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BLC202

# Customer's perspective on building Real-World Blockchain Applications

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# Agenda

Introduction to blockchain

Amazon Managed Blockchain

Legal & General: simplifying pension management





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# Introduction to blockchain



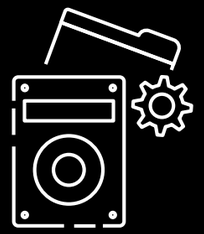
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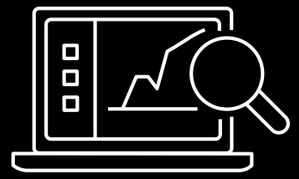
# Blockchain enables multi-party transactions

**Blockchain** creates a peer-to-peer network enabling multiple parties to transact without a central authority

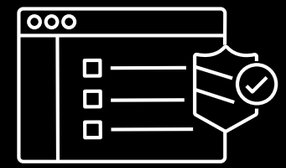
Multi-party transaction needs



Way to independently verify transactions



Single current view of data



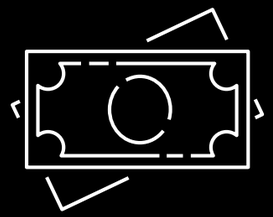
Tamper-proof history of transactions

# Top blockchain use cases



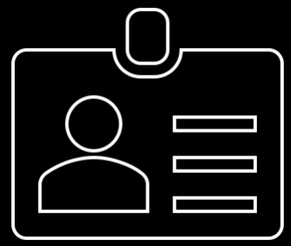
## Track-and-Trace

Transact with suppliers and distributers



## Settlements

Peer-to-peer financial transactions



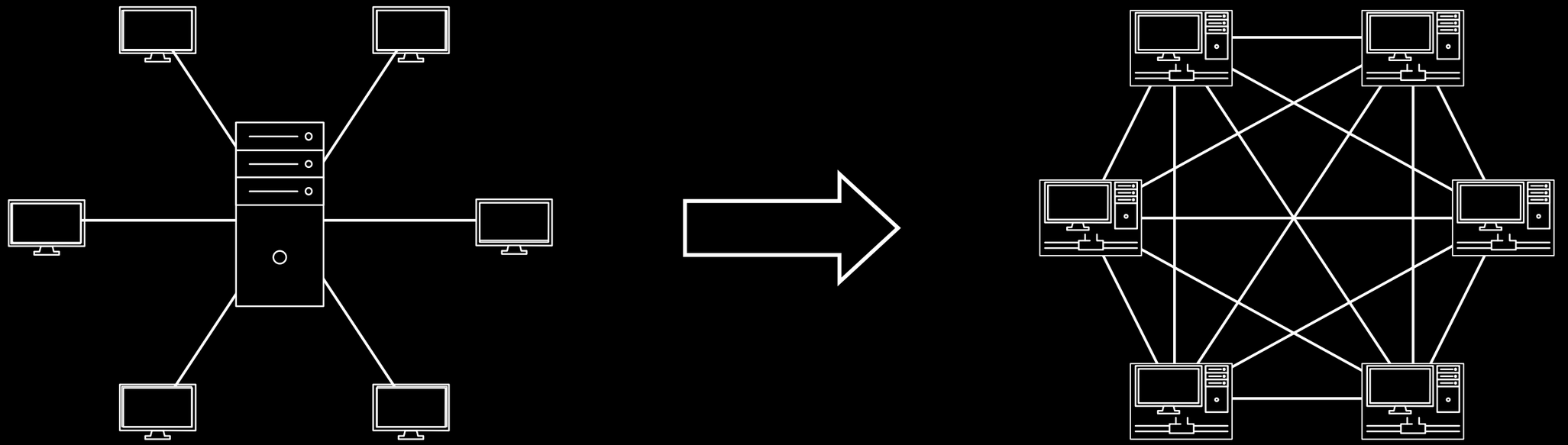
## Identity Management

Manage individual credentials

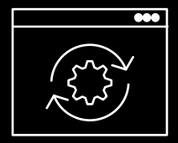
# Blockchain builds trust in a network

Eliminates the need for central authority in business networks with three main components:

