

QUANZAB Technologies Inc.

Empowering the Future of Enterprise and Maritime Operations

1. About Us

QUANZAB Technologies Inc. is a technology-driven solutions provider specializing in enterprise software and maritime crew management systems. Founded with a vision to empower digital transformation, we offer intelligent, AI-powered platforms that bring automation, clarity, and control to complex business environments.

2. Our Vision

To be the global leader in enterprise and maritime management solutions by harnessing intelligent automation, intuitive design, and integrated workflows.

3. Our Products

A. QUANZAB ERP: The Intelligent Business Operating System

"More than ERP, a Strategic Operating System"

QUANZAB ERP is a modern, AI-powered enterprise platform that consolidates core business functions—including Finance, HR, Procurement, Project Management, and Reporting—into a unified, secure, and intelligent ecosystem.

Key Features

- AI-Powered Executive Dashboard with live KPIs and narrative summaries
- Intelligent Journal Entries using AI to suggest balanced transactions
- Role-Based Dashboards & Access Control tailored per department
- Dynamic Approval Workflows for Purchase Requisitions, Expenses, Leave, and more
- System-Wide Chat Assistant to query business data using natural language
- Custom Branding with white-label capabilities

Modules Overview

- Finance: Multi-currency, AI-assisted transactions, consolidation
- Budgeting: YTD vs Budget analysis, data import tools
- Procurement & Sales: Full procure-to-pay and order-to-cash flows
- HR & Projects: Performance reviews, benefits management, task tracking
- Reporting: Trial Balance, AI-driven Variance Analysis, printable/exportable reports

Technology Stack

- Next.js, React, Tailwind CSS
- Python (Backend), PostgreSQL
- Hosted with security best practices and responsive UI

B. QUANZAB Crew Management System (CMS): Optimizing Maritime Human Capital

"From the Bridge to the Shore—Complete Crew Lifecycle Management"

The CMS platform is built specifically for manning agencies to manage crew personnel, documentation, compliance, financials, and vessel assignments—all from a single dashboard.

Key Features

- Complete Personnel Recordkeeping including bio, experience, certifications, next of kin
- Vessel Assignment & Rotation Tracking with automated sign-off planning
- Document Management with expiry alerts and uploading features
- Appraisals & Performance Logs built into crew profiles
- Financials: Allotment, obligations, and client-specific financial statements
- Report Generation across all modules

Technology Stack

- Django (Python), PostgreSQL, HTML5/CSS3, JavaScript
- Deployable via LAN (Waitress) or Cloud (Render.com)
- WhiteNoise, PyInstaller (for legacy standalone packaging)
- Modular design, Git-controlled development

4. Why QUANZAB?

Feature	QUANZAB Advantage
AI Integration	Real-time insights and predictive automation
Role-Based UI	Adaptive interfaces for each user type
End-to-End Workflow Automation	From approval chains to financial closure
Compliance & Security	Audit logs, RBAC, and secure authentication
Deployment Flexibility	LAN, Cloud, or Hybrid environments
Customization & Branding	Fully white-labeled and modular


5. Client Use Cases


- Finance Teams: Automate journal entries and financial close with AI.
- HR Managers: Review employee performance and manage benefits centrally.
- Procurement Leads: Process PRs and POs seamlessly with workflows.
- Manning Agencies: Track crew movements, documents, and compliance effortlessly.
- Executives: Get a unified view of operations through role-based dashboards.

6. Contact Information

QUANZAB Technologies Inc.

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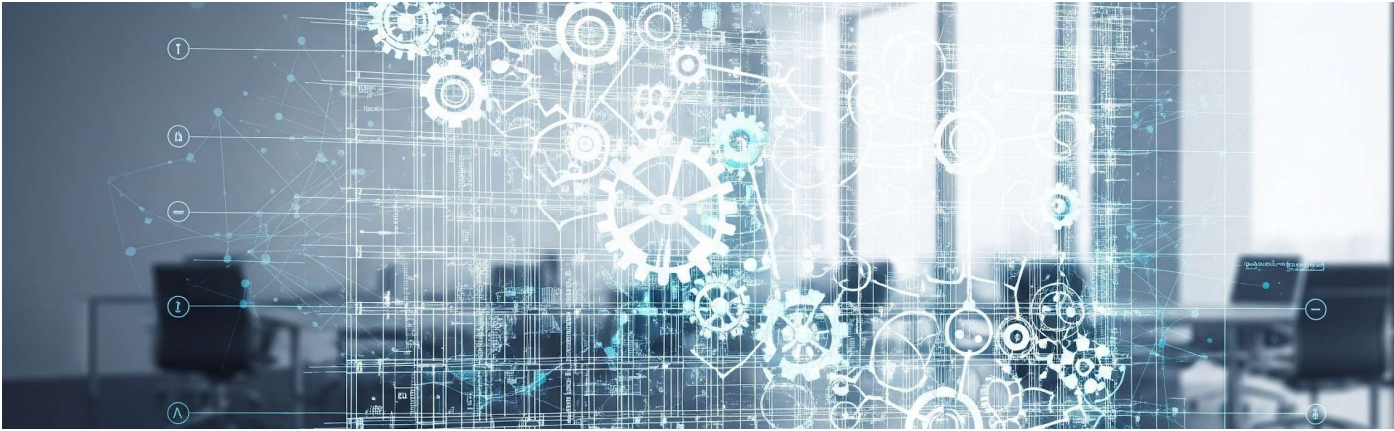
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7. Document Access

