WOLF ADVISORY GROUP

WOLF TECHNOLOGY

FINTECH CENTER

19+ Years of experience

600 Fintech engineers

End-to-End solution services

Trusted by Leading Financial and Bank Firms

Clients from **Australia, Europe, Singapore, Hong Kong, Thailand**

Application Development

Banking Integration

Embedded Finance

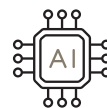**AI in Fintech**

Capital Markets

Payment Solutions

Asset Management

Web3 Platform

AI/ML Solutions

Our Services

Fintech Application Development

Develop advanced financial software for improve asset management, core banking integration, mobile payment, and capital market services

Banking Integration

Design and develop frontier applications to integrate with core banking

Web3

R&D solutions using Web3, Blockchain, NFT to resolve your business cases

AI in Fintech

Apply AI technologies to enhance customer experience, streamline financial processes

Sample Projects

- Asset Management
- Capital Markets: Post-Trade Processing
- Finance Document Intelligent
- AI and OCR For e-Invoice
- Financial Report Generation
- Credit Scoring System
- Finance AI Chatbot
- Robo Adviser

- Automated Intelligent Trade Reconciliation
- Web3 APIaaS Platform
- NFT Marketplace Platform
- Cash Flow Management
- Payment: International Remittance
- Digital Wallet
- Buy Now Pay Later
- Letter of Guarantee
- Online Banking Portal

Our Competency

Fintech Center

Embedded Finance
- Buy Now Pay Later
- International Remittance
- Digital Wallet

Web3
- NFT Trading Platform
- Secured Transaction
- Stable Coin

AI Finance
- Finance Document Intelligent
- AI and OCR for e-invoice
- Finance Report Generations
- AI Chatbot

Wealth Management
- Retirement Plan
- Modeling Portfolio

Capital Markets
- Pre-settlement
- Clearing & Settlement
- Trade Accounting

Banking Integration
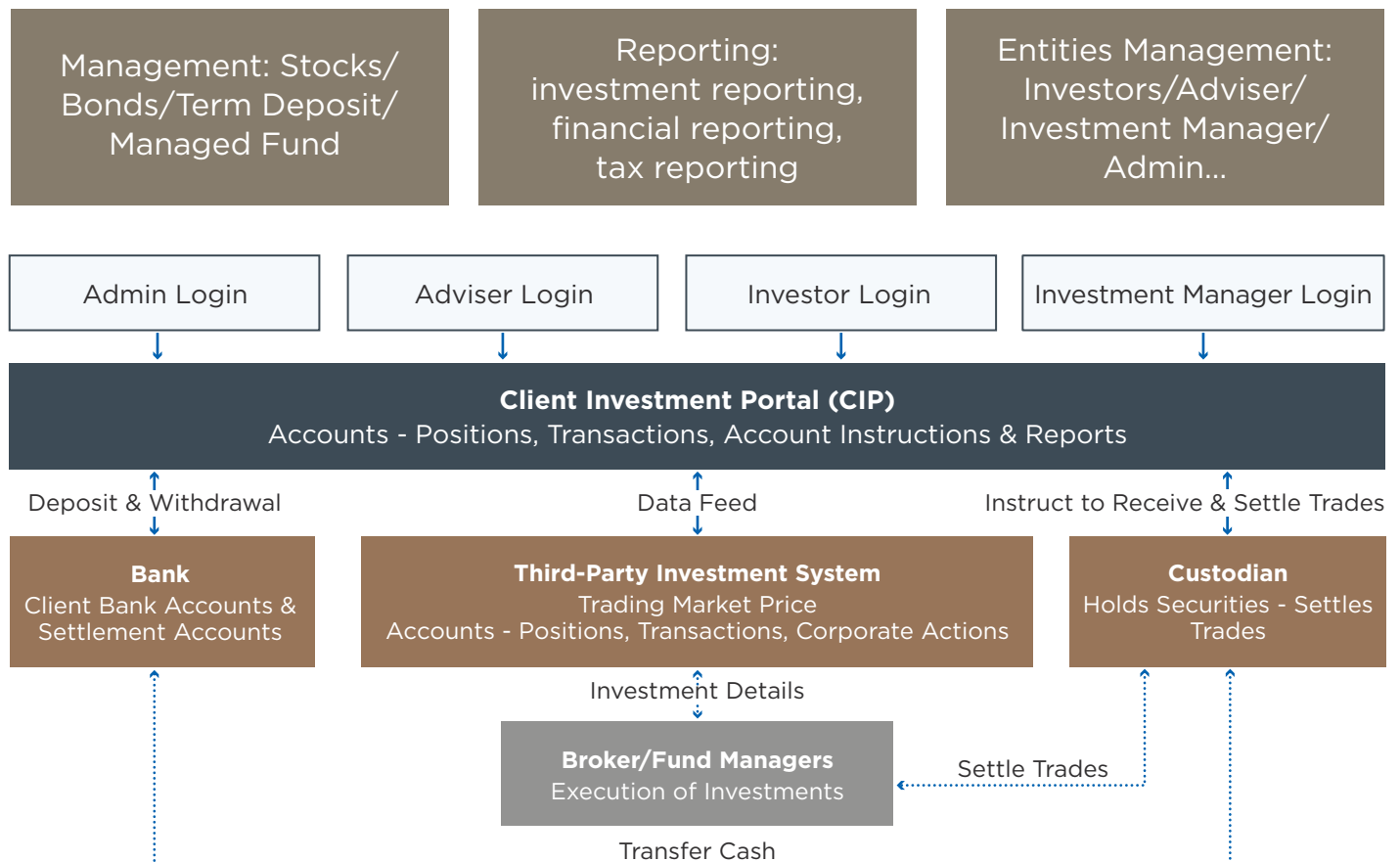- Online Banking Portal
- Letter Of Guarantees

Asset Management

A market-leading provider of securities processing and
wealth administration software products for the financial services industry

Wealth Management - Superannuation

Model Portfolio Management	Retirement Plan

IFAs, advisers, and employees

Administrators

Frontend

Self-Servicing Integration | Calculator Tools | Pre and Post Sales Illustrations

API Integration Layer

Back Office

External Systems

Documents/Content

Adviser back-office/CRM

Offer fulfillment (external/internal)

Banking compliance

Clients, investors and employees

Investment Management

A financial web portal that has been used for financial intermediaries to control,
maintain and support the investment of their investor accounts.

Management: Stocks/Bonds/Term Deposit/Managed Fund	Reporting: investment reporting, financial reporting, tax reporting	Entities Management: Investors/Adviser/Investment Manager/Admin...

