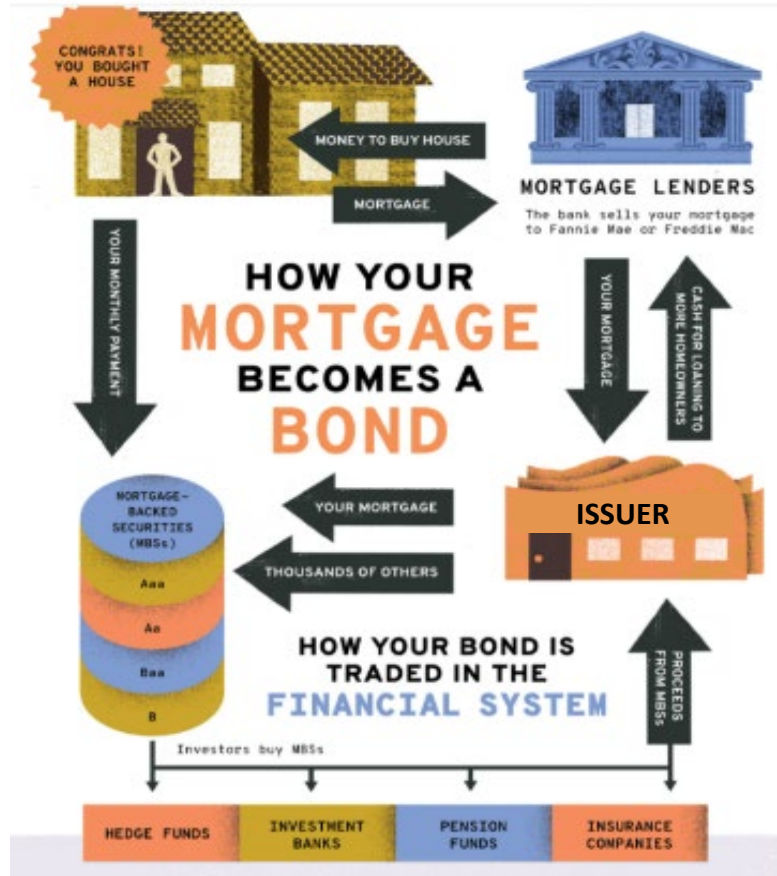




# INTEGRATED AND AUTOMATED STRUCTURED FINANCE WITH **INTAINADMIN** AND **INTAINMARKETS**



FUTURE OF STRUCTURED FINANCE IS DIGITAL



## Structured Finance is burdened by complexity and inefficiency

An industry issuing more than \$2T in Securities each year still running on Excel+Email combo!

Industry spends **\$10 billion** on intermediation and transaction expenses per year

# Multiple institutions working from disparate systems, results in high costs and potential risks



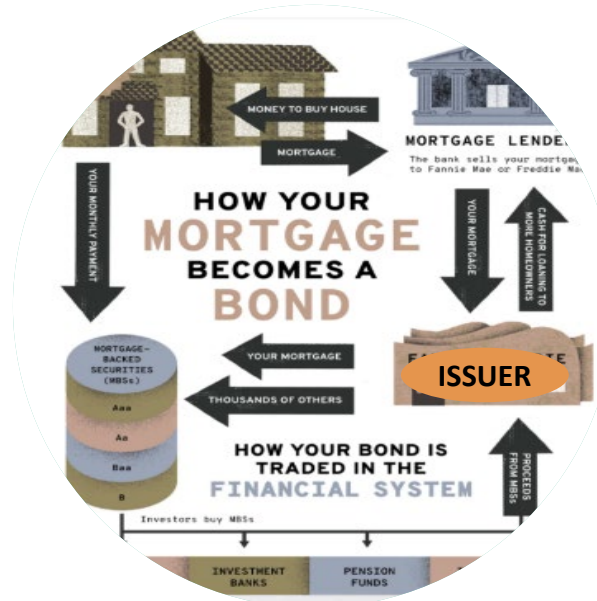
## SILOED DATA

Monthly Servicer Reports, Trustee Reports, Investor Reports – each having to be reconciled; less and less is known about the assets with each step



## LAYERED COSTS

Each party manages its own systems, does its own due diligence, and has its own set of analysts or reconcilers



## MANUAL PROCESSES

With Excel sheets as the most established industry tech, each transaction, analysis & report involves manual effort

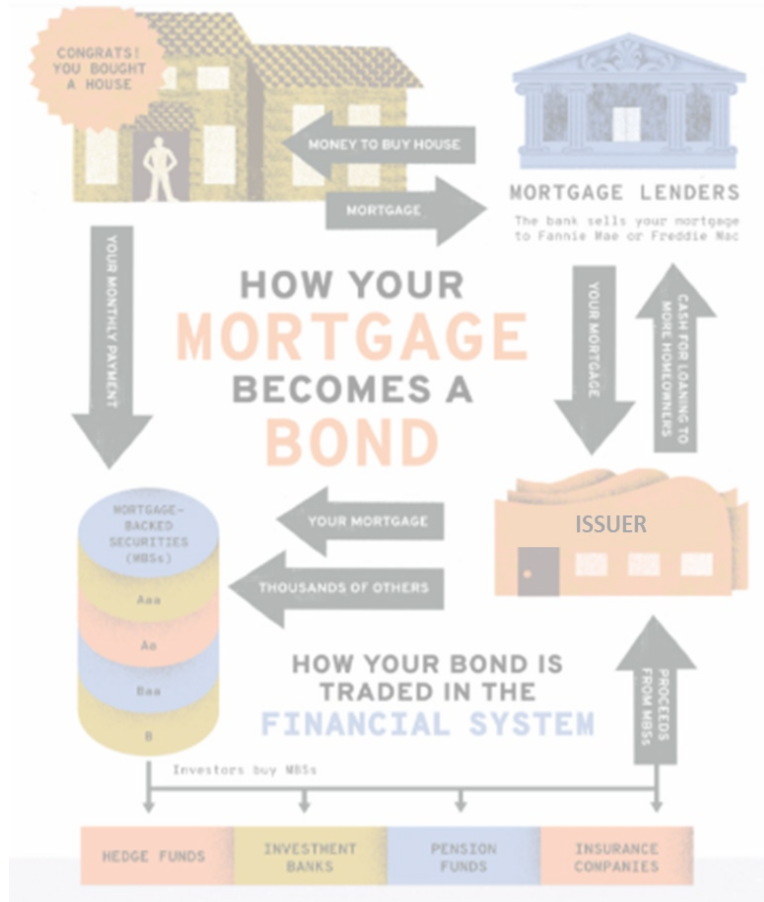


## LACK OF TRANSPARENCY

Lack of real-time asset-level data and inefficient market means opaque pricing specific to deal and counterparties



