



POST JOINT-CUSTOMER WORKSHOP DOCUMENTATION

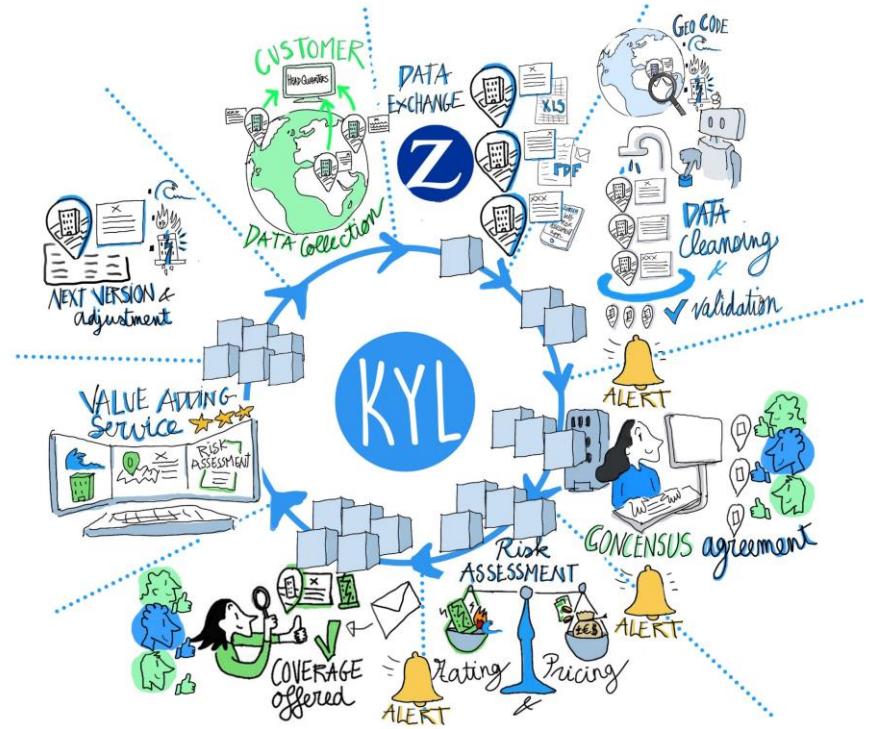


13th & 14th December 2018, Zurich Development Center
Location Data Management (LDM) / Zurich CI Blockchain



BACKGROUND ON THE WORKSHOP

- On an annual basis Zurich and its Customers have to gather information around the customers locations that ought to be insured. To gather and to validate this data is a time consuming exercise and effortful exercise.
- Therefore, Zurich invited ABB, Nestlé and Siemens to collaborate on improving the management of location data.
- During the workshop we have created a common understanding of each others Pain Points, which need to be considered when thinking of possible solutions.
- We discussed and considered whether DLT/Blockchain technologies might be a viable solution to improve the process of data handling and started to scope how a DLT prototype solution could look like.



WORKSHOP OBJECTIVES

Overall

Collaborate to improve the management of location data in the context of the insurance process.

Understand the extended use of location data in other functions and processes that deal with this data.

Wednesday (1/2 day)

Get a **shared understanding and ‘Picture’ of today’s ‘Pain Points’ around LDM.**

Thursday (full day)

Design a joint Future Vision for an improved Location Data Management solution.

Agree on next steps on how to collaborate going forward.

PARTICIPANTS



Zurich Insurance Group

- **Tony Wainner**
Head CI IP IT
- **Armin Schaefer**
CI IP Head New Business & Innovation
- **Chong-Gu Ra**
CI Blockchain Incubation, Lead
- **Aris Tzakas**
CI Blockchain Incubation, Co-facilitator
- **Alessandro Spadoni (Thu)**
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- **Susan Fallon (Thu)**
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- **Claude Haueter (Thu)**
Head of NEO
- **Fausto Steidle**
Head Risk Engineering Operations
- **Ross Mann**
Risk Engineering Data Services (REDS)

ABB

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Head of Captive
- **Susanne Rathgeber-Albiez**
First Party Lines of Insurance
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Nestle

- **Gregory Ranc**
Group Risk Services
- **Hantsoa Rasoa**
Group Risk Services

Siemens

- **Lutz Firnkorn**
CRO RISICOM
- **Michele Sollazzo**
Head Construction & Property

Zurich – ABB

- **Marcel Steinmann**
Global Relationship Leader (GRL)
- **Natascha Hansen**
Property Underwriting Services (UWS)

Zurich – Nestle

- **Ertekin Aydemir**
Property Underwriting
- **Roger Zopfi**
Claims Customer Relationship Director

Zurich – Siemens

- **Malgorzata Rybarczyk-Burger**
Teamlead UWS & Operations Property

Capgemini

- **Franziska Klaus**
Facilitator
- **Bartholome Hennemann**
Co-facilitator
- **Damien De Chillaz**
DLT Expert
- **Hans-Peter Högger (Thu)**
IT Architect



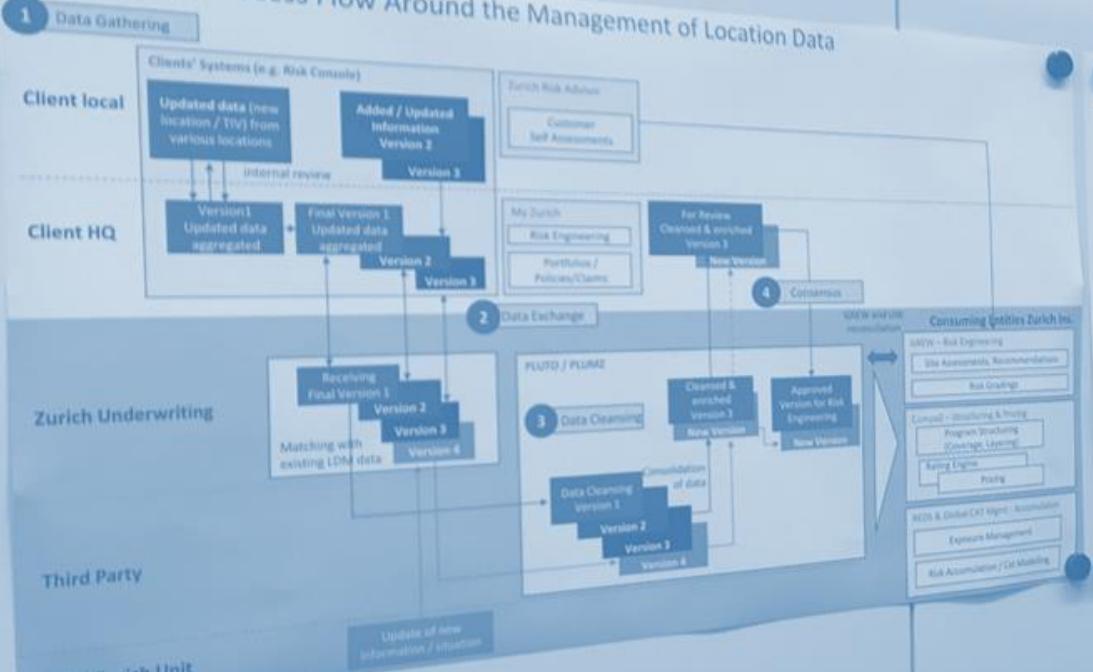
DAY 1



EXPECTATIONS TOWARDS THIS WORKSHOP HAVE BEEN HIGH

- Strengthen collaboration between Zurich and customers
- Understand customer's pain points and identify solution
- Understand the Blockchain technology and how it can be leveraged
- Identify benefits from the joint collaboration between Zurich and our customers
- Identify use cases for the future
- Identify how Blockchain can address the issue of gathering data, compared to traditional technologies
- Stimulate and encourage creative thinking with our customers
- Think about new approaches in Location Data Management (LDM)
- Provide practical examples and understand how a prototype based on blockchain would look like
- Identify "value levers" (short-, mid-, long-term) by the end of the workshop
- Exchange information with other participants
- Identify quick wins in order to get started
 - (See feedback on expectations met on [this](#) slide)

The Current Process Flow Around the Management of Location Data



Summarized Pain Points along the Process Flow

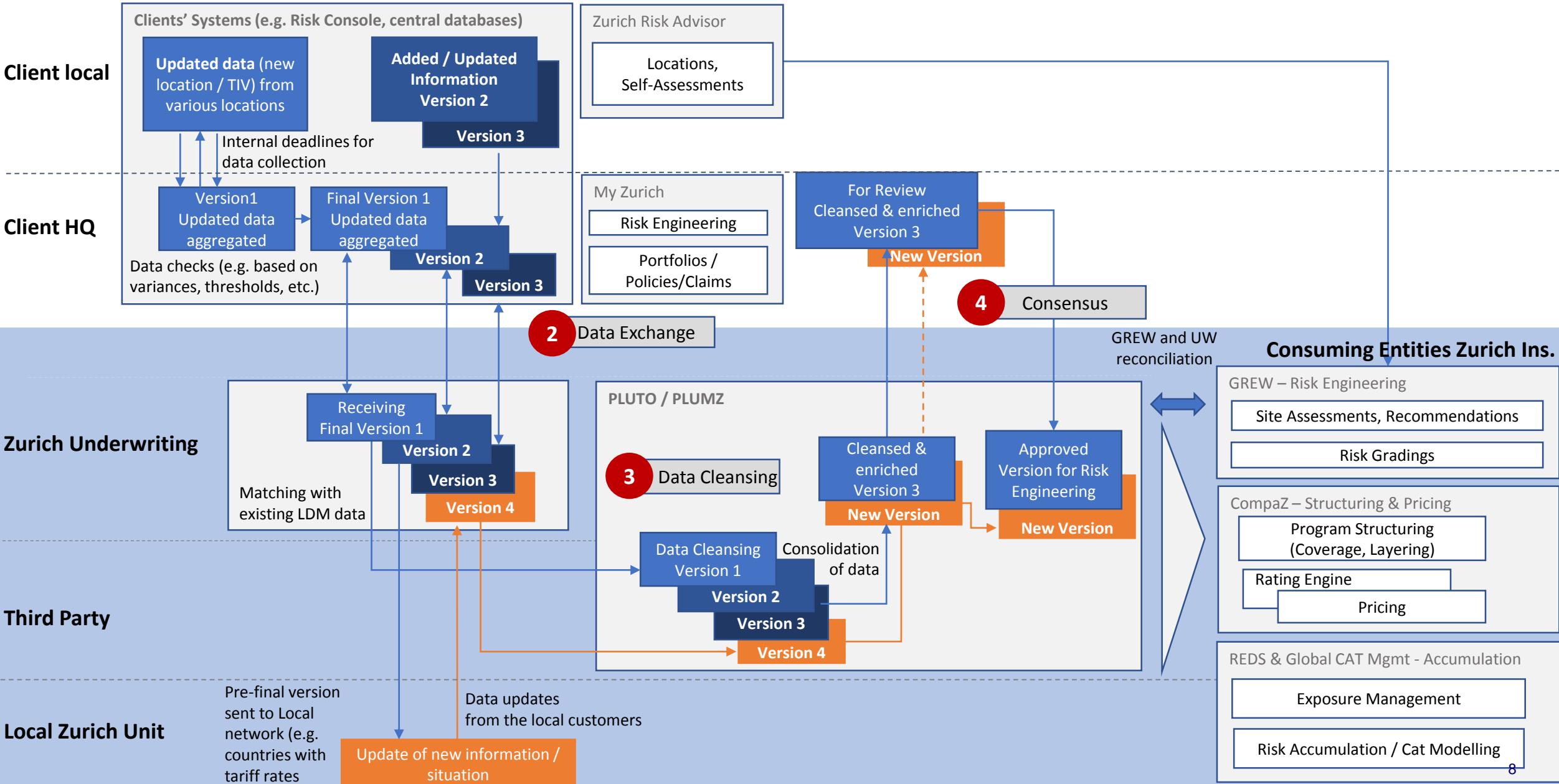


CREATING A SHARED UNDERSTANDING OF THE LDM PROCESS AND ITS PAIN POINTS



The Current Process Flow Around the Management of Location Data

1 Data Gathering





Shared Pain Points along the Process Flow (1/2)

1

Data Gathering

- Decentralized organisation, high effort for HQs to get information from local entities
- Different departments (complex BU/PG/Legal entity) within local entities are needed to provide the right data. Data which still differs in format and content of what is actual needed
- Central database does not contain certain data elements, e.g. allocated premium, not all data is available for collection, e.g. supplier locations
- Multiple tools / systems (Customers' and Zurich's Tools) do not integrate
- High risk of errors and questionable data quality (incomplete / inaccurate values)
- Delivery delays due to multiple versions sent back and forth
- % of unknown location in portfolio hard to track
- Sequential processing: data collection needs to complete before validation can start
- Data updated only once per year resulting in a "snapshot" view (no data on new locations during the year)
- Technical debt arising from tailored solutions developed over the years



