



FAC

Pilot Preparation Workshop 1

Agenda



- Introductions
- Demonstration
- How this impacts fund operations
- Pilot overview
- Next steps
- Induction resources

The Big Picture – why are we here?



- ❑ Technology is driving fundamental changes to the way the financial industry operates
- ❑ The effect on business models will be as big as the adoption of the internet

Distributed Ledgers:

- Providing an immutable record updated by consensus
- Improving transparency and accuracy of data
- Replacing messaging with inherent, automated alignment of data
- Eliminating reconciliations

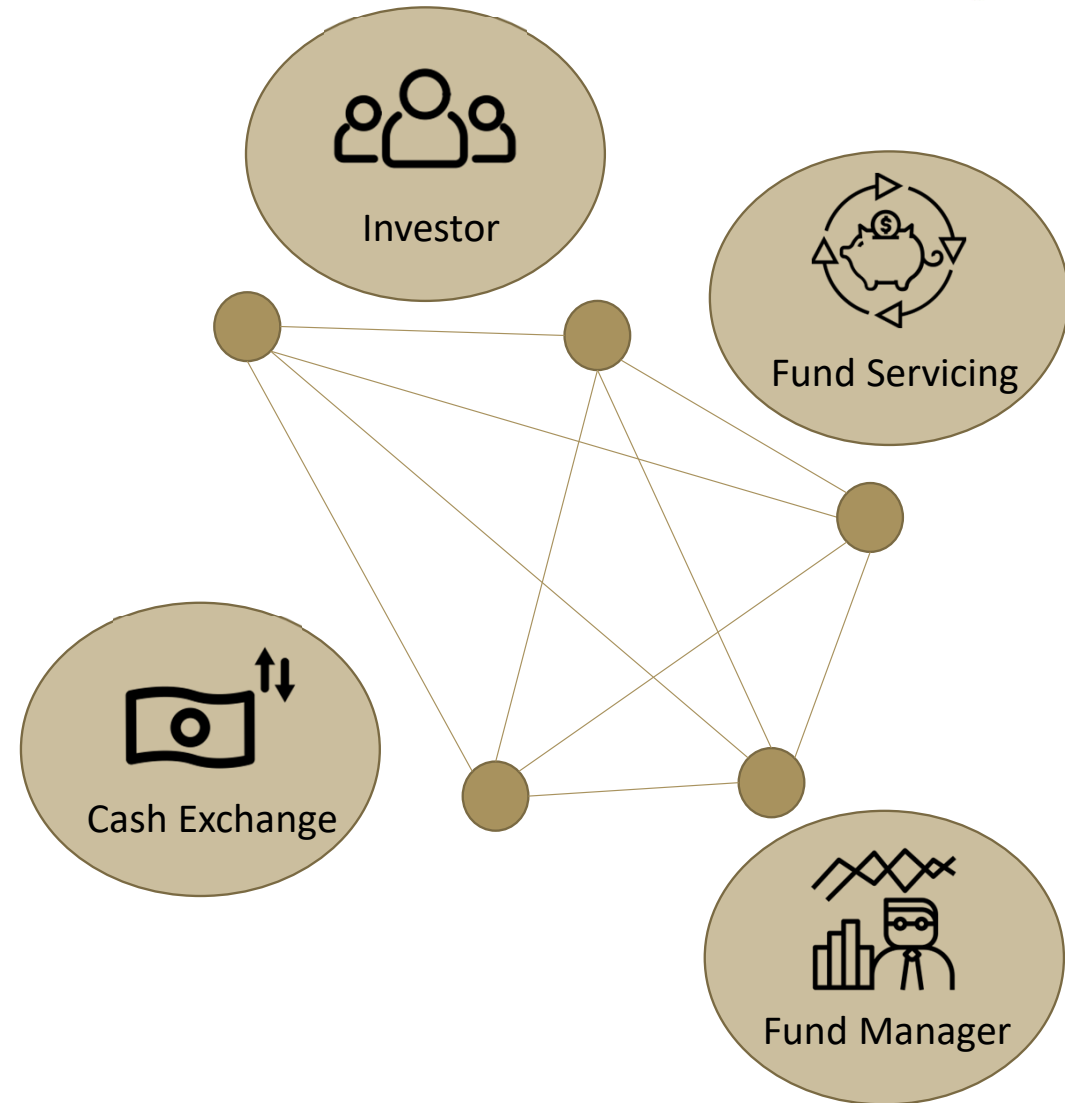
Asset Tokenisation:

