Problem Statements

1. Show case React Native app with NFC and camera combine with web view to form a single app for customer onboarding

2. Agentic AI understanding, architecting and implementation capability

Live demo

- ✓ Single React Mobile App with
  - ✓ NFC reader
  - ✓ Camera check Liveness
  - ✓ Integrate 2 Agentic AI use cases:
    - eKYC: check Identity, scan Sanction lists, screening Fraud lists..
    - Collateral Asset Valuation

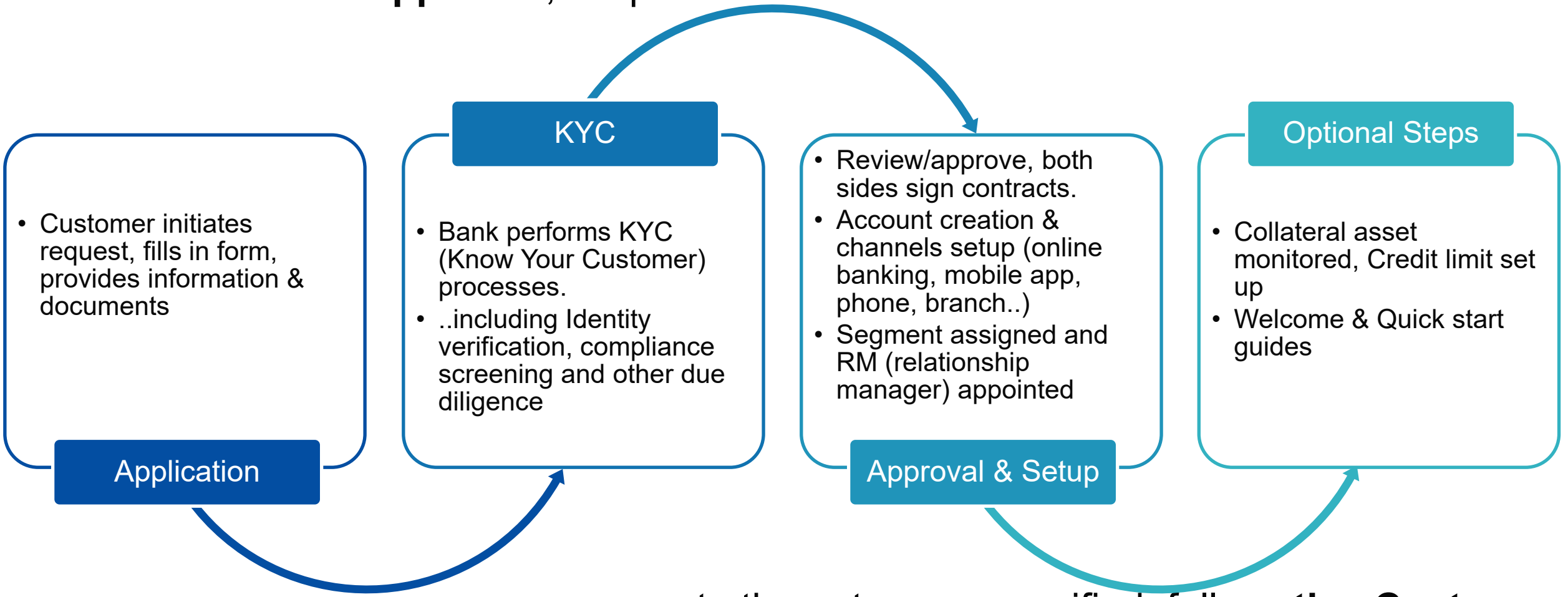
Presentation

- ✓ App and Agents Architectures
- ✓ FPT AI Service Offerings and Capability

Aligning Our Understanding

Customer Onboarding

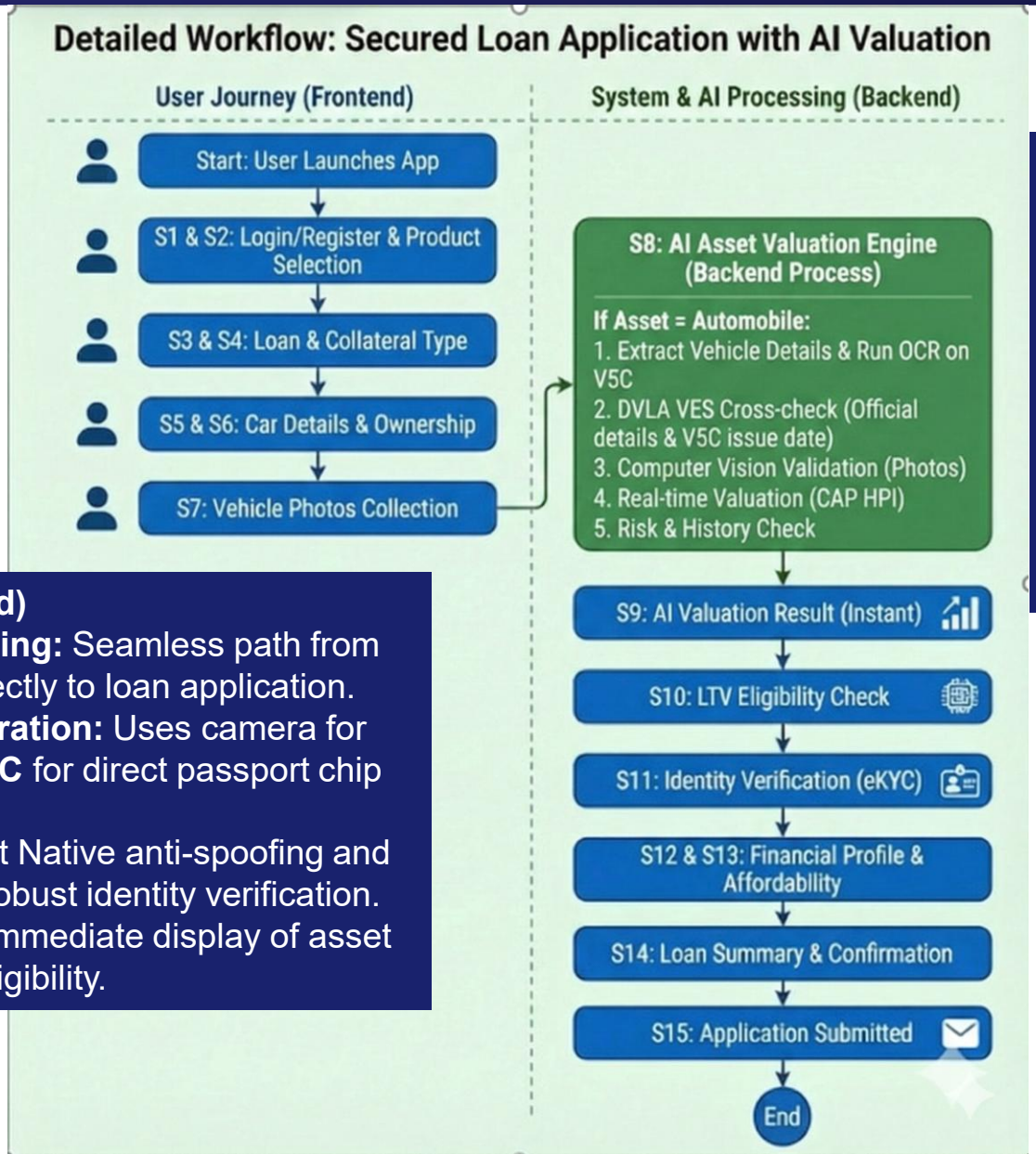
is to convert a **new Applicant**, via processes of:



to the outcome: a verified, fully **active Customer** ready to transact

The Demo: AI augmented onboarding flow

Demo Workflow Deep Dive



User Journey (Frontend)