# High costs that make deals below \$100M unviable and siloed 'truth' that means up to 50 days delay in loan & collateral data



MINIMUM  
DEAL SIZE

\$100m

COST OF  
TRANSACTION

\$1-2m

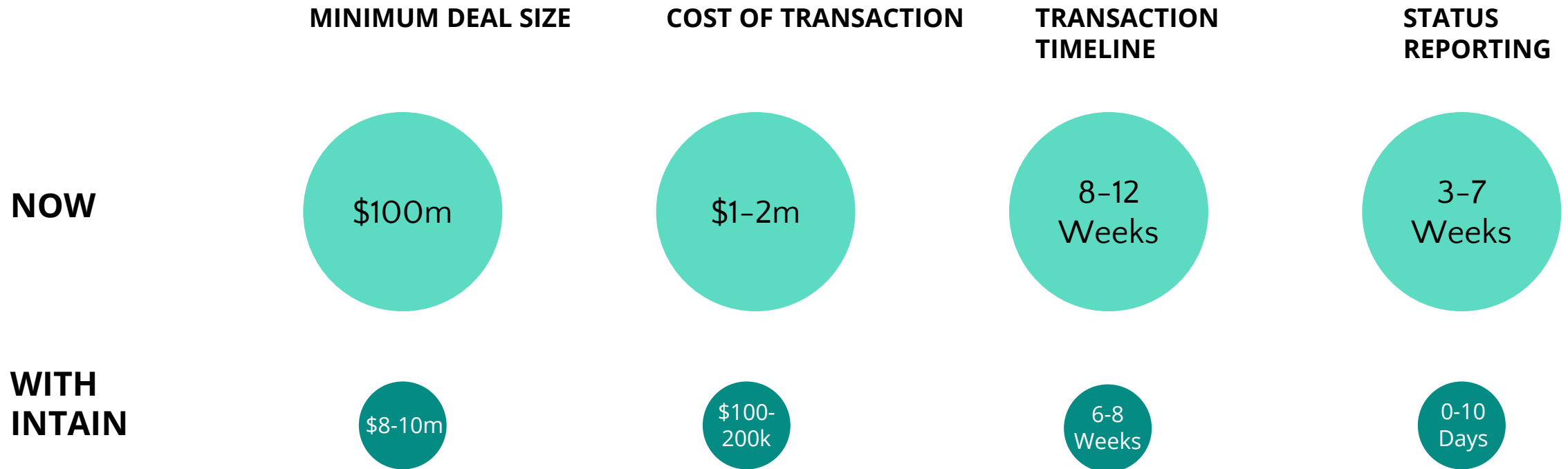
TRANSACTION  
TIMELINE

8-12  
Weeks

STATUS  
REPORTING

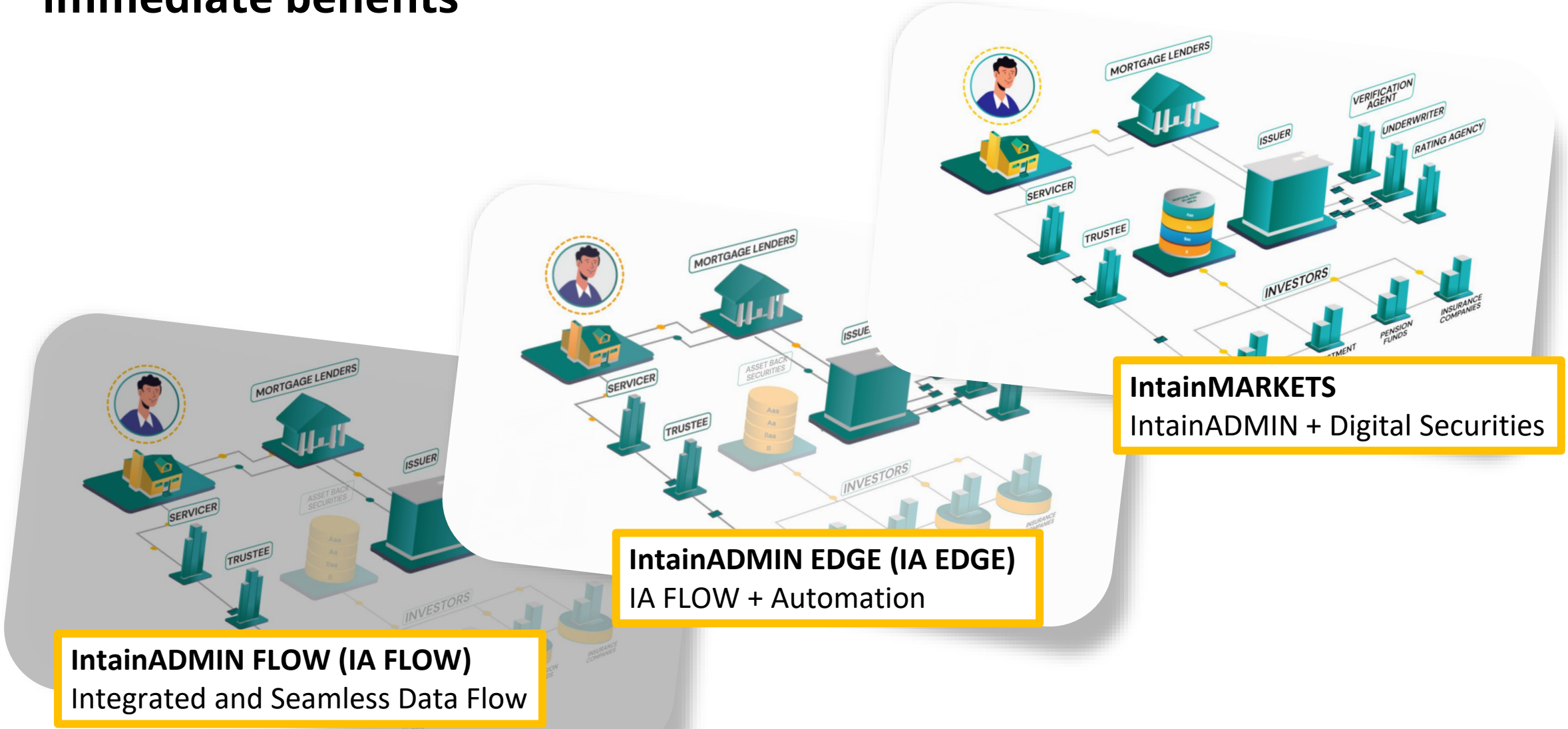
3-7  
Weeks

# Intain is building the integrated and automated digital infrastructure that is redefining a structured finance 'deal'