- Opening up new markets, and increasing accessibility / liquidity
- Enabling quicker, more efficient and safer settlement
- Maintaining secure, traceable ownership

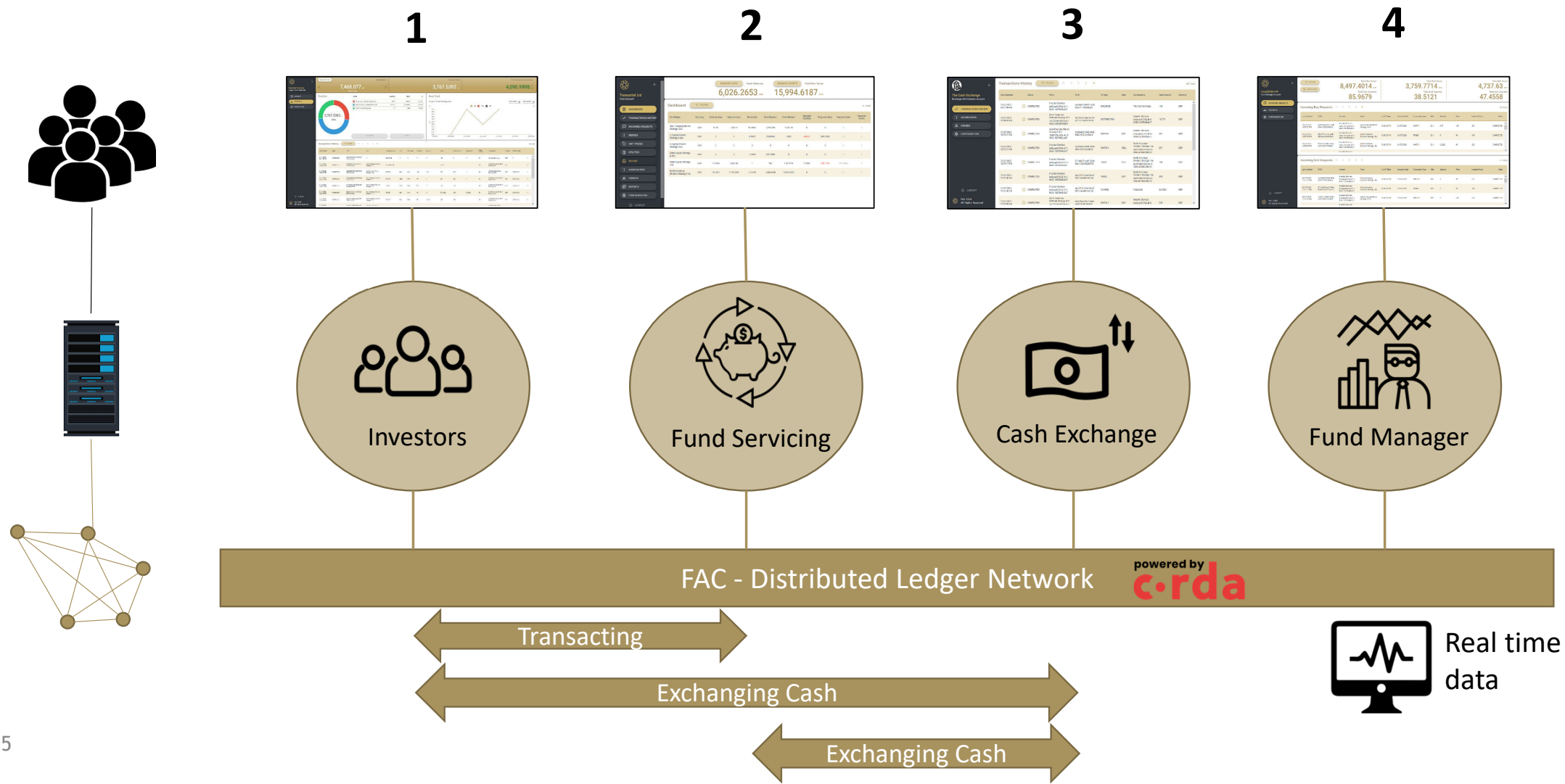
FAC Network Overview



- FAC is building an innovative distributed ledger-based platform for mutual funds servicing.
- FAC is a private, permissioned network built on R3 Corda Enterprise.
- FAC processes transactions and settles them. Both cash and fund assets are tokenised in FAC and transaction finality is achieved on ledger by atomic settlement (bilateral synchronised DvP).
- The ledger is a series of independent nodes operated by each actor in the value chain.



FAC Demonstration Network



Operational Consequences of Fund Tokenisation



1. Investor participation increases and becomes direct

- Investors / Concentrators will be active participants on the network, not at the other end of a Swift connection or a fax machine. They will manage their own data and approve changes or token transfers that impact their node on the ledger.

2. Possession of tokens replaces book-entries

- Mutual fund shares (and most forms of cash) are dematerialised, and exist as book-entries. Tokenisation effectively creates a digital 'certificate', where title is proven by holding the certificate, and secured by the digital signature of the holder.

3. There is no centralised register of shares

- Having the owner's name on the TA's register does not prove title: the ledger defines the register. A TA can no longer reassign ownership by updating their own records, as tokens have to move and the Investors have to approve that. The Fund nodes have visibility of tokens issued by them, so they can readily construct a view equivalent to 'the register'.

4. The transaction record is the transaction

- On issuance, the fund token is transferred to the Investor node: that is the transaction and the transaction record. It is immobilised at the node, in the Investor's safekeeping, until the Investor delivers it back to the Fund node at redemption.