Admin Login	Adviser Login	Investor Login	Investment Manager Login

Client Investment Portal (CIP)
Accounts - Positions, Transactions, Account Instructions & Reports

Deposit & Withdrawal | Data Feed | Instruct to Receive & Settle Trades

Bank
Client Bank Accounts & Settlement Accounts

Third-Party Investment System
Trading Market Price
Accounts - Positions, Transactions, Corporate Actions

Custodian
Holds Securities - Settles Trades

Investment Details

Broker/Fund Managers
Execution of Investments

Settle Trades

Transfer Cash

Capital Markets: Post Trade Processing

Pre-Settlement

- Provides post-execution
- Pre-settlement transaction processing across multiple asset classes and markets

Trade & Accounting

- Offers a powerful, flexible and fully featured securities trading ledger
- Supports Business Intelligence Reporting

Clearing and Settlement

- Allows banks and brokers to perform international clearing, settlement and corporate action
- Supports ETC protocols (e.g. Oasys, CTM, GETC, FIX, Iress), supports all settlement types
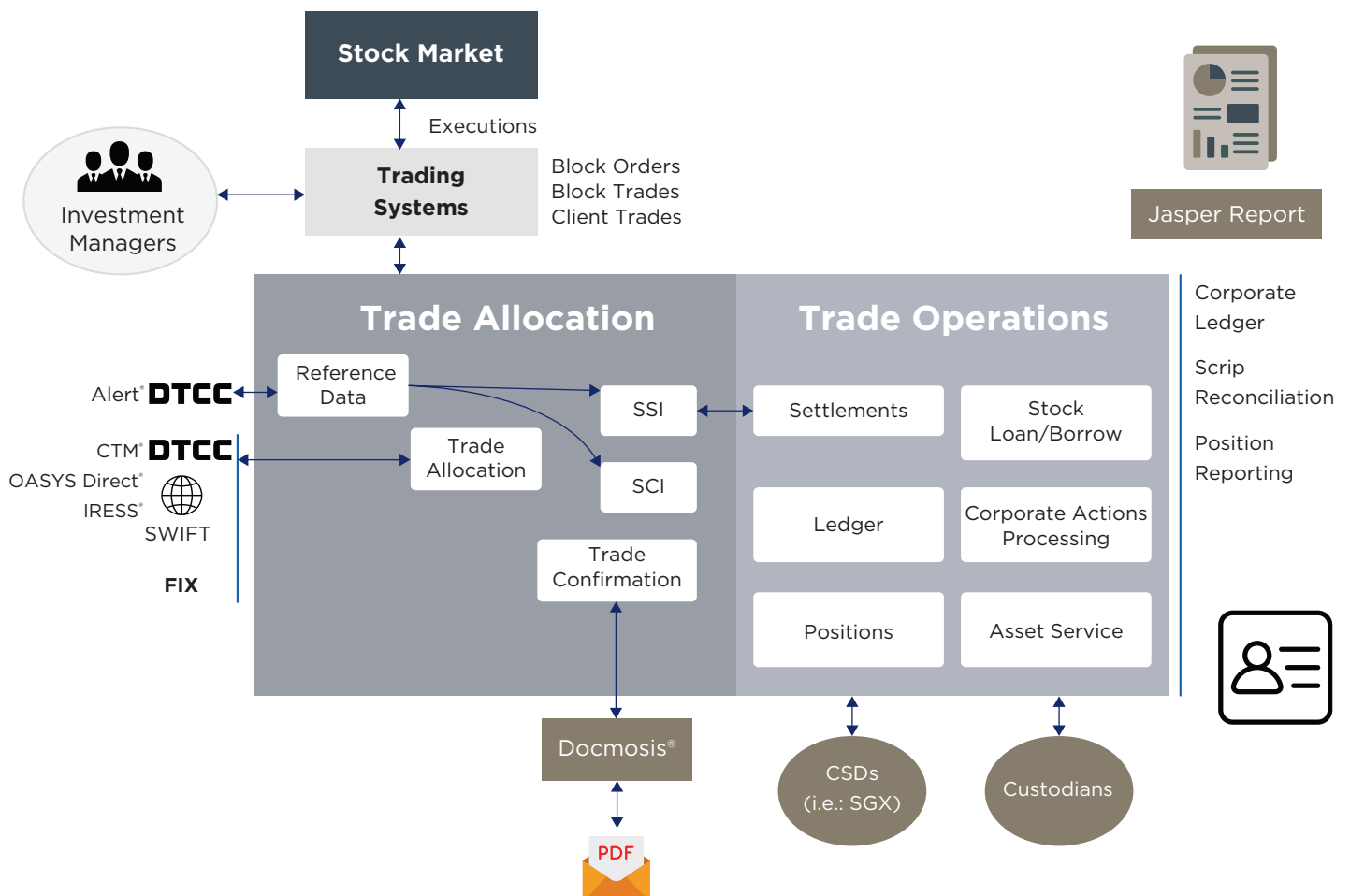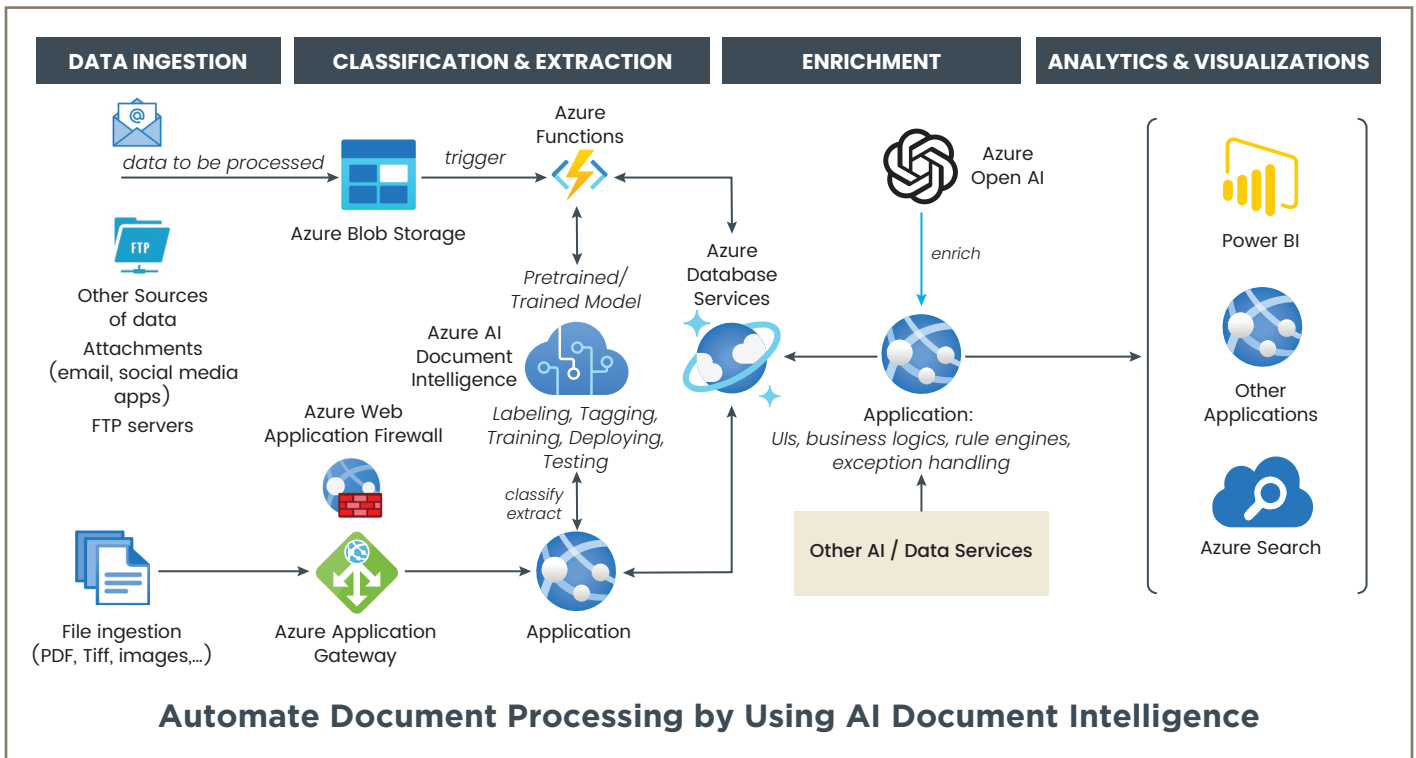
Finance Document Intelligent

An AI solution based on Azure AI Services, applying advanced machine learning to extract text, key-value pairs, tables, and structures from documents automatically and accurately.

