

# Requirements Document: Instant Marquees Melbourne Internal Operations Software (IMMIOS)

**Project Name:** Instant Marquees Melbourne Internal Operations Software (IMMIOS)

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## 1. Introduction

This document details the functional and non-functional requirements for the Instant Marquees Melbourne Internal Operations Software (IMMIOS). It serves as a comprehensive guide for development, ensuring all critical features and system behaviors are understood and implemented. The requirements are structured to be clear and actionable, particularly for code generation using Cursor AI.

## 2. User Roles

The system will primarily support two user roles:

- **Admin:** Full access to all system functionalities, including user management, settings, and all operational modules.
- **Staff:** Access to operational modules (Job Management, Stock Management, Staff Management, Vehicle Management) based on their specific roles (e.g., Rostering Manager, Load List Manager). Permissions within these modules will be managed by the Admin.

## 3. Functional Requirements

### 3.1. User & Authentication Management (Admin & Staff)

- **FR-AUTH-001: User Login:** The system SHALL provide a secure login page for all users (Admin and Staff).
  - **FR-AUTH-001.1:** Users SHALL be able to enter a username/email and password to log in.
  - **FR-AUTH-001.2:** The system SHALL authenticate users against stored credentials.
  - **FR-AUTH-001.3:** Upon successful login, users SHALL be redirected to the main dashboard/calendar view.
  - **FR-AUTH-001.4:** Upon failed login, the system SHALL display an appropriate error message.
- **FR-AUTH-002: User Logout:** The system SHALL provide a logout mechanism accessible from all main pages.
- **FR-AUTH-003: Admin Login:** The system SHALL provide a dedicated login path

or role-based access control for users with the 'Admin' role.

- **FR-AUTH-004: Staff Account Creation (Admin):** The Admin SHALL be able to create new staff user accounts.
  - **FR-AUTH-004.1:** Admin SHALL provide a unique username/email and initial password for new staff accounts.
  - **FR-AUTH-004.2:** Admin SHALL be able to link the user account to an existing or new 'Staff' profile (staff name).
- **FR-AUTH-005: Staff Account Editing (Admin):** The Admin SHALL be able to edit existing staff user accounts (e.g., reset password, change linked staff name).
- **FR-AUTH-006: Staff Account Deactivation (Admin):** The Admin SHALL be able to deactivate staff user accounts, preventing login.
- **FR-AUTH-007: Role-Based Access (Basic):** The system SHALL enforce basic role-based access, where only 'Admin' users can access the 'Settings' and 'User Management' sections.

### 3.2. Admin Settings & Configuration

- **FR-ADMIN-001: Site Color Scheme Modification:** The Admin SHALL be able to modify the site's primary and accent color choices.
  - **FR-ADMIN-001.1:** Changes made by the Admin SHALL be immediately reflected across the entire application for all users.
  - **FR-ADMIN-001.2:** The system SHALL store these color settings persistently.
- **FR-ADMIN-002: Default Light/Dark Mode:** The Admin SHALL be able to set the default theme (light or dark mode) for the application.
- **FR-ADMIN-003: Staff Profile Management:** The Admin SHALL be able to create, edit, and delete staff profiles (names, contact info, notes) which are separate from user accounts but linked to them.

### 3.3. Job Management & Scheduling

- **FR-JOB-001: Calendar View:** The system SHALL display a calendar view as the primary interface for job scheduling.
  - **FR-JOB-001.1:** The calendar SHALL support Day, Week, and Month views.
  - **FR-JOB-001.2:** All jobs (both 'Quote' and 'Job' stages) SHALL be displayed on the calendar, clearly distinguishable by color or icon.
- **FR-JOB-002: Create New Quote/Job:** Users SHALL be able to initiate a new quote/job directly from the calendar.
  - **FR-JOB-002.1:** Clicking on a date/time slot in the calendar SHALL open a form to create a new quote.
  - **FR-JOB-002.2:** The form SHALL capture client details (name, contact info), job dates (install, event, removal), location, and notes.