5. Tokenisation (of assets AND cash) redefines settlement

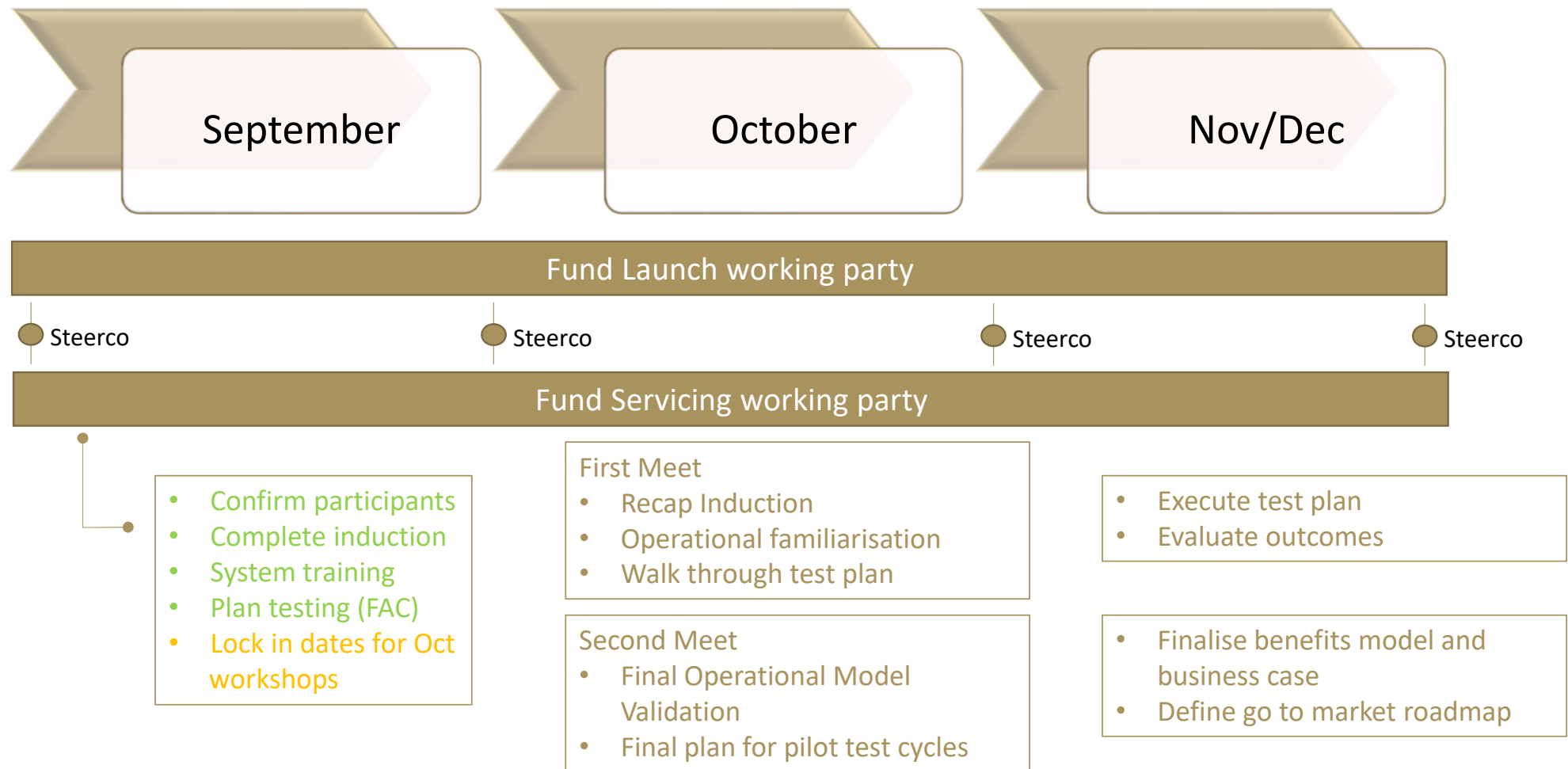
- There is no need for intermediate client money accounts as settlement becomes a bilateral exchange of cash and asset tokens where both parties must be present and authorise the transfer together.
- As a consequence the Transfer Agent has significantly less involvement with managing cash: there is no longer a need to match cash receipts to deals or to reconcile banks accounts to ledger transactions and balances.

Pilot Workstreams



Workstream	Activities	Participants	Outcomes
OEIC Fund Launch	<ul style="list-style-type: none"> Identify legal and regulatory implications of the FAC distributed ledger and tokenisation model on fund launch and propose solutions to these. 	<ul style="list-style-type: none"> Legal and Compliance SME's working as part of the LRFWG 	<ul style="list-style-type: none"> Draft fund launch documentation. Identification of key risks and issues requiring regulator review
Fund Servicing	<ul style="list-style-type: none"> Fund is setup on the FAC network and processed through multiple iterations of the 'day in the life' cycle of order processing, pricing and settlement. Aim is to simulate the end to end workflows so including off ledger functions (the custodian, fund accountant and depositary). 	<ul style="list-style-type: none"> Led by fund servicing participants working alongside nominated fund managers 	<ul style="list-style-type: none"> Validation of operating model and TA2.0 benefits Understanding of go to market operating model and road map to achieve this

Simulated Pilot



FAC Operating Model Workshop



1. Transfer Agent role evolves

- Investor on ledger
- Collapsed messaging and reconciliation requirements
- Consensus based data maintenance – the register is 'self-maintaining'

