Product Requirements Document

Project Name: bayar.online

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1. Overview

Context:

Many users transact on platforms like Facebook Marketplace or OLX where the platform doesn't offer a native payment mechanism. This creates a trust gap—buyers fear paying in advance without guarantee of delivery.

Problem:

- No escrow-like protection on C2C platforms.
- Workaround involves using Tokopedia/Shopee—but their 10–12% fees are too high for informal sellers.
- There's a need for a lightweight escrow solution integrated into these P2P environments.

Solution:

Build a **Piggybank/Escrow Platform** where:

- Buyers transfer money to a temporary holding (escrow).
- Sellers get notified of the payment and ship the item
- After buyer confirmation, funds are released to seller.
- Optional dispute resolution.

@ 2. Goals and Success Metrics\

Goal	Metric
Increase trust in P2P transactions	% increase in successful transactions
Reduce fraud/disputes	# of disputes / total transactions
Lower cost alternative to Shopee/Tokopedia	Target platform fee < 3%



👤 3. User Roles

- 1. Buyer
- 2. Seller
- 3. Admin

2 3.1. User Journey

3.1.1. Buyer Journey

1. Submit Transaction Request

- Buyer pastes a product listing URL from Facebook/OLX or uploads product screenshots.
- Inputs: product name, seller contact, price, shipping fee (if applicable), etc.

2. BayarinAja Transaction Verification

- BayarinAja verifies product listing (manual or assisted automation) and seller contact details.
- BayarinAja confirms that seller accept escrow service

3. Payment Instruction Issued

- o If verification passes, buyer receives a unique payment link or QRIS code.
- Deadline for payment (e.g., 24 hours).

4. Payment Received

- Buyer transfers funds to BayarinAja's virtual account.
- Buyer receives confirmation of payment.

5. BayarinAja Notifies Seller

- Seller is instructed to ship the product.
- Seller submits tracking number via platform.

6. Buyer Confirms Receipt

 Buyer confirms via platform (web/app) that the item has arrived in good condition.

7. Funds Disbursed

BayarinAja releases funds to seller.

8. Review & Rating (Optional)

Buyer can rate the seller for reputation purposes.

3.1.2. Seller Journey

1. Seller Accepts Escrow

i. Seller must acknowledge and agree for the product to be able to bought using BayarinAja Escrow service and ship once money is held.

2. Receives Notification from BayarinAja

Upon buyer payment, seller gets notified to ship the product.

3. Submit Shipping Details

- o Input tracking number and courier name.
- Must upload shipping receipt proof.

4. Await Confirmation

• Once buyer confirms delivery, money is disbursed to seller's bank account.

3.2. Admin Dashboard

- Transaction Verification Panel
- KYC Management (for frequent sellers)
- Escrow Fund Ledger
- Disbursement Status
- Dispute Center
- Performance Analytics (total volume, successful/failed transactions, etc.)

🧩 4. Features & Tasks (Detailed by Flow)

A. User Onboarding

Task: Sign Up / Log In

- Context: Users (buyers/sellers) need secure accounts.
- **Problem:** No trust or identity validation without onboarding.
- DoD:
 - User can register via phone number or email (Mandatory).
 - Optional: Facebook / Google OAuth.
 - Optional: Upload KTP (for added verification badge).
 - Unique identifier (UUID) is created.
 - Profile page saved with:
 - Mandatory: Full Name, Phone, Email
 - Optional: Profile Picture, Social media handle
 - OTP verification for phone/email.

B. Escrow Transaction Flow

Task: Create Escrow Transaction

- Context: Buyer wants to secure a transaction.
- **Problem:** No safe middle ground to hold funds temporarily.
- DoD:
 - Buyer initiates transaction.
 - Inputs:
 - Product Name (Text)
 - Product Link (Text)
 - Amount (IDR, Mandatory)

- Delivery Method (Text)
- Seller Phone/Email (Mandatory)
- Optional: Notes/Photos
- System generates:
 - Unique escrow ID
 - Payment instructions via VA, QRIS, etc.
- Notifications sent to seller via WA and email.

Task: Seller Accepts Escrow

- Context: Seller must acknowledge and agree to ship once money is held.
- Problem: Without seller consent, buyer risks unnecessary deposit.
- DoD:
 - Seller clicks "Accept Transaction."
 - Accepts terms: "Item must be shipped after payment held."
 - o Optional: Input shipping service & tracking number

Task: Buyer Pays into Escrow

- Context: Buyer deposits payment.
- **Problem:** Funds need to be securely held before release.
- DoD:
 - Buyer sees payment status page.
 - o Options: QRIS, Bank Transfer, eWallet
 - System marks payment as "Received."
 - Auto-update seller: "Funds received. Please ship product."