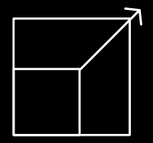
**Distributed ledger, Consensus mechanism, and Smart contracts**



# Challenges with existing blockchain solutions



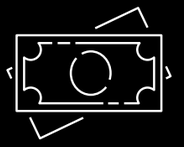
Setup is hard



Hard to scale



Complicated to manage



Expensive

# Amazon Managed Blockchain



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# What is Amazon Managed Blockchain?



Amazon Managed Blockchain is a fully managed service that makes it easy to create and manage scalable blockchain networks using popular open source frameworks:
**Hyperledger Fabric and Ethereum**

# Legal and general



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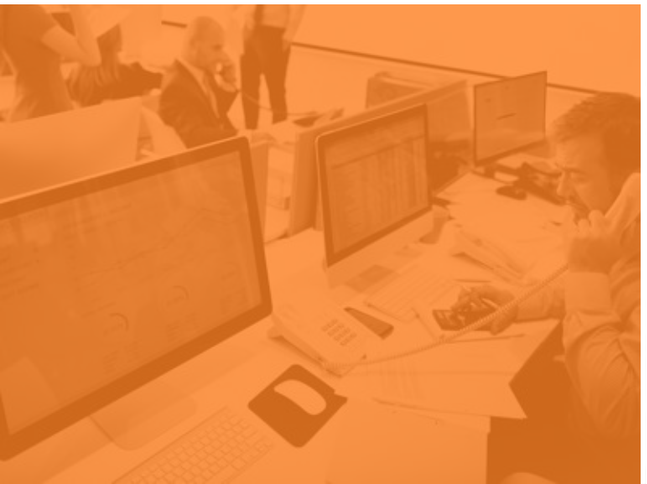




# estuare

(es·tu·ar·y)