Auto Labelling Data & Adaptability to Change	Custom Data Labelling & Training	Text Detection and Recognition	Data Regions and Compliance

DATA INGESTION   CLASSIFICATION & EXTRACTION   ENRICHMENT   ANALYTICS & VISUALIZATIONS

data to be processed

Azure Blob Storage

trigger

Azure Functions

Other Sources of data
Attachments (email, social media apps)
FTP servers

Pretrained/ Trained Model

Azure AI Document Intelligence

Azure Web Application Firewall

Labeling, Tagging, Training, Deploying, Testing

classify extract

File ingestion (PDF, Tiff, images,…)

Azure Application Gateway

Application

Azure Database Services

Azure Open AI

enrich

Application:
UIs, business logics, rule engines, exception handling

Other AI / Data Services

Power BI

Other Applications

Azure Search

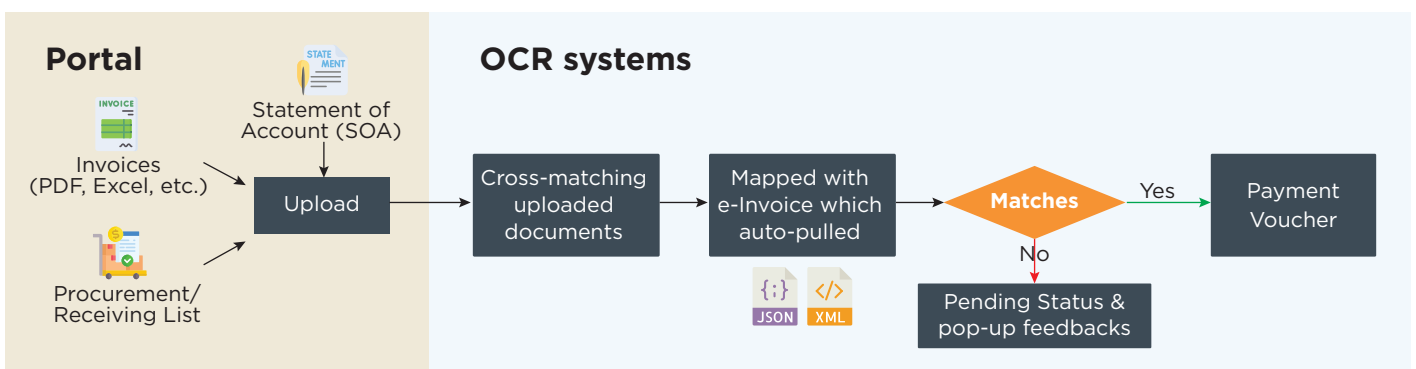**Automate Document Processing by Using AI Document Intelligence**

AI and OCR For e-Invoice

Data Extraction Portal utilizes Azure AI to manage, classify, and extract text, key-value pairs, tables. Search and highlight specific terms within document files.

Efficiency & Automation	Enhanced Accuracy & Searchability	Versatile Document Handling

Portal

Statement of Account (SOA)

Invoices (PDF, Excel, etc.)

Procurement/ Receiving List

Upload

OCR systems

Cross-matching uploaded documents

Mapped with e-Invoice which auto-pulled

JSON   XML

Matches

Yes → Payment Voucher

No → Pending Status & pop-up feedbacks
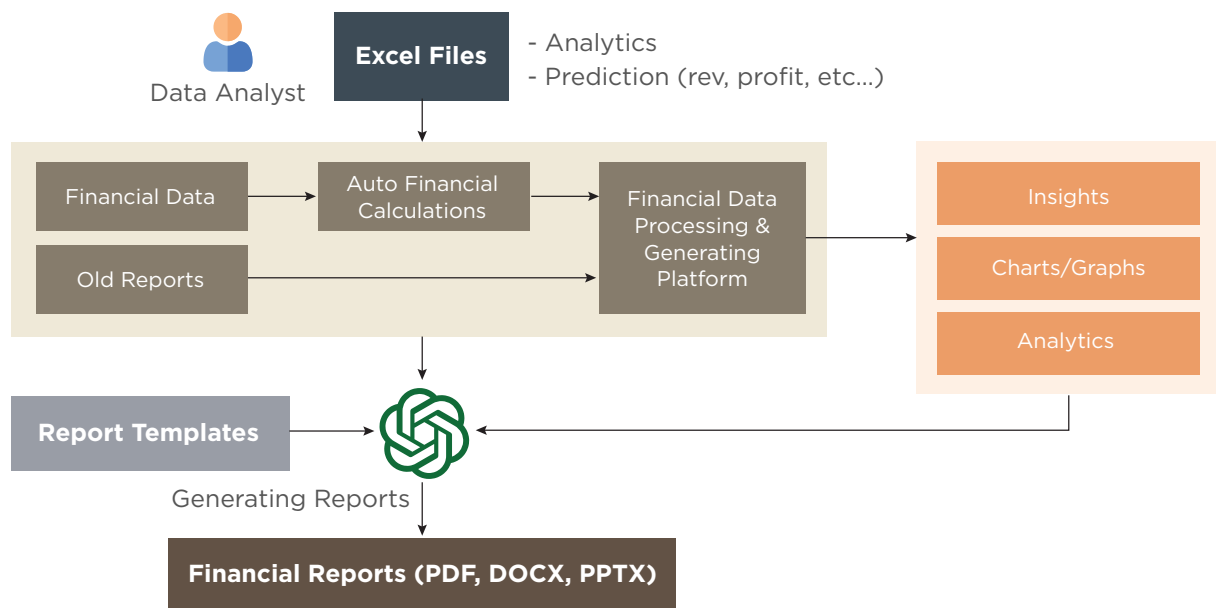
Financial Report Generation

Automate detailed financial reports with customized writing style, tables, charts, and AI-driven insights

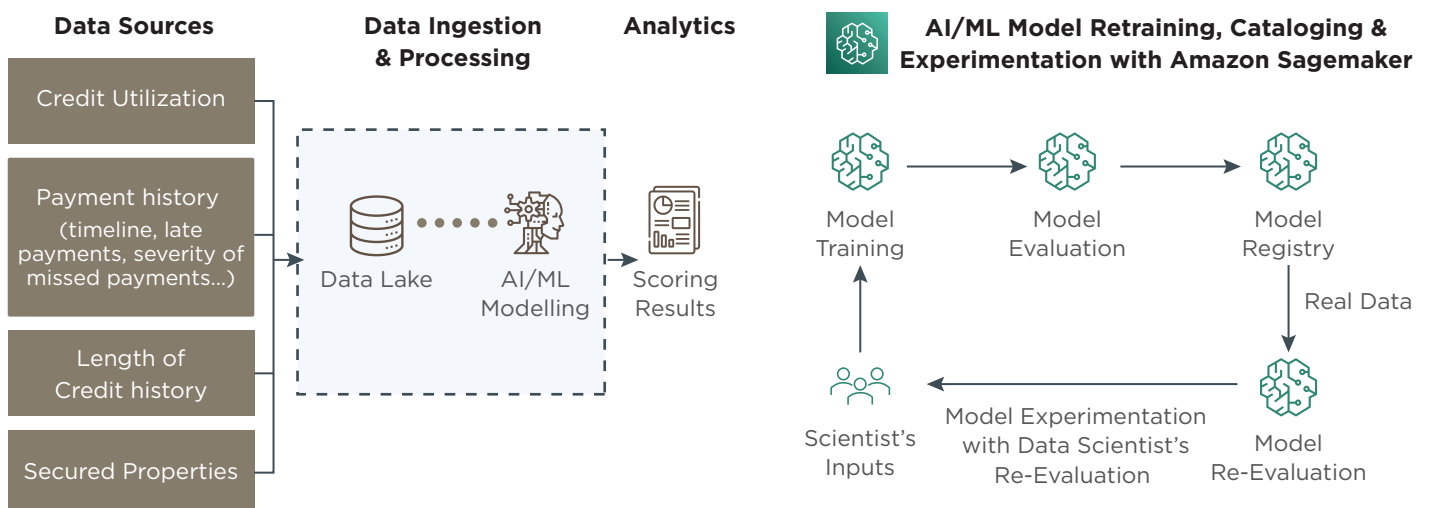|	
Automates the report creation process	Adapts reports to the individual style of each analyst
Provides detailed explanations about financial report	Insights information through AI

Data Analyst

Excel Files
- Analytics
- Prediction (rev, profit, etc...)

