

Verve Offline

Product Service Operations Document

Verve Offline



Governance	Finance	BackOffice	Technology
<ol style="list-style-type: none">1. Contracting / Agreements2. Schem Rules & Guidelines3. Partnerships	<ol style="list-style-type: none">1. Revenue Recognition2. Settlement of participating members	<ol style="list-style-type: none">1. Settlement & Recon2. Arbitration / Chargeback3. Reporting → Transaction4. BIN Broadcast??5. Fraud Monitoring ??	<ol style="list-style-type: none">1. Switching Infrastructure2. Fraud Mgt Tool3. Arbiter/IDRS?4. Unloading service

Service Introduction

Verve Offline is a card solution designed to enable secure and convenient offline payments for customers in locations with limited or no internet connectivity. This solution caters to locations where there is limited connectivity and markets where traditional online payment methods are unavailable. It is made possible through collaboration between various parties, including Verve, Card issuers, Acquirers, Merchants and platform enablers

Benefits to Verve

- Increased Transaction volumes and revenue
- Market Expansion
- Strategic partnerships
- Enhanced Brand image

Benefits to Issuers

- Additional revenue streams
- Increased user base
- Cross-selling opportunities
- Strategic partnerships

Benefits to Acquirers

- Increased revenue
- Wider acceptance
- Competitive positioning

Benefits to Cardholders

- Convenience
- Financial Inclusion
- Faster transactions

Business Model

Problem <ul style="list-style-type: none">- Decline in card purchase transactions due to issues with POS uptime, POS availability and success rate- Transfer issues due to network downtime/poor network coverage, confirmation of transfer, mobile app downtime, and poor success rate.	Solution <p>Offline solution (card, mobile, etc.) for payments at merchant locations.</p>	Unique Value Proposition <ul style="list-style-type: none">- No reliance on network availability- Financial inclusion- Faster transactions- Convenience in payments Existing Alternatives <ul style="list-style-type: none">- Debit/Credit/Prepaid cards- Account to account transfers- Cash		Unfair Advantage <ul style="list-style-type: none">- Strong partnerships with FIs and FinTechs- Brand recognition and trust	Customer Segments <ul style="list-style-type: none">- FIs- MMOs- PSBs- Agents
Key Partners <ul style="list-style-type: none">- Issuers- Acquirers- Regulatory bodies- PTSPs- PTADs- FinTechs	Key Metrics <ul style="list-style-type: none">• Adoption rate• Transaction volume• Transaction success rate• Revenue generation• Churn rate			Channels <ul style="list-style-type: none">- Soft POS device- NFC enable mobile devices- POS devices	Regulatory Bodies <ul style="list-style-type: none">- CBN- EMVCo- PCI DSS
Cost Structure <ul style="list-style-type: none">• Development cost• Technology cost• Marketing cost• Card production cost• Cost of acceptance devices			Revenue Streams <ul style="list-style-type: none">• Card Issuance Fee• Verve Scheme Fee• Transaction Fee		

Verve Offline Players

Verve Offline	Cardholders	Merchants Integrate the offline-capable POS systems and accept payments using the cards.	Acquirers Financial institutions that process transactions for merchants and settle them with the issuer	Issuers	PTSPs
Problem	<ul style="list-style-type: none"> • POS downtime • Unreliable mobile app service • Network issues • Poor success rate 	<ul style="list-style-type: none"> • Lost revenue • Counterfeit notes • Confirmation receipt • Reversed transfers • Poor network 	<ul style="list-style-type: none"> • Challenges in facilitating transactions in areas with limited network connectivity. • Payment reliant on online authorization are not feasible in such environments, • Lost revenue 	struggle to provide banking services to customers in areas with limited access to network coverage.	<ul style="list-style-type: none"> • Reliance on online authorization • Lost revenue
Persona	Anyone seeking to make purchases in markets with limited network.	Store owners in locations with limited or no internet access.	Acquiring banks/institutions	Financial institutions	Service providers,
Alternative	Cash Credit Line	Cash Receivables	Online transactions Branch visit		
Why	Motivation: Personal – Convenience, reliability and security Differentiation: Offline connection	Motivation: Business - Attract more customers, Increased sales Differentiation: Reduced Operational Costs Reduced losses Customer retention	Motivation: Business – New market access Increased transaction volume, New revenue New customers	Motivation: Business – New market access, Increased transaction volume, New revenue stream New Customers	Motivation: Business - Expand their market reach, Increased Revenue
Frequency	Weekly - Monthly	Weekly - Monthly	Weekly - Monthly	Weekly - Monthly	Weekly - Monthly

Stakeholders

Minimum Standards

All contactless devices are required to be configured to work within a maximum of 2cm from the terminal to manage data interception-related risks

Scheme Responsibilities

Card schemes are to process all contactless transactions online and ensure that they are submitted using current processing specifications?

Card scheme to enable services that guarantee high transaction success rate, protection of customer funds and required support to facilitate confidence in the use of the product.