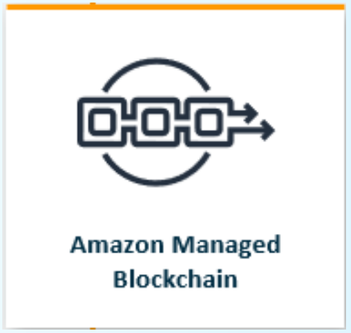






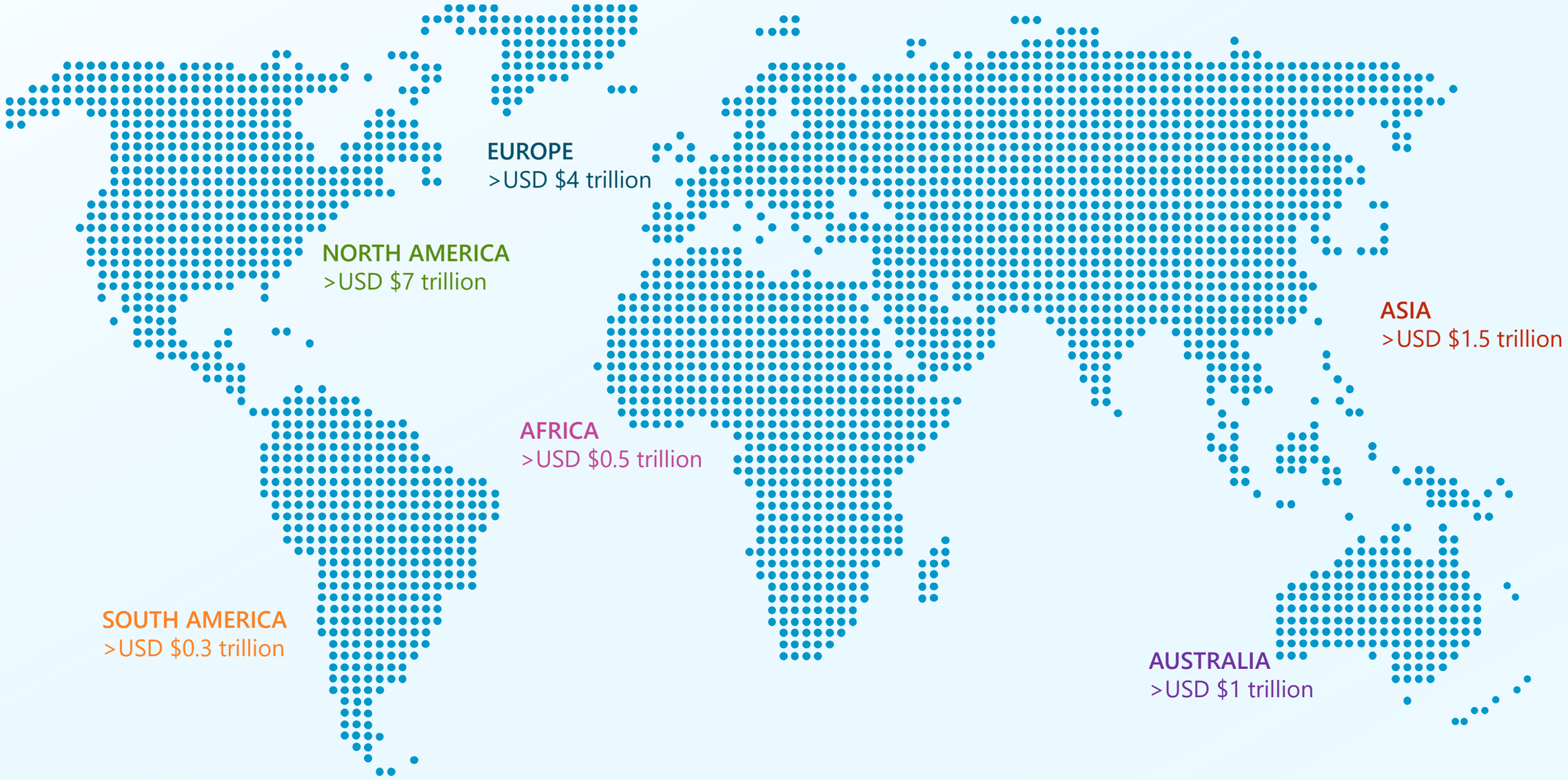
estuare is....

# Blockchain for pensions




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# Pensions are a LARGE part of the global financial system…..




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# The most important question is…..



Confidential

# The most important question is…..

# Who

Its all about people

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# Pensions touch the lives of millions of participants

These are paid for over many years, sometimes over 50 years.  What happens with bad data?



**41.1 MILLION**

participants in pension plans



**137 MILLION**

participants in pension plans



**6.3 MILLION**

participants in pension plans

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# There are four significant flaws in how pensions are managed globally

## That increases cost and inefficiency, and reduce security

1

**The existence problem: understanding who is alive is currently often achieved through manual tracing or third party tracing services which can be costly and inaccurate.**



2

**The population evolution problem: there is no way to trace the progression of a population of retirees with certainty. This can lead to errors in defining the population at any point in time**