1

Data Gathering

- Renewal process starts from scratch / no previous "baseline" to start from
- There is no common standard for collecting the data, which results in extra work (consolidation, re-formatting, etc.)
- Same mistakes are repeated in the data year after year because of insufficient feedback loop
- Changes to the company structure pose a significant challenge to data gathering and need to be accommodated by the solution
- Accounting codes are not globally set, which leads to inconsistencies
- Data changes/updates are not timely (or not at all) shared across all relevant stakeholders
- Local clients are only involved in the "Data Gathering" and "Consensus" steps
- Too much effort spent collecting data for locations with low value
- In addition to Location data, there is a need to include data on the Legal Entities and the Business Units
- Lack of unique identifier makes data gathering and updating more challenging and time-consuming



2

Data Exchange

- Uncoordinated delivery of data, based on manual exchange and involves multiple files (unstructured data)
- Data is inconsistent, incomplete, unstructured
- Delays due to back and forth and several versions
- Difficulties in traceability of the last right version from client
- Data validation/changes by local insurer does not get reported back systematically
- Regulated or tariff countries needs to be instructed first of all which leads to tighter time frames and even more inaccurate data to be processed ("Cash before cover")





Shared Pain Points along the Process Flow (2/2)

3

Data Cleansing

- Effort intensive cleansing
- Duplication of efforts due to several versions
- Inconsistent location data validation and enrichment participation
- Data updates do not propagate to all systems
- Location data accuracy needs improvement, data not always up-to-date
- PLUMZ/PLUTO shows a non-US view only



4

Consensus

- Partly no aligned standards of data sets and different understanding, not self-explanatory
- Customers have problems linking insurer policy data with information they originally send
- Multiple channels for inserting location data (e.g. Zurich Risk Advisor App) increases the challenge for data reconciliation and synchronization
- Data consistency ("symmetry") not always maintained across systems, due to the multiple systems involved and the tight time-frames
- It is meaningful having one responsible person coordinating internally, which is not always the case
- Partially incorrect location data
- Local insured doesn't accept the data provided by their head office
- Instructions need to be amended due to incorrect location data
- Delay due to back and forth



5

Other

- In cases where stock moves from one country to another, which policy would provide coverage?
- Processing and controlling attritional losses
- Agreement on "premium rates" per country



VISION OF A FUTURE STATE OF THE LDM PROCESS





Statements on a Vision for a Future State of the LDM Process

System/Platform	Governance/Rules	Process	Added Value
<ul style="list-style-type: none">▪ Facilitate integration and interfacing with existing customer systems▪ Support historical view on data▪ Proposed solution should be flexible (e.g. support customizations, changes to processes, company structures, etc.)▪ Potentially support the premium allocation process with internal only & shared views▪ Storage and downloads of relevant location certificates	<ul style="list-style-type: none">▪ Access control system in place that allows different viewing and editing rights.▪ Access control that is secure, easily controlled and managed.▪ Each stakeholder can customize access rights according to their specific needs. Internal and external stakeholders can be granted specific access to data▪ Recognizing legal / compliance issues, there should be a clear focus towards gathering only the essential information▪ Thresholds and rules for certain notification and alerts (i.e. new data received; data varies widely from historic data of previous year for certain location which requires a further check)	<ul style="list-style-type: none">▪ Support the uploading of unstructured data (XLS, PDF, email, etc.)▪ Automate workflow and provide status updates (e.g. issuance of insurance certificate to a landlord, request of settlements, etc.)▪ Provide alerts & notifications to relevant stakeholders about data changes▪ Allow collaboration directly on the platform (e.g. regarding data quality issues, data changes, etc.). No need for exchanging numerous emails.▪ Simplified renewal / re-evaluation process (with access to/ matching with historic data and supported notification where data changes reach a certain threshold that triggers further investigation)▪ Faster claims processing with direct access to relevant and detailed information▪ Overall simplified and more efficient process handling for all with a certain degree of automation	<ul style="list-style-type: none">▪ Facilitate collaboration between Zurich and customers on Risk Management▪ Provide customizable and real-time hazard analysis and risk mapping▪ Provide reporting and visualizations (e.g. heat maps) using this data (adaptable views such as location only, region, country, continent, etc.)▪ Enable location data sharing and management of those data with other functions (HR, facility management, etc.)▪ Use shared location data to assess impact of acquiring a new building on the insurance profile (M&A implications)▪ Better customized insurance programs due to access to accurate and more detailed information▪ Brokers can focus on insurance pricing and benchmarking instead of being involved in the data management process▪ Facilitate regulatory compliance (based on MIA-like information, such as country-specific regulations)
Data			
<ul style="list-style-type: none">▪ Commonly agreed Location ID card (ID #, address, geo-code, values (TIV, BI, PD)▪ Always accessible and up-to-date single source of truth for property-related data (no snapshot view)▪ Reduction of number of unknown location data (leakage)▪ Improved coordinated of larger risks (risk accumulation views)			



DAY 2



CURRENT AND FUTURE STATE OF DISTRIBUTED LEDGER TECHNOLOGIES IN INSURANCE

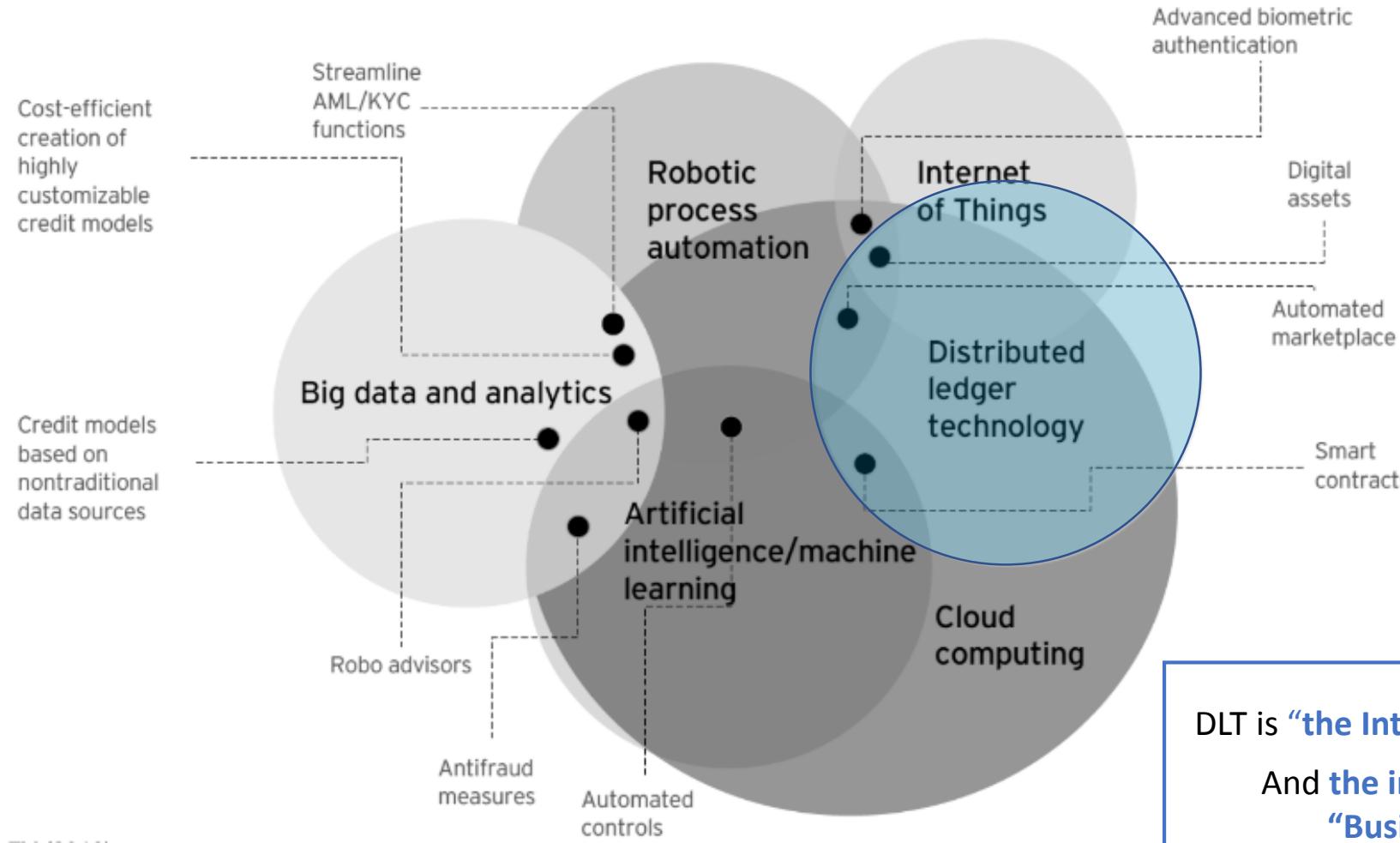


DAMIEN DE CHILLAZ





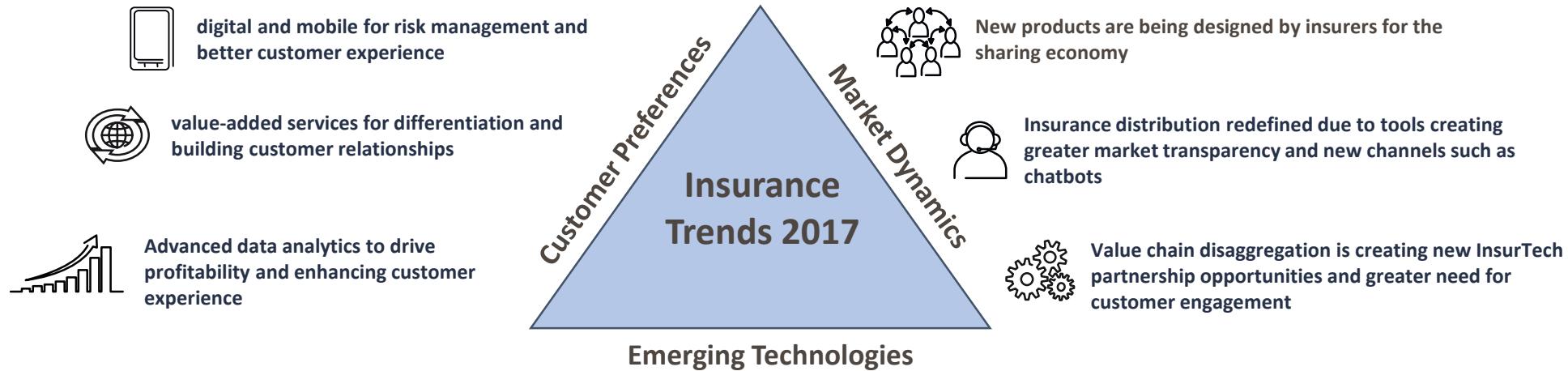
CONVERGENCE OF EMERGING TECHNOLOGIES WILL BLUR THE LINES OF INDUSTRIES IN A HIGHLY CONNECTED REAL-TIME WORLD



DLT is “**the Internet of Transfer of Value**”
And **the infrastructure behind
“Business Networks”**



INSURANCE TRENDS 2017



DLT use cases driving operational efficiency & new business models



Automation and AI applications across value chain



IoT enabling new models and creates a strong data pool



RPA driving efficiency over multiple applications in insurance



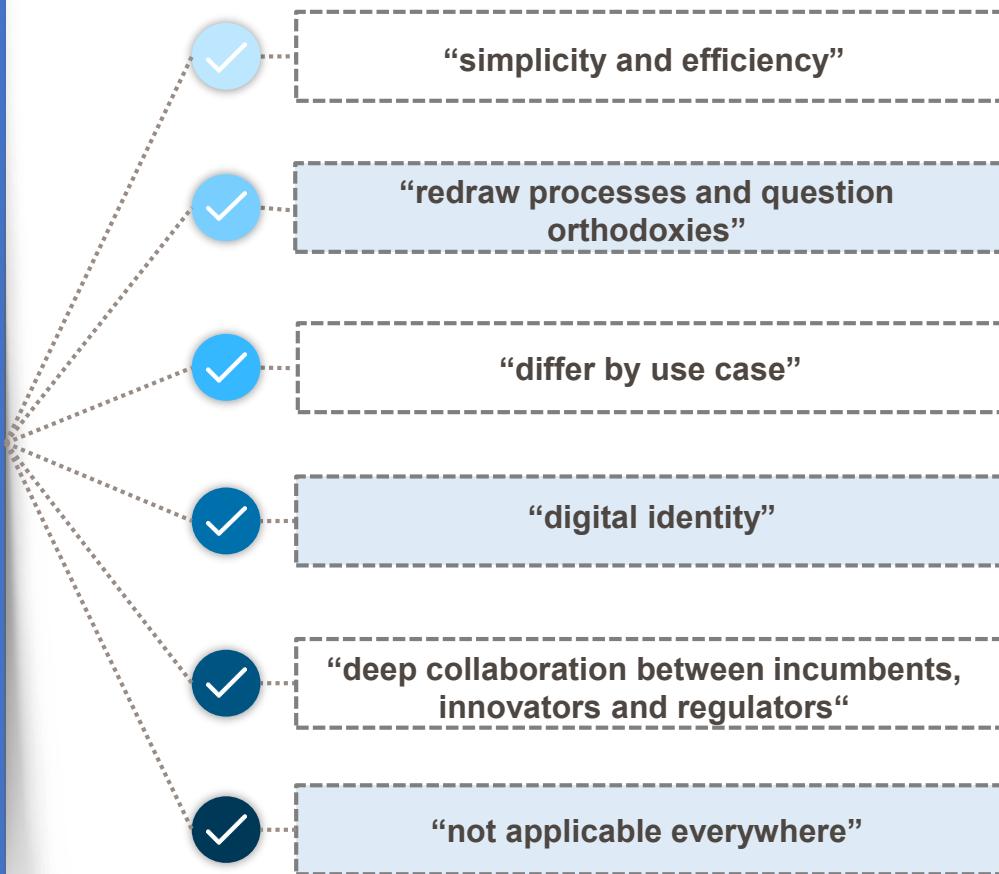
WILL BLOCKCHAIN BE THE NEXT REVOLUTION?

