DataArt

Insurance Innovation Enablement

New York USA
London UK
Munich Germany
Zug Switzerland

Digital Maturity in Insurance

DataArt

Evolving

- Mobile apps
- Customer and agent portals
- Paperless processing
- Integrated systems
- Big Data

Optimized

- Artificial Intelligence
- Machine Learning
- Product development and pricing from social data
- P2P business models

Mature

- Predictive analytics
- Smart homes/businesses
- Pay-as-you-go models
- Blockchain
- Drones

Digital strategy enables Agility

- New business models operationalize innovation and transform customer experience across channels
- MVP, clearly defined and well-executed, address key tech and business challenges
- Legacy re-engineering, clearly defined and well-executed, enables quick wins
- Constant innovation across the organization, people, process and technology
- Agile operating model + cloud-enabled microservices + multidimentional product management
- Advanced data and analytics in real time determines “next-best” actions to deepen customer relationships
- Business models governance enables rapid use of evolving tech
- Third-party business and IT platforms increase speed to market

Source: Earnst and Young

DataArt Approach to Insurance Innovation

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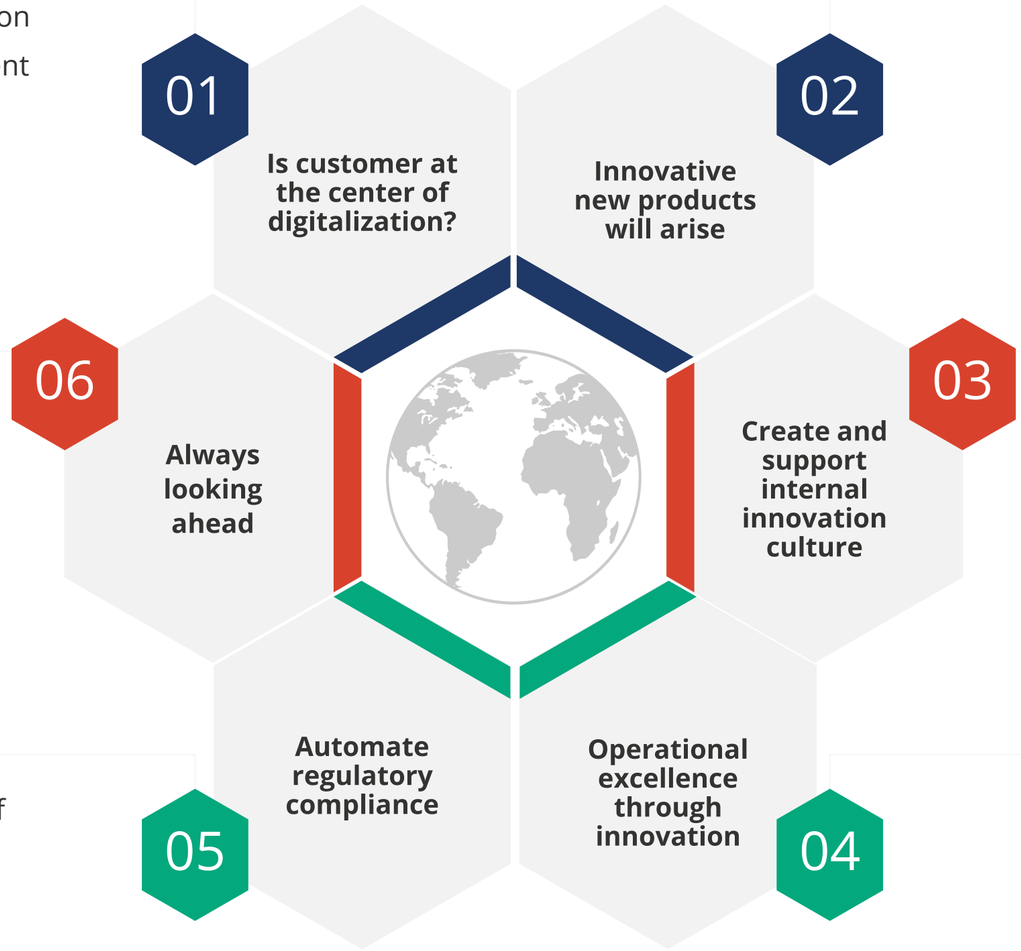
- Usage-based insurance for personalization
- Digital onboarding and claim management
- Boost digital sales
- Virtual customer assistance and robo-advisory