2. Interactions with other parties in the workflow

- Depositary
- Fund custodian and accountant

3. Maintaining AFM as principal

- Acting as the fund token issuer
- Managing token liquidity on ledger

4. Atomic settlement of trades

- DvP window is zero
- Binding of fulfilment and settlement

7. Cash On Ledger

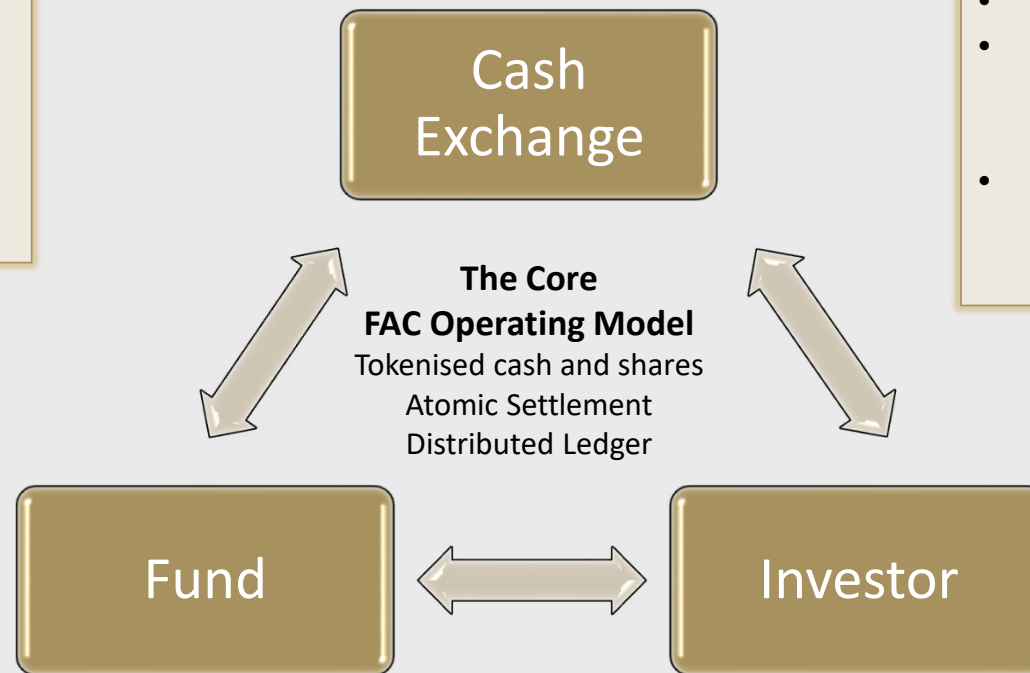
- A highly regulated activity (EMR & AML)
- Absolute legal certainty required for token as a store of value, with holders' right to redeem on demand
- Investor protection available on fiat currency must be applied equally to cash tokens

6. Different models for Investor Engagement

- Direct on ledger
- Distributor / wealth manager
- Retail portal
- Investor custody

5. Asset Tokenisation

- Funds issuing shares as digital assets
- Entitlement recorded by location of token on ledger not central registry