WORLD ECONOMIC FORUM
COMMITTED TO IMPROVING THE STATE OF THE WORLD



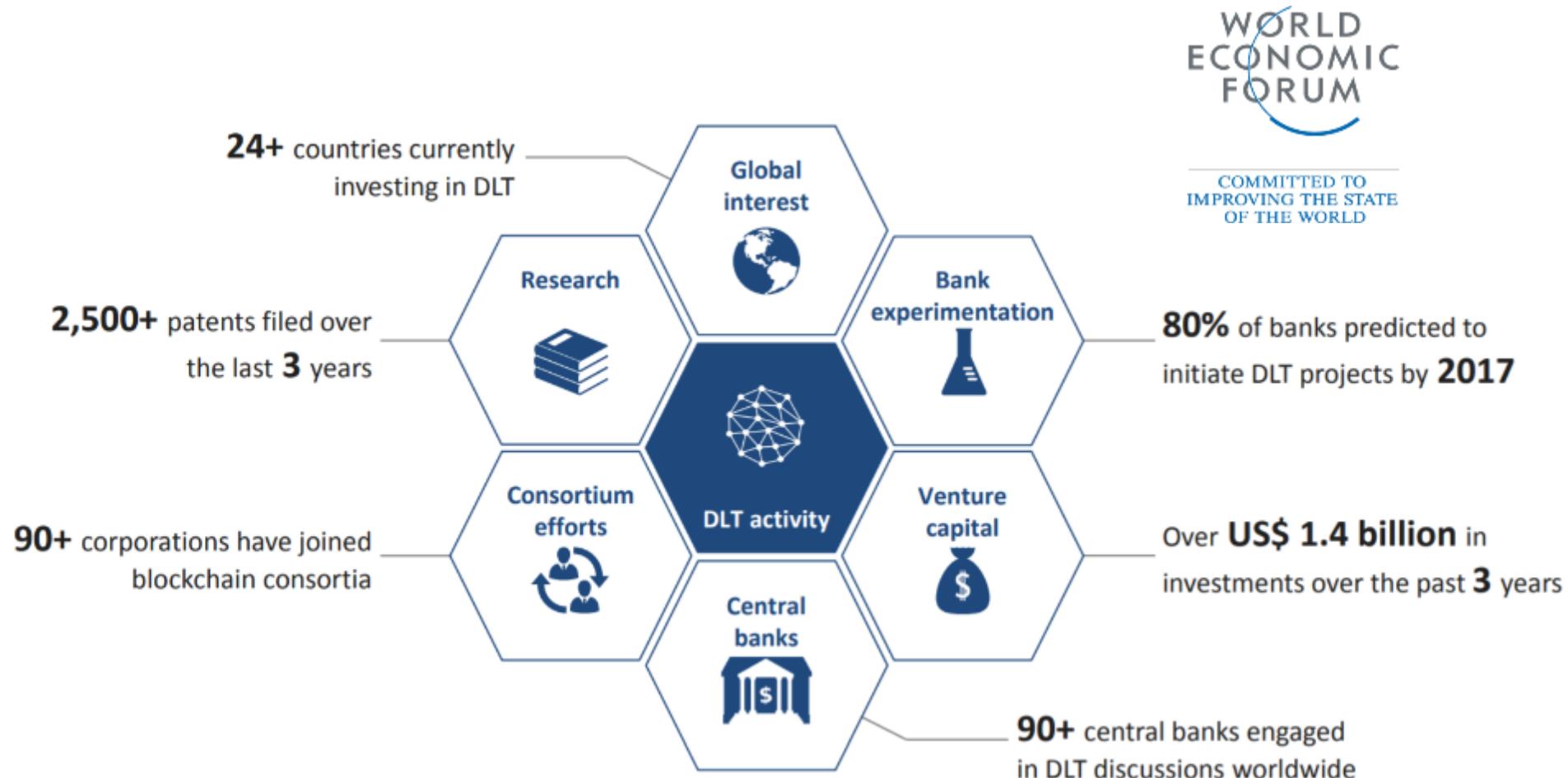
“ Distributed ledger technology promises to have FAR-REACHING ECONOMIC AND SOCIAL IMPLICATIONS. ”

“ BLOCKCHAIN APPEARS LIKELY TO TRANSFORM A NUMBER OF IMPORTANT INDUSTRIES that supply or rely upon third-party assurance. ”





BLOCKCHAIN IN FACTS...



WORLD
ECONOMIC
FORUM

COMMITTED TO
IMPROVING THE STATE
OF THE WORLD

80% of banks predicted to
initiate DLT projects by **2017**

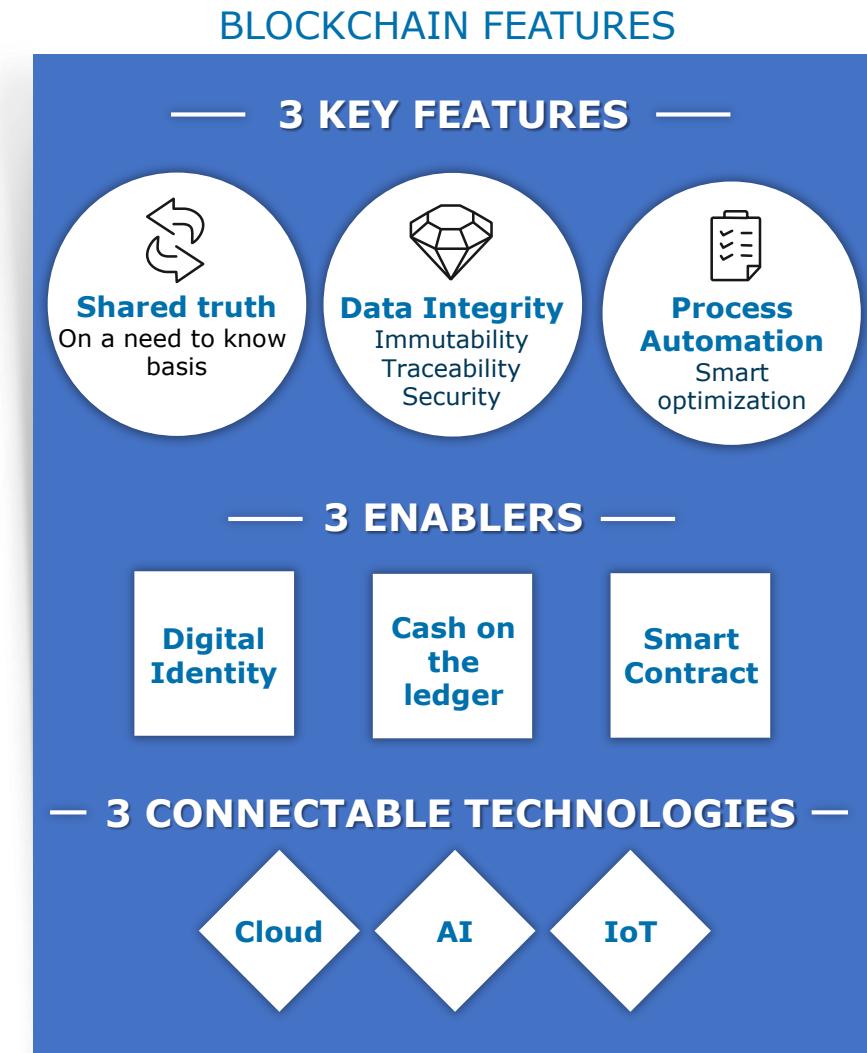
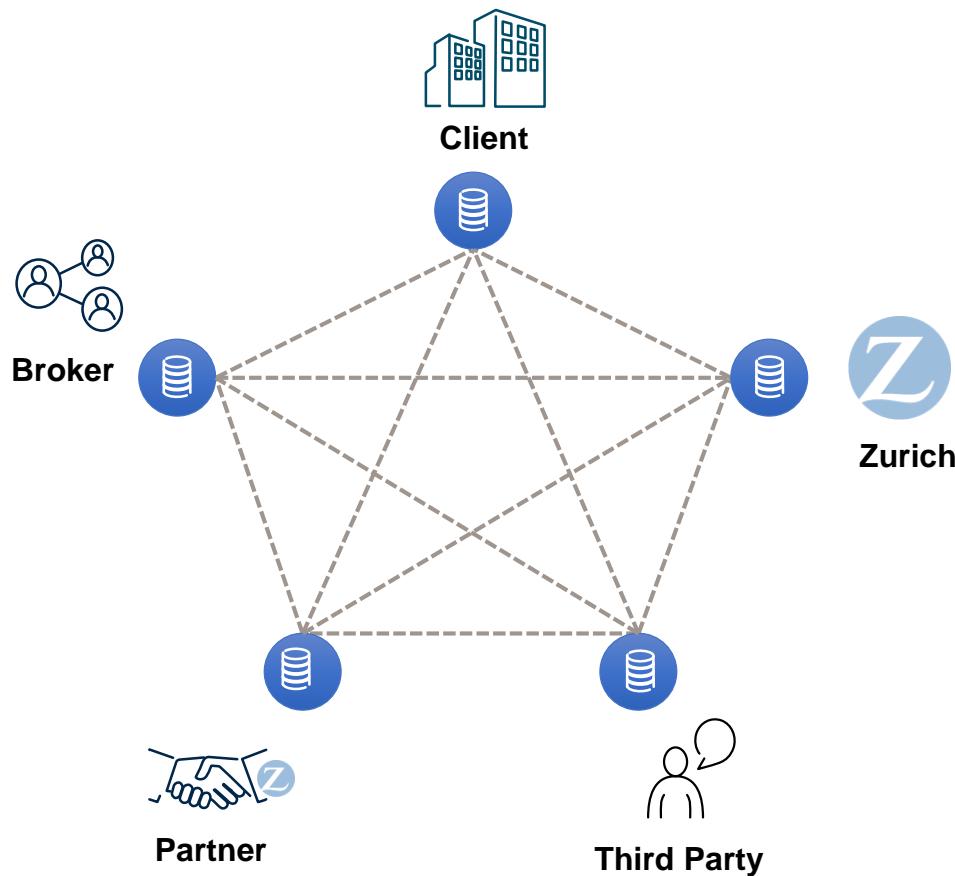
Over **US\$ 1.4 billion** in
investments over the past **3** years

90+ central banks engaged
in DLT discussions worldwide

Source: WEF, *The future of financial infrastructure*, August 2016



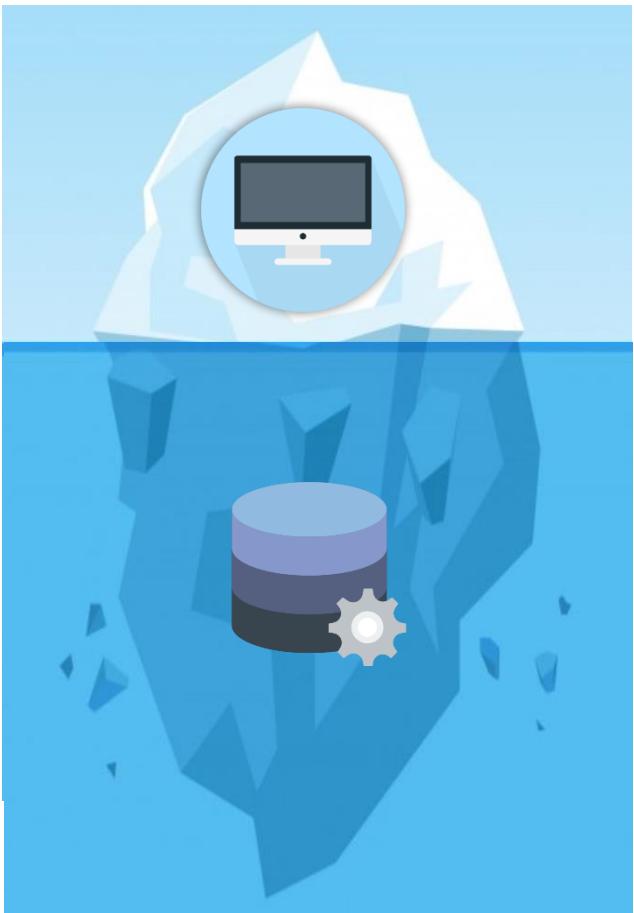
DISTRIBUTED LEDGER TECHNOLOGY (DLT) CAN RESOLVE MULTIPLE PAIN POINTS AND ENHANCE CUSTOMER EXPERIENCE AND VALUE