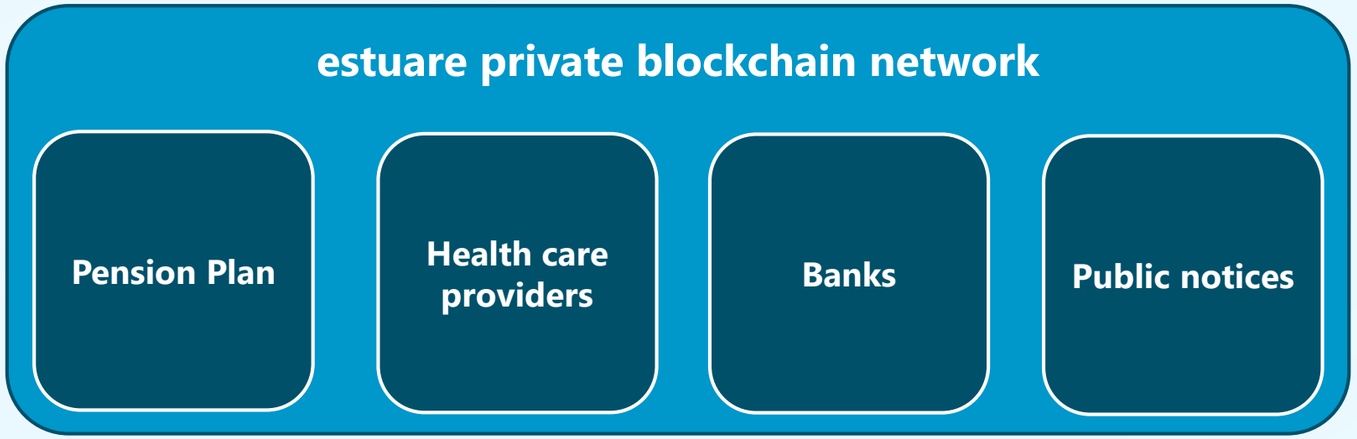
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# estuare solves the existence problem

Self-Sovereign Identity (SSI) integrated to capture trustworthy and timely information on existence in a secured manner



Using the power of the network




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# There are four significant flaws in how pensions are managed globally

## That increase cost and inefficiency, and reduce security

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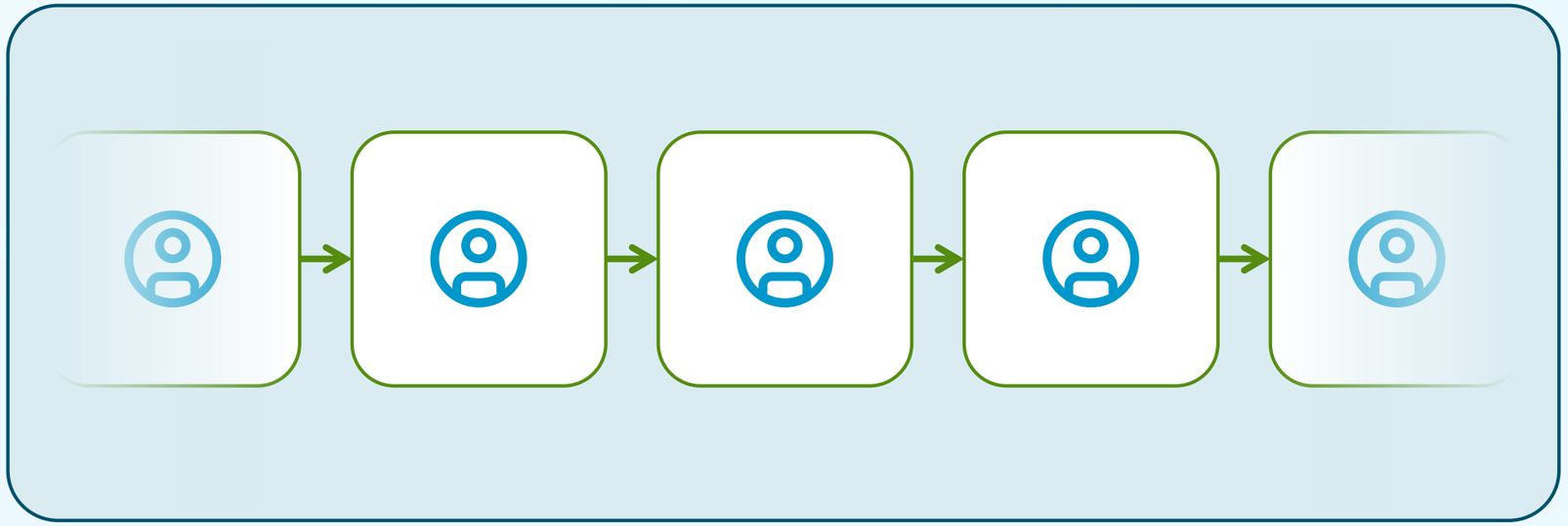


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# estuare solves the population evolution problem



Using blockchain to build a perfect record of how the population has developed over time.