Financial Data → Auto Financial Calculations → Financial Data Processing & Generating Platform

Old Reports →

Insights

Charts/Graphs

Analytics

Report Templates →

Generating Reports

Financial Reports (PDF, DOCX, PPTX)

Credit Scoring System

Build a credit risk and scoring modeling for a lending institution to evaluate creditworthiness, to make decisions about loan terms, amounts, interest rates, repayment periods

Data Sources

Credit Utilization

Payment history (timeline, late payments, severity of missed payments...)

Length of Credit history

Secured Properties

Data Ingestion & Processing

Data Lake ···· AI/ML Modelling

Analytics

Scoring Results

AI/ML Model Retraining, Cataloging & Experimentation with Amazon Sagemaker

Model Training → Model Evaluation → Model Registry

Real Data

Scientist's Inputs ← Model Experimentation with Data Scientist's Re-Evaluation ← Model Re-Evaluation
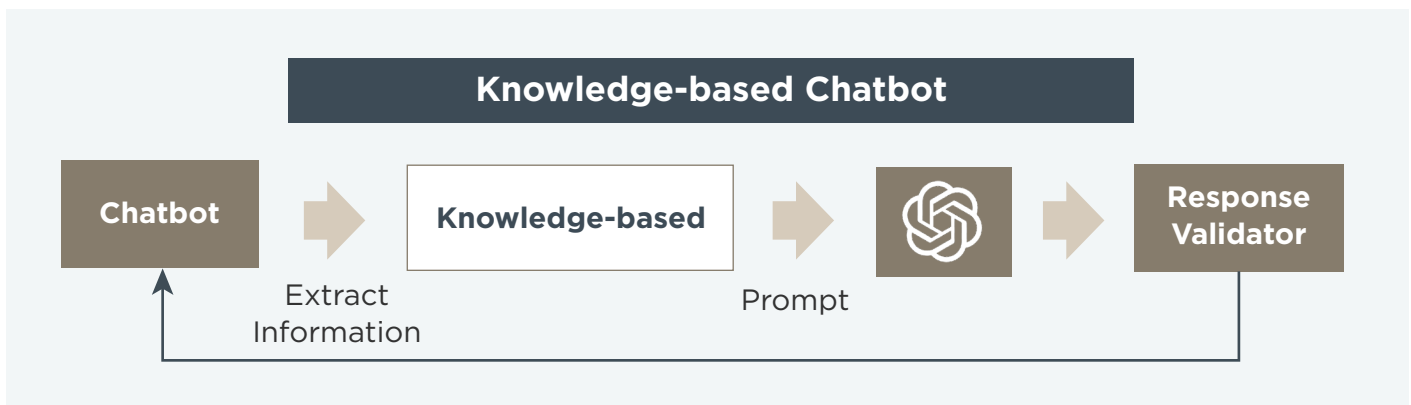
Finance AI Chatbot

An application running on Agent's PC to capture real time audio and provide suggestion to customer's queries. By using ChatGPT with specific data, real time suggestions can help agents to provide better answers, especially in complex cases

Transcripts storing and retrieving	Support multiple languages	Support long conversations	Simplifying the user experience

Knowledge-based Chatbot

Chatbot → Extract Information → **Knowledge-based** → Prompt → (OpenAI logo) → **Response Validator**

Robo Adviser

A tool that identifies an investor's habit, allocates their assets accordingly, a rebalance the allocation again upon top-up or withdrawal.

Risk Profiling	Allocating Assets According To Risk Profile	Rebalancing Portfolio	Asset Curation

Provide your personal details including your name, contact details and proof of Identity.

The robo advisor works its magic and provides a recommended investment portfolio and a Statement of Advice

Sit back and relax. The robo advisor will monitor these investments for you and manage any changes to keep you on track according to your financial goals.

Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

Answer some questions about your assets, risk tolerance and investment timeframe.
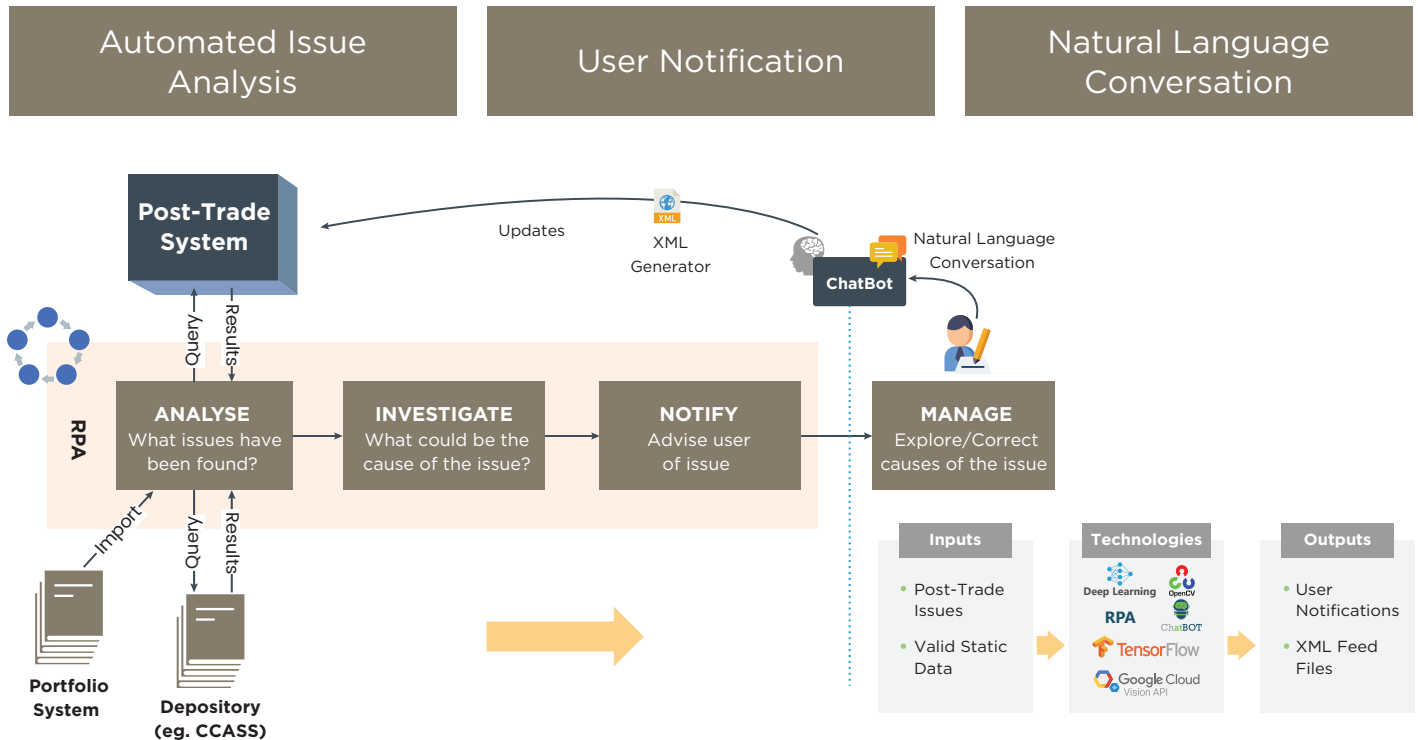
Satisfied with the advice? Proceed to give your advisor permission to action the investment. This will usually involve providing your bank account details or completing a bank transfer to designated account.