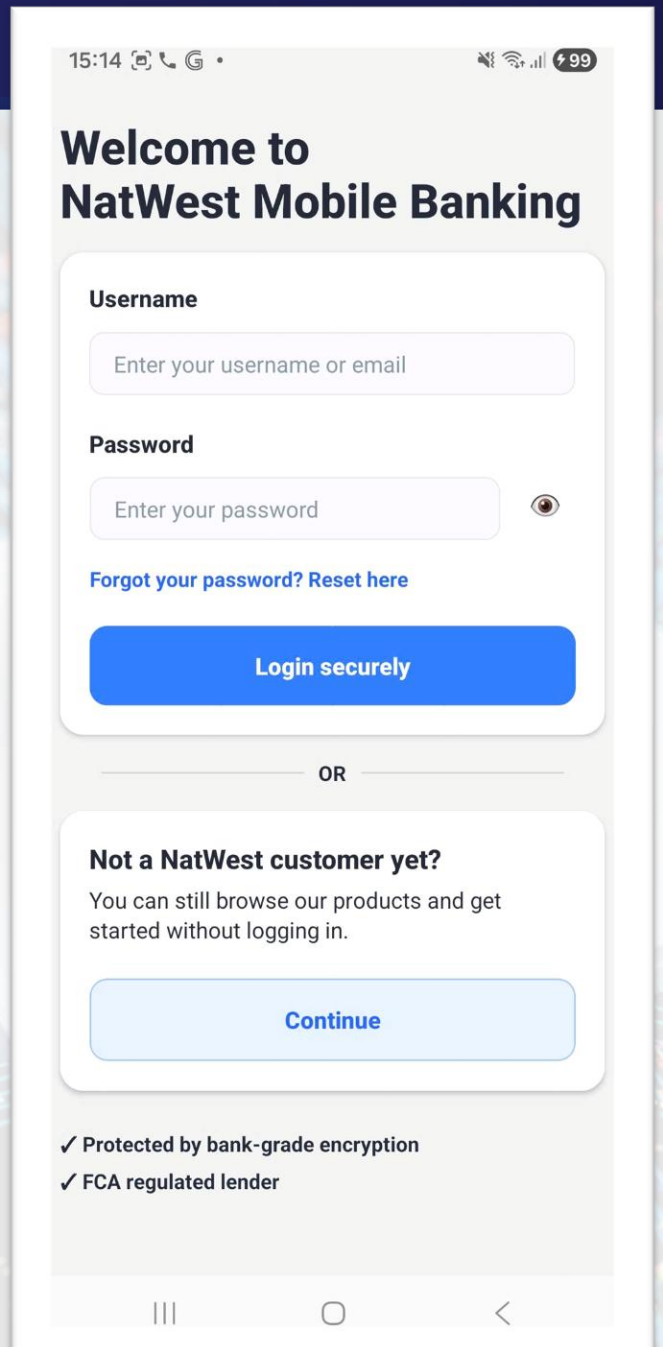
- **Unbanked Onboarding:** Seamless path from "Not a customer" directly to loan application.
- **Native Device Integration:** Uses camera for asset photos and **NFC** for direct passport chip reading.
- **Secure eKYC:** React Native anti-spoofing and liveness checks for robust identity verification.
- **Instant Feedback:** Immediate display of asset valuation and loan eligibility.

System & AI Processing (Backend)

- **Agentic AI Engine:** Autonomous agents handle data extraction, **computer vision** analysis, and V5C verification.
- **Cross Checking:** DVLA VES
- **Real-Time Valuation:** Instantly queries market data (CAP HPI) to validate asset price against condition.
- **Automated Decisioning:** Calculates risk, history, and LTV limits to generate a final loan offer in seconds.