Task: Mark Item as Shipped

- Context: Seller must prove shipment.
- **Problem:** Buyer needs confirmation seller has acted.
- DoD:
 - Seller uploads tracking number
 - Status changed to "Shipped"
 - Buyer receives notification

Task: Buyer Confirms Receipt

- **Context:** Buyer marks item as "received" once happy.
- Problem: Prevent early release if item not received.
- DoD:
 - Buyer clicks "Item received"
 - System disburses funds to seller
 - Transaction marked "Complete"

Task: Auto-Release Timeout

- Context: If buyer is inactive post-shipping.
- **Problem:** Avoid indefinite fund holding.
- DoD:
 - Timer starts after shipping date (e.g. 7 days)
 - o Auto-confirm and disburse funds unless dispute opened

C. Dispute Handling

Task: Open Dispute

- Context: Buyer didn't receive item / item is fake.
- Problem: No path for complaints otherwise.
- DoD:
 - Buyer clicks "Open Dispute" → fill form (Text + optional image)
 - System notifies admin
 - o Escrow fund is frozen
 - Admin dashboard shows "Pending Dispute"
 - o Both parties notified and can reply with evidence

Edge Cases & Dispute Handling

- Buyer Doesn't Confirm Receipt?
 - o Auto-confirmation after X days (e.g., 3-5 days based on courier data).
 - Buyer notified before auto-disbursement.
- Item Not Received or Wrong?
 - Buyer can open a dispute with proof.
 - Admin will mediate and potentially refund or hold payment.
- Seller Fails to Ship?
 - Buyer refunded after a grace period (e.g., 48 hours).

📊 5. Buyer/Seller Dashboard

Feature	Buyer	Seller
View transaction status	V	V
View history	V	V
Initiate new transaction	V	×
Accept transaction	×	V

Add shipping info	×	V
Raise dispute	V	×

Main Data Points:

- Transaction status (Pending, Paid, Shipped, Completed, Disputed)
- Product info
- Counterparty info
- Tracking details
- Payment receipts

% 6. Admin Dashboard

Feature	Description
View all transactions	With filters: status/date/user
View disputes	See dispute logs & actions
Disburse funds manually	Override if needed
Freeze transaction	For fraud or violation
User verification	KTP checks / badges
Export CSV reports	Transaction logs, fees earned, etc.

7. System Architecture Overview

Component	Stack
Frontend	Next.js / React
Backend/API	Node.js + Express / Supabase Functions
Database	PostgreSQL (Supabase)
Auth	Firebase / Supabase Auth
File Storage	Cloudinary / Supabase Storage

Payment Gateway	Xendit / Midtrans
Notifications	WhatsApp API + Email (SendGrid)
Hosting	Vercel + Railway

8. Integration Touchpoints

Integration	Purpose	Direction	Notes
Xendit / Midtrans	Payment	Inbound + Webhook	Auto-confirm payment via webhook
WhatsApp API	Notifications	Outbound	Buyer & Seller status updates
Shipping API	Tracking	Optional / Read	Check delivery status
Email	Verification, updates	Outbound	OTPs and updates
OAuth	Login	Inbound	Optional

9. Data Models (MVP Level)

User

• id, name, email, phone, role, verified, created_at

Product

• id, name, URL, images, verified_status, created_at

EscrowTransaction

• id, buyer_id, seller_id, product_name, amount, status, shipping_info, created_at, updated_at

Payment

• id, transaction_id, method, status, gateway_ref, paid_at

Dispute

• id, transaction_id, opened_by, reason, evidence, status, admin_notes

10. MVP Scope Clarification

Feature	Included in MVP?
Buyer/Seller Onboarding	~

Create/Accept Escrow	V
Xendit/Midtrans integration	V
WhatsApp/email notifications	V
Shipping tracking (manual entry)	V
Dispute flow (basic)	V
Admin Panel	V
Auto-release timer	V
KTP Verification	×
FB Messenger Bot	×
API for OLX integration	×

11. Suggested Estimation Breakdown Format

Task	Subtasks	Estimation (days)
Frontend (User)	Register/Login, Escrow Flows, Status Pages	х
Frontend (Admin)	Dashboard, Dispute Panel	х
Backend/API	Auth, Escrow logic, Payment, Dispute	х
Payment Gateway	Integration + Testing	х
Notifications	WhatsApp, Email	х
Database Schema	Design + Setup	Х
DevOps/Infra	Hosting, Deployment Pipelines	х
QA/Testing	Manual + Automated tests	х



12. Non-Functional Requirements

Area	Details
Performance	Handle 100 concurrent transactions
Security	Escrow balance unmodifiable manually except by admin
Reliability	Payments and statuses must be idempotent
Audit Logs	Admin actions logged
Uptime	99.5% minimum



13. Proposal Narrative (for Business Team)

A lightweight escrow system designed specifically for informal marketplaces like Facebook Marketplace or OLX, reducing fraud while keeping platform fees minimal (<3%). Users transact in trust without relying on costly third-party platforms like Shopee or Tokopedia. The MVP will cover end-to-end transaction security, with optional features like shipping verification and disputes. Built on modern, scalable infrastructure using Supabase, Xendit, and React.

14. Branding Note

Why BayarinAja?

- Bayar = Pay
- Aja = Friendly, casual tone in Bahasa
- Easy to remember, approachable, local

Other name options:

- TrustPay.ID
- BayarTengah
- PastiAman
- IndoPayTrust