- Reach wider and more diverse audience
- Retain existing customers
- Diversify & generate additional revenue
- On-demand insurance, usage behavior connected Car | Health | Home
- *MVP, clearly defined and well-executed, address key tech and business challenges*

- Be the trendsetter in insurance innovation, not the follower
- Liaison between digital technology and business objectives
- Implement the technology that really enables your customer and business objectives

- Create a lean insurance organization
- Adapt to insurance market dynamics in competitive way

- Enhancement of product offerings
- Data analytics for better identification and assessment of risk
- Improvement of pricing strategies for insurance packages
- Vital for becoming customer-centric

- Achieve efficiency through automation of insurance regulatory compliance
- Minimize risk from non-compliance

Disruptive Technology Adoption in Insurance

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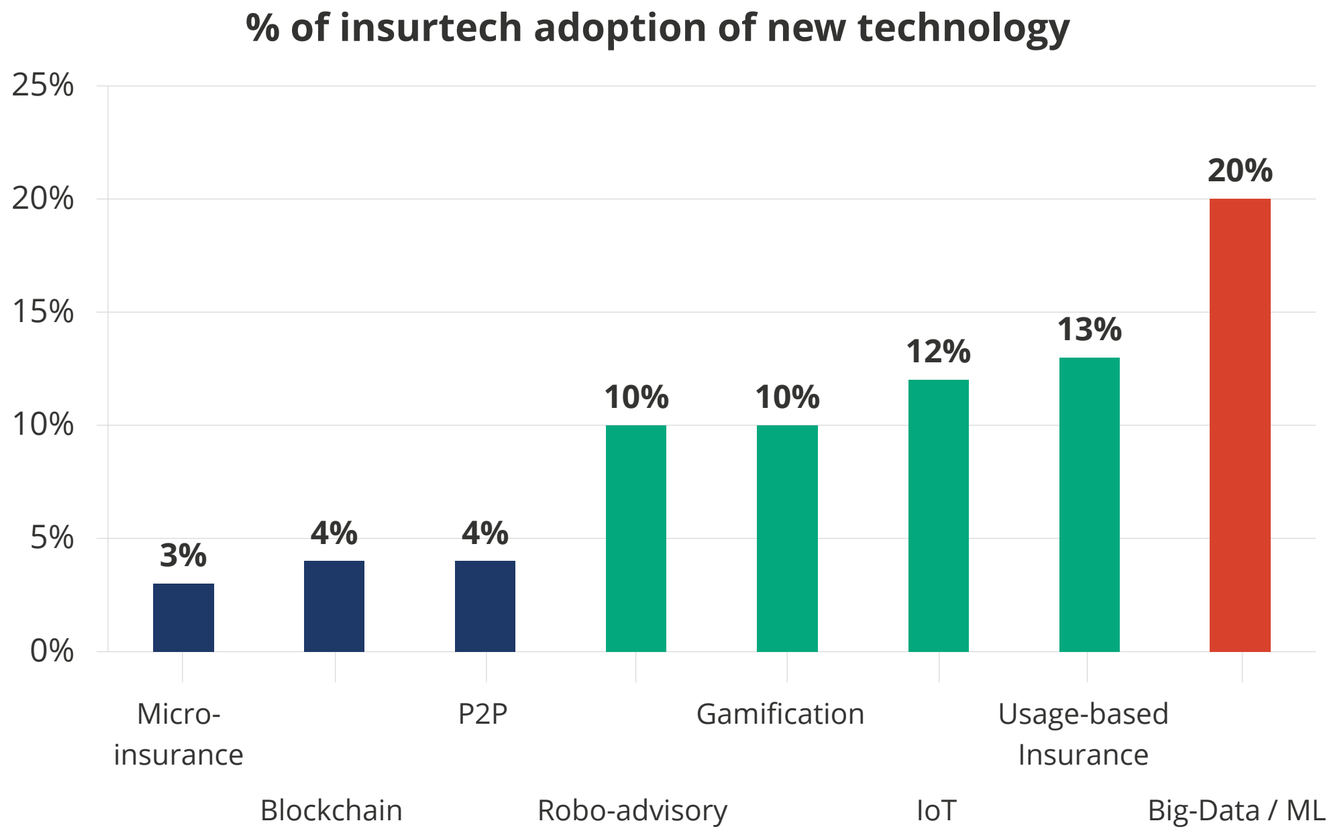
Blockchain MVPs could be combined with other disruptive technologies helping to re-visit old business models, acquire customers through new channels and create essential user experience

