

FOREX SESSION TRADING DASHBOARD

Product Requirements Document (PRD)

Technical Roadmap 2025

MVP Development Cycle: 10 Weeks

Target Launch: March 16, 2025

Document Version: 1.0 (B&W Print Optimized)

EXECUTIVE SUMMARY

Goal

Deliver a modern, high-value trading intelligence tool focusing on session behavior, risk management, and actionable insights for forex traders.

Scope

- 10-week MVP development cycle
- 8 MUST-HAVE features
- 2 SHOULD-HAVE features (Phase 2)
- Free tier launch with premium paywall
- Target: \$4-10M valuation within 9-14 months

Key Positioning

AI-powered trading analysis with unique emphasis on trader psychology and session-aware risk management.

Success Metrics (KPIs)

- Daily Active Users (DAU)
- Alerts per user (weekly average)
- Feature adoption rate
- Free → Paid conversion (target 3-5%)
- Monthly churn (target <5%)

MUST-HAVE FEATURES (MVP Tier)

1. Position Size & Risk Calculator

Purpose

Provide highly accurate, intuitive risk calculation to reduce losses and improve trading discipline.

User Problems Solved

- Over-leveraging
- Emotional revenge trading
- Difficult and slow manual calculations

Key Features

- Inputs: Account balance, risk %, stop-loss distance, currency pair
- Outputs: Lot size, pip value, max loss
- Preset saving & 1-click apply
- Real-time updates
- Session-aware risk recommendations

Tech Stack

- React component: RiskCalculator.tsx
- Formula module: riskUtils.ts
- Storage: LocalStorage or PostgreSQL

2. Volatility Indicators by Session

Purpose

Show traders when volatility is high, low, or abnormal.

Key Features

- Historical avg pip movement
- Real-time volatility meter
- Color-coded ranges (text-based for B&W)
- Current vs historical comparison

Tech Stack

- PostgreSQL: session_volatility table
- Endpoint: /api/volatility/session
- Worker: Cron job updates every 15-30 min

MUST-HAVE FEATURES (continued)

3. Session Countdown & Browser Alerts

Purpose

Provide automation-driven reminders to prevent missed opportunities.

Key Features

- Alerts for session open/close
- Killzone notifications
- Customizable lead time
- Sound alerts (optional)
- Alert history log & snooze options

Tech Stack

- Web Notifications API
- Service Worker for background alerts
- AlertManager.tsx component
- Backend scheduling via cron or WebSockets

4. News Danger Zones Visualization

Purpose

Help traders avoid dangerous volatility windows around economic news.

Key Features

- Shaded chart zones (30-min before/after logic)
- Flashing warning inside danger window
- Impact-level sensitivity (LOW/MEDIUM/HIGH)
- Persistent next event banner

Tech Stack

- Endpoint: /api/calendar/danger-zones
- Data: ForexFactory economic calendar
- Frontend: Enhanced ForexChart.tsx

MUST-HAVE FEATURES (continued)

5. Currency Correlation Matrix

Purpose

Prevent traders from taking correlated positions without realizing hidden risk.

Key Features

- 8x8 correlation heatmap
- Rolling 20-50 day Pearson correlation
- Hover tooltips with exact values
- Risk warnings: "Your positions are 85% correlated"
- Historical correlation trend graph

Tech Stack

- Table: currency_correlations
- Backend worker: Correlation calculation
- Component: CorrelationMatrix.tsx
- Endpoint: /api/correlation/matrix

6. User Authentication System

Requirements

- Email/password or OAuth login
- JWT or session-based auth
- Premium feature protection

Tech Stack

- NextAuth.js or Clerk
- Database: users, user_sessions, user_preferences tables

MUST-HAVE FEATURES (final) & SHOULD-HAVE

7. Subscription & Payments (Stripe)

Requirements

- Stripe checkout & billing portal
- Webhooks for subscription lifecycle
- Paywall logic on premium features

Tech Stack

- Database: subscriptions, payment_history tables
- Stripe API integration

8. Favorite Pairs & Personalization

Requirements

- Star/favorite currency pairs
- Quick access in charts & calculators
- Persistent storage (DB or localStorage)