Visit our website to download:

- Product Brochures (PDF)
- Pitch Deck (PPT)
- Demo Video & Screenshots
- Case Studies (Upcoming)



Project Blueprint: QUANZAB - The Intelligent ERP

1. Executive Summary: The Future of Business Management

QUANZAB is not just an ERP; it's a strategic business operating system designed for the modern enterprise. It unifies every facet of your organization—from finance and human resources to procurement and project management—into a single, intelligent, and intuitive platform.

Built on a cutting-edge technology stack, QUANZAB delivers a seamless user experience, powerful AI-driven insights, and unparalleled flexibility. This fully-functional platform features live data persistence, a robust security model with granular access control, and dynamic workflows that adapt to your business processes. Whether you're looking to streamline operations, enhance decision-making, or empower your workforce, QUANZAB provides the tools to achieve operational excellence.

2. Core Platform Features: The Foundation of Excellence

These foundational features are woven into the fabric of the entire application, ensuring a consistent, secure, and highly customizable experience for every user.

- **Secure Authentication & Session Management:** QUANZAB is secured by a robust login system. The first user to sign up automatically becomes a **Super Admin**, with full control to create additional users and configure the system. All pages and data are protected, with sessions managed to ensure airtight security.

- **Unified & Role-Aware Dashboard:** The central dashboard is the command center of your business. It presents key performance indicators (KPIs) from all relevant modules in a clear, concise format. The dashboard is dynamically **role-aware**: a finance manager sees critical financial metrics, an HR director views workforce analytics, and a C-level executive gets a comprehensive 360-degree overview.
 - **AI-Powered Insights & Assistance:**
 - **Executive Summary:** The main dashboard features an AI-generated executive summary, instantly analyzing all displayed KPIs to provide actionable insights and highlight key trends, turning data into strategy.
 - **System-Wide Chat Assistant:** An intelligent chat assistant is available across the application, allowing users to query business data using natural language. Ask "What were our sales last quarter?" or "Summarize our HR status," and get immediate, data-backed answers.
 - **Dynamic Role-Based Access Control (RBAC):** Go beyond static permissions. QUANZAB allows administrators to visually define user roles (e.g., "Accountant," "Procurement Lead"), assign granular access rights to specific modules and features, and see the changes reflected instantly. The entire user interface, from navigation menus to available actions, adapts based on the logged-in user's role.
 - **Interactive Approval Workflows:** Digitize and automate your approval processes. QUANZAB features a visual workflow engine to design and manage multi-step approval chains for documents like purchase requisitions, leave applications, and expense reports, ensuring compliance and accelerating decision-making.
 - **Guided Data Migration:** Seamlessly transition to QUANZAB with our user-friendly data migration tools. Import master data such as Chart of Accounts, Budgets, Customers, and Vendors from standard spreadsheet formats (CSV, XLSX). The interface provides clear guides on file formats and includes strategies for mid-year go-lives, ensuring data integrity from day one.
 - **System-Wide Audit Trail:** Maintain complete oversight and ensure compliance with a comprehensive audit trail that logs all critical user activities. A dedicated, filterable view is available for high-sensitivity areas like Procurement and Access Control, providing an immutable record of actions.
 - **White-Label Branding:** Make QUANZAB your own. A dedicated administration page allows clients to customize the application's primary, accent, and background colors to perfectly match their corporate branding, with changes saved instantly in their browser for a personalized experience.
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3. Application Modules: A Comprehensive Toolkit

QUANZAB's modular design ensures that every business function is covered with deep, purpose-built functionality.

3.1. Finance Module

The financial core of your business, supercharged with AI.

- **Chart of Accounts:** Manage a hierarchical list of all financial accounts (Assets, Liabilities, Equity, Revenue, Expense).
- **Journal Vouchers with AI:** Create, manage, and post journal entries. The system features **AI-powered suggestions** to automatically populate balanced debit/credit entries based on a simple transaction description, dramatically reducing manual effort and errors.
- **Financial Instruments with AI:** Manage Loans, Investments, and Overdrafts. Includes **AI-Assisted Interest Calculation** to automatically generate the correct journal entries for interest accrual, ensuring accuracy and saving time.
- **Foreign Exchange (FX) Revaluation:** Automatically calculate and post unrealized gains or losses on foreign currency balances. An **AI-powered JV creation feature** simplifies this complex month-end task into a single click.
- **And More:** The module also includes robust functionality for Financial Consolidation, Accruals Management, and multi-currency transactions.