Stakeholders

Verve

1. Establishing rules and guidelines for the use of the Verve Offline card
2. Obtain CBN approval to process offline transactions
3. Awareness and marketing of product

Issuer

1. Card Issuance
2. Card distribution via Agents
3. Ensuring compliance with regulatory requirements and security standards.
4. Customer Onboarding
5. Customer support

Acquirer

1. Acquisition of acceptance devices
2. Deploy Acceptance devices and provide support
3. Enable card acceptance and support

Merchant

1. Card acceptance
2. Compliance with POS specifications

Agent

1. Card activation and Funding
2. Balance Enquiry
3. Customer Support

Cardholder

1. Store the payment card and protect his PIN with due care
2. Notify the issuer without delay about missing, stolen, damaged, lost or destroyed card
3. Used only for authorised transactions

Regulator

1. Policy development
2. Licensing and Authorization

PTSP

1. Deploy POS terminals with offline payment capabilities to accepting merchant locations.
2. Installation, configuration, and maintenance of offline POS terminals.

Risk & Compliance

1. Risk Advisory
2. Compliance & Regulatory oversight
3. Compliance to regulatory requirements and industry standards

Back Office

1. Transaction processing
2. Settlement and Reconciliation
3. Dispute management
4. Fraud monitoring
5. Customer Support
6. Performance monitoring

Card Manufacturer

1. Card Production
2. Card personalization

Financials

Financial Model

			Trans Vol. growth retail market (v)	Annual Trans Vol.	Revenue	Service Fee
Verve Offline Card on POS		Period				
Issuer Scheme fee + Acquirer Vol. fee	0.13%	Year 1	0	10,280,186	41,120,744	257,004,650
Access fee (Issuer + Acquirer)	4	Year 2	5%	10,794,195	43,176,781	269,854,883
Settlement Risk and Reporting fee (Acquirer)	3	Year 3	10%	11,873,615	47,494,459	296,840,371
Annual Avg. txn per cardholder (i)	12	Year 4	15%	13,654,657	54,618,628	341,366,426
Verve offline Service fee	25					
Annual NIP txn vol (ii)	5,140,093,000					
Annual Retail Market NIP Trxn vol (iii)	514,009,300					
Annual Verve Offline Customers Trxn vol (iv)	10,280,186					
Annual Issuer Scheme fee + Acquirer Vol. fee	13,364.24					
Annual Access fee in Naira (Issuer + Acquirer)	41,120,744					
Annual Verve offline Transaction fee	257,004,650					
Cardholder count in year 1	3,426,728.67					
Assumptions						
To earn 41M+ in annual access fees, we should onboard 3.4M customers						
Annual access fees /Annual Avg. txn per cardholder						

Sources:

Power BI Monthly avg. txn. per user (prepaid card) =

- (i) Annual 1*12 = 12
- (ii) NIBSS NIP Report, 2022
[NIBSS Instant Payment - NIBSS \(nibss-plc.com.ng\)](https://nibss-plc.com.ng)
- (iii) Estimate: retail market represents 10% of NIP txn. vol
 $0.10 * 5.140bn = 514.0m$ txns
- (iv) Estimate: Verve Offline Card usage reps. 2% of (iii)
 $0.02 * 514m = 10.28m$ txns
- (v) Retail market CAGR is 4.8%. Approx 5% (2020 - 2025)
<https://www.statista.com/topics/5922/retail-market-worldwide/#topicOverview>

Financial Model

Verve Offline Card on POS			Period	Trans Vol. growth retail market (v)	Annual Trans Vol.	Revenue
Issuer Scheme fee + Acquirer Vol. fee		0.1258%	Year 1	0	41,120,744	164,482,976
Access fee in Naira (Issuer + Acquirer)		4	Year 2	5%	43,176,781.20	172,707,124.80
Settlement Risk and Reporting fee in Naira (Acquirer)		3	Year 3	10%	47,494,459.32	189,977,837.28
Annual Avg. txn per cardholder (i)		12	Year 4	15%	54,618,628.22	218,474,512.87
Annual NIP txn vol (ii)		5,140,093,000				
Annual Retail Market NIP Trxn vol (iii)		514,009,300				
Annual Verve Offline Customers Trxn vol (iv)		10,280,186				
Annual Issuer Scheme fee + Acquirer Vol. fee		12,932.47				
Annual Access fee in Naira (Issuer + Acquirer)		41,120,744				
Cardholder count in year 1		3,426,728.67				
Assumptions						
To earn 41M+ in annual access fees, we should onboard 3.4M customers						
Annual access fees /Annual Avg. txn per cardholder						

Sources:	
Power BI Monthly avg. txn. per user (prepaid card) = 1	
(i)	Annual 1*12 = 12
(ii)	NIBSS NIP Report, 2022 NIBSS Instant Payment - NIBSS (nibss-plc.com.ng)
(iii)	Estimate: retail market represents 10% of NIP txn. vol $0.10 * 5.140bn = 514.0m$ txns
(iv)	Estimate: Verve Offline Card usage reps. 2% of (iii) $0.02 * 514m = 10.28m$ txns
Retail market CAGR is 4.8%. Approx 5% (2020 - 2025) https://www.statista.com/topics/5922/retail-market-worldwide/#topicOverview	
(v)	

Cost Breakdown

Item	Estimated Cost (₹)	Notes
Software NFC application to read/write on Card	Variable	Verve Offline Application
POS terminal (if applicable)	Variable	
Marketing & Sales cost for product launch	Variable	Based on promotions and sales
Maintenance Costs	Variable	Based on software type, level of support required, and VAS

Revenue Assurance

Revenue assurance helps to ensure that revenue streams are maximized, and potential losses are minimized. Here are some examples to implement revenue assurance.