New Business Models:

- Microinsurance
- Usage-based insurance
- Peer-to-peer insurance
- E-aggregators



Source: McCinsey & Co

Known Insurance Industry Problems

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While on a business front insurers have been innovative across property and perils, the supporting technologies and infrastructure remain anachronistic and inefficient and in some ways reminiscent of the way business was conducted back in the 17th century! The costs of the fragmentation and inefficiencies within insurance are well documented:

- New emerging business models and solution provide customer-centric omni-channel customized and efficient products
- Inaccurate, disparate sources of data acquisition that lead to long underwriting cycles.
- Inaccurate risk profiling.
- Inefficiencies and extensive manual intervention exist across the insurance value chain ranging from contract placement to claims settlement.
- Archaic billing systems and complex billing processes lead to high reconciliation costs.
- Increased litigation risks due to ambiguity in loss conditions, assessment procedures, and claim settlement delays.
- Stringent and dynamic regulatory requirements impact several areas ranging from renewal decisioning to claims assessment.

DataArt helps to address these issues using innovative solutions, including Blockchain technology.

How Blockchain MVPs Can Help Narrow Gaps in Insurance?

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Blockchain is a foundational technology which if utilized correctly can help any business transform their core business model and address inefficiencies inherent in their business processes, legacy infrastructure etc. through a holistic approach.

- Helping insurers transform into a truly digital enterprise by integrating their entire supply chain (insurers, brokers and reinsurers)
- Streamlining inter-firm coordination and reconciliation
- Building a network of data providers to supply data related to Underwriting analysis and claims triage
- Reducing litigation risks through integration with Oracles
- Reducing manual intervention through automation & execution of several tasks via smart contracts.

While Blockchain in principle can assist in the above mentioned ways, not all platforms are built equal. Given the stringent security, privacy and scalability needs of insurers only Corda can meet the needs of insurers. Let us understand why.

Contract Placement

Claims Assessment

Real-time Invoicing

Technical accounting & Settlement

Property & Casualty Insurance

Life, Annuities & Retirement

Reinsurance

Niche Areas

Blockchain in Insurance

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DataArt can help your company put blockchain to work for your business.

Our Blockchain Center of Excellence provides a full range of consulting services, including technology research, prototyping, development and operationalization.

We actively partner with the leading players in the blockchain world and maintain expertise in the various flavors and permutations of blockchain and distributed ledger technology (DLT), including Hyperledger, Ethereum, Chain.com, and others.