Induction Resources

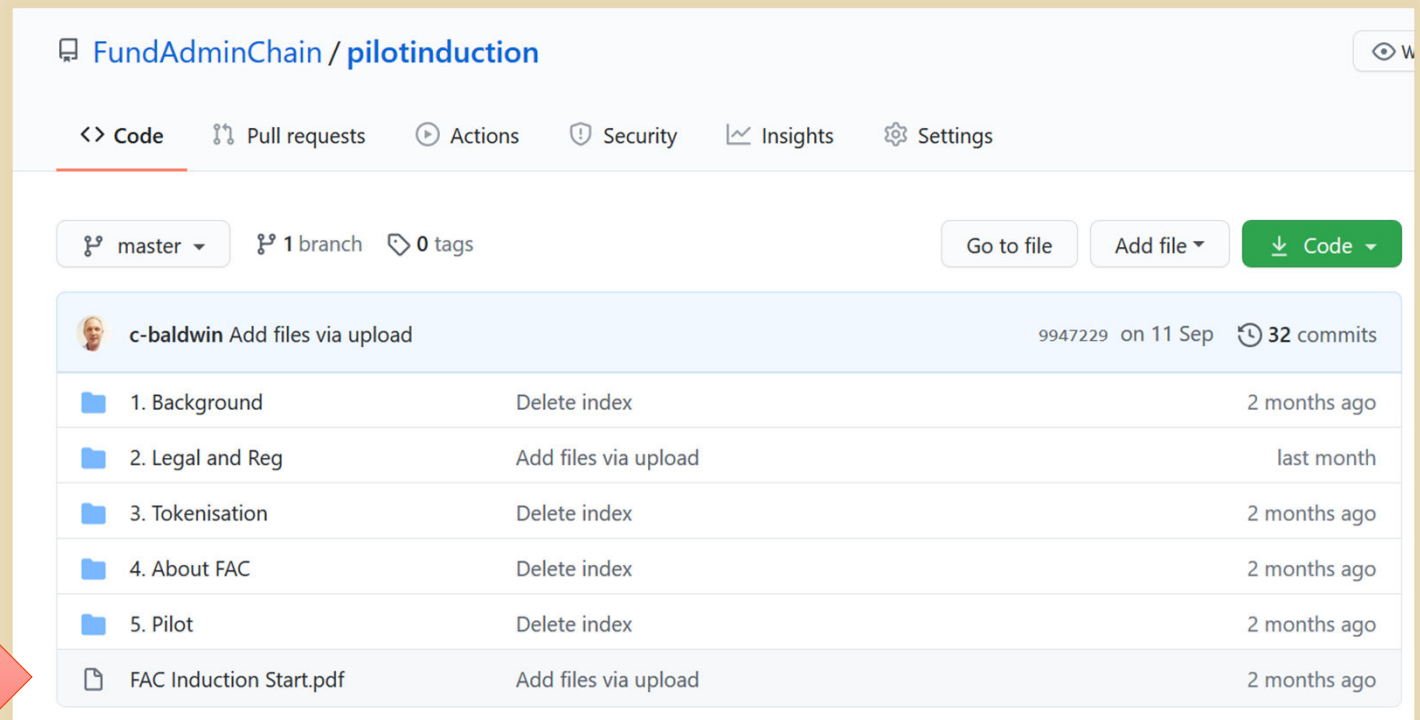


<https://github.com/FundAdminChain/pilotinduction>

Resources to help you:

