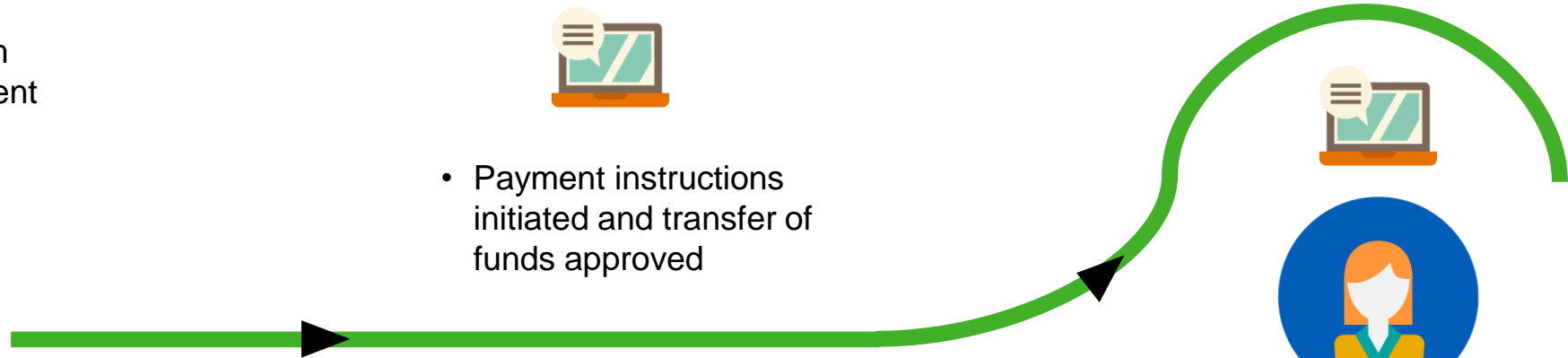
- Payment instructions initiated and transfer of funds approved

I

### Receipt of Payment Confirmed



- Claim receipt confirmed and claim settlement instructions captured



# Claim payment made and information recorded



J

Bank Transfers Funds

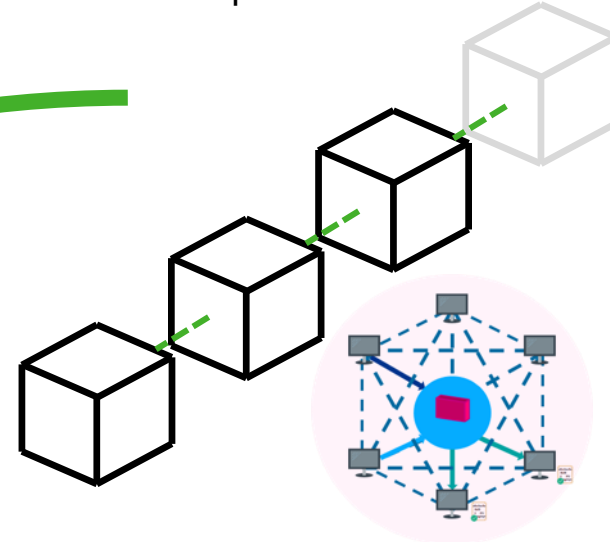


- Payment instructions initiated and transfer of funds performed

K

Update Blockchain

- Payment information updated on blockchain nodes and transaction ledger information updated



# The solution will drive benefits across the Insurance life cycle



Insurance Products



Underwriting



Servicing



Claims



Accounting & Payments



Operational Benefits

<ul style="list-style-type: none"> <li>Enhanced product traceability and accuracy</li> <li>Increased consumer demand for data visibility</li> <li>Improve process interaction with other parties</li> </ul>	<ul style="list-style-type: none"> <li>Better data quality/consistency and fewer IT systems to manage</li> <li>Reduce fraud and processing costs</li> <li>Improve customer experience and streamline onboarding</li> <li>Faster response time</li> </ul>	<ul style="list-style-type: none"> <li>Reduced manual processes</li> <li>Target new services and product to new consumer</li> <li>Product authenticity and claims validity</li> </ul>	<ul style="list-style-type: none"> <li>Faster payments</li> <li>Automatic enforcement of payments upon occurrence of pre-defined conditions</li> <li>Shared transaction ledger</li> </ul>
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Value Impact

<ul style="list-style-type: none"> <li>Increase sales</li> <li>Lower policy cost</li> <li>Optimization of vendor interaction</li> </ul>	<ul style="list-style-type: none"> <li>Reduce technology costs</li> <li>Lower operational costs</li> <li>Improve information quality</li> </ul>	<ul style="list-style-type: none"> <li>Reduce time in administration and servicing of policy life cycle</li> <li>Reduce compliance costs</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced consumer satisfaction</li> <li>Increase payment speed</li> </ul>
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## **02. Selected Credentials**





# Smart contracts in insurance policy

## Smart Contracts

### Concept

- Self-executing smart contract insurance products.

### Objectives

- To allow customers to engage in selecting insurance products in an automated way with the convince to do it from anywhere they want.
- To eliminate the need for multiple documents and long application process.
- To digitize insurance contracts in order to capture contract terms and information in order to significantly improve data quality and automate the flow of information to downstream processes.