We can help you to innovate through MVP process

Blockchain success stories:

- Flight delay and cancelation insurance coverage system based on smart contracts
- Welfare payment distribution platform for government and private sector agencies
- Proprietary cryptocurrency wallet for intracompany payments and transfers
- Securities issuance and transaction settlement platform
- E-proxy voting system for a settlement depository

Our Successful Stories:

Nasdaq

NATIONAL SETTLEMENT DEPOSITORY
MOSCOW EXCHANGE GROUP

GOVCOIN™

Underwriting and claims processing automation

Efficient, transparent and customer-focused claims model

Issue digital smart contracts to capture terms and obligations between insurers and clients

Streamlined data collection, efficient exchange of information

New payments model: payments through micro-transactions

Clearer visibility and risk exposure in reinsurance

Fraud detection and risk prevention

Insurance Business Case:
Contract Placement

Contract placement or policy placement put simply involves the negotiation of an insurance contract for an underlying asset (auto, home etc.) between the party desiring insurance (insured) and an insurance company (insurer or carrier).

A lot of insureds purchase insurance via a broker who could either be contracted with a single insurer (Managing General Agent or MGA) or could be working with several insurers. In the commercial insurance scenario; most insureds almost always purchase insurance via brokers.

Due to capacity constraints (how much business can an insurer write against a specific risk in a specific geography) or simply as a risk mitigation strategy; insurers might purchase reinsurance via a reinsurance broker to cover a part of the risk.

How Can DataArt Help?

DataArt

Contract placement involves multiple parties
(insureds, brokers, insurers, reinsurers) coming into consensus over the terms and conditions of a policy.

The current process is manual, involves several negotiation cycles and is inherently inefficient.

Moreover; for complex and high value insurance contracts (think Walmart buying property insurance for all of it's stores in US) a broker would typically have to "split" the risk into several manageable risks and have different insurers provide complete coverage, and each insurer may in turn reach out to a reinsurer.

The entire policy placement and subsequent servicing, billing and claims management processes are highly fragmented and involve a lot of manual intervention to track the provenance of the asset, figure out who owns each part of the policy etc.

Corda with it's unique peer-to-peer communication mechanism can streamline the entire contract placement process by seamlessly connecting the entire network of entities over a Blockchain network while keeping the data exchange secure and private. Moreover Corda with it's unique implementation of smart contracts (legal prose with contract code) is a great choice for the contract placement use case as it ensures that the legal prose i.e. contract is on the ledger and further use cases can be built off it.

MVP and Path to Future Use Cases

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A good MVP for the contract placement use case should comprise of:

01 Placement of highly complex risks

03 Focus on limited conditions example focusing only on treaty reinsurance initially

02 Connecting the network of brokers, (re)insurers & reinsurance brokers over the network by following the 80-20 rule (focusing on 20% of your counter-parties that bring in 80% of your business for the initial MVP)

04 With the MVP in place an insurer is well-set on implementing future use cases including loading the asset being insured on the ledger and tracking provenance

Insurance Business Case:
Claims Assessment

The process of validating a claim, adjudicating a claim, determining payouts and making the necessary payouts is collectively referred to as claims assessment.

At a high level, claims assessment involves the following steps:

- **Claims validation** – is the policy still active, is the product covered, is the area where the claim was reported covered etc
- **Claims Triage** – who should be assigned the claim?
- **Claims Adjudication** – what is the actual damage, determining final payout etc.
- **Claims Payout** – paying out the final claim amount
- Each step of the claims assessment process involves extensive manual intervention and cross-firm coordination.

How Can DataArt Help?

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Each step of the claims assessment process involves extensive manual intervention and cross-firm coordination. This process is typically expensive, time consuming and fraught with errors and risks as any claim wrong adjudicated could lead to a potential lawsuit.

For a complicated policy such as the one detailed in the Contract Placement example; determining which entity is responsible for the claim and the entire claim filing and settlement process is a complex endeavor and involves traversing the chain of reinsurers, reinsurance brokers, primary insurers and primary brokers to complete claims triage.