This allows pensions to be managed
accurately and at significantly lower cost.
Over a 75% reduction in long term costs is expected.

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# There are four flaws in how pensions are managed globally

## That increase cost and inefficiency, and reduce security

3

**The transparency problem: there is no way for data to be shared, audited or amended in real time across all managers. As the population evolves, misinformation compounds as data is sent from party to party, and back again**



4

**The risk-transfer problem: The lack of transparency can lead to an inefficient risk transfer process. Errors in data lead to mis-estimation and costly and time consuming data-cleansing.**

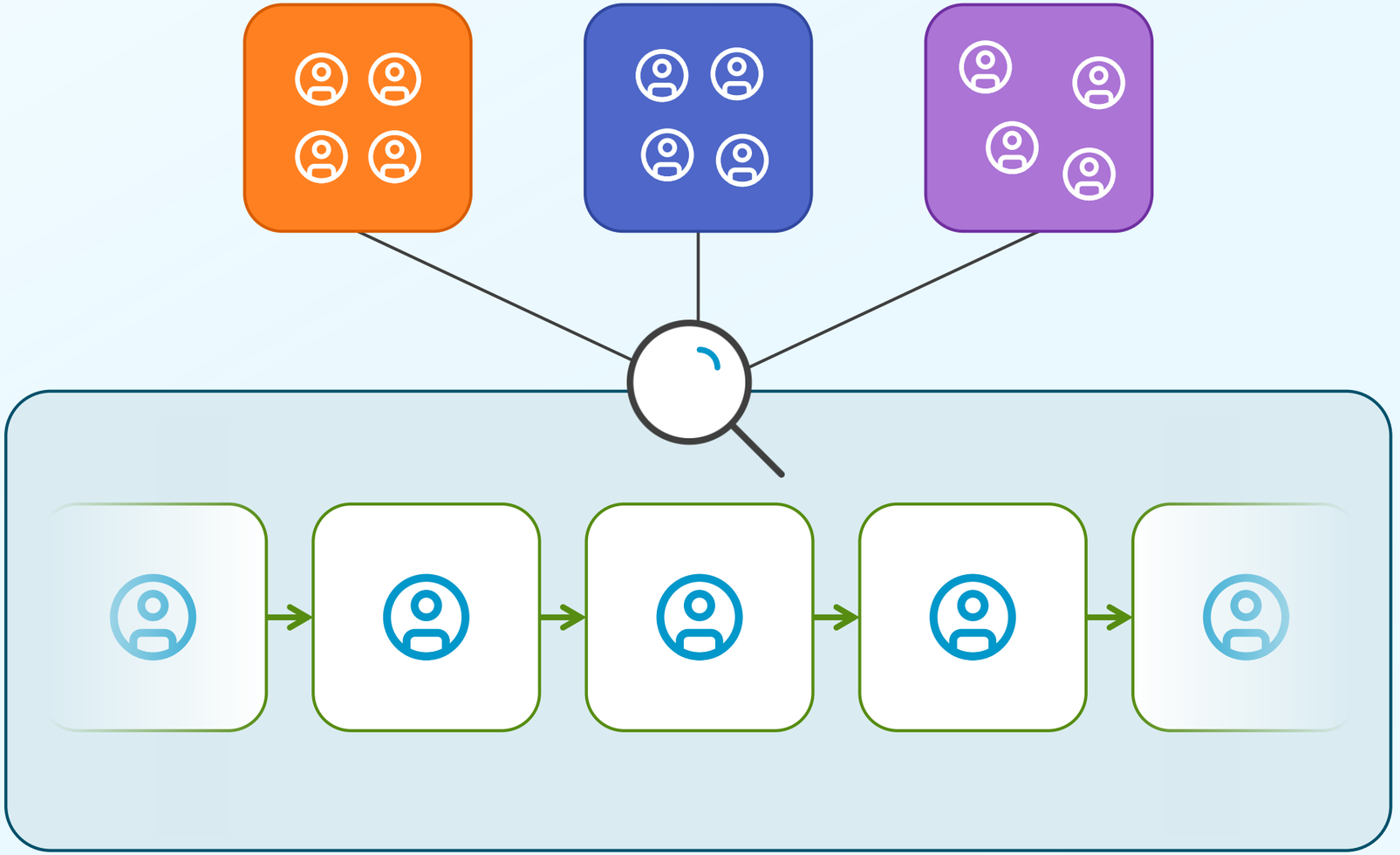


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# estuare solves the transparency problem

Using blockchain, all parties see the same data eliminating all duplication and further reducing costs

This benefits all participants in the ecosystem, increases protection for pensioners and makes estuare a necessary solution for the industry



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# There are four flaws in how pensions are managed globally

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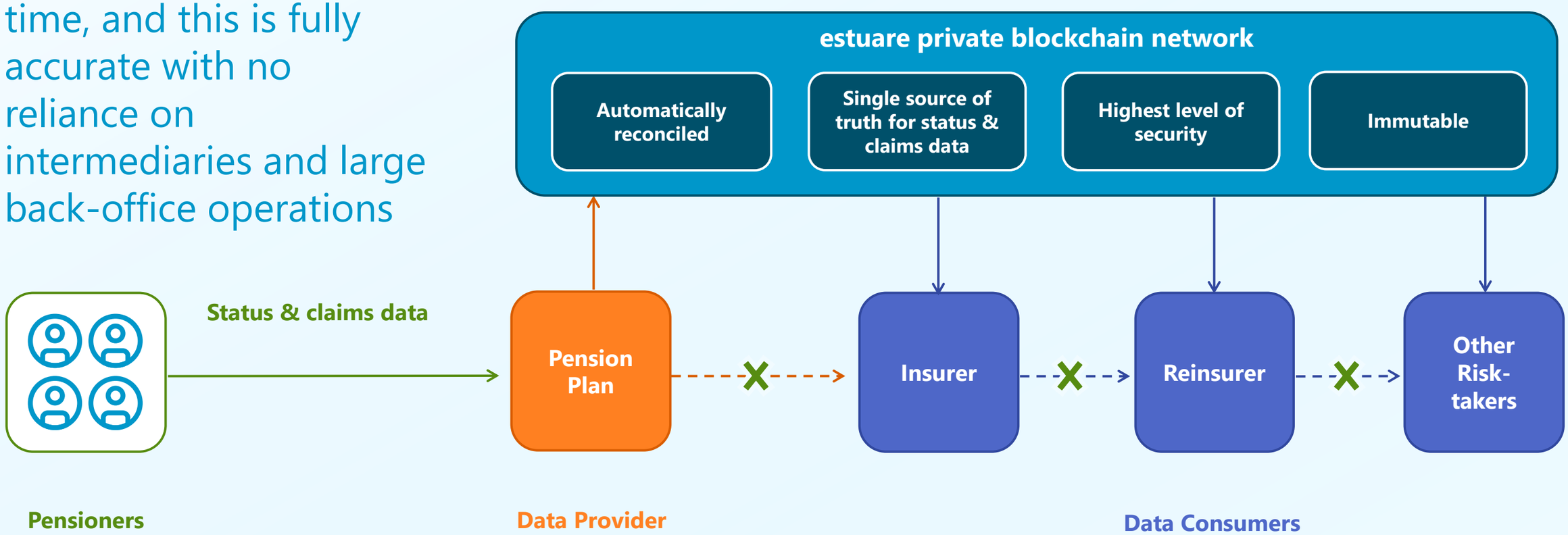