Remember to keep your robo advisor up to date with your financial goals, if and when they change.
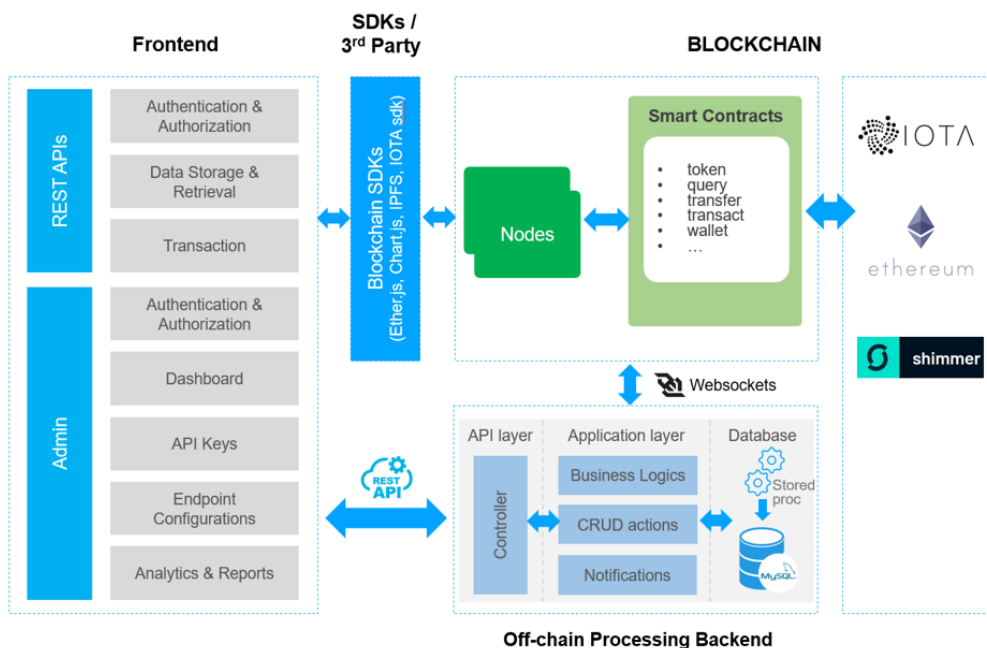
Automated Intelligent Trade Reconciliation

Automate Trade Reconciliation between Front Office and Back Office

Automated Issue Analysis	User Notification	Natural Language Conversation

Post-Trade System

Updates

XML Generator

Natural Language Conversation

ChatBot

RPA

ANALYSE
What issues have been found?

INVESTIGATE
What could be the cause of the issue?

NOTIFY
Advise user of issue

MANAGE
Explore/Correct causes of the issue

Query — Results

Import — Query — Results

Portfolio System

Depository (eg. CCASS)

Inputs	Technologies	Outputs
• Post-Trade Issues	Deep Learning OpenCV	• User Notifications
• Valid Static Data	RPA ChatBOT TensorFlow Google Cloud Vision API	• XML Feed Files

Web3 APIaaS Platform

A Web3 API as a Service (APIaaS) platform for external applications to access and utilize the advantages of blockchain technology, providing a bridge between the applications and blockchain infrastructure

API Launchpad & Configuration	Deploy & Interact with Smart Contracts	Payload Encryption	Load Balancing & Scalability

Frontend

SDKs / 3rd Party

BLOCKCHAIN

REST APIs
- Authentication & Authorization
- Data Storage & Retrieval
- Transaction

Admin
- Authentication & Authorization
- Dashboard
- API Keys
- Endpoint Configurations
- Analytics & Reports

Blockchain SDKs (Ether.js, Chat.js, IPFS, IOTA sdk)

Nodes

Smart Contracts
- token
- query
- transfer
- transact
- wallet
- ...

IOTA

ethereum

shimmer

Websockets

REST API

API layer	Application layer	Database
Controller	Business Logics CRUD actions Notifications	Stored proc MySQL

Off-chain Processing Backend

NFT Marketplace Platform

Multidisciplinary Applications	Easy To Integrate and Develop	Multiple Payment Methods

High Security Standards	Support Multiple Wallet & Chains

User Interface

Admin Dashboard	Home Page
Analytic Data	Transaction History
NFT Collection and Trading fee Managment	Sell/Buy/Action
User Profile	Authentication