Transaction monitoring:

Regular monitoring of transaction volumes and fees generated from Verve Offline card transactions.

Adoption rate:

Monitor the adoption rate to identify areas for improvement in user experience, marketing, and product offerings to drive user engagement. A high adoption rate will lead to high transaction volumes.

Customer satisfaction:

Customer satisfaction leads to increased user retention, high Net Promotor Score (NPS), and sustained revenue growth.

Fraud monitoring:

Fraud monitoring protects users' accounts and funds and minimizes financial losses due to fraudulent activities.

Data analytics:

Use data analytics tools to track transaction volumes and identify trends that may impact revenue generation.

Reporting:

Ensure that fees earned from Verve Offline card transactions are reported accurately.

Customer Journey

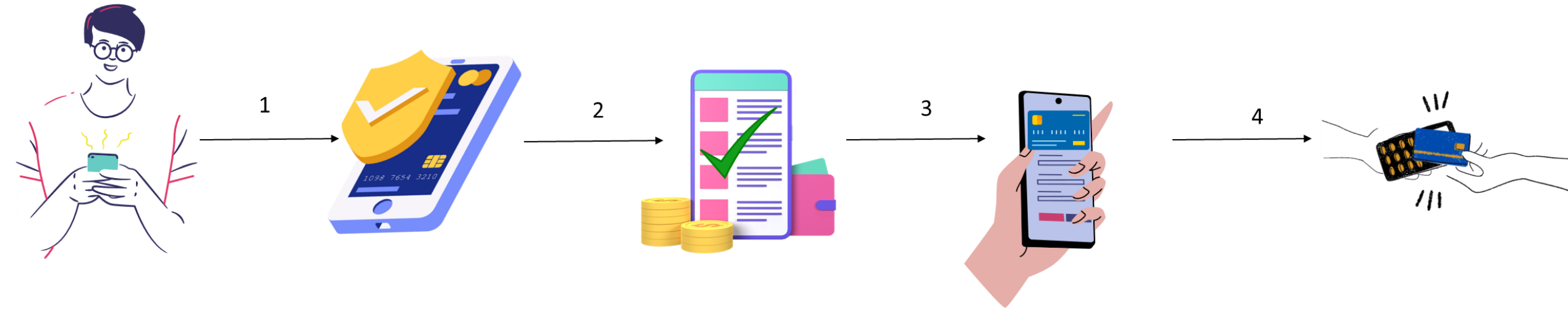


Customer Journey map

Stages	Awareness	Onboarding	Card Request	Funding	Usage
Touchpoints	Online advertisements, Social media posts	Supporting App	Supporting App	Supporting App	Merchant POS terminal
Actions	Learning about the Verve Offline Card	<ul style="list-style-type: none"> - Downloading the app from mobile store - Providing necessary information and completing the onboarding process 	<ul style="list-style-type: none"> - Selecting a delivery location 	<ul style="list-style-type: none"> - Card funding on the app 	<ul style="list-style-type: none"> - Merchant POS terminal
Motivations	Secure, reliable offline payments	<ul style="list-style-type: none"> - Early adoption - Convenient payments 	Making payment with a Verve Offline Card in a no-network zone	Ease of funding	Easy payment for goods
Pain points	Limited awareness of the usage of Verve Offline card	Complex registration process	Customer inconvenience Delivery fee	Delay in card funding due to network downtime etc	Low merchant acceptance or familiarity with Verve Offline card
Customer experience	😞	😞	😞	😞	😞

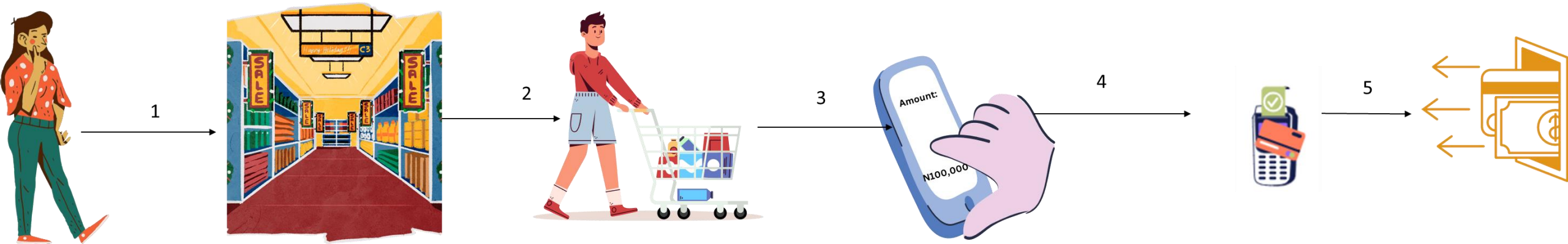
Customer Journey map

CARDHOLDER



Customer Journey map

MERCHANT



1. Cardholder walks into a merchant store
2. Cardholder picks items from the store and proceed to make payment
3. Merchants input total basket amount into the NFC enabled device
4. Cardholder taps card on the NFC enabled device and inputs PIN on device
5. Merchant gets settled at T+ x depending on the settlement cycle

Technology



Card Technology

Contactless card technology and mobile applications will be used for the Verve Offline Card.