FPT Software
Live Demo

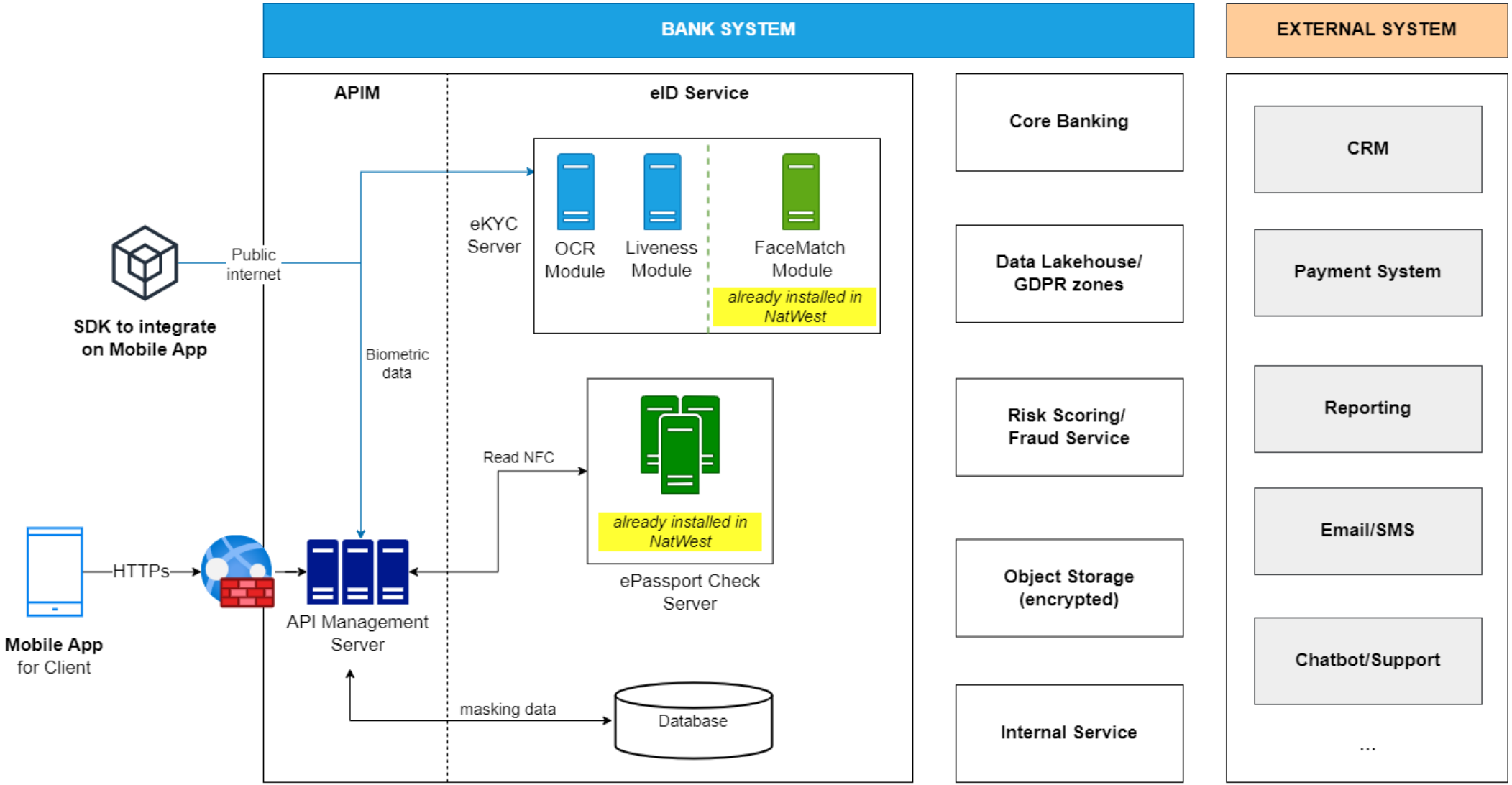
Open the Mobile App



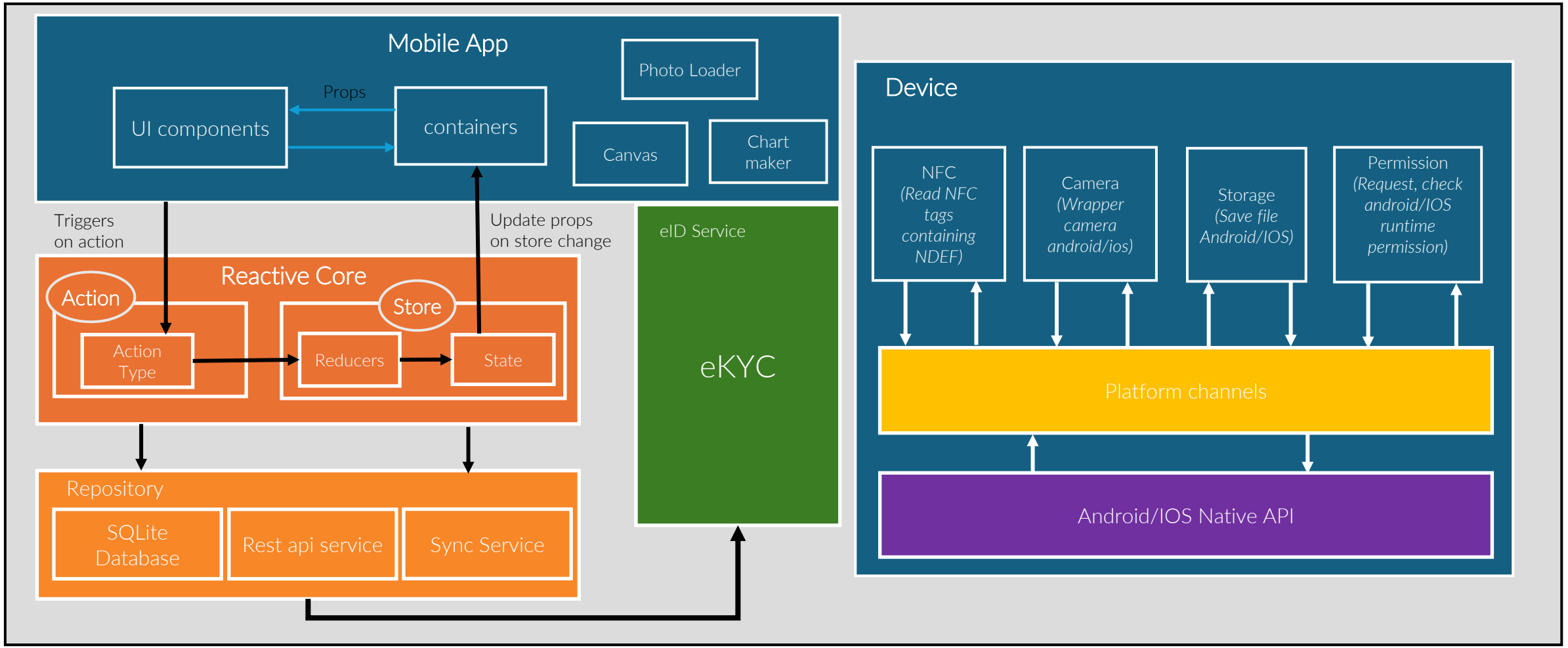
Note: We use screenshot because login screen is blocked by video conferencing software for security purpose

Technical Aspects

Reference High Level Architecture



Mobile App Architecture



UI layer | Business layer | Data layer | Bridge native | Native API | eID Service (OCR ID, ePassport)