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# estuare solves the risk-transfer problem

Using a Private Blockchain Network, participants have access to their data in real time, and this is fully accurate with no reliance on intermediaries and large back-office operations

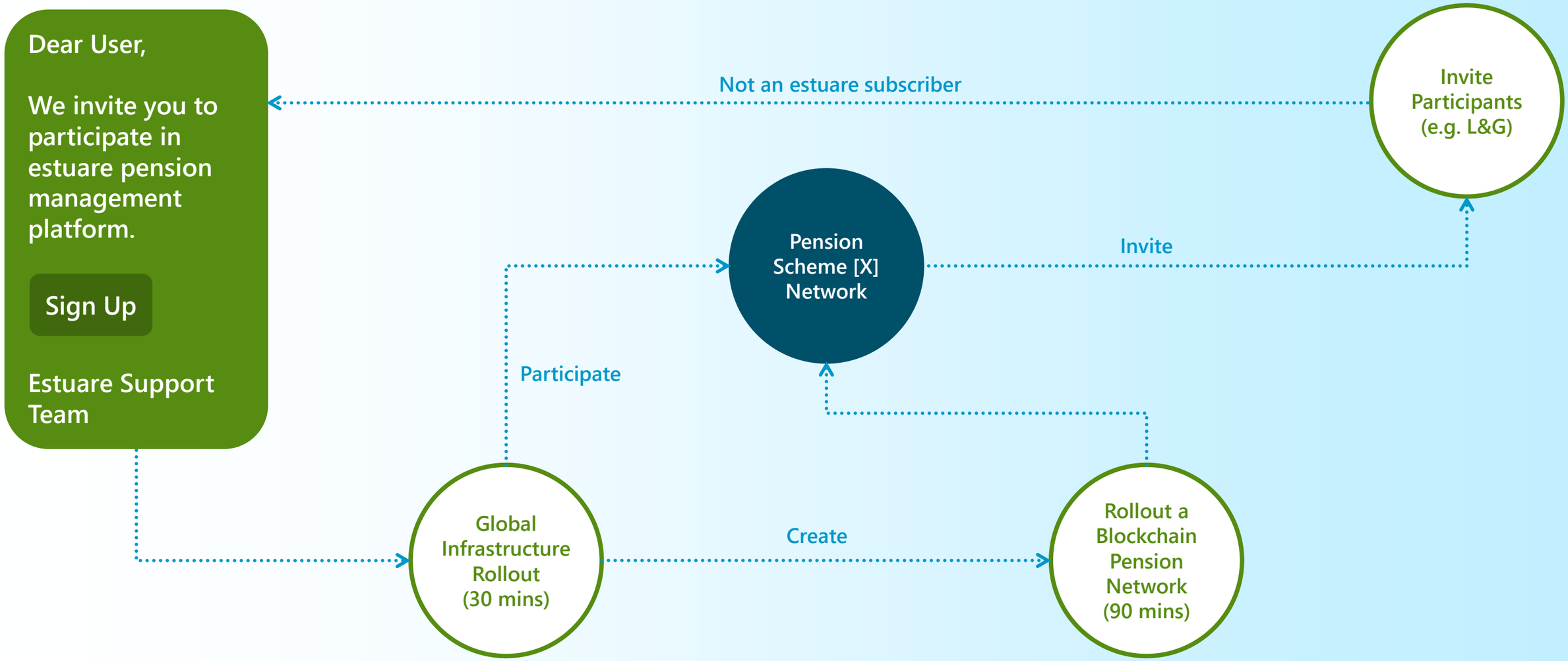
Distributed Ledger Technology enables efficiency, accuracy, security and trust among all participants in the same network.