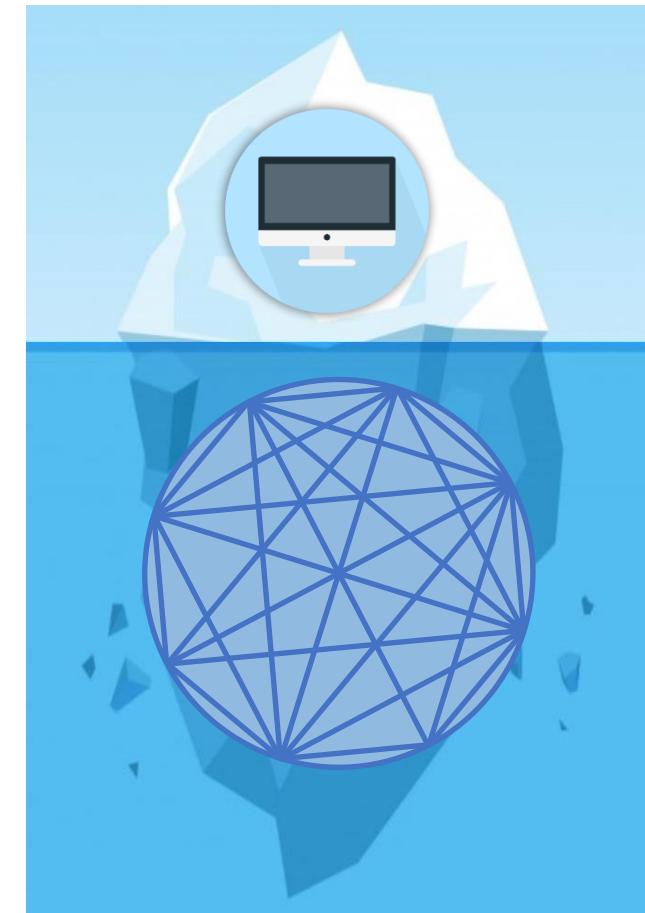


SIMILAR ON SURFACE... DIFFERENT IN PRACTICE

Platform

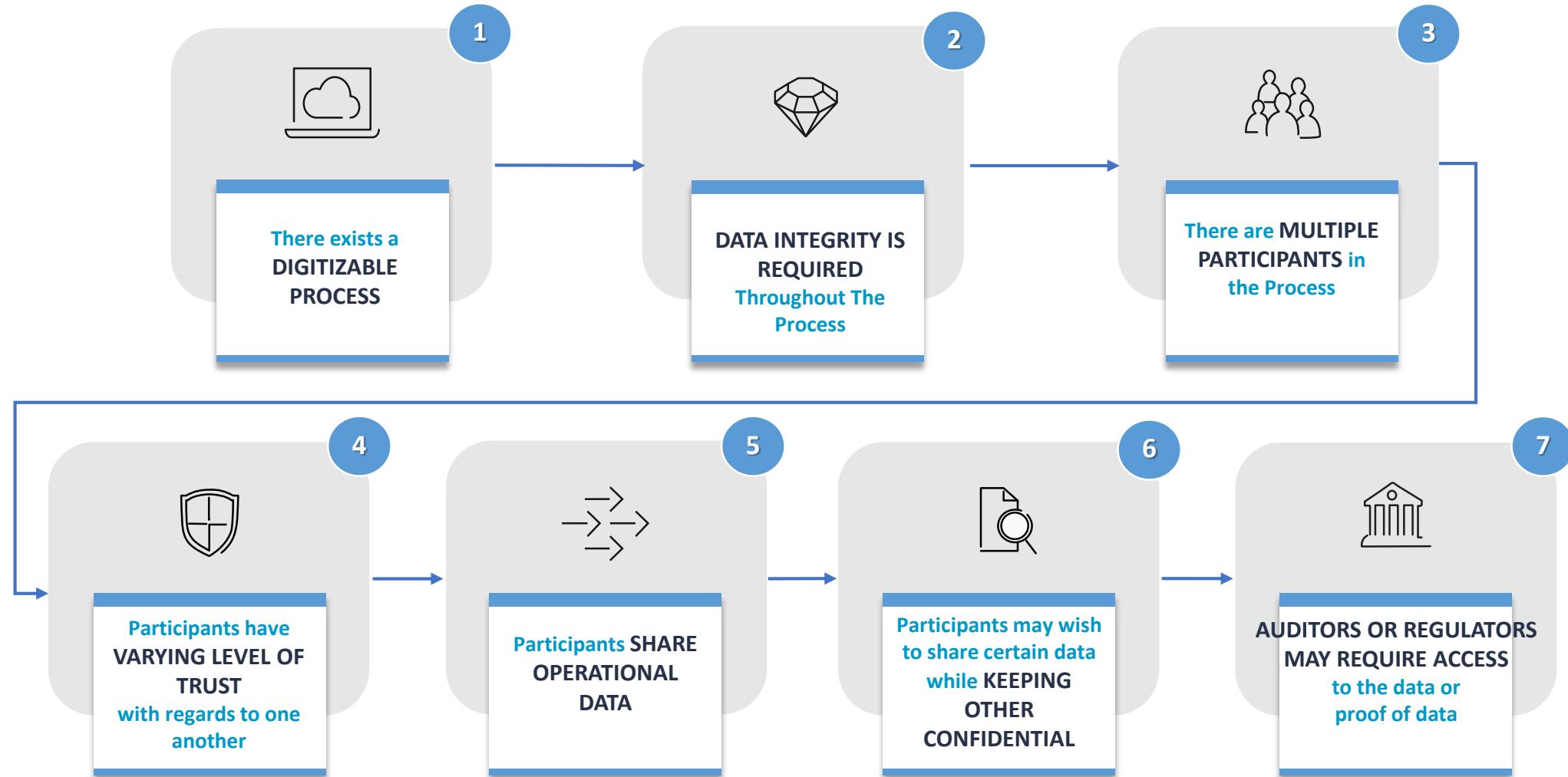


Distributed Platform





BLOCKCHAIN CAN BE APPLIED MOST EFFECTIVELY UNDER 7 CONDITIONS



Source: Stratum



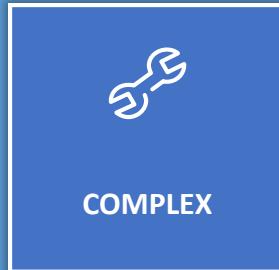
AN EXAMPLE...

KYC Trust



KYC process is painful for CIB-Banks and their Customers ...

KYC

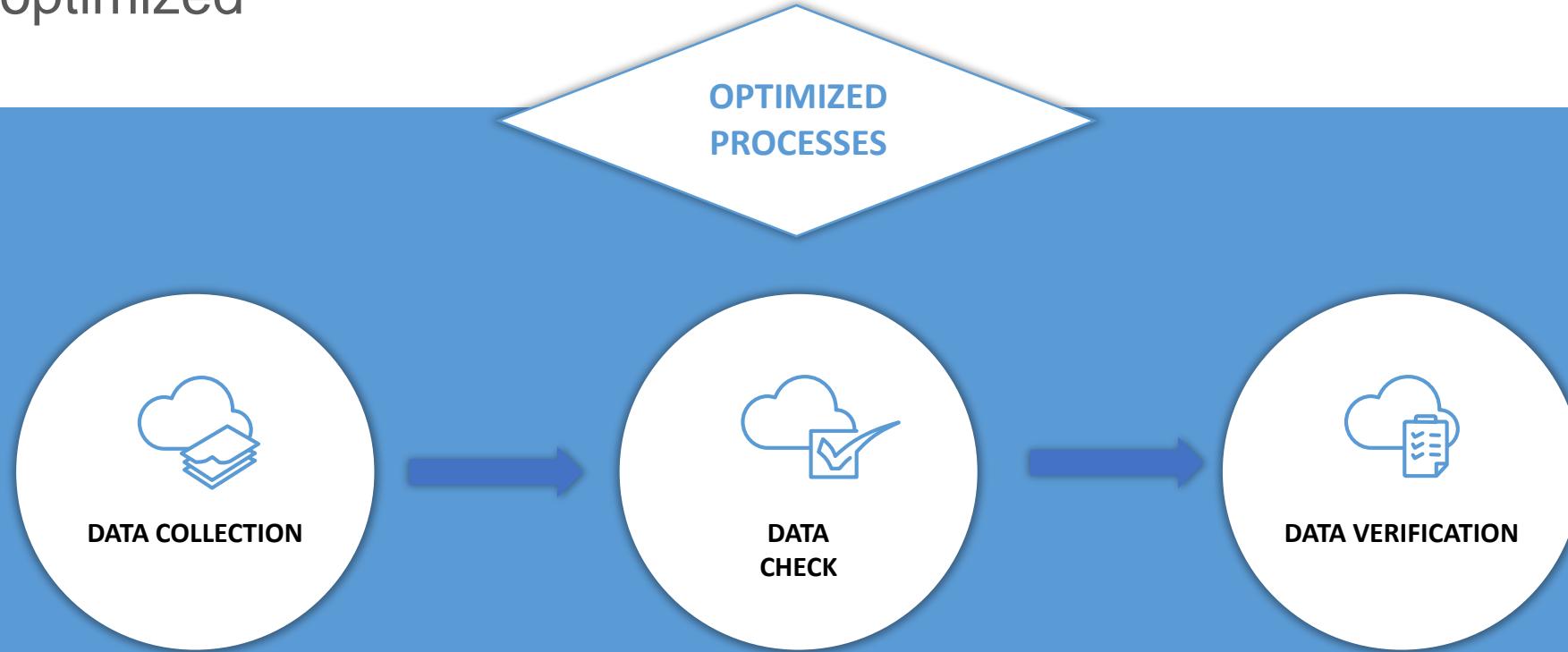


→ A major pain-point of the relationship between Banks & Customers





In the KYC Process, we believe that Data processes can be significantly optimized