Once the contract i.e. the policy is on the ledger; the Cordapp can address the following pain points:

- Automate basic claim checks such as checking the validity of the policy, insured, loss event etc at the time of loss reporting
- Receive Oracle data to validate adjudication logic
- Calculate payout information

MVP and Path to Future Use Cases

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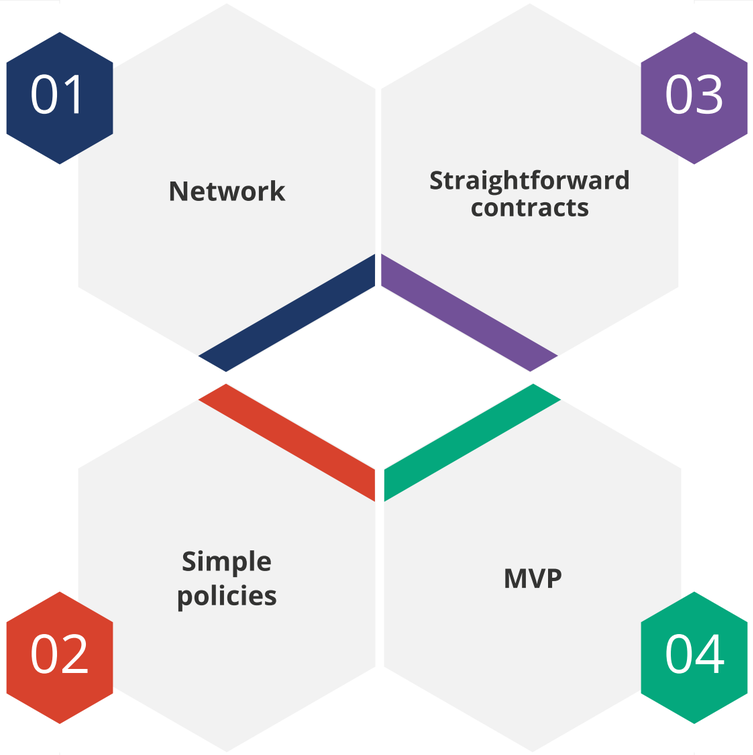
A good MVP for the claims triage use case should comprise of:

01

Connecting the network of entities involved in the payout process [brokers, (re)insurers & reinsurance brokers] over the network by following the 80-20 rule

02

Focus on simple policies versus complex structured programs initially



03

Focus on straightforward contracts such as ILW (Industry Loss Warranty) to automate the entire assessment and settlement process on the ledger