Technology Requirements:

- **Contactless Card Technology:**

Near Field Communication (NFC) technology with a chip for storing cardholder information and processing transaction data.

- **Mobile Application:**

A mobile application (issuer app*) for customer onboarding.

Mobile device and NFC Bluetooth add-on for non-NFC device for transaction acceptance

Verve Offline Application:

- Verve offline application to be used to write information to a card amongst other features. This should be compatible with non-NFC mobile devices as well as POS terminals

Features

Cardholder

Onboarding:
Self-onboarding
At agent
Activation
KYC Upgrade
Wallet funding
Card Request
Card Funding
Card Limit
Unload card
Transaction history

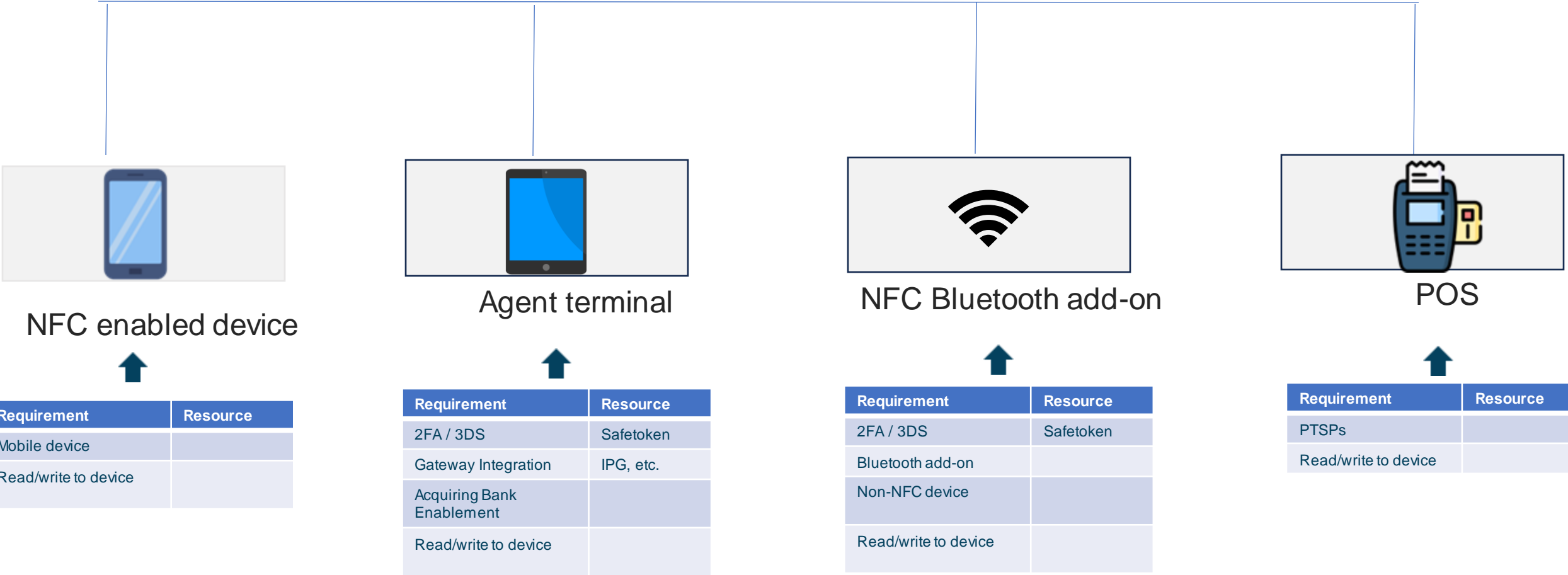
Merchant

Onboarding (PTSPs)
Acceptance device
Data synchronization
Settlement
Dispute management
Support tools

Product Offering

VERVE OFFLINE	Tier 0	Tier 1	Ter 2
Persona	Mr Kalu, a 32-year-old commercial bus rider, who goes cloth shopping in Balogun. He needs a secure and network-independent payment solution with a hassle-free sign-up process.	Aisha, a 25-year-old, thrift seller, who restocks weekly, is worried about failed payments at the market and wants a reliable payment option. She is comfortable providing her basic KYC details and NIN through her app.	Mama Nneka is a savvy businesswoman with a thriving neighbourhood retail store. she buys in bulk regularly, and values convenience. Mama Nneka is comfortable providing all the required details required to give her a high spend limit to perform transactions offline.
Use case	Ideal for customers making low-value purchases in a location with poor network coverage.	Ideal for customers shopping with a mid-ranged budget in an area with poor network coverage	Ideal for customers shopping with a high budget in an area with poor network coverage
Onboarding	Agent	Agent, App –	App
KYC requirement	Phone number, Name	Phone number, Name, NIN, Selfie	Phone number, Name, BVN,NIN, Selfie
Wallet funding	All available channel	All available channel	All available channel
Card Request/delivery – how will agents be paid for card pick up	Agent	App/Agent pickup	App/Agent pickup
Card PIN creation	Agent	App	App
Card Funding (activation) /topup	Agent (via verve offline wallet)	App	App
Balance inquiry	Agent	App	App
Tier Upgrade	NA, *smartphone required	Yes	Yes
Maximum balance /wallet limit	10,000	150,000	300,000
Card funding limit	50,000	300,000	500,000
Unloading**	**Yes (Agent)	**Yes (App, Agent)	**Yes (App, Agent)
Transaction history	NA	App	App
Daily spend count/limit	25,000	200,000	300,000

Acceptance point



Assumption
1. Onboarding is not handled by the issuer

Performance Metrics

Performance Metrics

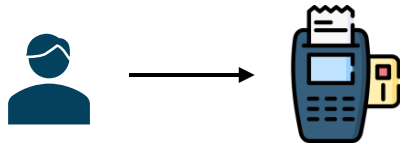
These metrics give insights into the usage and market penetration of the Verve Offline card.

