Business Requirement Document (BRD)

Project Name: Client Management & Billing System

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# 1. Project Overview

Infiniti Software Solutions, a leader in airline and travel technology, is building a Payment Tool – Client Management & Billing System to streamline client onboarding, billing, invoicing, and agreement management. The system will include AI-powered insights for revenue forecasting, client health, and profitability analysis.  
  
The solution will serve airline and travel industry clients with a scalable, user-friendly, enterprise-grade dashboard styled with modern corporate aesthetics.

# 2. Objectives

- Centralize client management, agreements, and billing.  
- Provide real-time financial insights for revenue, outstanding invoices, and renewals.  
- Automate alerts/reminders for overdue payments and expiring agreements.  
- Empower finance and customer success teams with customizable reports.  
- Leverage AI/ML insights for revenue prediction, risk scoring, and client health monitoring.  
- Deliver a secure, role-based system with scalable architecture for global airline clients.

# 3. Scope

In-Scope:  
✔️ Client management module (profiles, contacts, regions, status).  
✔️ Billing & service management (multi-currency support, exchange rate sync).  
✔️ Agreement lifecycle management (contract data, alerts, renewals).  
✔️ Reports (monthly outstanding, revenue, client filters, export options).  
✔️ Interactive dashboard with airline-themed visuals.  
✔️ AI insights (forecasting, risk scoring, profitability).  
✔️ Notifications & reminders (renewals, overdue payments).  
✔️ User roles & permissions.  
✔️ Deployment on React + Node.js/Express + PostgreSQL stack.  
  
Out-of-Scope:  
❌ Integration with external airline GDS systems (future roadmap).  
❌ Payment gateway integration (Phase 2).  
❌ Mobile application (Phase 2).

# 4. Stakeholders

CEO / Leadership – Strategic oversight & vision alignment  
Product Manager – Requirement definition, prioritization  
Development Team – Build frontend, backend, database  
AI/ML Engineers – Develop forecasting & risk scoring models  
Finance Team – Validate reports, billing accuracy  
CSM (Customer Success Managers) – Manage assigned client portfolios  
Admin – Configure roles, global system settings  
Clients – End beneficiaries (airlines, agencies, OTA, GDS partners)

# 5. Functional Requirements

5.1 Client Management  
- Maintain detailed client profiles (name, contacts, email, phone, address, GST/Tax ID).  
- Pre-filled Industry/Sector dropdown (Airlines, Travel Agency, GDS, OTA, Aviation Services).  
- Manage status (Active/Inactive).  
- Global region/location support.  
  
5.2 Service & Billing  
- Service type (Implementation, CR, Subscription, Hosting, Others).  
- Multi-currency billing (INR, USD, EUR with exchange sync).  
- Start & Go-Live dates.  
- Document uploads (agreements, invoices, POs).  
- Assign Responsible CSM from dropdown.  
  
5.3 Agreement Management  
- Contract start/end dates.  
- Payment terms (Net 30, Net 45, airline-specific).  
- Multi-year service fees (Y1, Y2, Y3 editable).  
- Alerts for contract expiry (2 months, 1 month, 2 weeks before).  
- Notifications to CSM & Finance via email and dashboard.  
  
5.4 Reports  
- Outstanding Report: Client, Invoice No, Due Date, Amount, Overdue Days, Status.  
- Revenue Report: Client, Revenue Collected, Pending, Service Type, Location.  
- Report filters: by client (multi-select), date range.  
- Export options: Excel, PDF, CSV.  
  
5.5 Dashboard  
- Modern, airline-themed with interactive widgets: Outstanding invoices, Revenue summary, Upcoming renewals, CSM-wise distribution, Airline KPI tiles.  
  
5.6 User Roles & Permissions  
- Admin: Full access.  
- CSM: Assigned clients only (profiles, agreements).  
- Finance: Financial data, invoices, reports.  
- Viewer: Read-only.  
  
5.7 Notifications & Alerts  
- Renewal reminders (2 months, 1 month, 2 weeks).  
- Overdue invoice alerts (15, 30, 45 days).  
- In-tool urgent case banners.  
  
5.8 AI Insights  
- Revenue Forecasting, Risk Scoring, Client Health, Profitability Insights, Smart Alerts, Anomaly Detection.  
- Visuals: Forecast curves, heatmaps, CSM performance leaderboard.

# 6. Non-Functional Requirements

- Performance: Handle 10,000+ client records with <2s dashboard load.  
- Security: Role-based access, JWT/OAuth2 authentication.  
- Scalability: Cloud-ready, multi-region deployment.  
- Reliability: 99.9% uptime SLA.  
- Usability: Airline-inspired UI, Tailwind + shadcn/ui styling.  
- Compliance: GST/Tax-ready, GDPR-compliant.

# 7. Technical Notes

Frontend: React, Tailwind, shadcn/ui, Recharts  
Backend: Node.js / Express  
Database: PostgreSQL  
AI Models: Prophet / ARIMA (forecasting), Classification ML (risk scoring)  
Exports: Excel, PDF, CSV  
Deployment: Replit full-stack build, production-ready

# 8. Deliverables

1. Client Management Module  
2. Service & Billing Module  
3. Agreement Management System  
4. Reports (Outstanding & Revenue)  
5. Interactive Dashboard  
6. User Roles & Permissions  
7. Notifications & Alerts  
8. AI Insights Module  
9. Deployment Build

# 9. Success Metrics

- Reduction of billing cycle time by 40%.  
- At least 95% renewal alerts sent before expiry.  
- AI forecast accuracy ≥ 85%.  
- Dashboard adoption rate ≥ 90% among CSM & Finance users.  
- Export/report generation under 5 seconds.

# 10. Timeline (High-Level Estimate)

Requirement Finalization – 2 weeks – BRD, Wireframes  
Development Sprint 1 – 4 weeks – Client + Billing modules  
Development Sprint 2 – 4 weeks – Agreement + Reports  
Development Sprint 3 – 4 weeks – Dashboard + Roles/Permissions  
AI Integration – 6 weeks – Forecasting, Risk scoring, Insights  
UAT & QA – 3 weeks – Testing, Fixes  
Deployment – 1 week – Live on Replit

# 11. Risks & Dependencies

- Currency exchange sync APIs may impact performance.  
- AI models depend on sufficient client payment history.  
- Global compliance variations (tax laws, GDPR).  
- Stakeholder availability for UAT.