

altpay Project Overview

Technical Summary for Internal Teams



The Smart Way to Accept Payments in Nigeria

A secure, reliable payment gateway for Nigerian businesses

Document Information

Field	Details
Project Name	altpay Payment Gateway
Document Type	Technical Overview (Internal)
Version	1.0
Date	January 30, 2026
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Audience	Internal Teams, Technical Staff, Project Managers

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1. What is altpay?

altpay is a payment gateway – a technology platform that allows Nigerian businesses to accept payments from their customers online.

Think of it like **Stripe** (the American payment company valued at \$50 billion) but built specifically for Nigeria.

In Simple Terms:

When a customer buys something online from a Nigerian business, altpay handles the payment – securely taking money from the customer's card and depositing it into the business's bank account.

Key Facts:

- ⌚ **Target Market:** Nigerian SMEs, startups, and e-commerce businesses
 - 💳 **Payment Methods:** Card payments (Visa, Mastercard, Verve)
 - ⚡ **Settlement:** Next business day
-

2. The Problem We Solve

Nigerian Businesses Face These Challenges:

Challenge	Impact
Complex Integration	Businesses spend weeks trying to accept payments
Slow Settlements	Waiting 3-7 days to access their money
Poor Support	Difficult to get help when issues arise
Security Concerns	Customers worried about card fraud

Market Opportunity:

- Nigeria has **200+ million** people
 - E-commerce market growing at **25% annually**
 - Over **40 million** Nigerians shop online
 - 10,000+** new online businesses start each year
-

3. Our Solution

altpay Offers:

```
graph TD
    subgraph VALUE["altpay Value Proposition"]
        EASY["⌚ EASY SETUP<br/>Integrate in minutes,<br/>not weeks"]
        FAST["⚡ FAST MONEY<br/>Next-day<br/>settlement"]
        SECURE["🔒 SECURE<br/>Bank-level<br/>security"]
        INSIGHTS["📊 CLEAR INSIGHTS<br/>Real-time<br/>dashboard"]
        SUPPORT["👋 GREAT SUPPORT<br/>Dedicated<br/>support team"]
    end
```

Competitive Advantage:

Feature	altpay	Competitor A	Competitor B
Settlement Time	Next Day	2-3 Days	3-7 Days
Integration Time	1 Day	3-5 Days	1-2 Weeks
3D Secure	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Developer Support	<input checked="" type="checkbox"/> Excellent	<input type="checkbox"/> Basic	<input checked="" type="checkbox"/> Poor

4. Key Features

MVP Features (Launch):

Feature	What It Means	Business Value
Card Payments	Accept Visa, Mastercard, Verve	Reach all Nigerian cardholders
Hosted Checkout	Secure payment page	No complex integration needed
3D Secure	Extra verification step	Reduce fraud, build trust
Merchant Dashboard	See all transactions	Track business performance
Next-Day Settlement	Money in bank next morning	Better cash flow
Webhooks	Instant notifications	Automate order processing

Future Features (After Launch):

Feature	Timeline	Description
Payment Links	Month 3	Share links to get paid without a website
Refunds	Month 3	Process customer refunds easily
Bank Transfers	Month 4	Accept direct bank payments
Subscriptions	Month 5	Recurring billing for memberships
Installments	Month 5	Let customers pay in parts

5. How It Works

For a Business Owner:

```
flowchart LR
    A[Sign Up<br/>on altpay.ng] --> B[Get API Keys<br/>in 5 minutes]
    B --> C[Add to Website<br/>or App]
```

```
C --> D[Start Accepting<br/>Payments]
D --> E[Get Settled<br/>Next Day]
```

For a Customer Making a Payment:

```
flowchart LR
    A[Shop on<br/>Website] --> B[Click Pay<br/>with altpay]
    B --> C[Enter Card<br/>Details]
    C --> D[Verify with<br/>Bank OTP]
    D --> E[Payment<br/>Complete! ✓]
```