Metric	Data Source
Adoption rate	Partner Switch/Processor
Transaction volume	Partner Switch/Processor
Transaction Success Rate	Processor/Partner Switch
Average Transaction Value	Partner Switch/Processor
Revenue generation	Partner Switch/Processor
Churn rate	Partner switch/Processor
Customer satisfaction	Surveys
Net Promoter Score (NPS)	Surveys

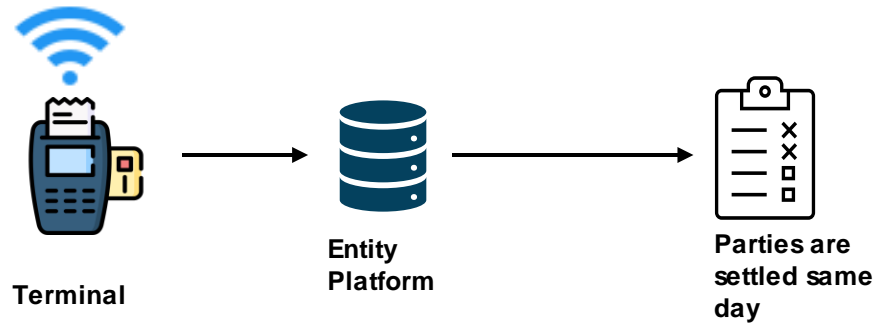
Transaction and Settlement

INSTANT SETTLEMENT

Cardholder Initiates Transaction.



1. The Customer presents their Verve Offline card at the Merchant's POS terminal.
2. The POS terminal captures and stores the transaction details (purchase amount, card number etc.)
3. If the purchase amount and fees is equal to or less than the value on the card, the transaction would be successful, if not, it will decline.



1. When the POS terminal comes online, the offline transactions are uploaded on the institution's CBA
2. Detailed report is captured, and settlement initiated same day
3. All participating parties (Merchants, ISW) are settled as applicable

PROs

- Streamlined flow
- Easy Reconciliation
- Seamless dispute management process

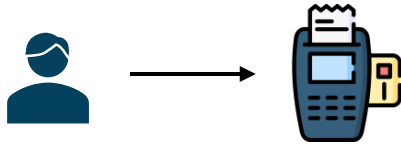
CONs

- Lack of visibility into transactions

Parties

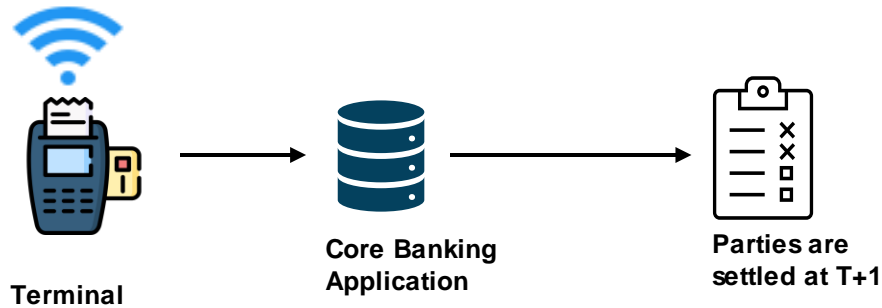
- Same issuer/acquirer
- Merchant
- Verve

Cardholder Initiates Transaction.



1. The Customer presents their Verve Offline card at the Merchant's POS terminal.
2. The POS terminal captures and stores the transaction details (purchase amount, card number etc.)
3. If the purchase amount and fees is equal to or less than the value on the card, the transaction would be successful, if not, it will decline.

T+1 SETTLEMENT



1. When the POS terminal comes online, the offline transactions are uploaded on the institution's CBA
2. Detailed report is captured, and settlement initiated at T+1
3. All participating parties (Merchants, ISW) are settled as applicable