Digital Wallet
- Coinbase
- Metamask
- Trust

Admin
Investors
Browser

nest
- Controller Layer
- Service Layer
- Data Access Layer

DATABASE
- PostgreSQL

BLOCKCHAIN
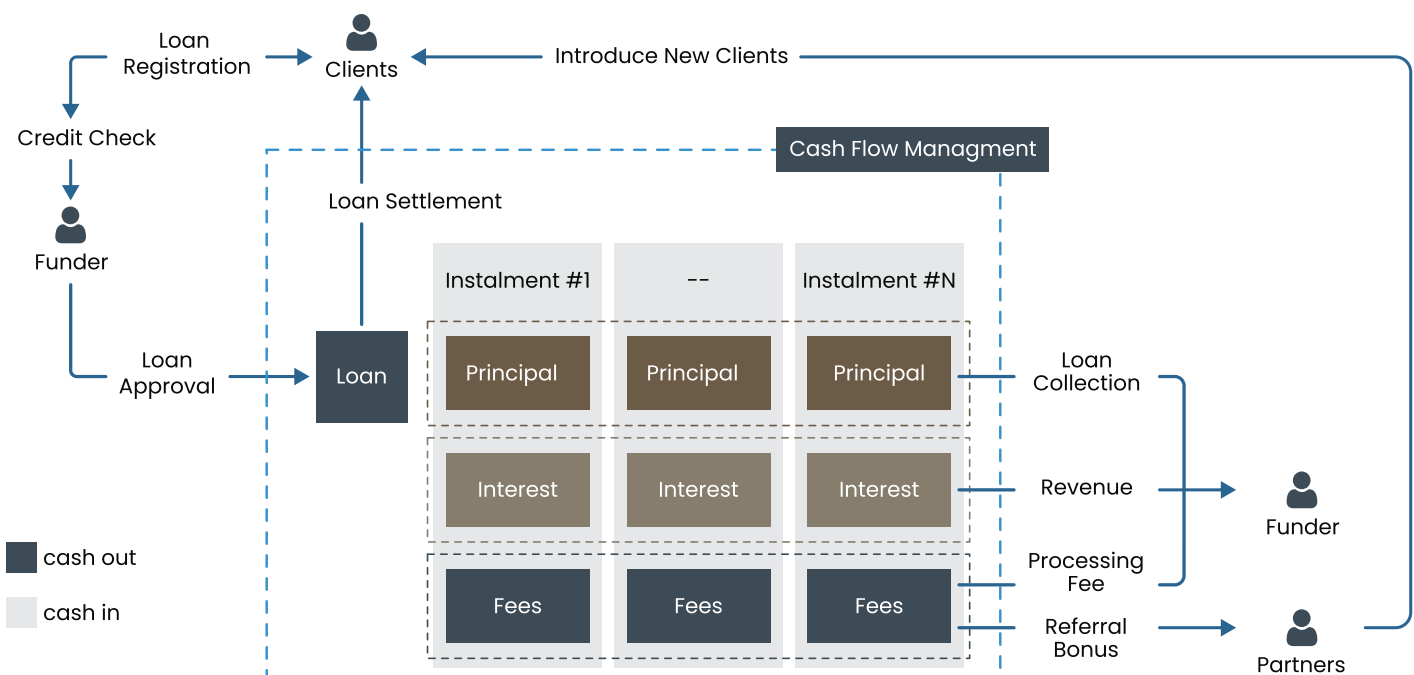- Ethereum Network
- Smart Contract
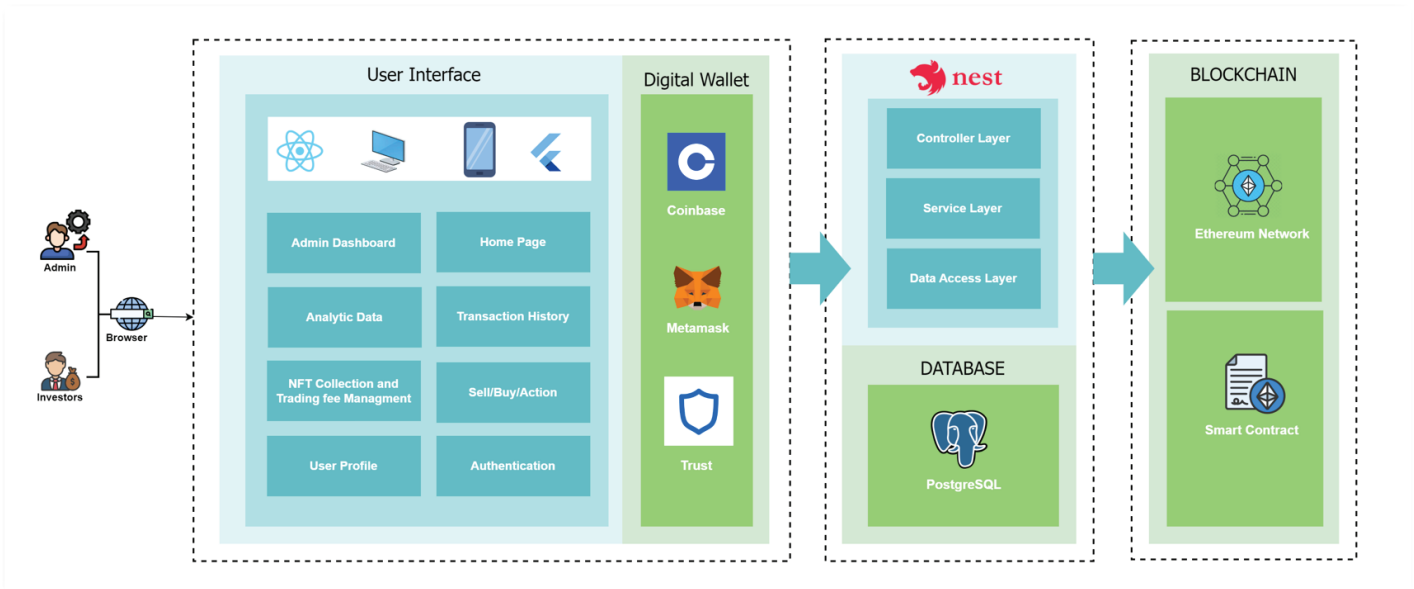
Cash Flow Management

Manage with a simple, flexible line of credit, 1 day approval

Automatic Account Receivable	Bad Debt Protection	Advance Payment on Invoices

Loan Registration

Clients

Introduce New Clients

Credit Check

Cash Flow Managment

Loan Settlement

Funder

Loan Approval → Loan

Instalment #1	--	Instalment #N
Principal	Principal	Principal
Interest	Interest	Interest
Fees	Fees	Fees

Loan Collection

Revenue

Processing Fee

Referral Bonus

Funder

Partners

■ cash out
□ cash in

Payment: International Remittance

1-Day money transfer for international payments & remittances

Local & International Payments	Multilingual and Multi-Currency	No Bank Fee & Best Rate

MULTICURRENCY

WORLDWIDE

1-CLICK

1-DAY PAYMENT

Payment: Digital Wallet

Solutions

- Transfer Fund
- Cash Deposit/ Withdraw
- Bill Payment
- Mobile Top-up
- Buy Voucher
- Reporting

