

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 |
|---------------|---|
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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:

```
flowchart TB
    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
    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 | ✔ Yes | ✔ Yes | ✗ No |
| Developer Support | ✔ Excellent | ⚠ Basic | ✗ 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:

```

graph TB
    subgraph "Leadership"
        TL[👨‍💻 Tech Lead<br/>Balogun Abdulsamad<br/>Architecture & Decisions]
    end

    subgraph "Design"
        UI[👩‍💻 UI Designer<br/>User Experience & Interfaces]
    end

    subgraph "Development"

```

```

    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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