PROs

- Streamlined flow
- Easy Reconciliation
- Seamless dispute management process

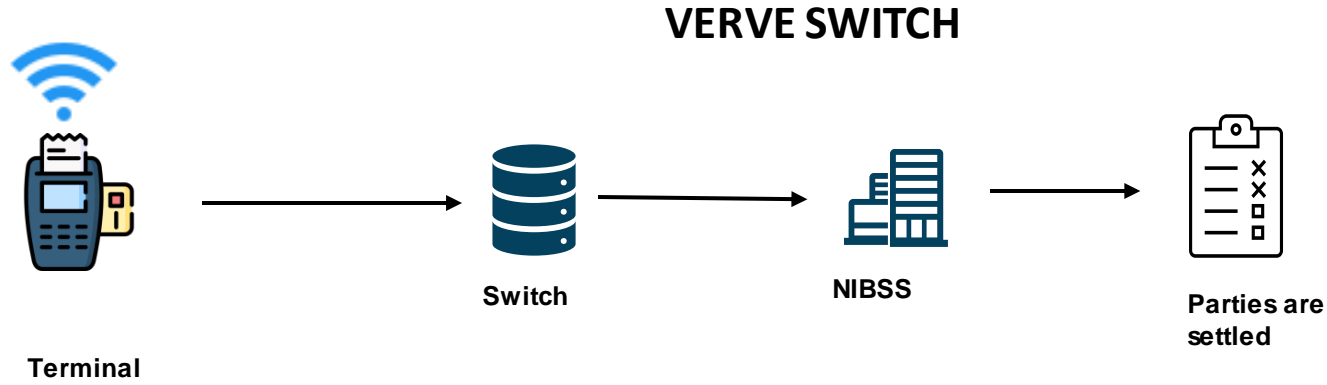
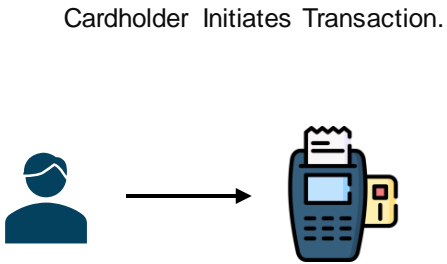
CONs

- Lack of visibility into transactions

Parties

- Same issuer/acquirer
- Merchant
- Verve
- Cardholder

Settlement Flow – Multiple Entities



Terminal

Switch

NIBSS

Parties are
settled

PROs

- Visibility into transactions

Parties

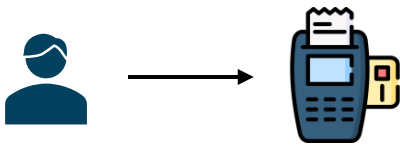
- Issuer
- Acquirer
- Merchant
- Verve
- Cardholder

1. The Customer presents their Verve Offline card at the Merchant's POS terminal.
2. The POS terminal captures and stores the transaction details (purchase amount, card number etc.)
3. If the purchase amount and fees is equal to or less than the value on the card, the transaction would be successful, if not, it will decline.

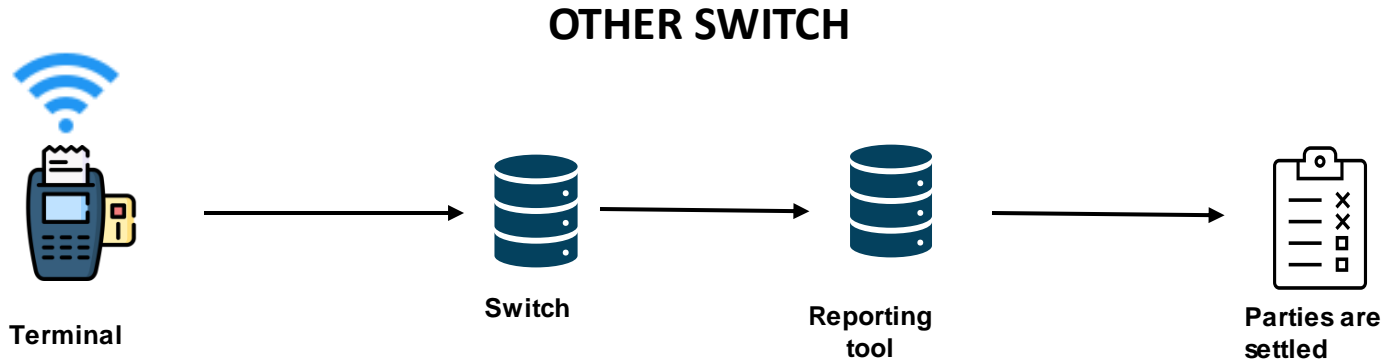
1. When the Verve Offline Application/POS terminal comes online, transaction details are updated on the switch. The Transaction details will capture the issuer, the merchant, the acquiring bank.
2. At T+1, a report is generated from switch and settlement advice is shared with NIBSS
3. All participating parties are settled as applicable
4. Merchants will be settled by their acquiring banks

Settlement Flow – Multiple Entities

Cardholder Initiates Transaction.



1. Customer uses their offline debit card at a merchant's store.
2. The POS device verifies the customer's PIN and checks the card balance. If valid, transaction details are saved on the device.
3. If the purchase amount and fees is equal to or less than the value on the card, the transaction would be successful, if not, it will decline.



1. At T+X, when the Verve Offline Application/POS terminal connects to the network at intervals online, and transmits stored transaction data to the switch platform
2. The switch platform captures/prepares a detailed report via a reporting tool
3. At T+1, settlement advice is processed for all players and all participating parties are settled as applicable
4. Merchants will be settled by their acquiring banks