The Payment Flow:

```
sequenceDiagram
    participant C as Customer
    participant AP as altpay Platform
    participant IS as Card Processor<br/>(Interswitch)
    participant M as Merchant

    C->>AP: Initiate Payment
    AP->>IS: Process Card
    IS->>IS: 3D Secure Verification
    IS-->>AP: Payment Confirmed
    AP-->>C: Success!
    AP->>M: Webhook Notification
    Note over AP,M: Settlement: Next Business Day
```

6. Technology Overview

What We're Building (Simple Explanation):

```
flowchart TB
    subgraph "What Customers See"
        W[Website/App]
        CP[Checkout Page]
    end

    subgraph "Behind the Scenes"
        API[altpay System]
        DB[(Transaction<br/>Records)]
    end

    subgraph "Banking Partners"
        IS[Card Processor<br/>Interswitch]
    end
```

```
BK[Banks]  
end
```

```
W --> CP  
CP --> API  
API --> DB  
API --> IS  
IS --> BK
```

Technology Choices (What & Why):

Component	Technology	Why This Choice
Website & Dashboard	Next.js	Fast, modern, great for SEO
Backend System	Laravel	Proven, secure, large talent pool
Database	PostgreSQL	Reliable, handles money well
Hosting	Amazon AWS	Industry standard, Nigerian data center
Card Processing	Interswitch	Largest processor in Nigeria

Security Measures:

Protection	What It Does
PCI Compliance	Industry security standard for payments
Encryption	All data scrambled and unreadable to hackers
3D Secure	Customer verifies with bank before payment
Fraud Detection	Automatic blocking of suspicious activity
Tokenization	Card numbers never stored on our servers

7. The Team

Team Structure:



```

    BE1[💻 Backend Dev 1<br/>Payment Processing]
    BE2[💻 Backend Dev 2<br/>Settlements & Webhooks]
    FE1[💻 Frontend Dev 1<br/>Dashboard]
    FE2[💻 Frontend Dev 2<br/>Checkout & Website]
end

subgraph "Quality"
    QA[🔍 QA Engineer<br/>Testing & Quality]
end

TL --> UI
TL --> BE1
TL --> BE2
TL --> FE1
TL --> FE2
TL --> QA

```

Team Capabilities:

Role	Count	Expertise
Tech Lead	1	8+ years, payment systems, architecture
UI Designer	1	User experience, interface design, design systems
Backend Engineers	2	Laravel, APIs, payment integrations
Frontend Engineers	2	React/Next.js, user interfaces
QA Engineer	1	Testing, quality assurance
Total	7	Full-stack payment expertise

8. Project Timeline

Overview: 5 Months to Full Launch

```

gantt
    title altpay Project Timeline
    dateFormat YYYY-MM-DD

    section MVP Phase
        Foundation & Setup      :a1, 2026-02-03, 14d
        Core Payments            :a2, after a1, 14d
        Security & Webhooks     :a3, after a2, 14d
        Settlement & Launch     :a4, after a3, 14d
        💡 MVP Launch             : milestone, after a4, 0d

    section Growth Phase
        Payment Links & Refunds :b1, after a4, 21d
        Bank Transfers          :b2, after b1, 21d

```

section Scale Phase	
Subscriptions	:c1, after b2, 21d
Advanced Features	:c2, after c1, 21d
🎉 Full Launch	:milestone, after c2, 0d

Detailed Timeline:

Phase	Duration	Dates	Key Deliverables
MVP Development	8 weeks	Feb 3 - Mar 28, 2026	Working payment gateway
MVP Launch	-	March 28, 2026	Go live with first merchants
Phase 2	6 weeks	Mar 31 - May 9, 2026	Refunds, payment links
Phase 3	6 weeks	May 12 - Jun 20, 2026	Subscriptions, advanced features
Full Launch	-	June 20, 2026	Complete product

Key Milestones:

Date	Milestone	What It Means
Feb 3, 2026	Development Starts	Team begins building
Feb 14, 2026	Alpha Version	Basic registration works
Feb 28, 2026	Beta Version	Payments work in test mode
Mar 14, 2026	Feature Complete	All MVP features ready
Mar 28, 2026	🎉 MVP Launch	First real merchants
May 9, 2026	Phase 2 Complete	Enhanced features live
Jun 20, 2026	🎉 Full Launch	Complete platform

