

# Convention Center Event Management System – Finalized Requirements Document

## 1. Purpose

This document defines a **lean, clean, cost-effective, and future-ready Convention Center Event Management System** for **Web and Mobile App**. It enables a **single owner** to manage **multiple convention centers**, track income and expenses, and generate essential financial reports efficiently. The owner has full control across all centers.

---

## 2. Scope

- Web application (internal use only)
- Mobile application (Android & iOS, internal use only)
- Centralized backend and database
- Multiple convention centers under a single owner
- Optional future public module: read-only calendar per center

Users can **enter and view data from both web and app**, scoped to their assigned center(s).

---

## 3. User Roles

**Admin (Owner / Towner):** Manage users, events, income, expenses across centers; access dashboards per center or consolidated.

**Staff (User):** Enter data and view events for assigned center; no access to other centers or consolidated financial reports.

---

## 4. Modules & Functional Requirements

The system is designed as a **white-label product**, allowing the same platform to be sold to different convention centers with their own branding (logo, name, colors) without code changes.

### 4.1 User & Role Management

- Admin-approved user registration and profile management.
- Role assignment per center (Admin, Staff).
- Secure login/logout and password management.
- Role-based access control for events, income, expenses, and reports.

## **4.2 Event Management**

- Create, edit, and track events: Date, Time, Type, Client Name, Address, Contact, Advance Amount, Total Booked Amount, linked center.
- Event lifecycle: Blocked → Booked → Completed.
- Event status tracking and reporting per center.

## **4.3 Income & Expense Management**

- Record event-related and general expenses, categorized (Food, Decoration, Electricity, Cleaning, Staff, Others).
- Track income received, advance amounts, balance calculations per event and center.
- Expense analytics to identify high-cost categories and event-wise expense comparison.

## **4.4 Client Management & Analytics**

- Automatic client record creation from event entries.
- Client search by name or contact.
- Client history: total events, first/last event date, total revenue, outstanding balances.
- Reports: repeat vs new clients, top revenue-generating clients.

## **4.5 Reporting & Analytics**

- Event-wise income vs expense and profit/loss per center.
- Monthly and annual summaries.
- Charts and graphs for quick insights.
- Export options: PDF and Excel.

## **4.6 Calendar Module**

- Internal monthly/yearly calendar per center.
- Event filtering by center, date, or type.
- Future public read-only calendar with date, type, and status only.

## **4.7 Notifications & Alerts**

- In-app notifications: new events, completed events, added expenses, pending balances.
- Push notifications for mobile app: event reminders, same-day alerts.
- Email notifications: confirmations and summaries.
- Dashboard alerts: over-budget events, high expenses, pending payments.

---

## **5. Dashboards**

**Admin:** Total Events, Income, Expenses, Net Balance, Pending Payments per center or consolidated.

**Staff:** Assigned Events, Event Status, Recent Entries per center.

---

## 6. Non-Functional Requirements

- Secure internal access only
  - Fast API responses (< 2s)
  - Mobile-friendly, simple forms
  - Optimized for staff usage
  - Data scoped per center
- 

## 7. Technology Stack (Lean & Future-Ready)

**Frontend:** React.js (Web), React Native (Mobile), Material UI / Ant Design, Victory/Recharts, Redux Toolkit/Zustand, React Hook Form + Yup.

**Backend:** Laravel PHP 10+, REST API, Sanctum authentication, role-based access, services for events/income/expenses/reports with center scoping, queues and scheduler for automation.

**Database:** MySQL 8+, tables: Centers, Events, Users, Roles, Incomes, Expenses, Clients; `center_id` foreign key; soft deletes and timestamps; single currency.

**White-Label / Branding Support (Built-in):** - Center-level configuration for: - Logo - Center name - Primary color / theme - Branding loaded dynamically based on logged-in center - Same application binary used for all customers - No code change required for branding updates

**Hosting & Infrastructure:** - Cloud-based or VPS hosting (AWS EC2 / DigitalOcean / similar) for internal apps. - Managed MySQL instance with automated daily backups. - Scalable for future multi-center growth. - Optional object storage for documents/images. - SSL/TLS, firewall rules, restricted admin access, basic CI/CD pipeline.

**Notifications & Communication:** Internal email, in-app, push, and dashboard alerts per center; future public calendar read-only; voice calls, IVR, and social media notifications excluded.

---

## 8. Assumptions

- Single owner managing multiple centers
  - Internal users only
  - Single currency system
  - Internet connectivity available
  - Hosting will be cloud-based or VPS with security and backup measures in place
- 

## 9. Future Enhancements (Out of Scope)

- GST / Tax calculations

- Vendor management
- Accounting system integration
- Public booking requests and lead management