- Distributed ledger
- Blockchain
- Tokenisation
- Corda
- Regulation
- FAC

Start Here



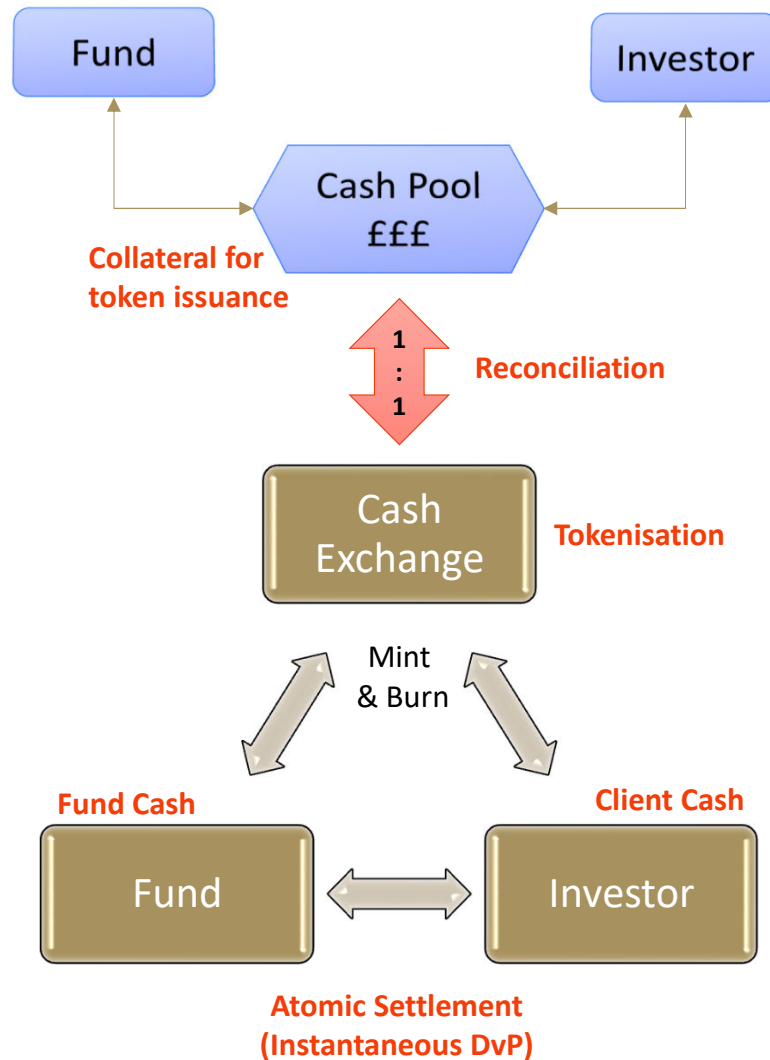


FAC

Additional Slides



FAC - Client Money Overview



Client Money Compliance

1. CASS requires client and corporate money to be segregated.

FAC enhances segregation by holding cash tokens on independently controlled nodes.
















































































2. Funds already rely on a CASS exemption for the DvP window.

FAC reduces this requirement and enables funds to collapse DvP window towards zero

3. CASS rules do not prevent a firm transferring client money into the firm's own account, provided this is done for the purpose of making a payment on the same day

The cash at the Cash Exchange can be regarded as in a safekeeping pool where token holders have a fractional claim

Insolvency: Investor protection increased as no longer exposed to fund. If investor node operator fails administrator can take control of node and return cash. Cash Exchange operator is a bank providing a high degree of protection to fiat deposits.

TA 1.0 Functions	TA 2.0 Impact	How the function improves	Part of Successful PoC?	Closing Gaps	Ready for Q3/4 Pilot?
	 Mostly the same  Material changes  Eliminated	 Function streamlined by shared data for all network participants ¹  Becomes a core function/feature of the FAC network		 Process design w/ light dev  Market partner dependent  Roadmap development	
Client Servicing (Client = Fund Manager or other Inst. Investor)		 TA 2.0 client/fund manager servicing team responsibility, albeit with access to investor data shared with the Fund Node		  	
Transaction Management & Settlement		 <ul style="list-style-type: none"> Digitalisation of cash and fund shares enable coupling of the transaction and the related settlement in real-time Investors and Funds top-up or cash out via Cash Exchange 		  	