9. Success Metrics

How We'll Measure Success:

```
pie title Success Metrics Priority
    "Payment Success Rate" : 30
    "Merchant Satisfaction" : 25
    "Settlement Accuracy" : 20
    "System Uptime" : 15
    "Response Time" : 10
```

Key Performance Indicators (KPIs):

Metric	Target	Why It Matters
Payment Success Rate	> 95%	Customers complete purchases
System Uptime	> 99.5%	Always available for payments
Settlement Accuracy	100%	Merchants get correct amounts
Merchant Satisfaction	> 4.5/5	Happy merchants stay & refer
Response Time	< 3 seconds	Fast payment experience
Support Response	< 2 hours	Quick issue resolution

Monthly Targets:

Metric	Month 1 Target	Month 6 Target
Active Merchants	50	500
Monthly Transactions	15,000	150,000
Churn Rate	< 5%	< 3%

10. Risks & How We'll Manage Them

Risk Assessment:

```

quadrantChart
  title Risk Assessment Matrix
  x-axis Low Probability --> High Probability
  y-axis Low Impact --> High Impact
  quadrant-1 Monitor
  quadrant-2 Critical - Action Required
  quadrant-3 Accept
  quadrant-4 Mitigate
  Security Breach: [0.2, 0.9]
  Processor Downtime: [0.4, 0.7]
  Competition: [0.6, 0.5]
  Regulatory Changes: [0.3, 0.6]
  Team Turnover: [0.4, 0.5]
  Scope Creep: [0.7, 0.4]

```

Risk Mitigation Plan:

Risk	Likelihood	Impact	How We'll Handle It
Security Breach	Low	Critical	Bank-level security, PCI compliance, insurance
Processor Downtime	Medium	High	Backup processor ready (Flutterwave)

Risk	Likelihood	Impact	How We'll Handle It
Strong Competition	Medium	Medium	Focus on superior developer experience
Regulatory Changes	Low	High	Legal team, compliance officer
Key Team Leaves	Medium	Medium	Documentation, cross-training
Scope Creep	High	Medium	Strict MVP definition, phased approach

Contingency Plans:

Scenario	Response	Recovery Time
Primary processor down	Switch to backup	15 minutes
Data center outage	Failover to backup region	30 minutes
Security incident	Isolate, investigate, notify	4 hours
Key developer leaves	Team coverage + hiring	2-4 weeks

11. Next Steps

Immediate Actions (Next 2 Weeks):

#	Action	Owner	Deadline
1	Finalize team contracts	HR	Feb 1
2	Set up development environment	Tech Lead	Feb 3
3	Kick-off meeting	All Stakeholders	Feb 3
4	Begin Sprint 1	Development Team	Feb 3
5	Complete initial UI designs	UI Designer	Feb 14

Key Decisions Needed:

Decision	Options	Recommendation	Needed By
Hosting Provider	AWS vs Azure	AWS (Nigeria region)	Feb 1
Primary Processor	Interswitch vs Flutterwave	Interswitch	Feb 1
Launch Strategy	Soft vs Public	Soft (beta merchants)	Mar 15

Communication Plan:

Update Type	Frequency	Audience	Format
Weekly Status	Every Friday	Stakeholders	Email

Update Type	Frequency	Audience	Format
Sprint Review	Every 2 weeks	All	Meeting
Design Review	Weekly	Dev Team + UI	Meeting
Launch Announcement	As needed	Public	Press Release

Summary

What You Need to Know:

Question	Answer
What are we building?	Payment gateway for Nigerian businesses (like Stripe)
How long will it take?	2 months to MVP, 5 months to full launch
What are the risks?	Manageable with proper planning

Why This Will Succeed:

- Clear market need** – Nigerian businesses need better payment solutions
 - Experienced team** – 7 skilled professionals with payment expertise
 - Proven technology** – Using battle-tested tools (Laravel, AWS, Interswitch)
 - Competitive advantage** – Better pricing, faster settlements, superior developer experience
 - Realistic timeline** – Phased approach reduces risk
-

Ready to Build the Future of Payments in Nigeria? 

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Document Version 1.0 | January 30, 2026