At a global scale



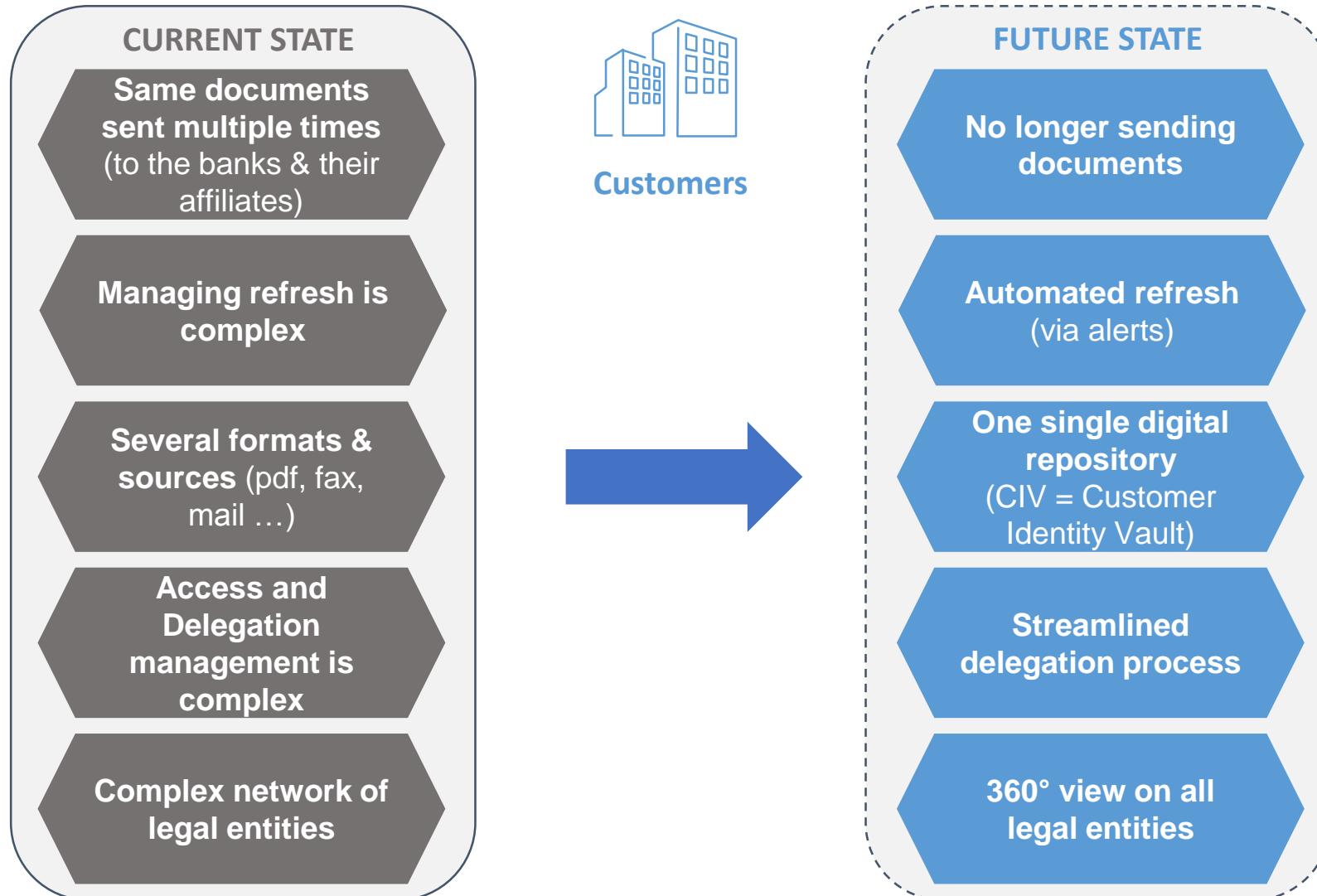
Tuned to local regulation



For all customer types

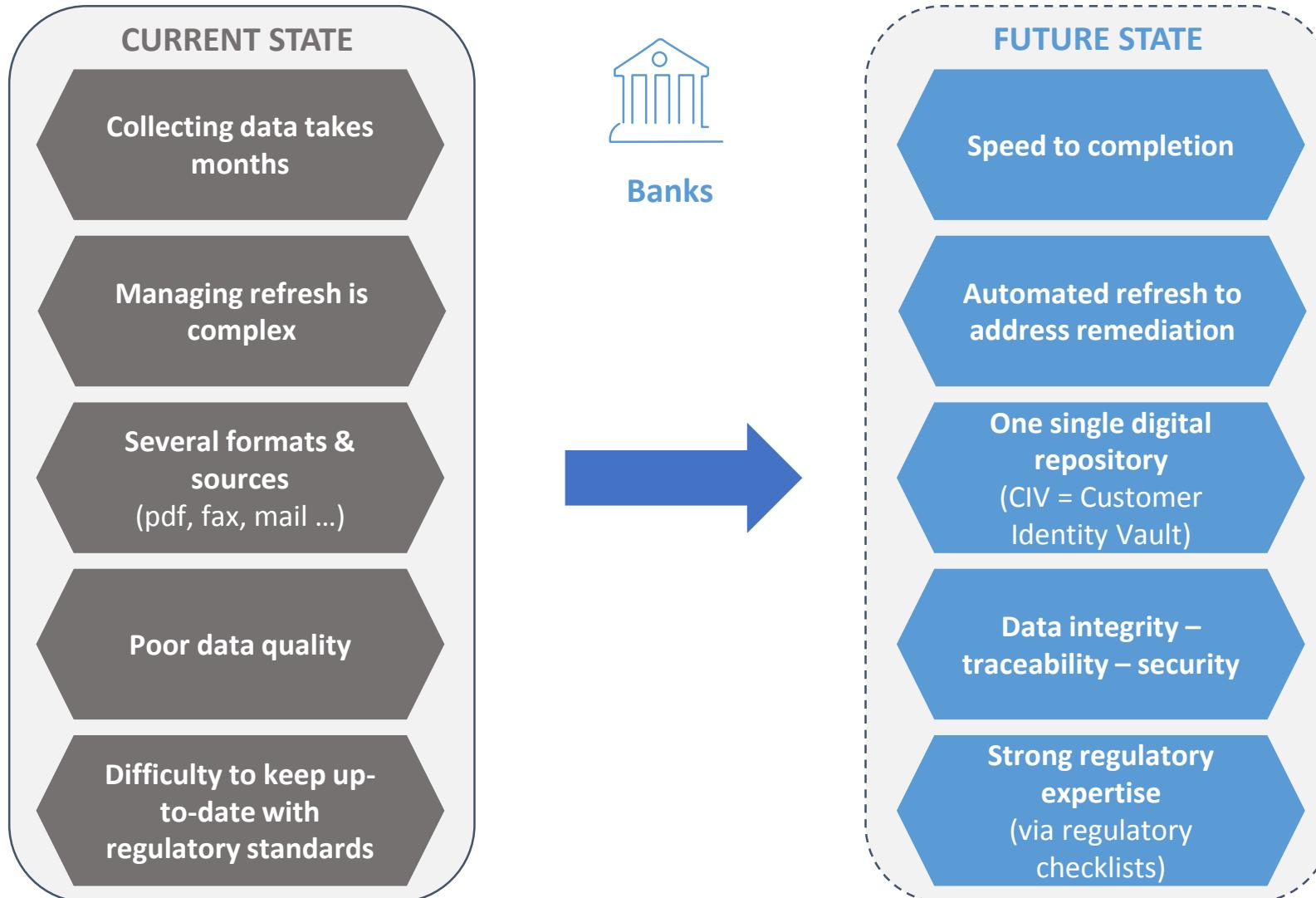


For Customers, KYC experience could be greatly improved



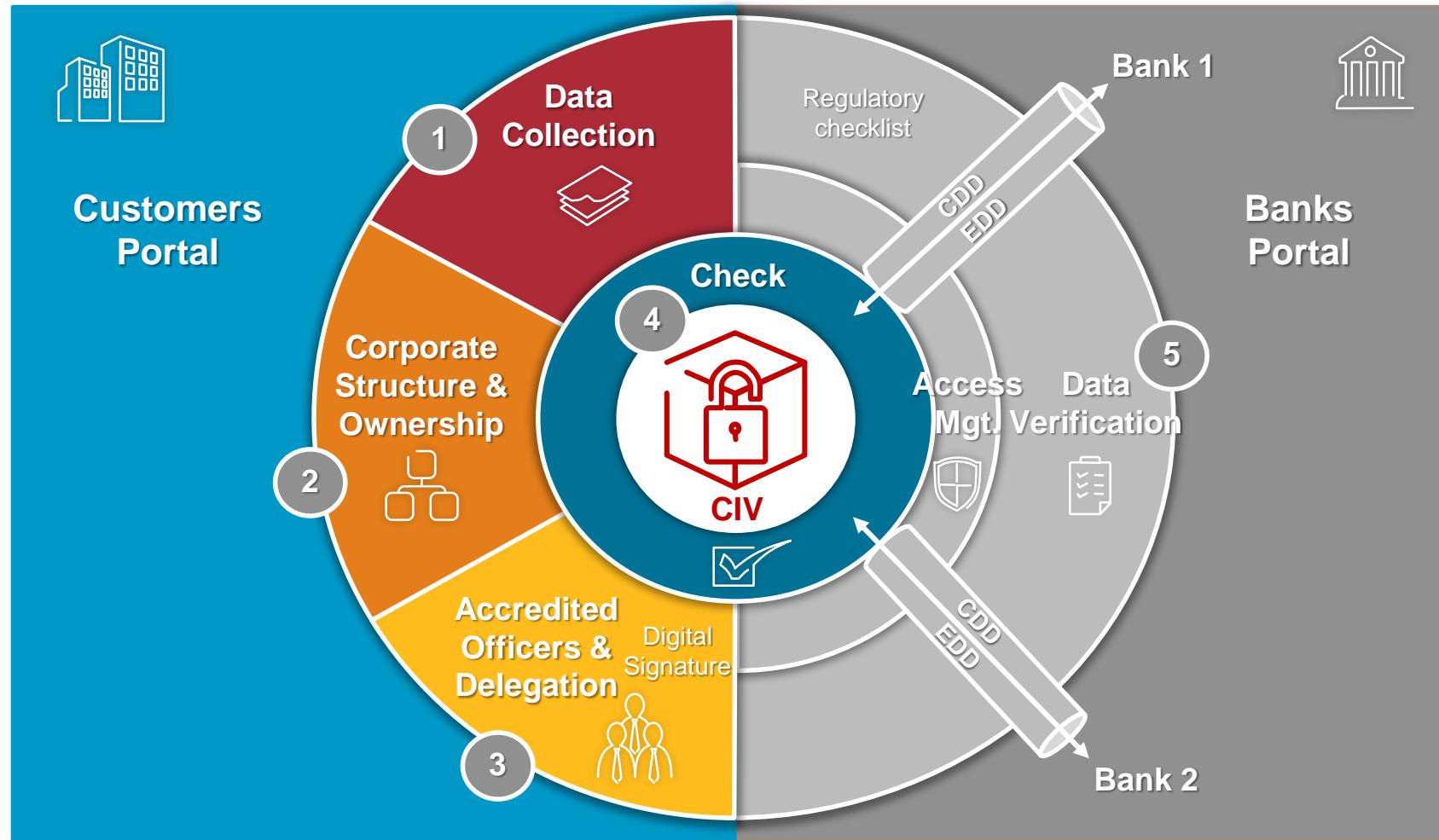


For Banks, KYC Process could be greatly improved too



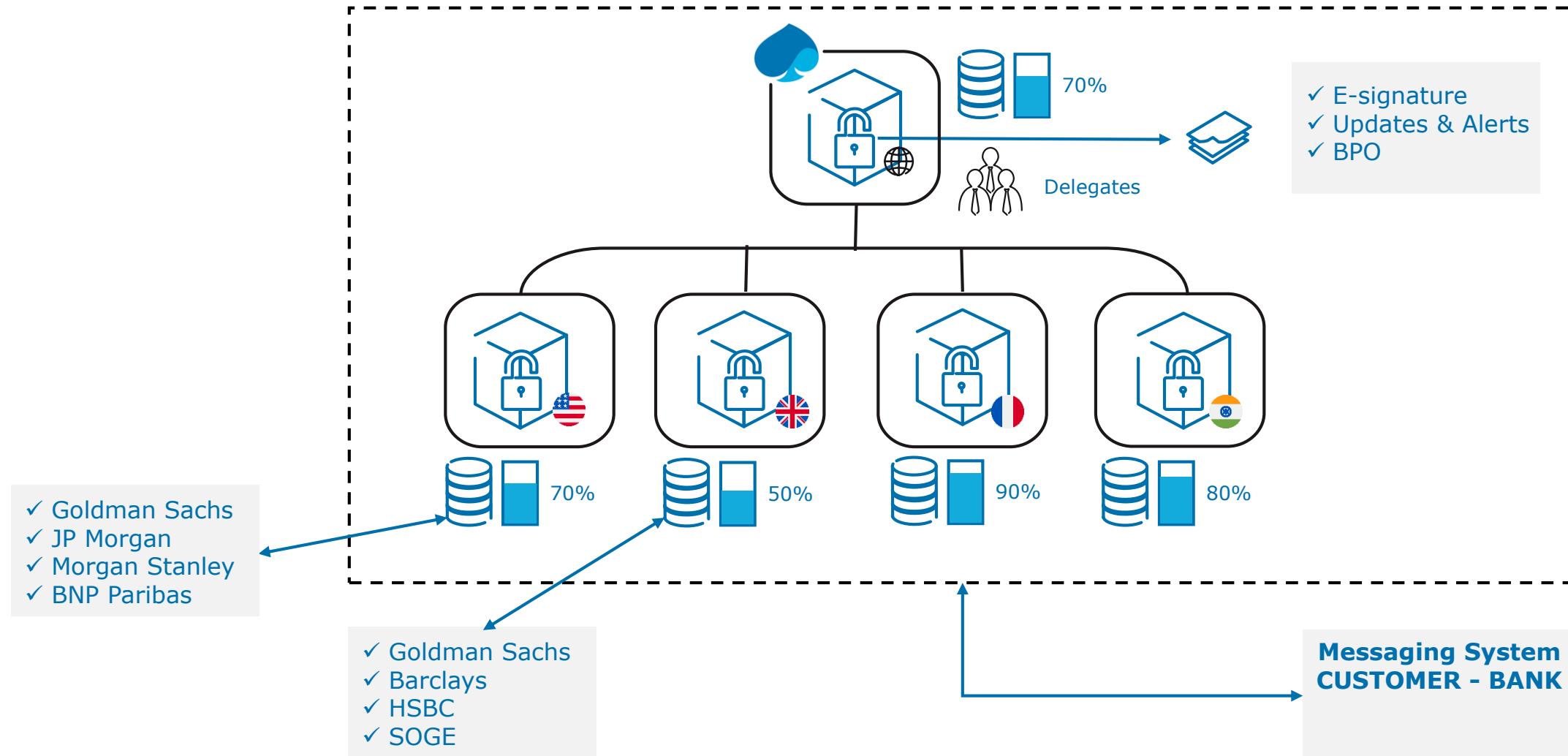


KYC Trust: 1 platform 2 portals 5 services - Focus on Customers Portal



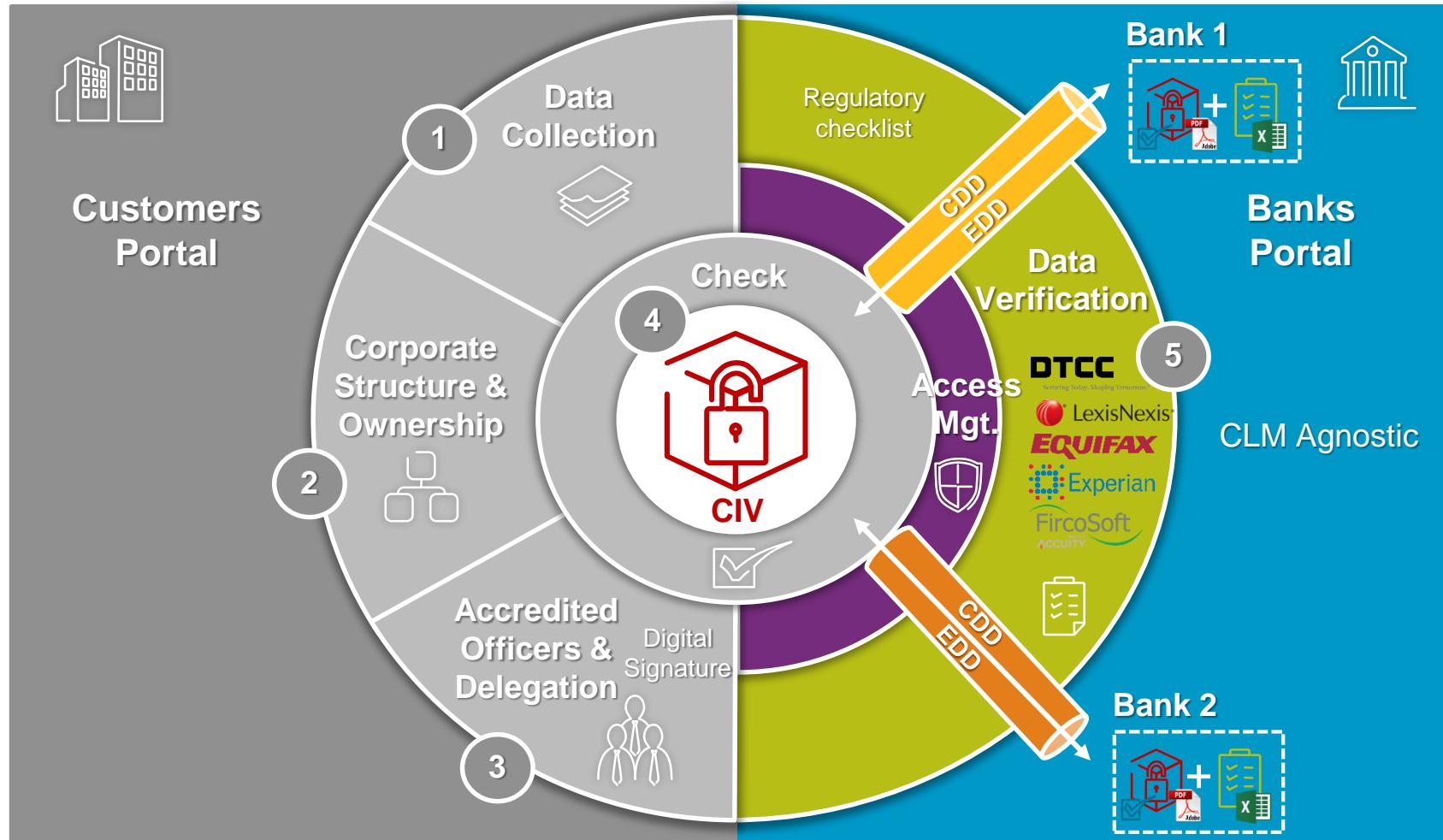