### Current State example







- High level of manual process in identifying insurance contract and contract parameters suitable for client
- Once the contract is negotiated it requires time to gather the information and perform checks to validate the information against third party databases
- Historically poor customer interactions through slow client onboarding process
- Underwriting the policy may require multiple signatures to secure execution of insurance policy

### Future State Smart Contracts



### Some possible Smart Contract examples in Insurance

 <b>Smart Travel</b>	 <b>Smart Life</b>	 <b>Smart Home</b>	 <b>Smart Road</b>
<ul style="list-style-type: none"> <li>• Frequently delayed flights / bags</li> <li>• Trip cancellations due to unforeseen circumstances</li> </ul>	<ul style="list-style-type: none"> <li>• Death and maturity pay-outs</li> <li>• Serious illness / injuries</li> <li>• Healthy living rewards</li> </ul>	<ul style="list-style-type: none"> <li>• Hospitalisation</li> <li>• Loss of portable devices</li> <li>• Hazard detection systems</li> </ul>	<ul style="list-style-type: none"> <li>• Cashless and fuss-free car repair process</li> </ul>

Objective Type	Current State	Blockchain Advantage
Operational Efficiency	<ul style="list-style-type: none"> <li>• Customer has to work with insurers agent to fill out application</li> <li>• The insurance policy will transfer to different parties to perform checks, risk reviews, and other administrative activity</li> <li>• Underwriting will review contract and then approve for execution</li> <li>• The insurance contract is then entered into system for processing</li> </ul>	<ul style="list-style-type: none"> <li>• A smart contract automatically executes based on programed logic</li> <li>• Smart contracts can allow for multiparty to approve execution of transaction independently</li> <li>• Escrow capability ensure the locking of funds with a mediator</li> </ul>
Business Strategy	<ul style="list-style-type: none"> <li>• New insurance contracts take time to market and close</li> <li>• Have to maintain sales team to drive sales</li> </ul>	<ul style="list-style-type: none"> <li>• New insurance products geared towards electronic automated contracts</li> <li>• Automated processing of claims</li> </ul>
Profitability	<ul style="list-style-type: none"> <li>• This is an expensive ecosystem to maintain</li> </ul>	<ul style="list-style-type: none"> <li>• The total cost of issuing new policy will be cheaper</li> </ul>



# Insurance claims for accident policy

## Insurance Claims

### Concept

- A blockchain solution using Smart Contracts to create transparent and seamless claims journey to make claims process of personal accident insurance a hassle-free experience.

### Objectives

- To allow customers to quickly file claims and to get reimbursed for out of pocket expenses.
- To eliminate the need for multiple documents and long claims application process.
- To digitize insurance contracts in order to capture contract terms and claims information to significantly improve data quality and automate the flow of information to downstream processes.

### Current State Claims Process



#### Accident Policy

#### Claim Form

- Customer purchases accident protection plan from insurer and fill out multiple documents and get health exam.
- After an incident, the customer has to call the insurer to find out if the treatment is covered in the policy.
- After the treatment the customer has to request documents from care provider and file a claim with the insurer.
- The claim is reviewed and validated by insurance company
- The payment of hospitalization is reimbursed to customer

### Future State Insurance Claims



Objective Type	Current State	Blockchain Advantage
Operational Efficiency	<ul style="list-style-type: none"> <li>• Customer has to work with insurers agent to fill out claims application</li> <li>• The insurance will review the claims with different parties to perform checks, risk reviews, and other administrative activity</li> <li>• The claims information is then entered into system for processing</li> </ul>	<ul style="list-style-type: none"> <li>• A smart contract will reduce latency in data provided to partners</li> <li>• Smart contracts can allow for automated approval of claims based on predefined criteria's</li> <li>• Escrow capability ensure the locking of funds with a mediator</li> </ul>
Business Strategy	<ul style="list-style-type: none"> <li>• The claims process take time to execute from filing to payment</li> <li>• Have to maintain sales team to lease with customers and partners</li> </ul>	<ul style="list-style-type: none"> <li>• New streamlined claims workflow for customers</li> <li>• Automated processing of claims form mobile devices</li> </ul>
Profitability	<ul style="list-style-type: none"> <li>• This is an expensive ecosystem to maintain</li> </ul>	<ul style="list-style-type: none"> <li>• The total cost of issuing new policy will be cheaper</li> <li>• Eliminate/reduce current reconciliation and settlement activity</li> </ul>



# 03. Q&A and Next Steps



# Q&A and Next Steps?



We can work with firms to strategize if blockchain is right for your organization today and what specific areas are potential candidates for use case development.



We can organize further workshops around specific questions that the firm has with respect to blockchain and facilitate a working session with internal stakeholders.



KPMG can also partner in an alliance with the firm to develop a specific use case with you in order to allow you to gain from our knowledge and deep expertise in both lifecycle workflow and blockchain solutions.



**Thank you**





**kpmg.com.mx**  
**01800 292 KPMG**  
**kpmg@kpmg.com.mx**



KPMG MÉXICO



KPMG MÉXICO



@KPMGMEXICO



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