**FUTURE OF STRUCTURED FINANCE IS DIGITAL**

**Intain's approach allows Issuers to choose the pace and level of digitization of the issuance and administration, quick set-up and immediate benefits**



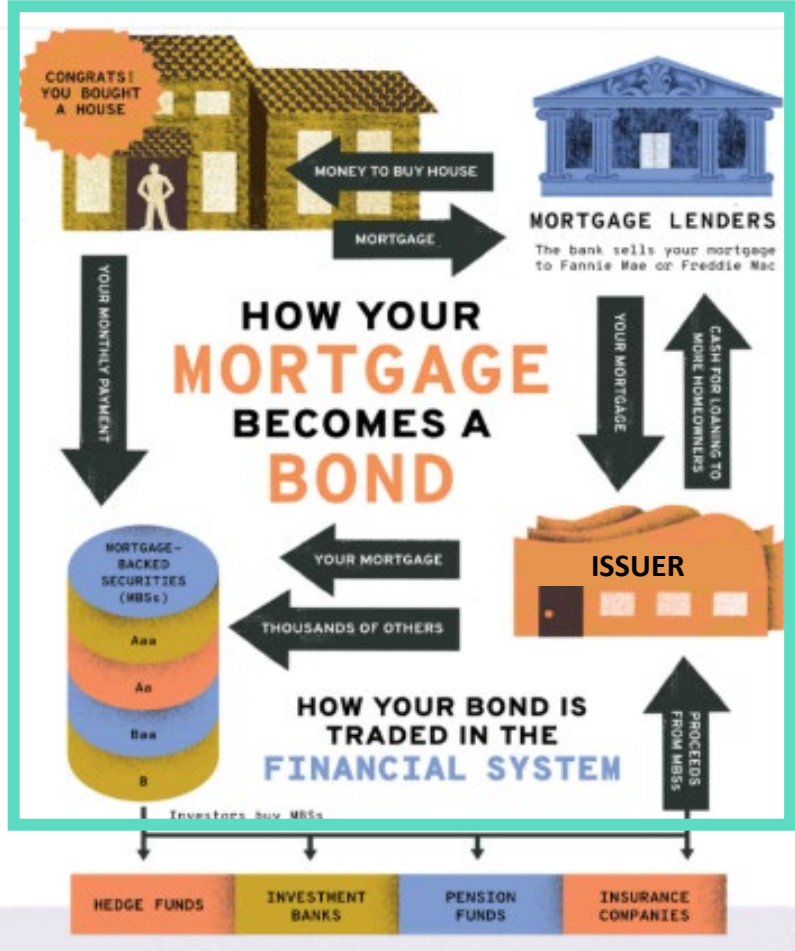
**IntainADMIN FLOW (IA FLOW)**  
Integrated and Seamless Data Flow

**IntainADMIN EDGE (IA EDGE)**  
IA FLOW + Automation

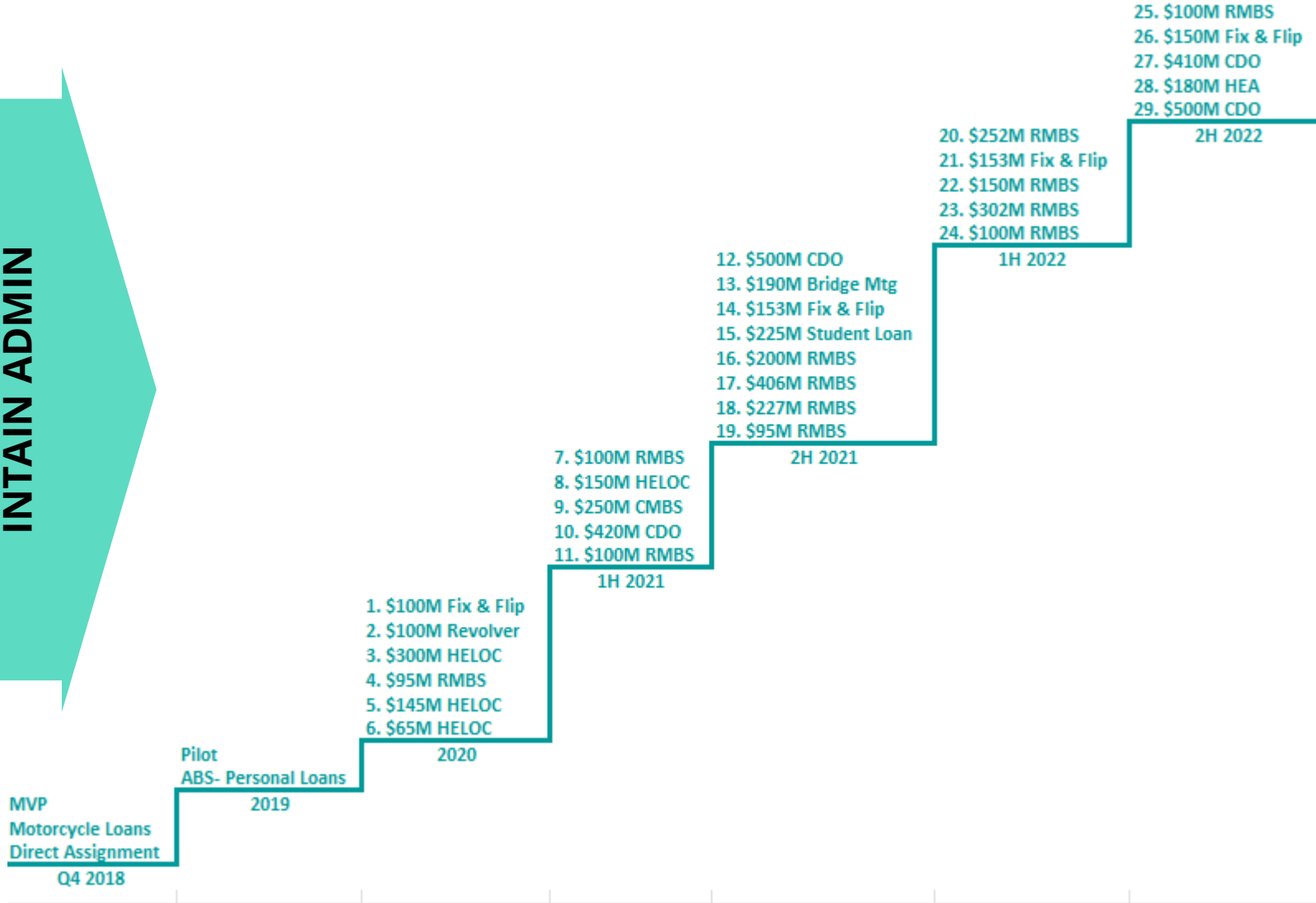
**IntainMARKETS**  
IntainADMIN + Digital Securities