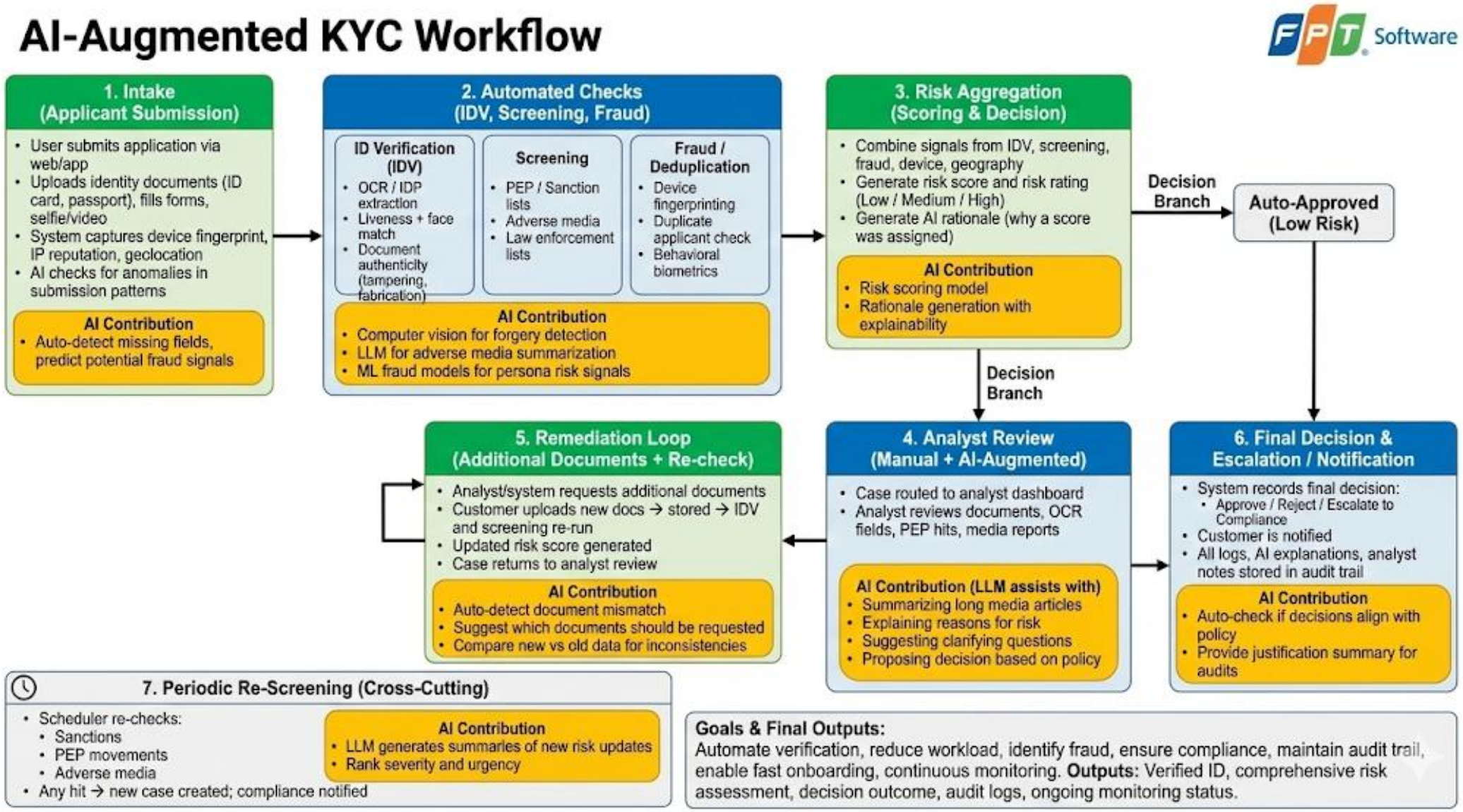
Technical Challenges – How we mitigate

We must focus on the key principles of banking

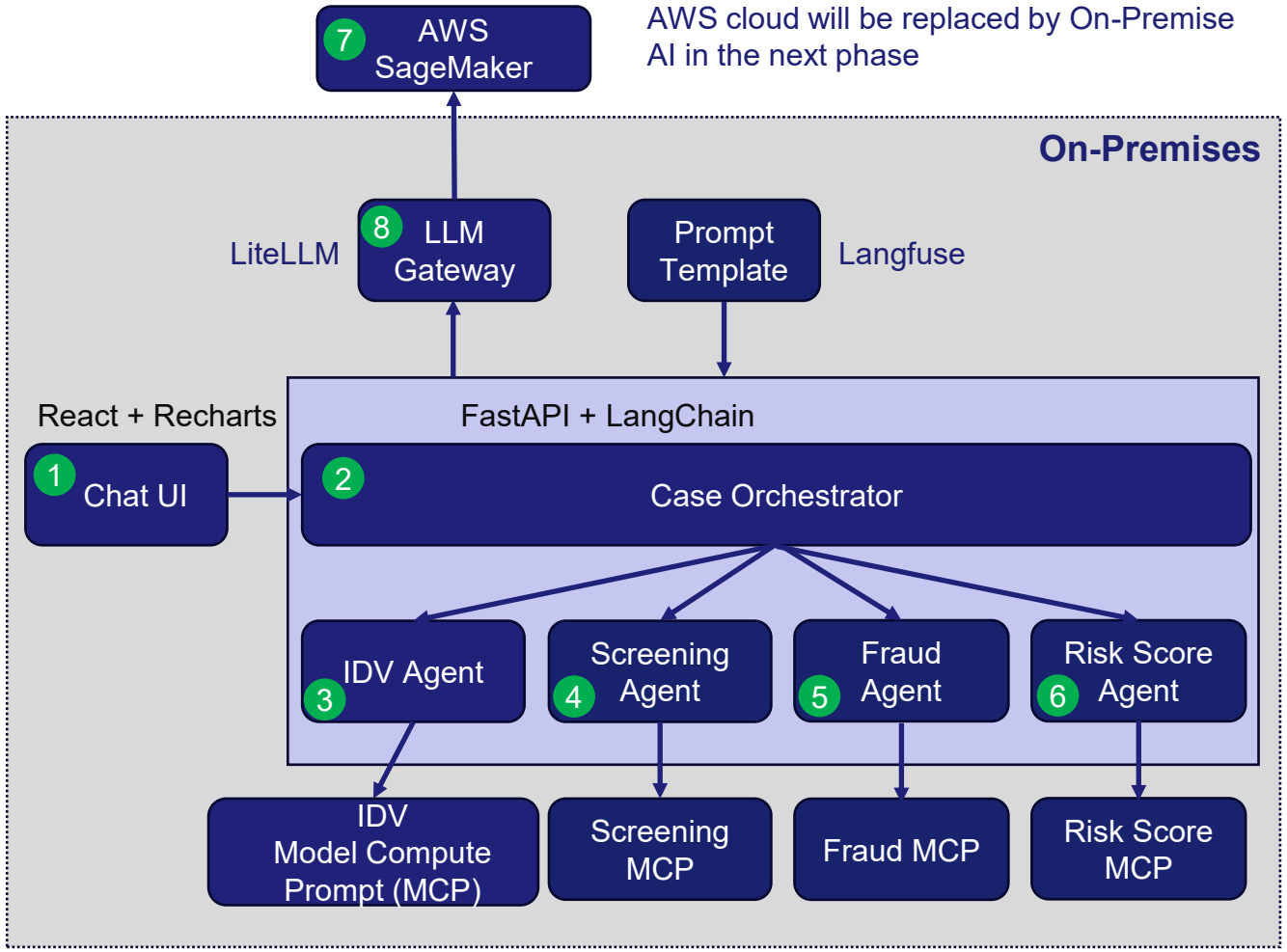
This is essential for any project that touches financial services, compliance, or customer onboarding: Mention Consumer Duty and KYC/AML compliance in the onboarding flow; Highlight Operational Resilience and Data Protection in current architecture design; Show that our app supports SCA (biometric or two-factor auth) and GDPR principles (data minimisation); Reference SM&CR accountability in UK security governance.