KYC Trust: 1 platform 2 portals 5 services - Focus on Customers Portal



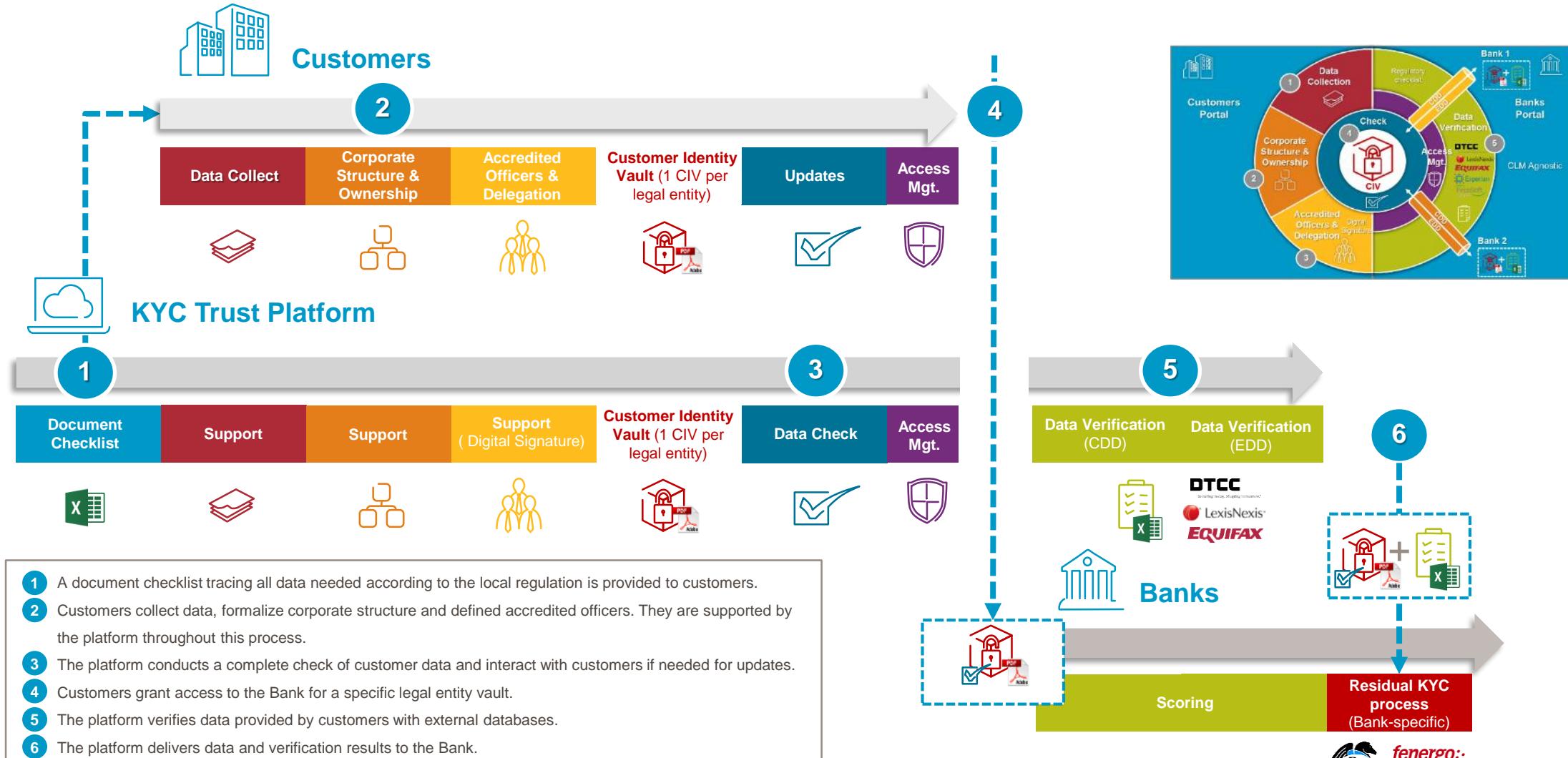


KYC Trust: 1 platform 2 portals 5 services - Focus on Banks Portal



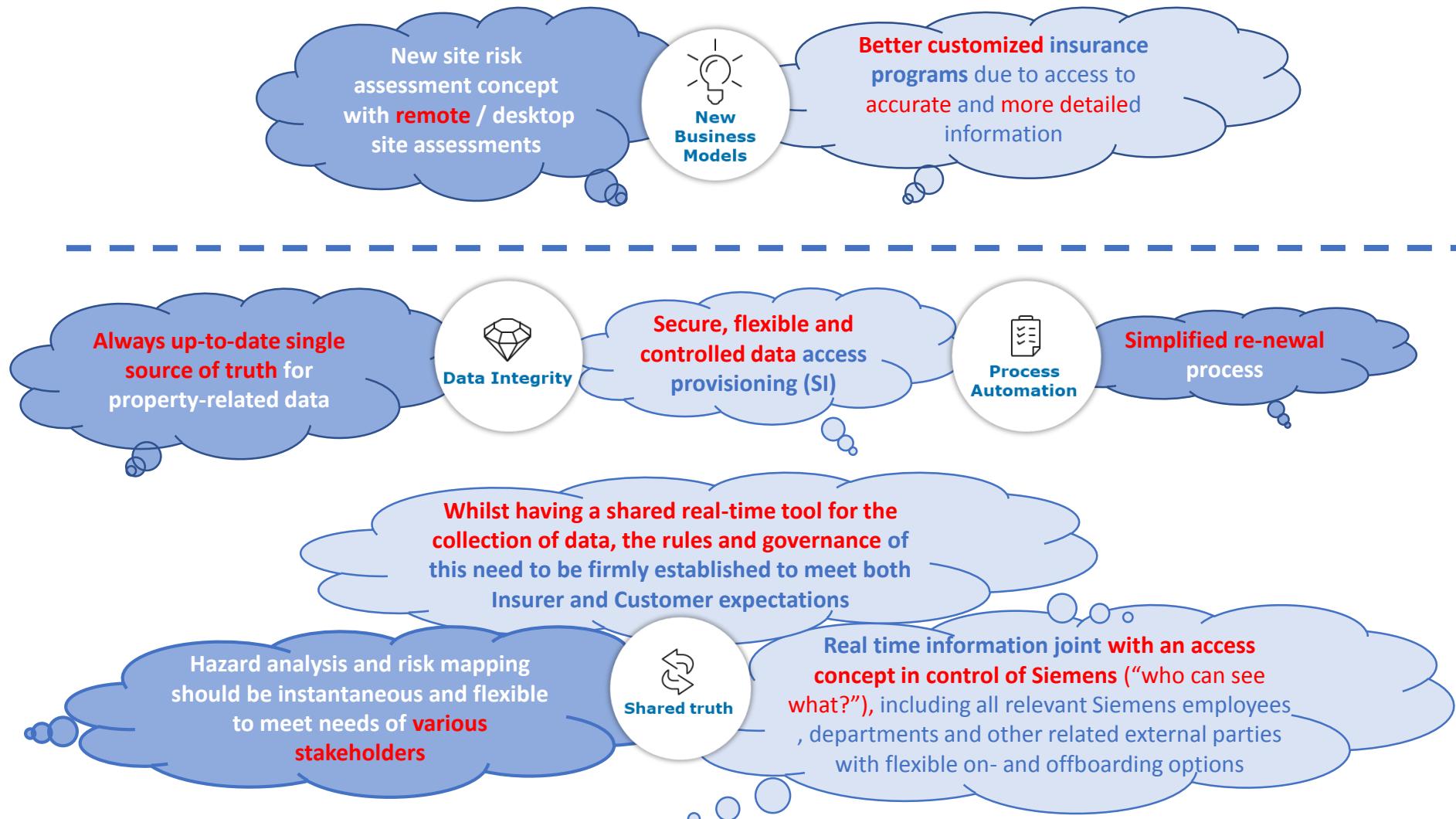


KYC Trust: Simplified workflow

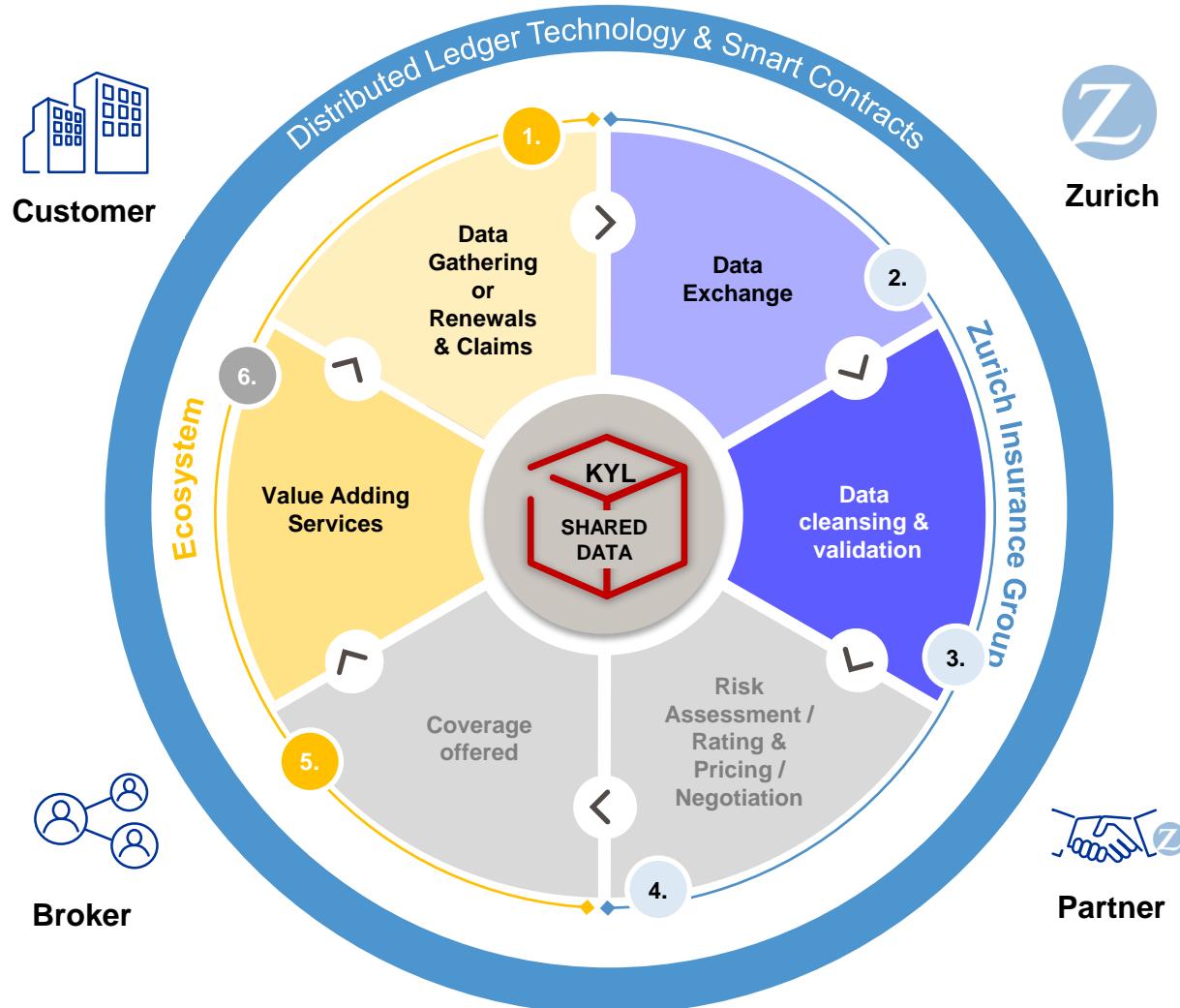




DLT can address process efficiencies & new business models



KYL is a unifying solution based on Distributed Ledger Technology. It will be the kernel of LDM across the ecosystem.