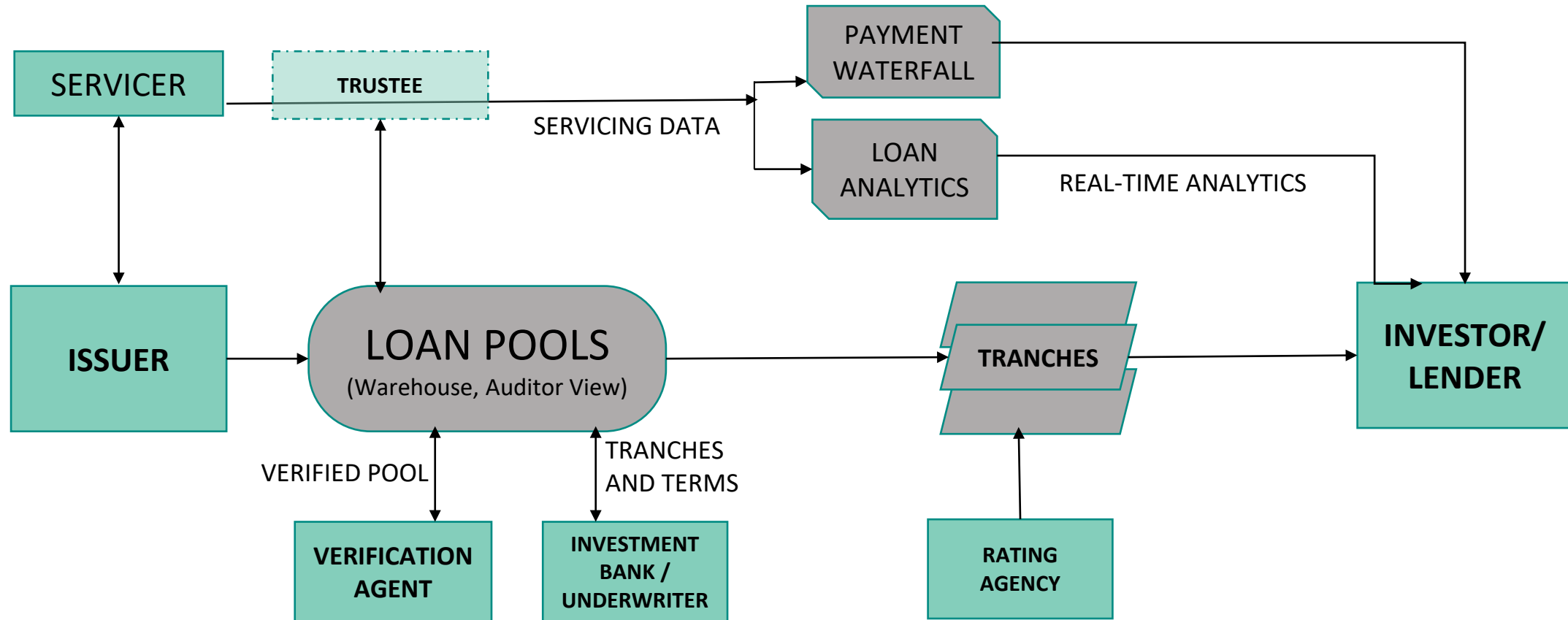
# IntainADMIN provides integrated and automated administration across asset classes and deal structures