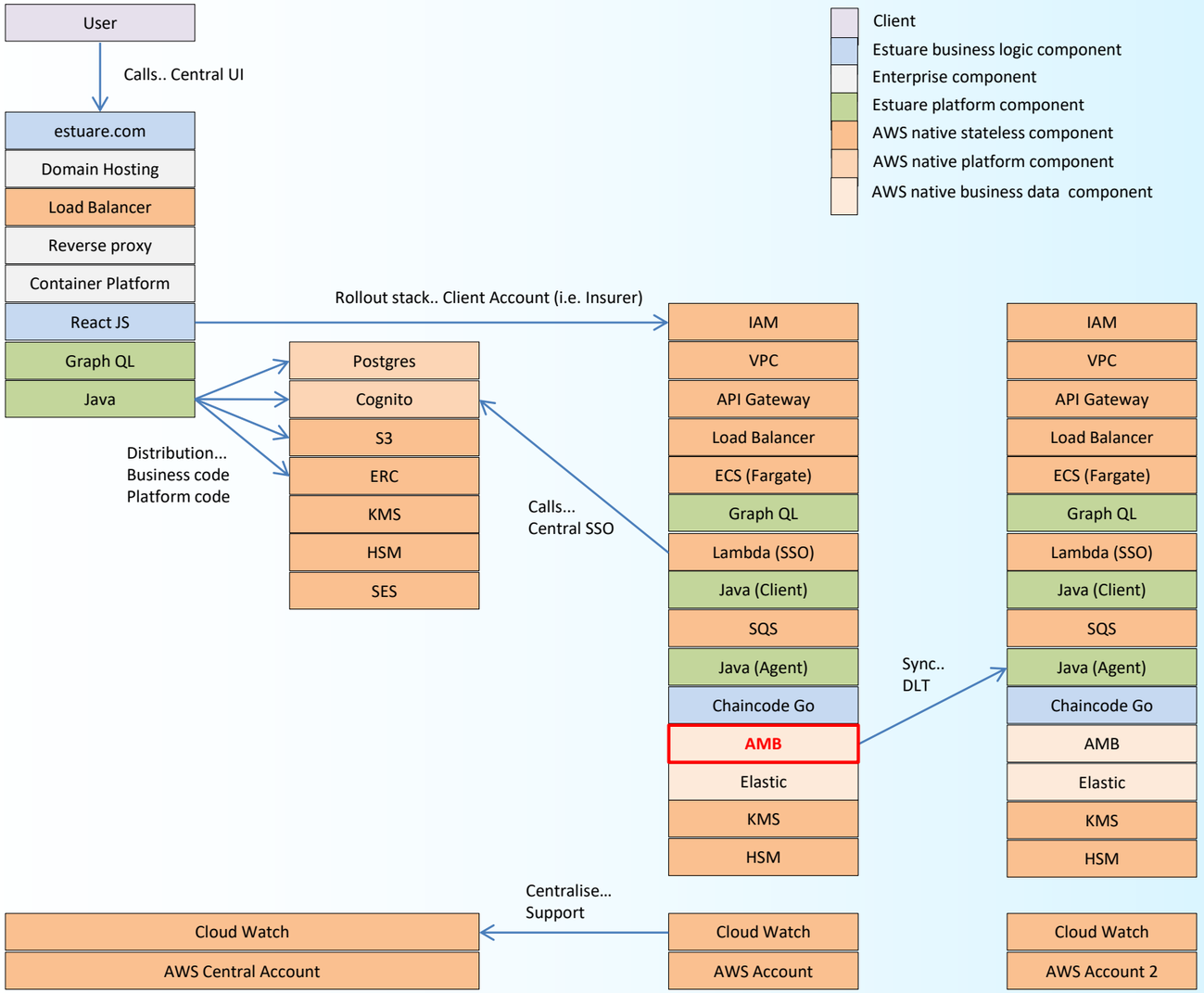

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# estuare user journey – Set up

## Up and running in less than a day



# estuare technical stack



# Thank you!

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