KYL DEFINITION

- **KYL is the digital identity of any location within Commercial Insurance.**
- **KYL** is the single **Shared Truth** of location data within a qualified ecosystem.
- **Consisting of:** address, GPS data, insured value
- KYL allows **permissioned access (with different view and change rights)** and reaches **consensus** by validation of public KYL data.
- **Smart Contracts facilitates processes like the sending of alerts** when either the data set or the status of the policy has changed. Likewise it can **automate the policy issuance** if consensus is given.

DLT is the underlying technology and is used to create a single source of truth

KYL has the potential to scale, create new business models and value propositions within the industry, across all stakeholders.

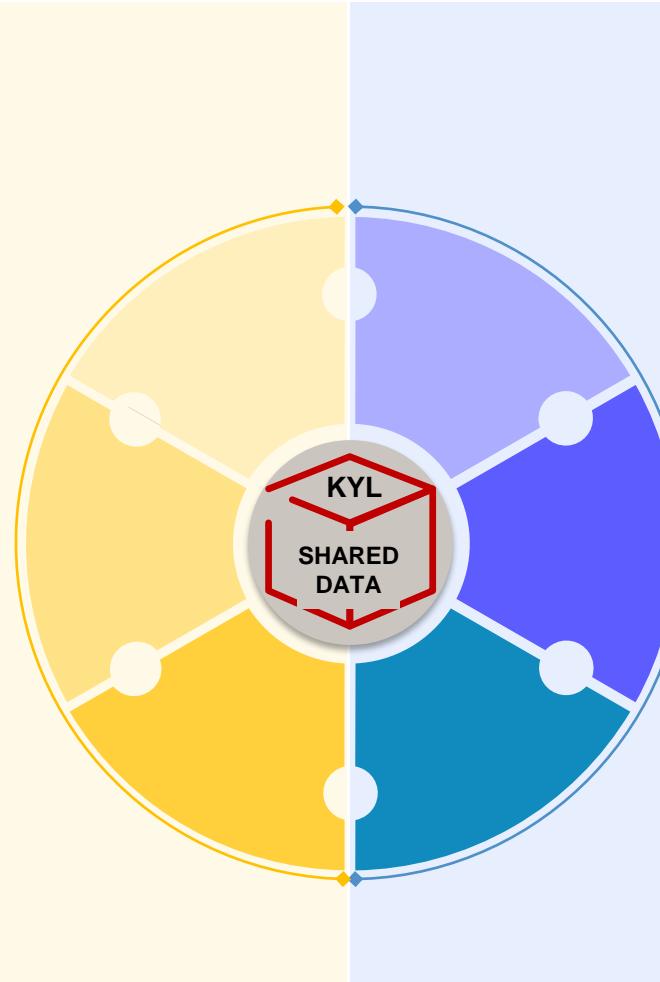


Customer

- Leading in customer experience
 - **Real time traceability** of location assets linked to insured portfolio
 - Enhanced **dashboard data view** allowing clients to
 - a) **improve their risk exposure** and therefore **reduce costs**
 - b) use KYL data to better **manage their location portfolio** overall
 - **Access value enhancing services** (off-the-shelf) such as:
 - risk warning alerts
 - risk calculators
 - elaborated location data
 - etc.



Broker



- **Scalability** opportunities for other business areas
- Opportunities to enter **new business models** and discover **new revenue streams**
- The opportunity and will **to set the benchmark** within the industry
- Potential to evolve into **Industry Standard**
- Demonstrating **Innovation**
- Be **recognized as pioneering** in the space of **new technology**
- **Closer** to customers
- **Simpler** access to critical information



Zurich



Partner

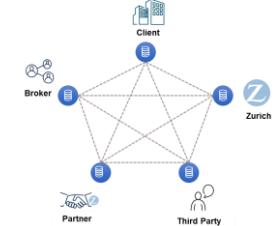


Why DLT ?!



**We are assembling a business network / ecosystem of different stakeholders
(not internal)**

And we need 3 core features:



Share data on
a need to
know basis



Guarantee
data
integrity

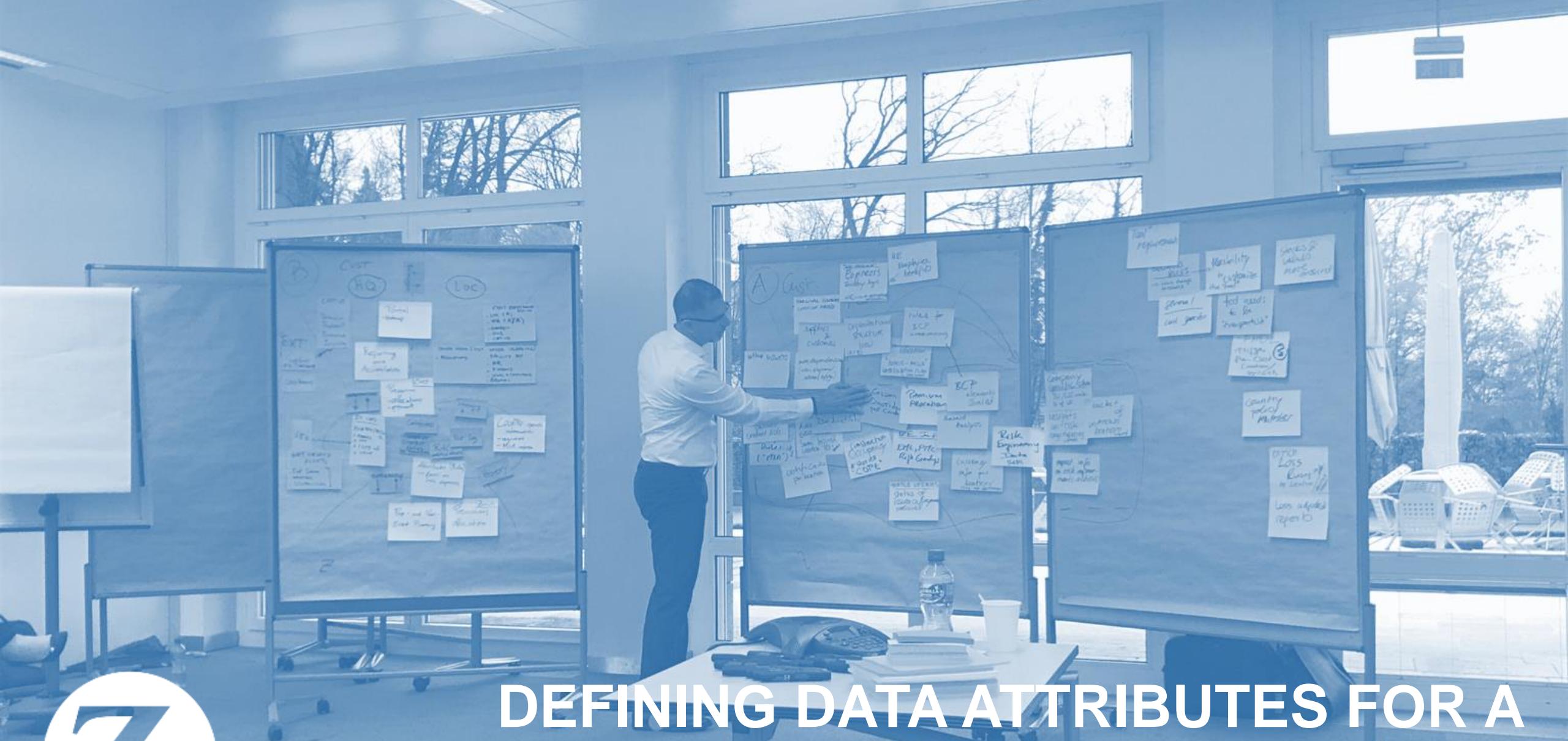


Automate processes
of data collection &
transaction

The technology that enables this is DLT.



DEFINING DATA ATTRIBUTES FOR A POSSIBLE DLT SOLUTION & SCOPING A PROTOTYPE





The Digital ID-Card is the core of the solution

The core of the prototype solution is the Digital ID-Card, consisting of both shared and non-shared data attributes. The Data Governance describes who sees which data and has which rights (such as viewing, editing, approving, commenting). The different required rights should be defined at a later stage.

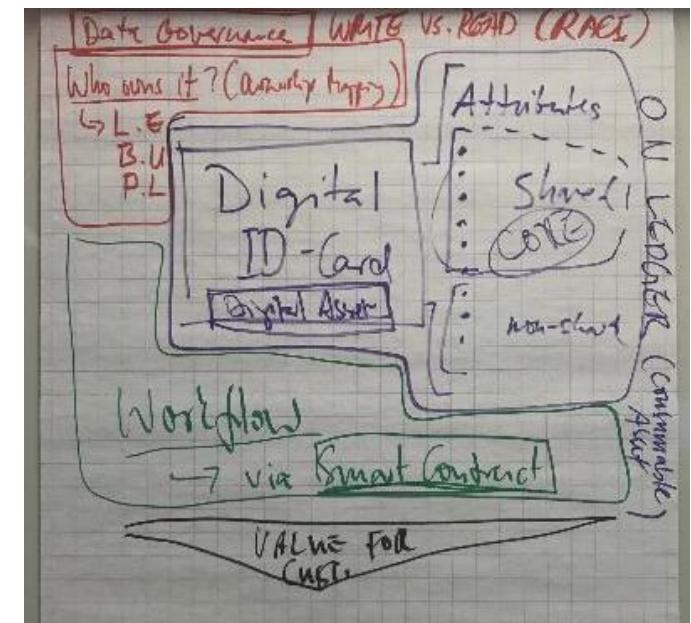
Digital ID card:

- Describes the core elements that the Customer as well as Zurich wants to see, in order to a) identify the location, but also process the data most effectively.
- Different views Shared / Non-Shared allow internal only data processing as well as external processing (e.g. with Zurich or other third parties)
Please refer to following slides for further details on shared / non-shared data attributes.

Data Governance:

- Stakeholders of the data need to be identified and their rights to view and edit the data need to be documented in a RACI Matrix. These Matrixes and stakeholders vary from Organization to Organization and need to be fully customizable.

Please refer to following slides for further details stakeholders.





Shared Data attributes

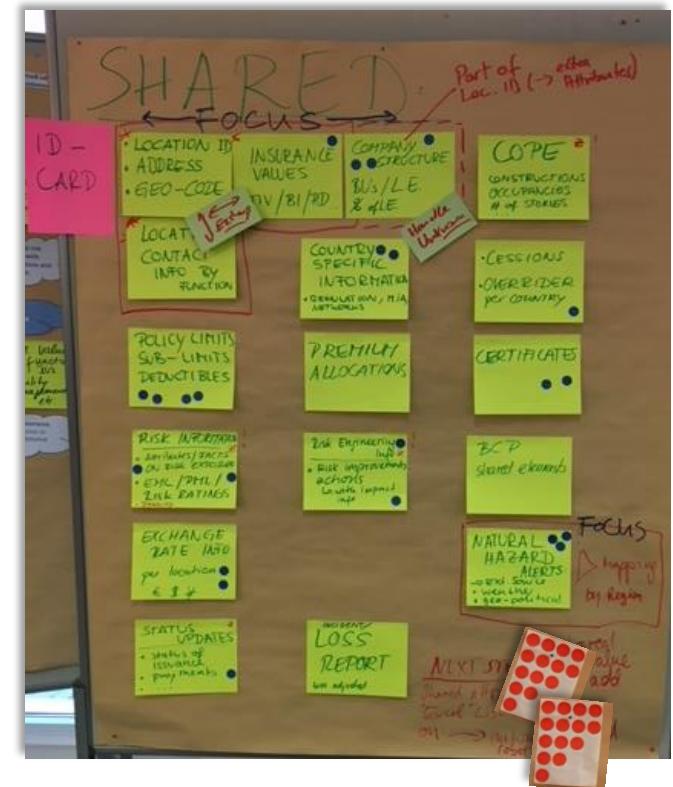
Shared Data is one of the two parts of the Digital ID Card. In this exercise we identified all Shared Data attributes and ranked them according to their importance for the POC.