3.2. Budgeting Module

Plan and control your financial future with precision.

- **Budget Overview:** A dedicated dashboard for monitoring Year-to-Date (YTD) actuals against the budget, providing an instant snapshot of performance.
- **Budget Entry & Viewing:** A detailed, spreadsheet-like interface to view or enter monthly budget figures for every P&L account.
- **Budget Upload:** A powerful tool to import annual budgets and prior year actuals directly from spreadsheets, streamlining the entire planning cycle.

3.3. Procurement & Sales Modules

Manage your entire supply chain and sales funnel.

- **Procure-to-Pay:** Manage a comprehensive vendor database, create Purchase Requisitions that flow through custom approval workflows, and seamlessly convert them into Purchase Orders.
- **Order-to-Cash:** Maintain a full customer database (CRM), and create essential sales documents including Invoices, Debit Notes, and Credit Notes.

3.4. Human Resources & Project Management

Your two most important assets: people and projects.

- **Employee Lifecycle:** Manage a complete Employee Directory, conduct detailed Performance Reviews, and manage annual Salary Revisions with built-in proposal and approval flows.
- **Benefits & Entitlements:** Define company benefits (e.g., insurance, allowances) and easily assign them to different employee grades.
- **Project Tracking:** Define projects with dedicated managers and budgets. Create detailed task lists and assign them to team members to track progress against deadlines.

3.5. Reporting Module

Turn data into intelligence.

- **Core Financial Reports:** Instantly generate a Trial Balance, a comparative Income Statement (P&L), and a Balance Sheet.
 - **AI-Powered Variance Analysis:** The P&L report is enhanced with **AI-generated narrative summaries**, providing plain-English explanations of performance variances against budget and the prior year.
 - **Export & Print:** All reports and data tables can be instantly exported to XLSX for further analysis or printed as a professional PDF.
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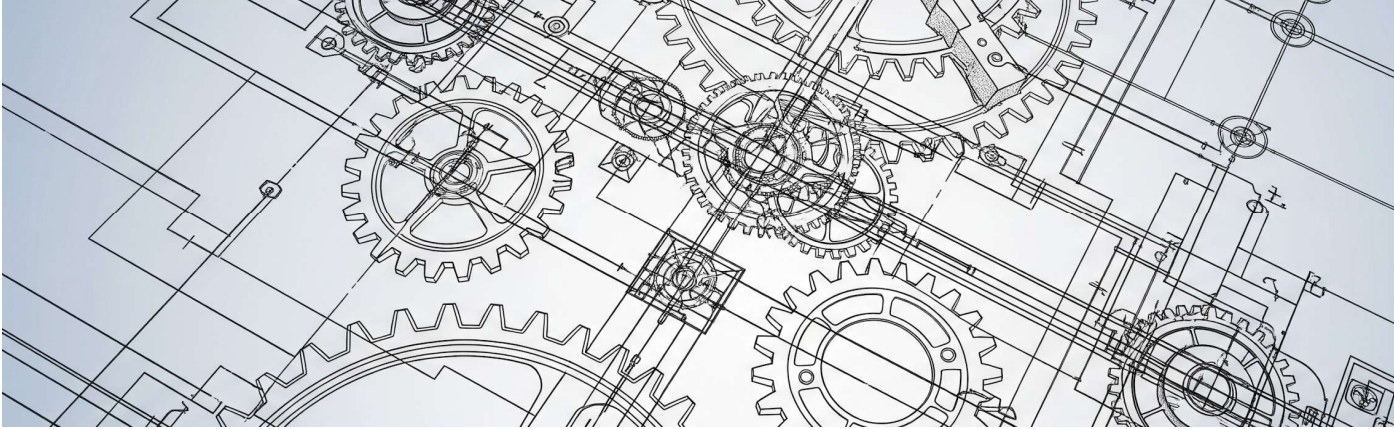
4. Key Differentiators: The QUANZAB Advantage

- **Intelligent Automation:** QUANZAB isn't just a system of record; it's an active partner. From suggesting journal entries to summarizing financial performance, AI is deeply integrated to accelerate tasks, provide insights, and reduce manual effort.
 - **Uncompromising Security:** With granular, role-based access control at its core, a detailed audit trail, and a robust authentication layer, QUANZAB is built to protect your most sensitive business data.
 - **End-to-End Integrated Workflows:** Witness complete business scenarios in action. Create a purchase requisition, watch it route through a multi-step approval workflow, and convert it to a purchase order—all within a single, seamless system.
 - **Superior User Experience:** Built with a modern tech stack (Next.js, React, Tailwind CSS), QUANZAB delivers a clean, fast, and responsive user interface that is intuitive and professional on any device, from desktop to tablet.
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5. Demo Scenarios: See QUANZAB in Action