- **FR-JOB-002.3:** Users SHALL be able to select 'Products' for the quote/job.
- **FR-JOB-002.4:** Upon selection of products, the system SHALL check current stock availability (assembled products and components) and display a clear warning if the requested quantity exceeds available stock.
- **FR-JOB-003: Edit Existing Job:** Users SHALL be able to select an existing job from the calendar to view and edit its details.
- **FR-JOB-004: Job Status Management:** Users SHALL be able to change a job's status between 'Quote' and 'Job' (confirmed).
- **FR-JOB-005: Job Deletion:** Users SHALL be able to delete a job (with confirmation).

### 3.4. Stock Management

- **FR-STOCK-001: Product & Component Definition:** The system SHALL allow admins to define "Products" (e.g., "3x3m Instant Pop-up Marquee - White") and "Components" (e.g., "3x3m Instant Pop-up (40mm) Frame", "3x3m Instant Pop-up (40mm) Roof - White").
  - **FR-STOCK-001.1:** Components SHALL have attributes such as size, color, condition (e.g., "new", "festive"), and type (e.g., "40mm frame", "32mm frame").
- **FR-STOCK-002: Bill of Materials (BOM) Management:** The system SHALL allow admins to define the components required for each product (e.g., a "3x3m Instant Pop-up Marquee - White" requires 1x 40mm frame and 1x 3x3m White Roof).
  - **FR-STOCK-002.1:** The BOM SHALL support defining quantities of each component.
  - **FR-STOCK-002.2:** The BOM SHALL allow for defining alternative components (e.g., 32mm frame as a substitute for 40mm frame for a product).
- **FR-STOCK-003: Real-time Stock Level Tracking:** The system SHALL maintain real-time stock levels for both assembled "Products" and individual "Components."
  - **FR-STOCK-003.1:** Stock levels SHALL decrease when products are allocated to a confirmed job.
  - **FR-STOCK-003.2:** Stock levels SHALL increase when products are returned from a completed job.
- **FR-STOCK-004: Stock Assembly Workflow:**
  - **FR-STOCK-004.1:** If a job requires more assembled products than currently available, the system SHALL automatically check if sufficient components exist to assemble the deficit.
  - **FR-STOCK-004.2:** If components are available, the system SHALL generate

an "Assembly Alert" for the warehouse manager.

- **FR-STOCK-004.3:** The warehouse manager SHALL be able to confirm completion of an assembly via the system.
- **FR-STOCK-004.4:** Upon assembly confirmation, the system SHALL decrease the relevant component stock and increase the assembled product stock accordingly.
- **FR-STOCK-005: Manual Stock Adjustment:** Users with appropriate permissions (e.g., Admin, Warehouse Manager) SHALL be able to manually adjust stock counts for products and components (e.g., for new purchases, damages, audits).

### 3.5. Staff Management

- **FR-STAFF-001: Staff Profiles:** The system SHALL maintain profiles for each staff member, including name, contact information, and internal notes (e.g., on speed, experience).
- **FR-STAFF-002: Rostering View:** The system SHALL provide a "Rostering Mode" accessible from the main calendar view.
  - **FR-STAFF-002.1:** In "Rostering Mode," the calendar SHALL display staff availabilities as a list for each day.
  - **FR-STAFF-002.2:** Users SHALL be able to manually input and edit staff availability for each day.
  - **FR-STAFF-002.3:** The view SHALL clearly highlight jobs that currently do not have staff assigned.
  - **FR-STAFF-002.4:** Users SHALL be able to assign staff to jobs from this view.
  - **FR-STAFF-002.5:** Each job entry in this view SHALL have a toggle/checkmark to indicate that shifts have been "sent out" (e.g., via Deputy), allowing for internal tracking.

### 3.6. Vehicle Management

- **FR-VEHICLE-001: Vehicle Profiles:** The system SHALL provide a dedicated page to manage vehicle profiles.
  - **FR-VEHICLE-001.1:** Each vehicle profile SHALL include details such as display name, type (e.g., van, truck), capacity (e.g., cubic meters, weight), registration number, and servicing dates.
- **FR-VEHICLE-002: LoadList View:** The system SHALL provide a "LoadList Mode" accessible from the main calendar view.
  - **FR-VEHICLE-002.1:** In "LoadList Mode," jobs on the calendar SHALL be visually colored to indicate their loadlist status (e.g., incomplete, does not match ordered stock, ready for loading).
  - **FR-VEHICLE-002.2:** The system SHALL automatically calculate the required

components for a job's loadlist based on the products ordered and their BOM.