'Must haves' for Prototype:

- Location ID, Address & Geo-code
- Insurance values (Total Insured Value / Business Interruption / Property Damage)
- Company structure (Business Units, Legal Entities)
- Location contact information per function
- As added value: Natural hazard alerts (e.g. weather, geo-politics)

Further points to be added later:

- Policy limits, Sub-limits and Deductibles
- Risk information (attributes / facts on risk exposures, PML/EML, risk ratings, density)
- Exchange rate information (per location)
- Country specific information (regulation, MIA, networks)
- Risk engineering info (risk improvement actions with impact information)
- Certificates
- Status updates (status of issuance / payments / etc.)
- Cessions and overrides per country
- COPE (Construction, Occupancy, Protection, Exposure)
- Premium allocations
- Incident / Loss report (less adjusted)
- Business Continuity Plans (shared elements)





Non-Shared Data attributes

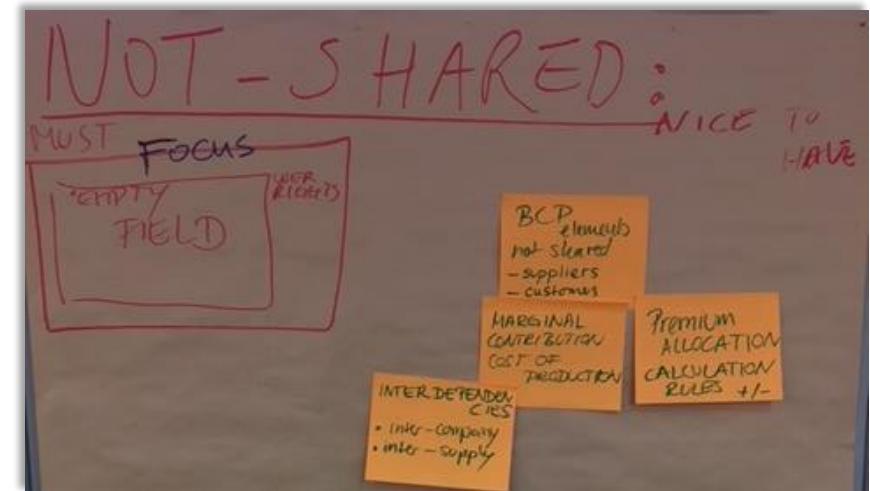
Non-Shared Data is the second of the two parts of the Digital ID Card. In this exercise we identified all Non-Shared Data attributes. For the POC, we did not categorize any specific non-shared attributes as critical for the POC. Yet, we agreed upon building an empty field where the customers can fill in their preferred Non-Shared Data to test it in the POC.

'Must haves' for Prototype:

Empty field allowing customizable non-shared view demonstrating the ability of different user rights

Further points potentially added later:

- Business Continuity Plans (non-shared elements) for suppliers / customers
- Marginal contribution, cost of production
- # of employees per location, employee benefits
- Calculation rules for premium allocation
- Interdependencies (inter-company, inter-supplier)





Stakeholder and Consumers of the location data

The relevant stakeholders and consumer of the data were identified. We clustered them into core and non-core consumers to highlight the most important ones. This classification has implications on the access rights and visibility of data for the different consumers.

Core Stakeholders

- Local network
- Headquarters
- Zurich hubs
- Captives

Other potential consumers of data

- Facility managers / Factory managers
- HR
- Finance
- Legal & compliance
- Brokers
- Regulators





Consuming and Value-adding features

After having defined the data attributes for the Digital ID Card, we identified potential consumers and valued-adding features. The exercise has been to identify both potential consumers of the core data as well as thinking of features that can be implemented on top of the DLT-based solution.

Consuming:

- Reporting and Accounting

Value-adding features:

- Natural hazard alert (dynamic)
- Heat Map



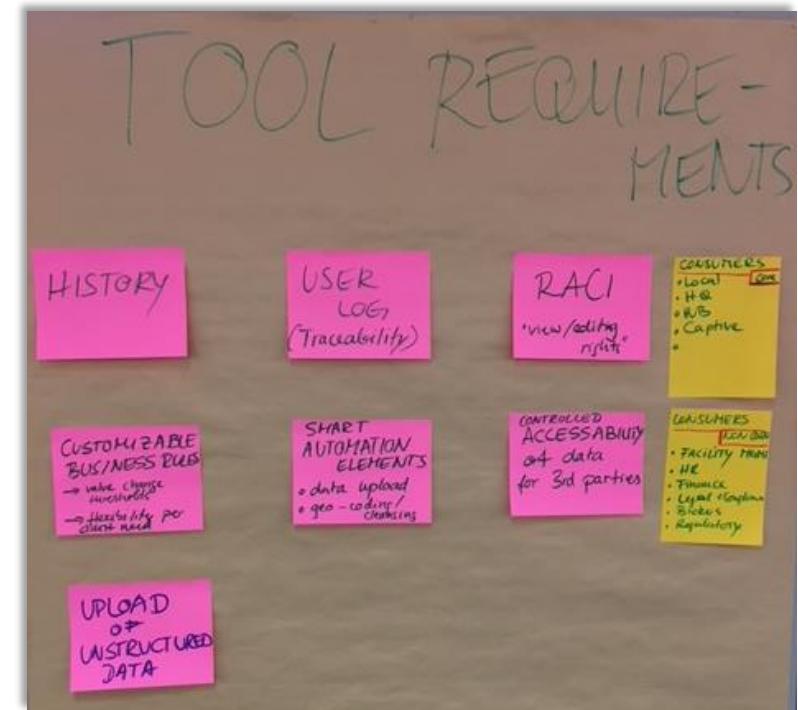


Tool requirements of a potential DLT-based solution

After having carved out the attributes and features of a POC, the next exercise has been to define tool requirements of the potential solution. All of the below mentioned tool requirements have been identified critical for the POC.

Focus on / 'must haves' for Prototype:

- History
- User log (traceability)
- RACI matrix (to document responsibility and help define access rights)
- Controlled data access for 3rd parties
- Customizable business rules
 - Value change thresholds
 - Flexibility per customer need
- Smart automation elements
 - Data upload
 - Geo-coding / cleansing
- Upload of unstructured data





WRAP-UP & NEXT STEPS



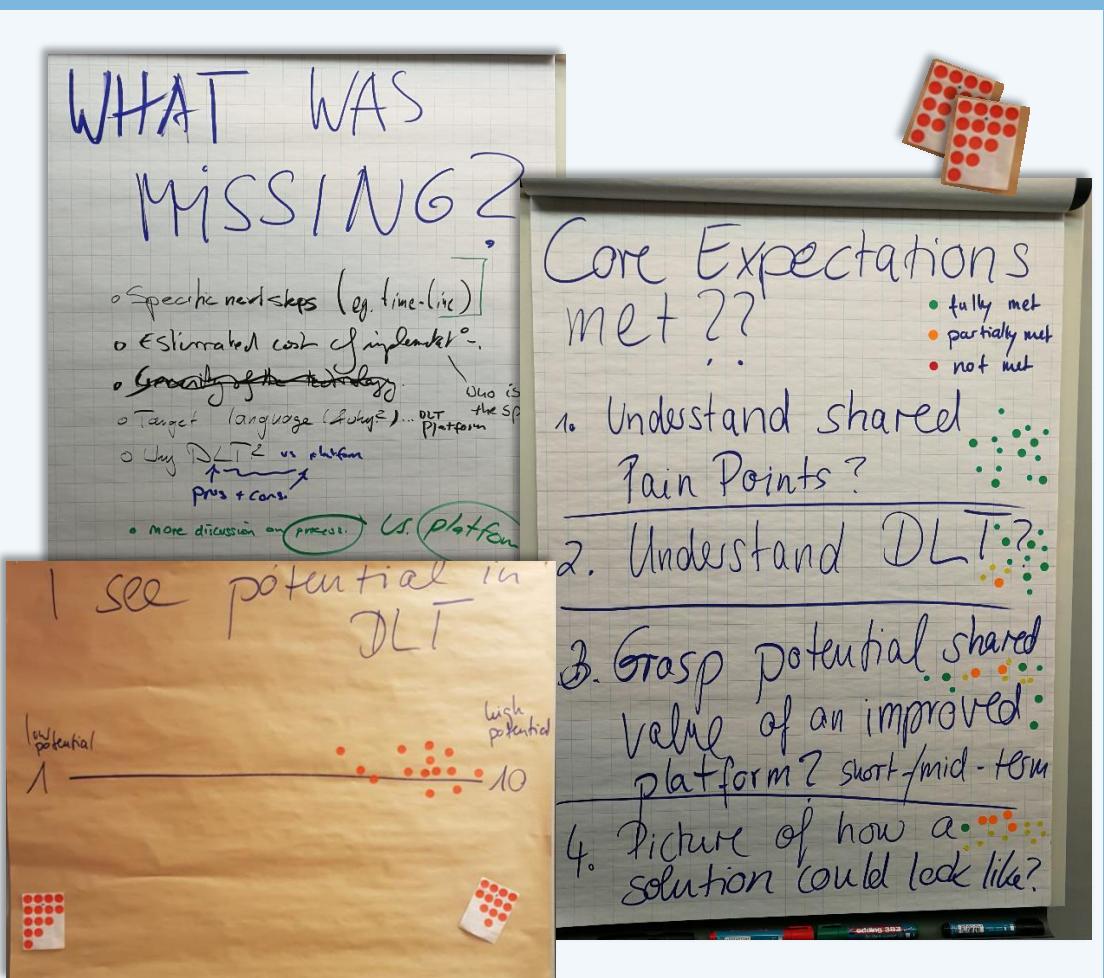
FEEDBACK SESSION

The feedback from all participants carried a strong message:

DLT has great potential and there was common interest in collaborating to further explore a joint DLT solution to improve the Location Data Management Process.

What would need to be elaborated on in the next steps should be:

- To create a clearer understanding of how a Proof of Concept and therefore a concrete DLT solution could look like (with focus on process as well as platform)
- Likewise there was an ask to describe the rationale for selecting a DLT platform (i.e. Corda, Hyperledger, Ethereum)





NEXT STEPS

With the goal in mind to **explore a joint DLT solution to improve the Location Data Management Process, we agreed to start developing a first Prototype in a joint Proof of Concept Phase.**

The prototype should prove that DLT is a viable technology for the better management of Location Data and that a DLT-based solution is feasible, as well as scalable. The Proof of Concept Phase should also refine selected Location Data Management concepts.

Hence, we suggest the **Next Steps:**

- Proposal of a first roadmap (next steps, milestones) towards a Prototype / joint Proof of Concept Proposal in January 2018
- Elaborated assessment on technical system requirements in Q1 2018
- Prototype Kick-off Workshop to elaborate on
 - a) the target process flow
 - b) Why DLT and rationale for DLT platform selection and
 - c) Definition of final project teamin Q1 2018
- Milestone: Delivery of Prototype / Proof of Concept Within a time frame of 3 months



THE 'BIG DREAM' VISION NEW BUSINESS MODELS, NEW SERVICES, NEW VALUE PROPOSITIONS

Targeted audit

As there is a greater transparency regarding the sites information the audit can be focused on meaningful items and priorities.

Supporting and catering to different business functions & third parties (i.e. facility management, HR)

Data-driven process automation

Issuing of certificates and policies, processing of premium payments, etc.

Higher degree of overall automation (i.e. issuance of certificates, policies, premium payments)

Real-time risk management

Access data on insured assets in real-time, across locations

Better maintenance of physical assets

Thanks to the qualitative information on buildings, incidents...etc. associated protocols could be created for maintenance procedures and loss prevention actions.

Reduce frictions and reduce the number of intermediaries

Offering value adding servicing

End to End / blanket insurance coverage

Insights into all relevant information should allow an all risks concept insurance.

Better optimization of risk financing

Proactive loss prevention hence potentially reduction in losses should enable to substantially improve the quality of risk which will enable our Company to better define its risk appetite and the use of captive's capital.

New Site Risk Assessment Concept

Such as remote / desktop assessments utilizing satellite site scanning and drone picture capturing.

Connecting Location data to IoT capabilities

New pricing models

Pay-per-use, conditional premiums



**Thank you very much to embark on this
journey of exploring DLT with us.**



**We are looking forward to continue this
expedition with you!**