NAV Pricing		 <ul style="list-style-type: none"> Fund Accountant provides NAV and receives TA data as in TA 1.0 Immediate access to official NAV for network participants 		  	
Distributions		 <ul style="list-style-type: none"> Digitalisation of cash and fund shares enable coupling of the distribution, reinvestment and any related settlements in real-time Automated allocation to nominee-based investors 		 	
Registration		 <ul style="list-style-type: none"> Transactions & investor data changes are initiated on Investor Node TA 2.0 role ensures compliance with fund/jurisdiction rules 		 	
AML/KYC		 KYC performed by operator of Investor Node (i.e., institutional investor, distributor, also KYC'd) through a KYC utility for the network as a whole, and AML controls run by Cash Exchange.		  	
Document Management		 <ul style="list-style-type: none"> Operator of Investor Node (nominees) will maintain the relevant documents for investors on their node Relevant documents can be attached to all transactions in FAC 		 	
Distributor Management		 Distributor operates their own Distributor Node where all of their transactions, fees and data changes are initiated		  	
Regulatory & Tax Reporting		 Reporting utilities leverage data and FAC-native tax/fiscal agent calculations on the Fund Node		  	
Investor Servicing		 TA 2.0 investor servicing team responsibility, albeit with access to investor data shared with the Fund Node		 	
Reconciliations		 As nodes are always in synch and transactions and settlements are coupled, reconciliations of cash settlements against share transactions and to other participants' records are not required			

13 Note 1 – One of the core features of Corda, the distributed ledger framework on top of which FAC operates, is that only the network participants party to a transaction have access to the related data.