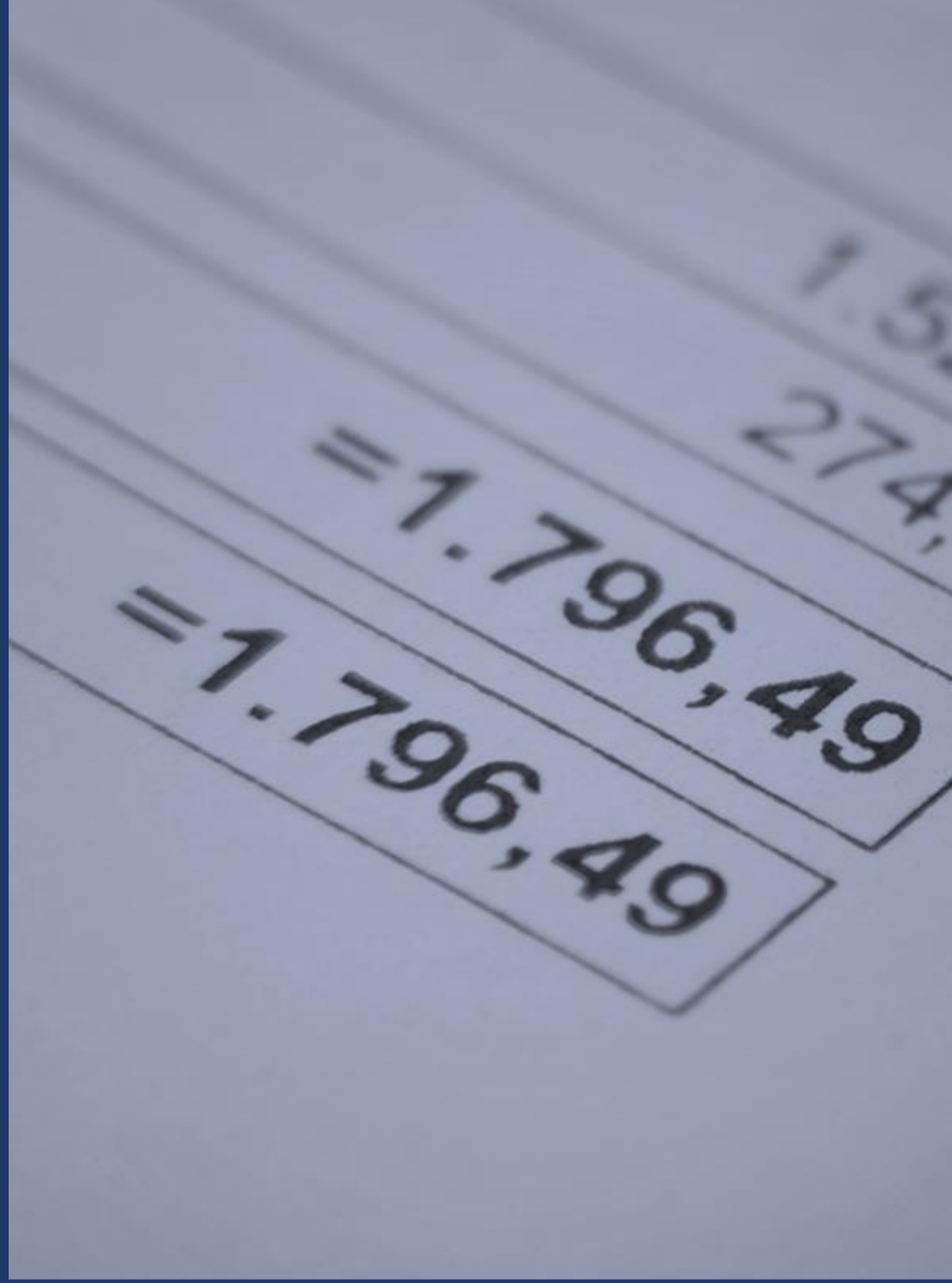
04

With the MVP in place an insurer is well-set on implementing future use cases including building a greater network of oracles for providing facts, implementing the actual payout (cash as a digital entity) on the ledger, automate the FNOL (First Notice of Loss) process through IoT device integration etc.

Insurance Business Case:
Trigger-based Invoicing

Invoicing refers to (re)insurers generating the invoice (premium to be paid in exchange for providing insurance coverage) to be paid by either the broker or the insured depending on the billing type (agency bill v/s direct bill).

Based on the billing arrangement; there could be several other nuances such as the bill generated could either be net of taxes, fees and broker commissions or exclude broker commissions.



How Can DataArt Help?

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For a complex billing arrangement; the number of entities involved in bringing together a complete invoice for the insured could be huge.

For instance in the case of a complex program with an agency bill arrangement; the broker has to receive invoices from each primary insurer and then collate them together to generate a single invoice for the insured - a costly and time consuming exercise.

To further complicate the issue; current insurers have a huge disconnect between their front office, middle office and billing systems leading to either missed / delayed invoicing or a huge investment in core system modernization and full-suite implementation to get over current inefficiencies.