PROs

- Reconciliation and settlement delegation

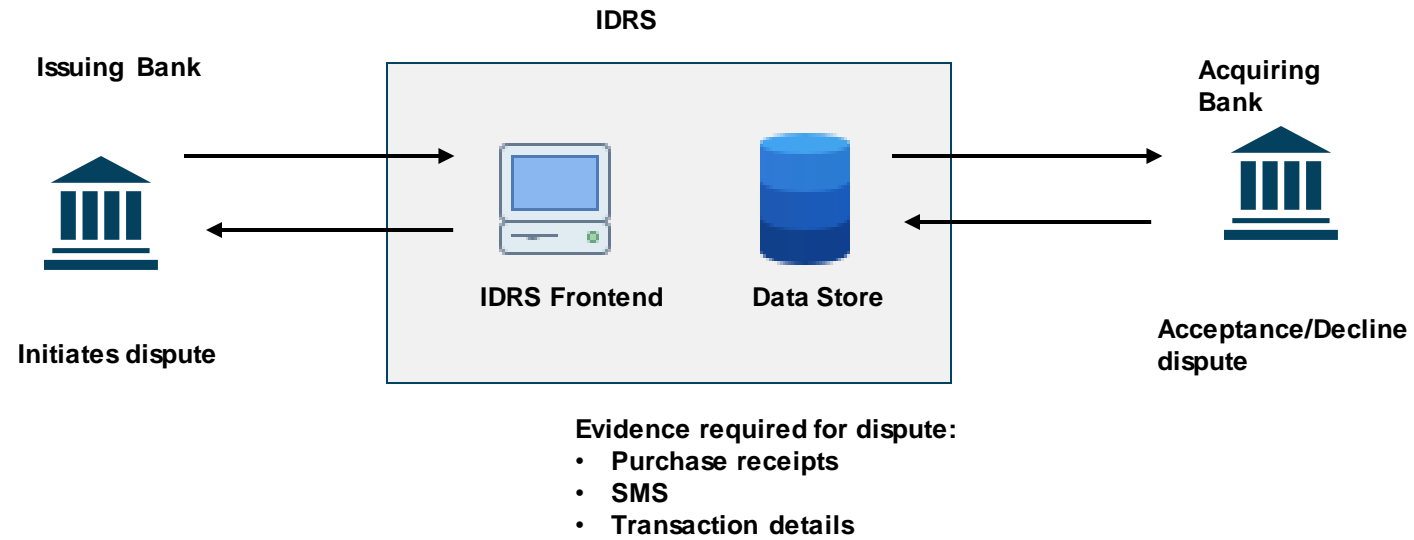
CONs

- Lack of visibility into transactions
- Possible complexity

Parties

- Issuer
- Acquirer
- Merchant
- Verve
- Cardholder

Dispute Management



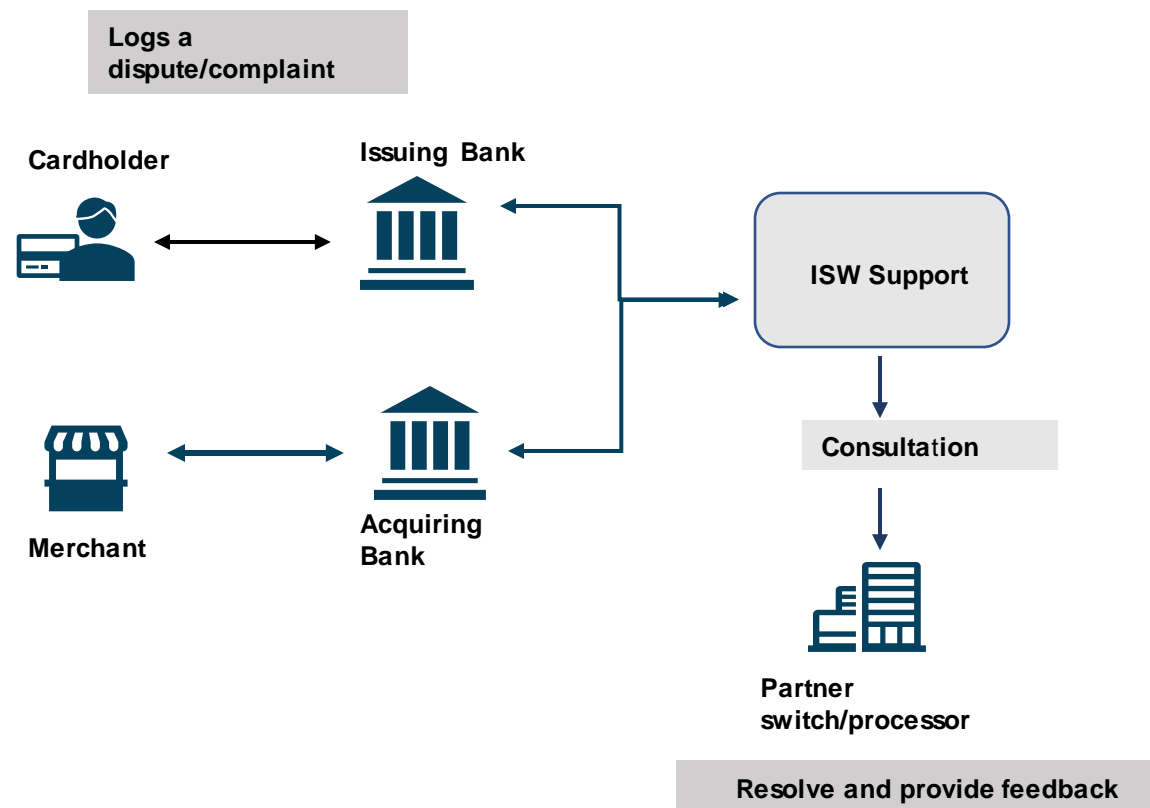
Resources

Issuers, Acquirers, Merchants, Arbitration

Tools