Tech Stack

- Component: FavoritePairs.tsx
- Table: user_favorite_pairs

SHOULD-HAVE FEATURES (Phase 2)

- **Best Pairs by Session Tracker:** Live ranking of active pairs by session
- **Currency Strength Meter:** Rank currencies 1-8 with visual heatmap

TECHNICAL ARCHITECTURE

Frontend Stack

- Framework: React + TypeScript
- State Management: Zustand or Redux Toolkit
- Charting: Recharts (volatility + session overlays)
- Component Structure: /components/advanced/ folder

Backend Stack

- Server: Express.js + Node.js
- API: RESTful + WebSocket
- Scheduling: Node Cron or BullMQ
- Workers: Price fetchers, correlation calculators, volatility aggregates

Database (PostgreSQL)

Core Tables

- users, user_sessions, user_preferences
- risk_presets, user_favorite_pairs
- user_alerts, economic_events, danger_zones
- session_volatility, currency_correlations
- subscriptions, payment_history

Infrastructure

- Frontend: Vercel or GCP Cloud Run
- Backend: GCP Cloud Run or AWS Lambda
- Database: Cloud SQL (PostgreSQL)
- Caching: Redis (real-time data, 15-min TTL)

10-WEEK DEVELOPMENT TIMELINE

Sprint	Weeks	Key Features
Sprint 1	1-2	Risk Calculator, Countdown Widget, Favorites, Theme Toggle
Sprint 2	3-4	Volatility Indicators, News Danger Zones, Price Pipeline
Sprint 3	5-6	Session Alerts, User Auth, Web Notifications
Sprint 4	7-8	Correlation Matrix, Best Pairs Tracker, Risk Warnings
Sprint 5	9-10	Stripe Integration, Premium Paywall, Production Deploy

Key Milestones

- **Week 2:** Risk Calculator MVP Live (Internal Testing)
- **Week 4:** Volatility & News Danger Zones Ready
- **Week 6:** Full Alert System + Auth Enabled
- **Week 8:** Advanced Features Complete
- **Week 10:** Production Launch (Free & Premium)

FEATURE PRIORITIZATION (RICE Score)

Feature	Reach	Impact	Confidence	Effort	RICE
Position Size Calculator	8	9	90%	3	216
News Danger Zones	7	8	75%	4	105
Volatility Indicators	7	9	80%	5	100.8
Session Alerts	9	8	70%	6	84
Correlation Matrix	6	8	70%	6	56

RICE = (Reach × Impact × Confidence) / Effort. Highest RICE score = highest priority implementation.

MoSCoW CLASSIFICATION & ACCEPTANCE CRITERIA

MoSCoW Summary

- **MUST:** Risk Calculator, Volatility, Alerts, News Zones, Correlation, Auth, Payments, Favorites
- **SHOULD:** Best Pairs Tracker, Strength Meter
- **COULD:** Trade Journal, AI Briefing, Spread Comparison, Backtesting
- **WON'T:** Broker integration, Native apps (initially)

Acceptance Criteria Examples

Position Size Calculator

- User inputs account, risk %, stop-loss → lot size updates instantly
- Pip value auto-calculates by pair
- Presets save and persist across sessions
- Validation prevents negative/invalid values

Volatility Indicators

- Real-time update every 15-30 min
- Color intensity (grayscale) reflects volatility level
- Historical vs current comparison displayed

Session Alerts

- Fire exactly at configured offset ($\pm 5/10/15$ min)
- Browser notifications persist when tab minimized
- Snooze and history log available

RISKS & MITIGATIONS

Risk	Mitigation
API rate limits	Caching + backup APIs
Alert permission denial	Onboarding prompts + email fallback
Real-time load	Redis caching + WebSocket optimization
Data staleness	Cron jobs every 15-30 min
User adoption	Feature education in UI + onboarding

Conclusion

This PRD delivers a high-impact, revenue-ready trading platform with strong focus on top trader pain points: risk discipline, timing awareness, volatility intelligence, and position correlation.

Key strengths: Fast time-to-value, early monetization via premium tiers, proven trader psychology positioning, scalable architecture.

Target outcome: 3-5% free-to-paid conversion, <5% monthly churn, \$4-10M valuation within 9-14 months.