Here are a few scenarios to showcase QUANZAB's power during a live demonstration:

- **The Finance Manager's Day:**
 - a. Start at the **Dashboard** to review AI-generated KPI summaries.
 - b. Navigate to **Journal Vouchers** and enter a simple narration like "Paid \$500 for office supplies". Use the **AI Suggestion** feature to auto-populate the full, balanced journal entry.
 - c. Open the **Income Statement Report**, select a period, and view the comparative data. Showcase the **AI Variance Analysis** that explains performance against budget.
- **Streamlining Procurement:**
 - a. As a department head, create a **Purchase Requisition** for new laptops.
 - b. Log in as the **Finance Manager** to see the approval notification on the dashboard. Review and approve the requisition.
 - c. Return to the procurement user, see the "Approved" status, and convert the requisition into a **Purchase Order** with a single click, ready to be sent to the vendor.
- **Setting Up a New Department:**
 - a. Navigate to **Access Control** and create a new **Role** for a "Marketing Specialist". Assign specific permissions for the



Comprehensive Crew Management System Project Blueprint

This document outlines the detailed architecture, database schema, and comprehensive functionalities of the Crew Management System (CMS), built with Django, as implemented in your manning agency.

1. Project Overview

- **Objective:** To provide a robust, web-based system for efficiently managing all aspects of crew members for a manning agency. This includes comprehensive personnel records, certification tracking, vessel assignments, detailed experience history, next-of-kin information, communication logs, professional references, performance appraisals, and financial management (allotments and obligations). The system aims to streamline operations, enhance data integrity, and provide critical alerts and reporting capabilities.
- **Core Users:**
 - **Manning Agency Staff:**
 - **Admins (Superusers):** Full access to all features, including user management, audit logs, alerts, and all CRUD operations.
 - **Managers/Staff (is_staff):** Access to core management modules (Crew, Principals, Vessels, Documents, Experience, Next of Kin, Communication, References, Appraisals, Financials, Reports), with permissions typically restricted to view/edit/add, and delete for specific modules.
 - **Crew Members (Standard Users):** (Future/Planned) Access to their own profile details, documents, experience, and financial statements.

- **Deployment:**
 - **Primary Deployment:** Dedicated PC within the company's Local Area Network (LAN), accessible by team members.
 - **Online Deployment (Render.com):** For potential external access or cloud hosting.
 - **Standalone PC Use (PyInstaller bundle):** (Currently being phased out in favor of direct Waitress deployment on LAN PC, but architecture supports it).

2. Technology Stack

- **Backend Framework:** Django (Python 5.2.3)
- **Python Environment Management (Local/Deployed PC):** Miniconda (used for creating and managing isolated Python environments per project).
- **Web Server (Local/Standalone PC):** Waitress (Pure-Python WSGI server for production-ready serving on Windows).
- **Web Server (Online/Render):** Gunicorn (typical for Render, handled by platform).
- **Database:**
 - **Development/Standalone PC:** SQLite3 (file-based database: db.sqlite3).
 - **Production (Render.com):** PostgreSQL (configured via dj_database_url).
- **Frontend:** HTML5, CSS3 (Custom Dark/Light Theme with Flexbox/Grid for responsive design), JavaScript (native browser features for interactivity, custom modals).
- **Static File Serving:** WhiteNoise (for efficient serving of static files in production/bundled environments).
- **Deployment Platform:** Render.com (for cloud deployment).
- **Executable Bundling:** PyInstaller (for standalone PC application - *currently being superseded by direct Waitress LAN deployment*).
- **Version Control:** Git / GitHub.
- **Utility Libraries:** Pillow (for image processing), dj_database_url (for database URL parsing), csv module (for import/export).

4. Key Database Models (Detailed)

- **CrewMember:** Core personnel record.
 - **Fields:**
 - user (OneToOne to Django User)
 - profile_picture (ImageField),
 - seafarer_code (CharField, **unique**),
 - first_name, last_name, father_name,
 - date_of_birth,
 - place_of_birth,
 - marital_status (choices),
 - nationality,

- city_of_residence,
- address_temporary,
- address_permanent,
- phone_no,
- mobile_no,
- email_id (unique),
- skype_id,
- domestic_airport,
- nearest_international_airport,
- current_rank,
- joined_in_company (Date),
- joined_in_rank,
- principal (ForeignKey to Principal),
- crew_status (choices),
- performance_rating,
- relieving_plan_date (Projected Sign-off),
- last_sign_off_date, current_vessel (ForeignKey to Vessel),
- ssb_no,
- client_name_for_appraisal,
- account_title,