**INTAIN ADMIN**



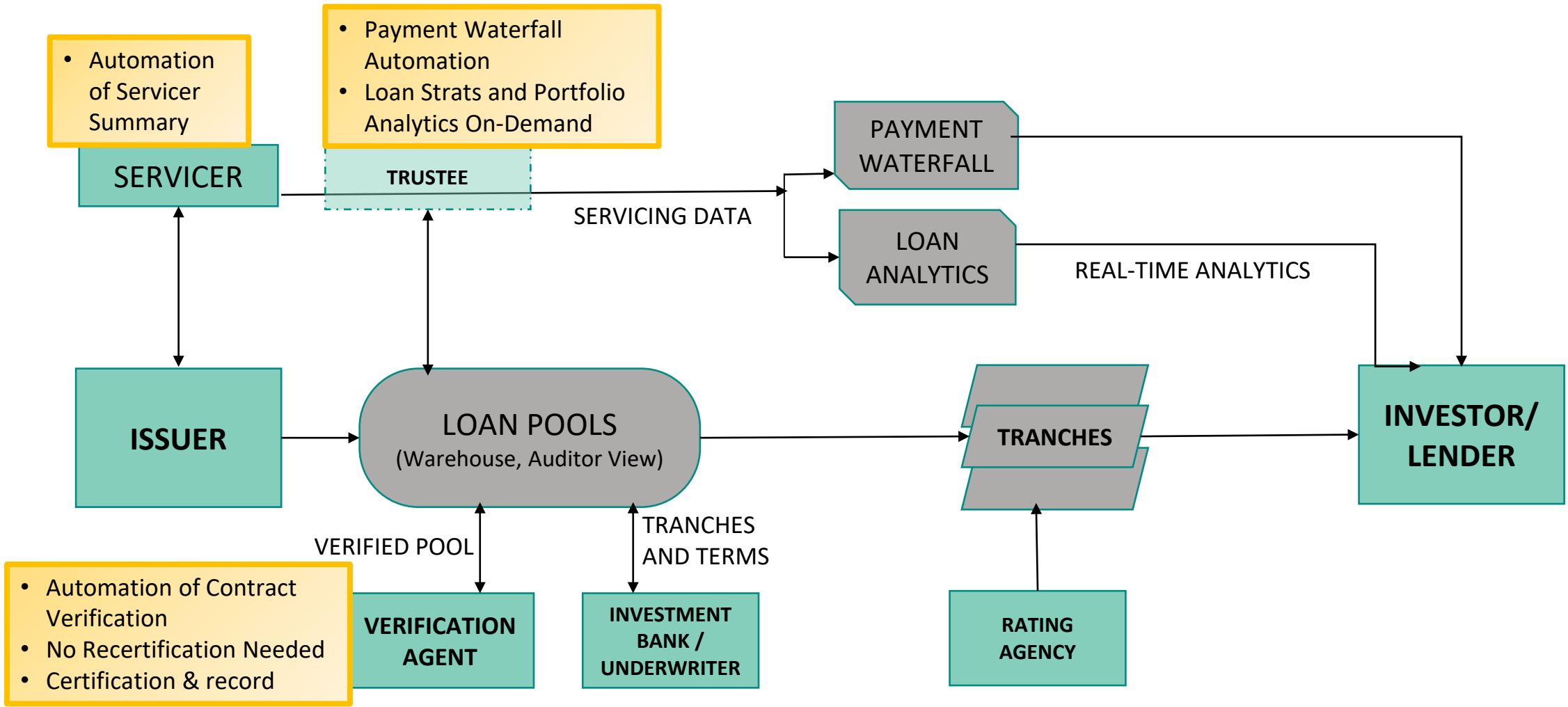
# IntainADMIN FLOW (IA FLOW) facilitates Integrated Data Operations with seamless flow of data across stakeholders



Eliminates Manual Reconciliation, Ensures Data Integrity, Provides Real-time Insights, Reduces Costs



# IntainADMIN EDGE (IA EDGE) adds automation to IA FLOW for up to 80% reduction in Verification Agent and Paying Agent time and effort



AI-enabled automation of Loan Document Review, Smart Contracts to automate the Payment Waterfall, Combined with Deal and Portfolio Analytics



Thus, IntainADMIN digitizes, automates and then integrates on a blockchain network, key processes across structured finance administration life-cycle

Due Diligence on Loan Documents by a **VERIFICATION AGENT**

Servicer Loan Tape Standardization with **LOAN TAPE CRACKER**

Deal Modeling and Payment Waterfall by a **PAYING AGENT**

Loan Strats and Portfolio Insights with **REAL-TIME ANALYTICS**

Surveillance and Monitoring by **RATING AGENCIES**

Most of these solutions are provided by independent tools or enterprise software products in structured finance; in many cases still done manually or using Excel

Now all available on IntainADMIN

# Establishing Data Provenance - AI enabled VERIFICATION AGENT service on-chain

The screenshot displays a web application interface for loan verification. On the left, a sidebar lists loan pools from POOL1 to POOL6. The main content area features a comparison table between LMS and Contract data. A 'SAVE' button is positioned above the table. To the right, a preview of a 'VEHICLE LOAN AGREEMENT' document is shown, featuring the 'ABC Bank' logo and a document title. The interface also includes a top bar with an 'EXPORT' button and a bottom bar with a 'VIEW MORE' button.

LMS	Contract
Loan Contract Number TW02488	Loan Contract Number TW02488 ✓
City Phoenix	City Phoeni ✗
Date of Loan Agreement 10-16-2017	Date of Loan Agreement 10-16-2017 ✓
Lender	Lender

1 / 7 | - + | ⌵ ⌵ ⌵

ABC Bank

VEHICLE LOAN AGREEMENT

Pending VIEW MORE

## VERIFIED LOAN POOL ON BLOCKCHAIN

Used by loan verification agents (VA) to review and certify loan pool data using artificial intelligence, Intain VA module ensures trust in the data about the underlying assets (loans and collateral)