- **FR-VEHICLE-002.3:** Users SHALL be able to assign specific jobs/loads to specific vehicles from this view.
- **FR-VEHICLE-002.4:** The system SHALL generate clear, printable loading instructions for warehouse staff, detailing which components to load onto which vehicle for each job.

### 3.7. Financial Status View

- **FR-FIN-001: Financial Status View:** The system SHALL provide a "Financial Status Mode" accessible from the main calendar view.
  - **FR-FIN-001.1:** In "Financial Status Mode," each job entry SHALL display the status of key financial details:
    - Whether Operational details have been emailed to the client.
    - Whether the client has received an invoice.
    - Whether the client has paid.
  - **FR-FIN-001.2:** Users SHALL be able to manually update these financial status flags for each job.

### 3.8. Real-time Updates & Notifications

- **FR-RT-001: Live Data Synchronization:** All data changes (e.g., job updates, stock adjustments, staff assignments) made by any user SHALL be reflected in real-time across all other connected users' screens.
- **FR-RT-002: Contextual Alert Badges:**
  - **FR-RT-002.1:** The "Rostering Mode," "LoadList Mode," and "Financial Mode" buttons SHALL display an alert badge (number) indicating the count of jobs with relevant *unseen* changes since the current user last viewed that specific mode.
  - **FR-RT-002.2:** Changes to a job's **contact details** SHALL only increment the badge on the "Financial Mode" button.
  - **FR-RT-002.3:** Changes to a job's **stock items/products** SHALL increment badges on both "Rostering Mode" (as staff needs might change due to different products) and "LoadList Mode."
  - **FR-RT-002.4:** Changes to a job's **dates/times** SHALL increment badges on "Rostering Mode" and "LoadList Mode."
  - **FR-RT-002.5:** Changes to a job's **financial status** (invoice sent, paid) SHALL increment the badge on the "Financial Mode" button.
  - **FR-RT-002.6:** Viewing a mode (e.g., clicking "Rostering Mode") SHALL reset the badge count for that specific mode for the current user.
  - **FR-RT-002.7:** The system SHALL track which users have "seen" changes

relevant to each mode for each job.

## 4. Non-Functional Requirements

- **NFR-PERF-001: Performance:** The system SHALL load pages and display data within 2-3 seconds on a standard office internet connection. Real-time updates SHALL occur within 1 second.
- **NFR-USAB-001: Usability:** The user interface SHALL be intuitive and easy to navigate for users with limited technical proficiency.
  - **NFR-USAB-001.1:** Clear labels, consistent navigation, and minimal clicks for common tasks.
  - **NFR-USAB-001.2:** Error messages and warnings SHALL be clear and actionable.
- **NFR-SEC-001: Security:** The system SHALL implement secure authentication and authorization mechanisms.
  - **NFR-SEC-001.1:** User passwords SHALL be securely hashed and stored.
  - **NFR-SEC-001.2:** Data transmission between client and server SHALL be encrypted (HTTPS).
- **NFR-SCAL-001: Scalability:** The architecture SHALL be designed to accommodate future growth in jobs, stock items, and users without significant re-architecture.
- **NFR-RELI-001: Reliability:** The system SHALL minimize downtime and data loss.
  - **NFR-RELI-001.1:** Data persistence SHALL be robust (Firestore).
  - **NFR-RELI-001.2:** Error handling SHALL be implemented to gracefully manage unexpected issues.
- **NFR-COMPAT-001: Compatibility:** The web application SHALL be fully responsive and functional across modern web browsers (Chrome, Firefox, Edge) on desktop/laptop PCs.
- **NFR-MAINT-001: Maintainability:** The codebase SHALL be clean, well-structured, modular, and extensively commented to facilitate future development and maintenance by the client.
- **NFR-OFFLINE-001: Offline Capabilities (Basic):** The system SHALL provide basic offline access to previously loaded data (read-only) via browser caching. Changes made offline will not be synchronized in the MVP.
- **NFR-THEME-001: Theming:** The system SHALL support dynamic theming based on admin settings, allowing for easy modification of primary site colors.
- **NFR-THEME-002: Light/Dark Mode:** Users SHALL be able to toggle between light and dark mode themes.