MVP and Path to Future Use Cases

DataArt

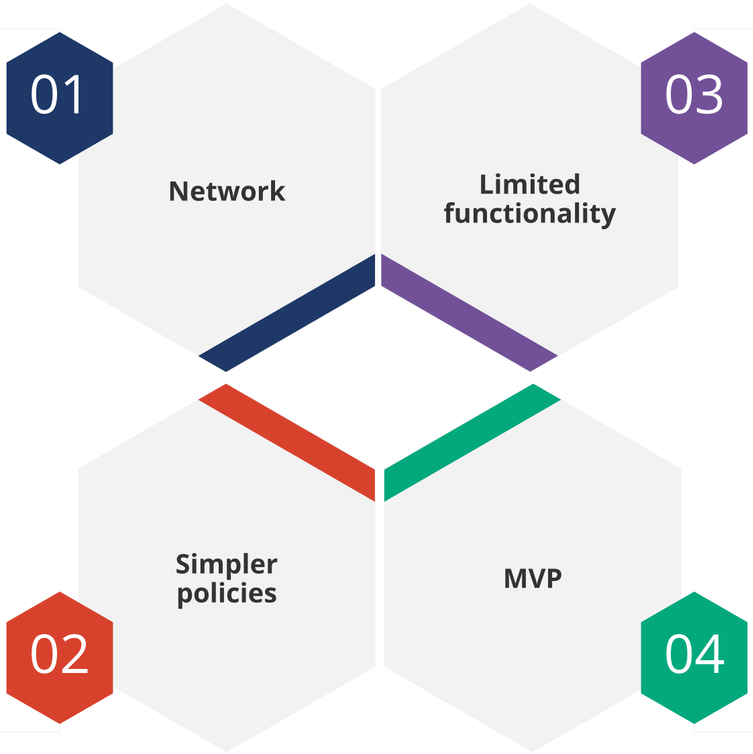
A good MVP for the trigger-based invoicing use case should comprise of:

01

Connecting the network of brokers, (re)insurers & reinsurance brokers over the network by following the 80-20 rule

02

Focus on "simpler" policies such as the ones that do not involve complex program placement



03

Focus on limited set of billing functionality - agency bill, only net of taxes, fees, broker commissions etc.

04

With the MVP in place an insurer is well-set on implementing future use cases including complicated billing types, invoice assembly and ultimately payment on top of settlement on ledger

Insurance Business Case:
Technical Accounting & Settlement

As we have learnt in previous lessons; there are several points of interaction between a broker and an insurer with contract placement and claims payout the main ones. A key challenge in broker-to-carrier interactions is how to keep track of the various records between parties in the steps between the contract (policy), accounting records, payment requests and actual payments made between bank accounts. Rarely are records completely reliable, accurate and available in a timely manner.

Technical accounting and settlement refers to the process of generating and reconciling the payment accounts with final settlement.

How Can DataArt Help?

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At present, every party keeps and reconciles their own records at each step and needs to reconcile each step with the preceding and following steps, frequently across different systems. In addition, there are often manual reconciliation processes around the existing IT systems. Costs stem not only from the process itself but also from each reconciliation activity. Mismatches result in unmatched or unallocated cash in suspense accounts.

DataArt provides a new way to address costs in both the accounting processes and the operations management activities of claims and policy administration.

DataArt can assist this process in the following ways:

- Provide a shared record of the existence of each business transaction between the counterparties, and maintain that shared record as transactions evolve over time. Any counterparty can be certain that the version and status of the contract that they are looking at is the same that every other relevant counterparty has in their records
- Superior over existing electronic messaging based implementations is that the information held regarding a transaction and its status are immediately available to both parties on a transparent and agreed-upon basis. This can facilitate high degrees of straight through processing by each counterparty
- Facilitate coordination processes across the business distribution chain

MVP and Path to Future Use Cases

DataArt

A good MVP for this use case should comprise of:

01 Connecting a simple network of brokers and insurers

02 Uploading multiple contracts on the ledger

03 Focus on limited conditions such as net settlement

04 With the MVP in place further enhancement of the product by adding more entities, complex program types, settlement conditions and ultimately settling via on-ledger payments (digital representation of cash) should be pursued

Our Disruptive Tech Capabilities

Robotics

Cloud Enablement

IoT

Big Data

Data Management

Software Design, Development, and Support

DataArt

20+ Global Locations:

USA
United Kingdom
Switzerland

EU
Eastern Europe
Latin America

3000+
consultants & engineers

10%
staff turnover rate

95%
return clients

22 years
in operation

3500+
successfully completed projects

Reliable
profitable, financially strong, fully audited

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