# LOAN TAPE CRACKER with master templates that also incorporate requirements of 2019 ESMA regulations

**intain**

Add Standard Fields

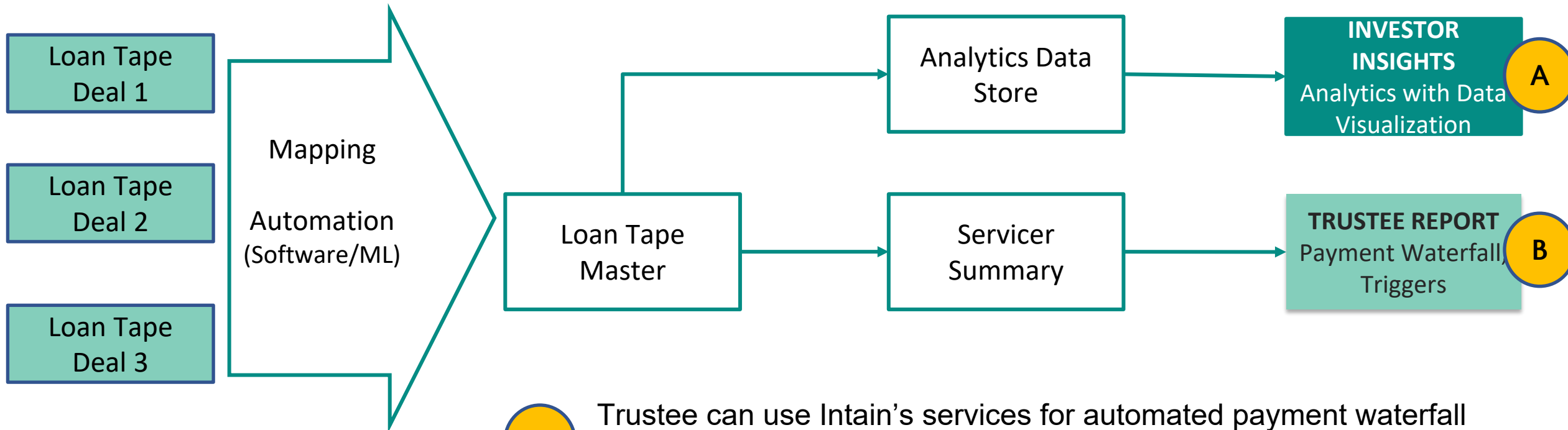
Asset Class \*  
RRE

Last Updated  
09/13/2021, 01:16:59

**Field Details**

Field Name	Field Code	Section	Content To Report	Action
Loan ID	RREI0	Underlying exposures information section	The unique identifier assigned by the reporting entity in accordance with Article 11(1) of Delegated Regulation (EU) ... [include number of the disclosure RTS]	
Original Underlying Exposure Identifier	RREI1	Underlying exposures information section	Unique underlying exposure identifier. The identifier must be different from any external identification number, to ensure security of the obligor. The reporting entity must not amend this	
New Underlying Exposure Identifier	RREI2	Underlying exposures information section	If the original identifier in field RREL2 cannot be maintained in this field enter the new identifier here. If there has been no change in the identifier, enter the same identifier as in RREL2. The reporting entity	
Original Obligor Identifier	RREI3	Underlying exposures information section	Original unique obligor identifier. The identifier must be different from any external identification number, in order to ensure security of the obligor. The reporting entity must not amend this	
New Obligor Identifier	RREI4	Underlying exposures information section	If the original identifier in field RREL4 cannot be maintained in this field enter the new identifier here. If there has been no change in the identifier, enter the same identifier as in RREL4. The reporting entity	
Data Cut-Off Date	RREI5	Underlying exposures information section	The data cut-off date for this data submission.	

# Two Modules that Address Standardization Challenges and Provide Comprehensive, Real-time Reporting



**B** Trustee can use Intain’s services for automated payment waterfall and reporting OR use their own systems/processes, in which case they still benefit from standardized *Servicer Summary* and all the *Loan Strats* made available by Intain



# (B) Automate the Payment Waterfall computations with *smart contracts*, as a **PAYING AGENT**

The screenshot displays the intain platform interface. At the top left is the intain logo. At the top right, it says 'Welcome Rachel' with a user icon. The main content area is titled 'Class Distribution Summary (USD's)' and contains two tables. The first table lists various note classes (A1, D1, C1, B1, TotalNotes, Certificate, Totals) with columns for Cusip, Original Balance, Prior Balance, Interest Rate, Interest Distribution, Principal Distribution, Total Distribution, and Ending Balance. The second table, titled 'Class Factors per \$1,000', provides the same data normalized to a \$1,000 original balance.

Notes	Cusip	Original Balance	Prior Balance	Interest Rate	Interest Distribution	Principal Distribution	Total Distribution	Ending Balance
A1	81632KAB1	138,737,000.00	138,737,000.00	3.350	697,153.43	9,362,983.99	10,060,137.42	129,374,016.01
D1	81632KAB4	31,426,000.00	31,426,000.00	6.520	307,346.28	0.00	307,346.28	31,426,000
C1	81632KAB3	31,426,000.00	31,426,000.00	5.090	239,937.51	0.00	239,937.51	31,426,000
B1	81632KAB2	23,523,000.00	23,523,000.00	3.970	140,079.46	0.00	140,079.46	23,523,000
TotalNotes		225,112,000.00	225,112,000.00		1,384,516.68	9,362,983.99	10,747,500.67	215,749,016.01
Certificate		4,573,891.50	4,573,891.50				0.00	21,640,320.18
Totals			229,685,891.50		1,384,516.68	9,362,983.99	10,747,500.67	237,389,336.19

Notes	Cusip	Original Balance	Prior Balance	Interest Distribution	Principal Distribution	Total Distribution	Ending Balance
A1	81632KAB1	138,737,000.00	1,000.00	5.03	67.49	72.51	932.51
D1	81632KAB4	31,426,000.00	1,000.00	9.78	0.00	9.78	1,000.00
C1	81632KAB3	31,426,000.00	1,000.00	7.64	0.00	7.64	1,000.00
B1	81632KAB2	23,523,000.00	1,000.00	5.96	0.00	5.96	1,000.00

## MODEL AUTOMATION

Deal set-up as per governing documents and payment waterfall calculations automated using smart contracts,



# Extend to rating agency for rated deals – Surveillance on-chain

Welcome Bob

Loan Pool Setup < Pool Details Pool Summary

Collection < Pool Details

Issuer SPV <

Transaction Details <

Show 10 entries Search: 4fcb

Pool ID	Pool Owner Name	Pool Name	Pool Description	Pool Start Date	No Of Assets	View
e12584e6-271a-4c82-943d-5d67df6b4fcb	Alice	poolname60	pooldesc	01-07-2020	60	<a href="#">View Pool Summary</a> <a href="#">View Loans</a> <a href="#">Pool Data Analytics</a>

Showing 1 to 1 of 1 entries (filtered from 190 total entries)

Previous 1 Next

## RATINGS SURVEILLANCE

Pool Details Available on Chain – Single Source of Truth for Issuer, Investor & Rating Agency

Asset Details Available on Chain – Structure, Collateral, Payment History

Providing data, clarifications, follow-ups is just one log-in

# WSFS taps blockchain firm Intain to automate capital markets transactions

by Suman Bhattacharyya — March 11, 2020

In Business Banking, Wealth Management Reading Time: 2 mins read



WSFS Bank is working with Intain, a blockchain firm based in Chennai, India, to help automate capital markets transactions. The Wilmington, Del.-based bank, a subsidiary of WSFS Financial, said it's using Intain's blockchain-based tool to facilitate trustee reporting for asset-backed