PROBLEM	MITIGATION 1	MITIGATION 2	MITIGATION 3
Identity capture quality & privacy	Glare/blur detection; on-device checks before upload	signed URLs + server-side encryption (SSE-KMS)	PII redaction in logs
NFC on iOS	NDEF read/write is fine	for ePassport we must use Core NFC + ISO7816 commands and MRZ-derived keys (BAC/PACE)	Bridge via native module (e.g., NFCPassportReader)
Sanctions/KYC accuracy	Integrate multiple data sources	deterministic + fuzzy matching	human review queue; adhere to OFSI guidance
Fraud & device trust	Play Integrity API (Android) and App Attest (iOS) for device/app attestation	enforce token binding and tiered enforcement strategies	server-side verification, whitelist devices
WebView comms	Use a tiny, versioned schema for postMessage	sanitize inputs	restrict originWhitelist
Transport security Regulatory/data-residency	TLS 1.3 everywhere; certificate/public-key pinning in the app	rotate pins; plan fallbacks	Region-scoped storage; lifecycle policies; implement GDPR minimisation & retention

Detailed KYC Process Workflow



High-level Solution Design – Agentic AI for KYC



Component Descriptions

#	Component	Description
1	Chat UI	• React UI for onboarding form + file upload • Conversational experience (chat assistant) • Visualizes results & risk (Recharts)
2	Case Orchestrator	• Central controller using FastAPI + LangChain • Builds KYC prompt • Triggers all agents • Collects agent outputs • Produces final decision
3	IDV Agent	IDV Agent - Identity verification Agent • Handles ID OCR, liveness, face match • Field comparison (ID ↔ user form) • Detects fake/expired IDs
4	Screening Agent	• Runs sanctions, PEP, adverse media • Deduplicates name matches • Provides screening risk & explanation
5	Fraud Agent	• Fraud history and deduplicate check • Device/IP anomaly • Suspicious pattern detection
6	Risk Score Agent	• Aggregates all agent outputs • Uses scoring + rules + CIC • Determines final risk level & recommendation
7	AWS SageMaker	• Current model hosting and inference • Will be replaced by on-prem AI
8	LLM Gateway	• Single abstraction over LLM models • Routes LLM calls to SageMaker • Handles logging, tracing (Langfuse)

IvyChat Agent for Asset Valuation