Administrators

Agents/Merchants

Users

Admin Portal

Agent Portal

Web Applications

Mobile Application

eWallet System

eWallet Database

Bank API

Payment Gateways

KYC API

Bill Payment API
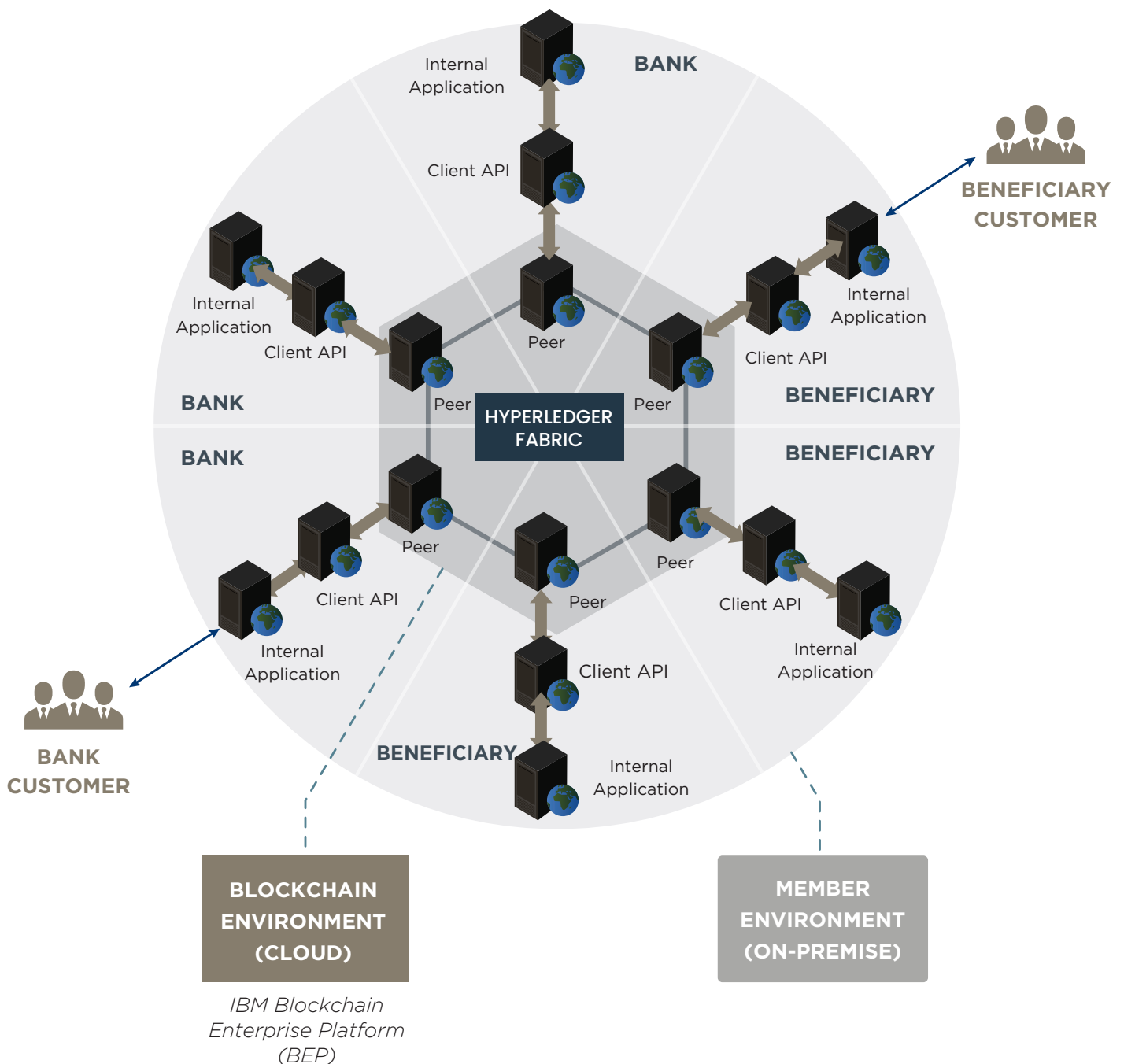
Integrations
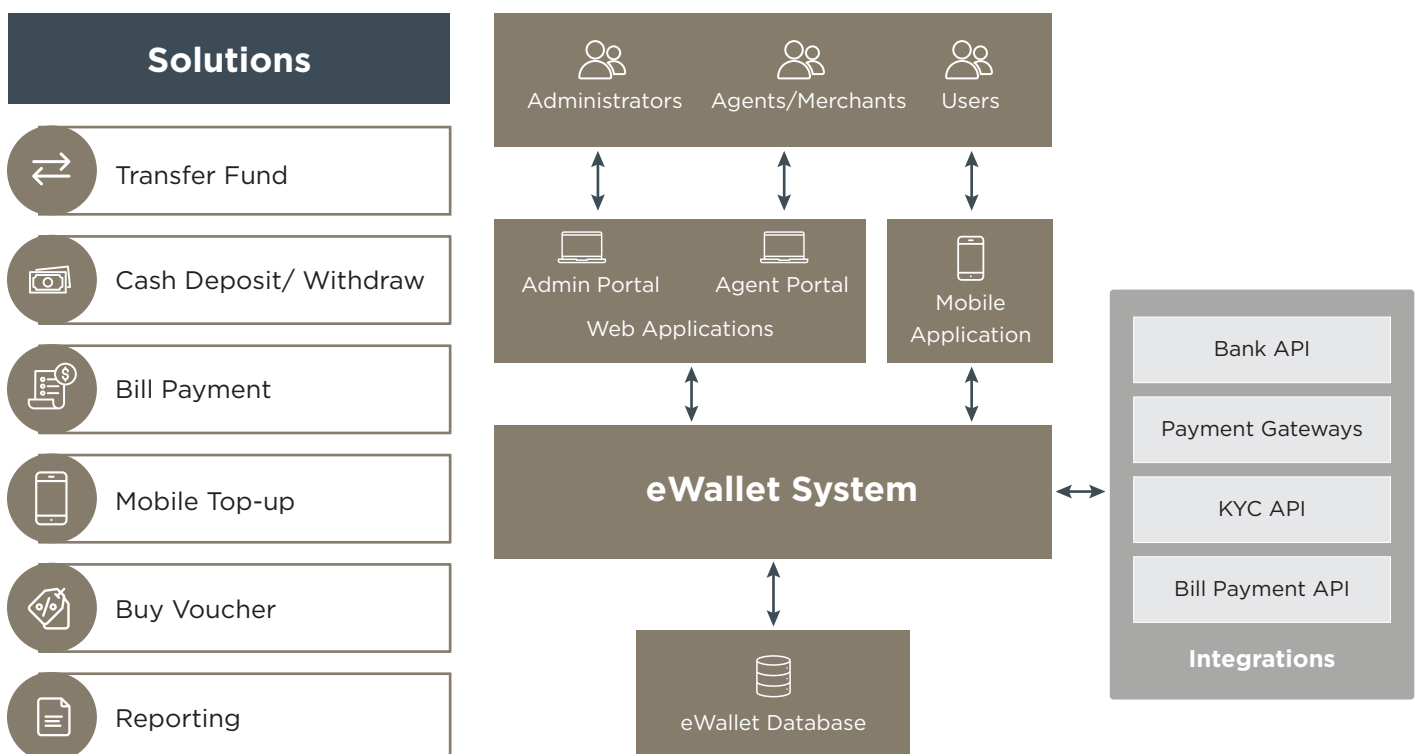
Enterprise Letter of Guarantee

Simplify and expedite procedures for Bank's Letter of Guarantee process based on Blockchain technology

Data Access Controller using Smart Contract	Banks & Beneficiaries Application

BANK

Internal Application

Client API

Peer

BENEFICIARY CUSTOMER

Internal Application

Client API

BENEFICIARY

Peer

BANK

Internal Application

Client API

Peer

HYPERLEDGER FABRIC

BENEFICIARY

BANK

Peer

Client API

Internal Application

BANK CUSTOMER

Peer

Client API

Internal Application

BENEFICIARY

Peer

Client API

Internal Application

BLOCKCHAIN ENVIRONMENT (CLOUD)	MEMBER ENVIRONMENT (ON-PREMISE)

IBM Blockchain Enterprise Platform (BEP)

Buy Now Pay Later

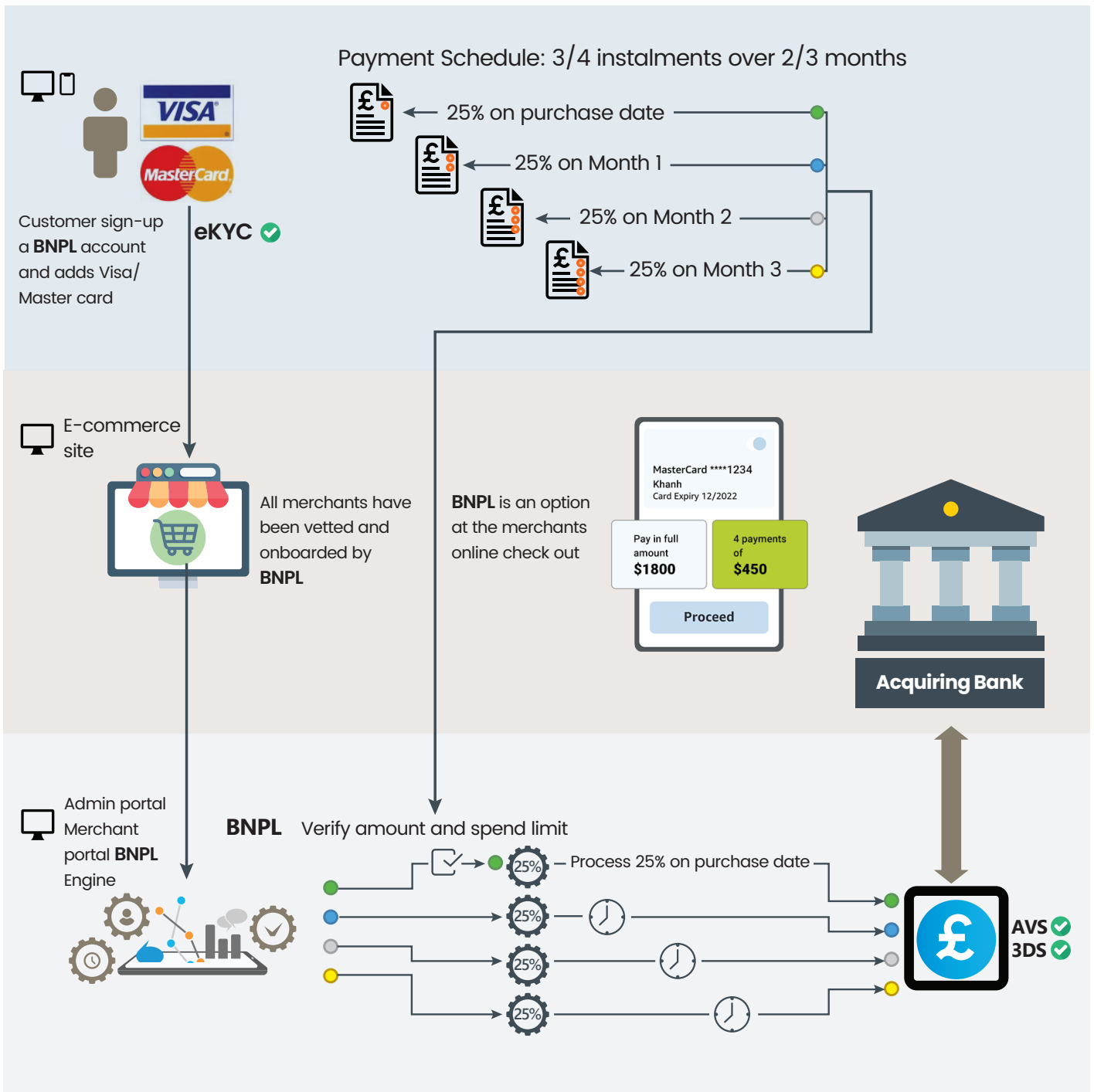A payment system that allows consumers to spread their payments into instalments