First to blockchain-enable Trustee (Paying Agent) function in Structured Finance

# Custodians leverage AI to automate verification of off-chain assets – solving on-ramp challenge

## UMB Financial Corporation Becomes First Bank to Deploy Intain's Verification Agent; Activates Key Module of Administration Service for Structured Finance

NEWS PROVIDED BY  
Intain Inc →  
May 24, 2022, 09:00 PT

SHARE THIS ARTICLE  
f t in

*Intain Augments Admin Service with Verification Agent, Employing Artificial Intelligence for Large-Volume Automated Loan Processing to Substantially Reduce Potential Errors*

NEW YORK, May 24, 2022 /PRNewswire/ -- Intain Inc., a leading blockchain-enabled structured finance platform for issuers and investors to connect to an efficient, secure and trusted way, announced today the availability of a verification

# LEADING THE DIGITIZATION OF STRUCTURED FINANCE WITH AI AND DIGITAL LEDGER TECHNOLOGY

## Trustee Eyes Intain For Blockchain Job

Wilmington Trust is looking to partner with Intain Technologies to develop blockchain technology the trustee would use to enhance a range of securitization processes including data management and document storage.

Wilmington, among the leading trustees for structured-finance transactions, has spent several years designing distributed-ledger applications for securitization — including a tool to streamline document storage and access for investors in multiple asset classes. It's now in talks with Intain, which specializes in blockchain technology for structured finance, about writing code that creates applications for the project.

Wilmington's goal is to standardize data obtained from multiple entities, eliminate reconciliation and automate reporting of information including the payment waterfall. The document-storage function would encompass representations and warranties, underwriting guidelines and servicing parameters.

Once Wilmington and Intain sign a contract they could



Wilmington Trust, part of M&T Group, announced using Intain for automated and seamless admin on blockchain

IntainMARKETS was piloted with Wells Fargo, selected from innovations across digital technologies

## Wells Fargo Selects Blizzard Portfolio Company Intain as a Finalist in its Innovation Challenge 2022

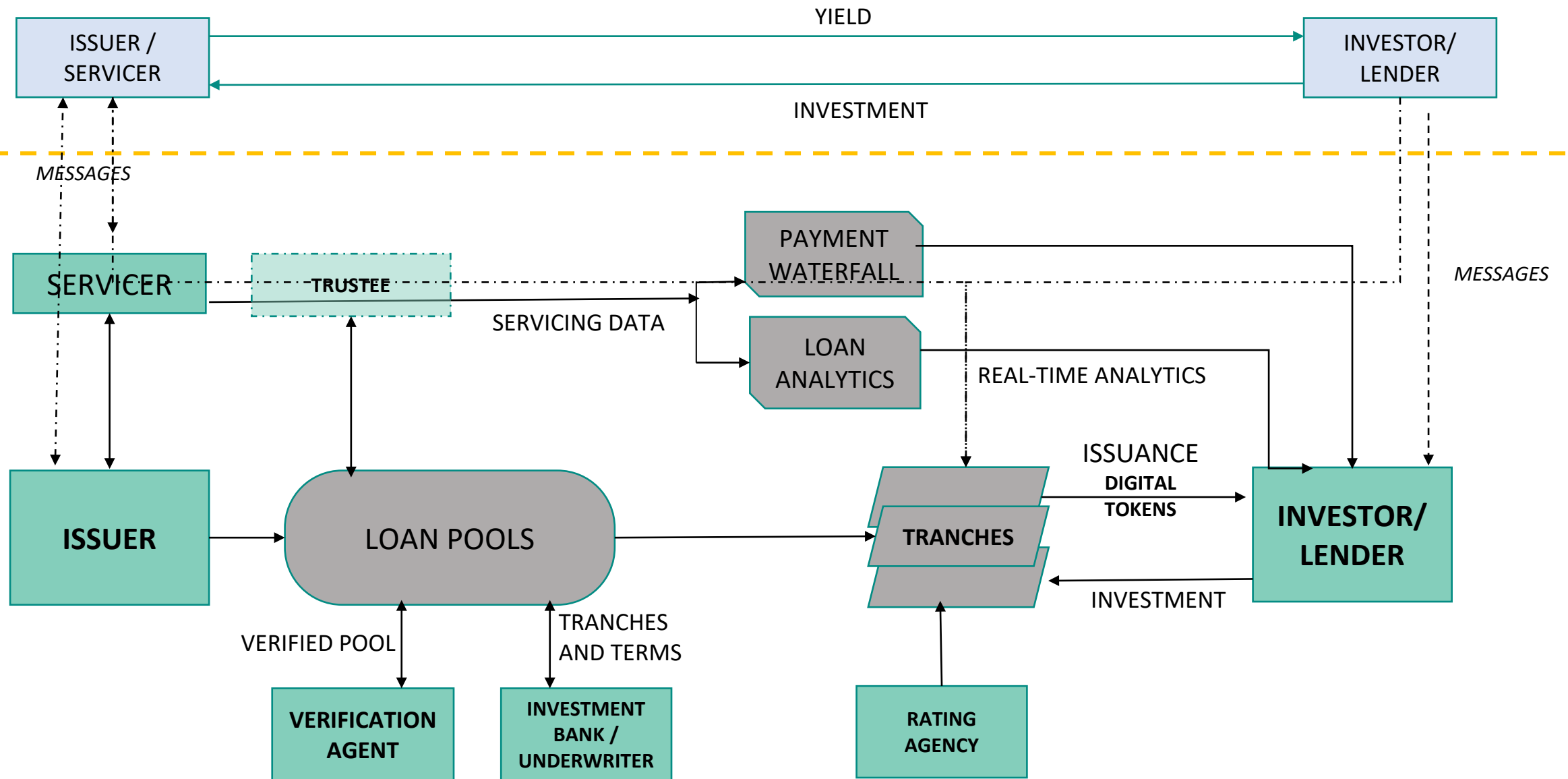
Intain is building blockchain-enabled digital platforms for transparency and efficiency in capital market transactions, with an initial focus on structured finance. Intain's first platform, IntainADMIN, has revamped structured finance administration. Built on Avalanche, IntainMARKETS extends IntainADMIN by adding tokenization and marketplace features, facilitating the creation of fully digital, institutional-grade structured credit assets.