IDRS

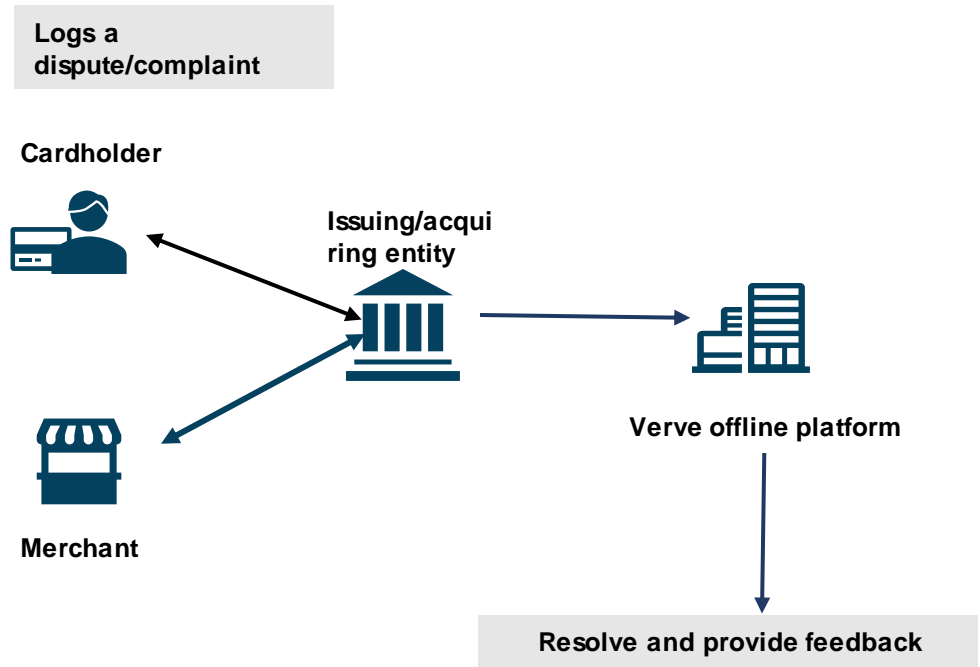
Issue Resolution – Multiple Entities



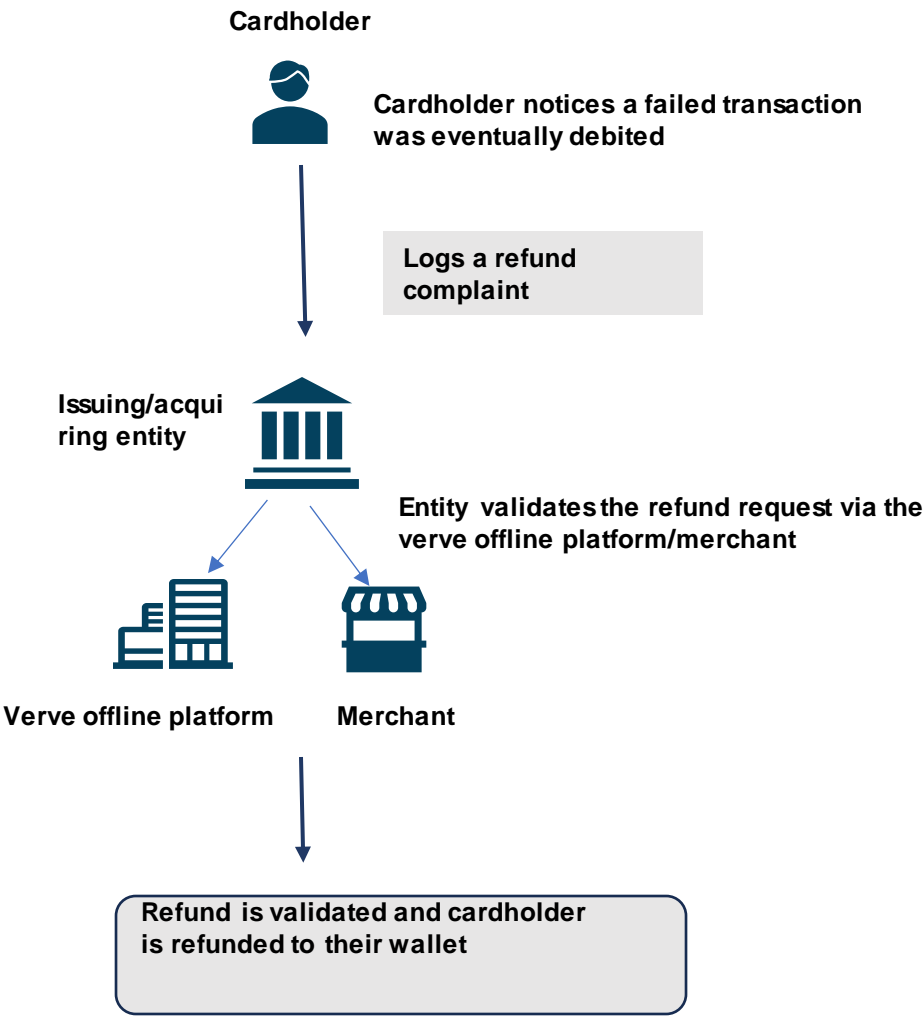
- This will be dependent on our position on who the players in the eco-system will be

Issue Resolution – One Entity

Issue resolution



Refund Process



THANK YOU

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