It's popular among online retailers and offers a flexible approach to purchasing products

Fee on each transaction	Late Fee	Commissions	Interest From Early Payments

Customer sign-up a **BNPL** account and adds Visa/ Master card

eKYC ✅

Payment Schedule: 3/4 instalments over 2/3 months

25% on purchase date

25% on Month 1

25% on Month 2

25% on Month 3

E-commerce site

All merchants have been vetted and onboarded by **BNPL**

BNPL is an option at the merchants online check out

MasterCard ****1234
Khanh
Card Expiry 12/2022

Pay in full amount **$1800**

4 payments of **$450**

Proceed

Acquiring Bank

Admin portal Merchant portal **BNPL** Engine

BNPL

Verify amount and spend limit

Process 25% on purchase date

25%

25%

25%

25%

AVS ✅
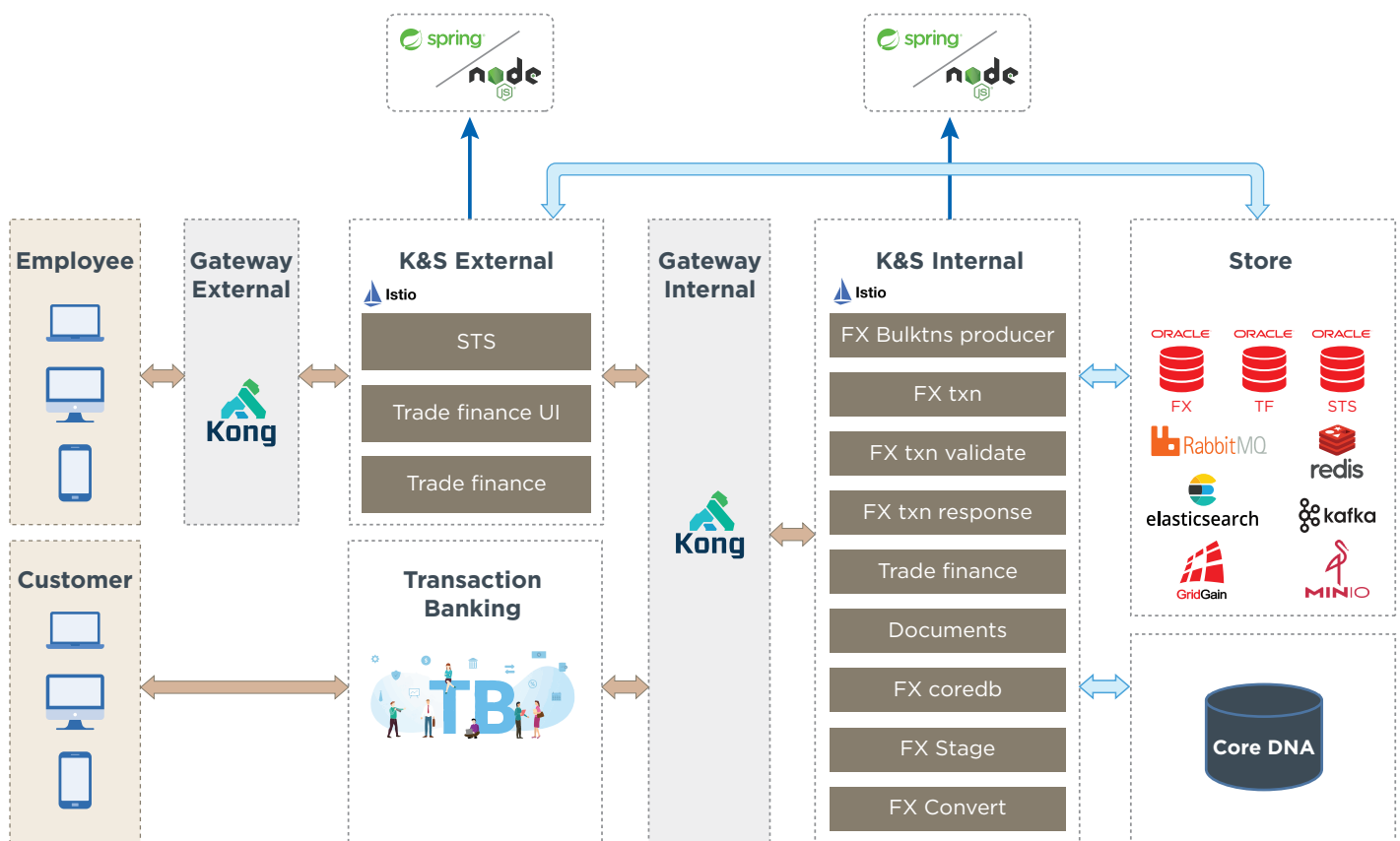3DS ✅

Online Banking Portal

An online banking portal that serves retail customers

Personal Banking

- Account Management
- Privilege Banking
- Remittance & Payments
- Depository Services
- Cards
- Foreign Currency Trading
- Loan & Mortgages

Business Banking

- Financial Services
- Term Deposit
- Import/Export Finance
- Trade Finance
- Global Payments

Employee

Gateway External

Kong

K&S External

Istio

- STS
- Trade finance UI
- Trade finance

Customer

Transaction Banking

TB

Gateway Internal

Kong

K&S Internal

Istio

- FX Bulktns producer
- FX txn
- FX txn validate
- FX txn response
- Trade finance
- Documents
- FX coredb
- FX Stage
- FX Convert

Store

ORACLE FX
ORACLE TF
ORACLE STS

RabbitMQ
redis

elasticsearch
kafka

GridGain
MINIO

Core DNA

spring / node.js

spring / node.js

Abbreviations:

STS: Secure Token System

FX: Foreign Exchange

TF: Trade Finance

Protocols:

HTTPS

TCP

Technologies

Angular	React.js	Java	Spring Boot
Node.js	Python	Django	Kotlin
Solidity	Ethereum	Hyperledger	Polygon
IPFS (InterPlanetary File System)		TensorFlow	PyTorch
Azure AI Platforms	OpenAI GPT	Scikit-learn	Hugging Face

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