### More Enterprise & Institutional Highlights

- [Amberdata to deliver comprehensive data on Avalanche to institutions](#)
- [Security Token Market & Securitize are bringing the first-of-its kind tokenized crowdfunding campaign to Avalanche](#)

**IntainADMIN** Digitized Structured Finance Administration using AI and DLT  
Now **IntainMARKETS** Enables Issuance of Digital Securities

# PAYMENT/SETTLEMENT : OFF-CHAIN / WITH STABLECOINS



# IntainMARKETS benefits from a library of deal structures already administered by Intain

SAMPLE DEAL STRUCTUES BEING ADMINISTERED THROUGH SMART CONTRACTS			
	DEAL 1	DEAL 2	DEAL 3
TRANCHES	Senior : A1,A2, AIOS Subordinate : C	Senior : A1,A2,AIOS Subordinate : M1, M2, C Exchangeable : C1	Senior : A1, A2 Subordinate : M1, C
TRIGGER EVENTS	Net WAC Trigger, 60+ Delinquency Trigger, Overcollateralization Trigger, Class A Sequential Pay Trigger Event, Amortization Event, Indenture Default Event	60+ Delinquency Trigger, Cumulative Loss Trigger, Early Termination Event, Amortization Event, Servicer Default Event, Indenture Default Event, Early Redemption Event	60+ Delinquency Trigger, Cumulative Loss Trigger, Early Redemption, Indenture Default Event
OTHER CONTACT TERMS AND CALCULATIONS	Overcollateralization Amount, Class A1 Credit Enhancement Percentage, Optimal Principal Distribution Amount, Class A Target Amount, Required Reserve Account Balance, Optimal Revolving Period Reinvestment Balance, Factors	Exchangeable Notes, Class A1 Credit Enhancement Percentage, Class A Target Amount, Optimal Principal Distribution Amount,overcollateralizatio n Amount,Factors	Weighted Average Coupon, Net WAC Rate, Overcollateralization Amount, Class A/M Principal Distribution Amount, Cumulative Loss, 60+ DQ Percentage, Factors

# Intain has achieved mainstream adoption because it is built with the Institutions, for the Institutions; addressing their key concerns

- A **Digital Solution** that uses blockchain, not a Blockchain Solution
  - Off-chain (Loan Verification, Loan Servicing) and On-Chain automation for key tasks of various stakeholders
  - Suite of digital technologies with integrated document reading AI, analytics and data visualization and other digital technologies as part of the overall platform
- **Designed for regulations of today**
  - Enables required intermediaries, making them efficient through automation, rather than create regulatory and compliance risks through a utopian 'trustless' system
- **Innovation with responsibility**
  - In a world of blockchain ventures, with 'anon' employees, Intain is ISO27001:2013 certified for information security practices
  - Assessed through rigorous vendor risk management procedures of regulated US financial institutions
- **Leadership team with background in financial services**
  - In a blockchain world of punters and plumbers, Intain team took a plumber-like approach building technology components core to the infrastructure, before launching the issuance platform

# Architected as technology of today, eliminating adoption risks through solution design and choice of technology components

- On a **Permissioned Network**, using Avalanche Subnets:
  - Completely US hosted infrastructure ensuring data resides within US geography
  - Validators chosen by network participants, must be US entities/individuals who pass a KYC/AML check
  - Can be required to hold specific licenses
  - Token economics specific to the subnet with no gas fees for a public chain
- Architected to trusted methods, **eliminating unproven/risky technology** components
  - No transfer of assets or tokens on bridges
  - Ability to choose any digital cash/currency, with exposure limited to transaction processing time

More details on IntainMARKETS design are available in a three-part series here

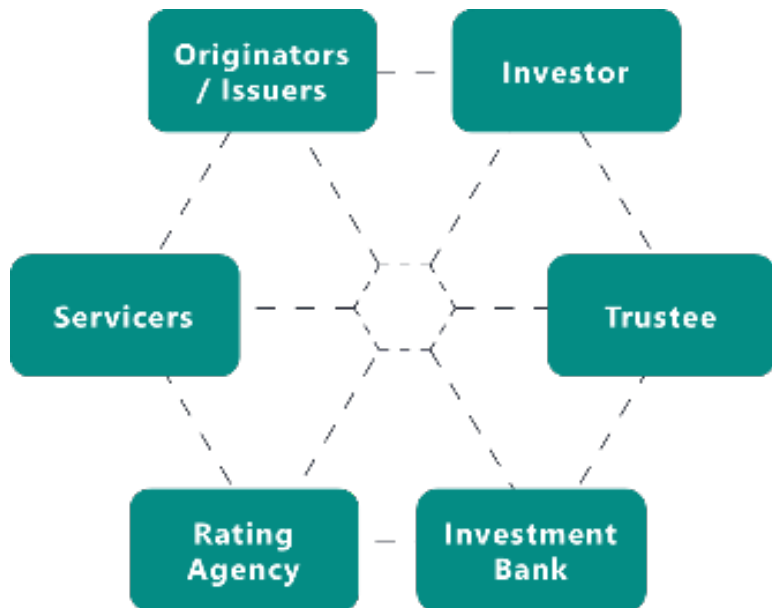
[PART 1 — STRATEGIC APPROACH AND SOLUTION DESIGN](#)

[PART 2 — ONBOARDING ASSETS ON-CHAIN, WITH TRUST AND EFFICIENCY](#)

[PART 3 — TRADITIONAL FINANCIAL INVESTMENTS ON BLOCKCHAIN - HOW TO PAY AND SETTLE?](#)



# In a nutshell...



## **ONE VERSION OF TRUTH**

From loan documents onwards, there is a single source of truth across parties and across transactions

## **PROCESS AUTOMATION**

From loan documents onwards, there is a single source of truth across parties and across transactions

## **TRANSPARENCY & COMPLIANCE**

Reporting, process flows, payment waterfalls are all automated using smart contracts

## **FUTURE READY FOR DIGITAL SECURITIES**

For tokenized structured finance, IntainADMIN forms the administration infrastructure for IntainMARKETS

# Contact

**ERIC MITZEL**

Eric.mitzel@intainft.com



INTAIN IN 100 SECONDS  
(Opens a YouTube link)