# Diligince.ai – Functional Design & Workflow Guide (Enhanced)

## 1. Professional Availability Calendar

This feature is designed for professionals (e.g., experts, consultants, engineers) to manage and share their work schedule.  
  
Each professional can:  
• Add job title (e.g., PLC Maintenance, Site Visit)  
• Set start and end time/date  
• Tag the location (auto-suggestion via maps or manual entry)  
• Set hourly or daily rate (for AI cost estimation)  
• Mark recurrence (e.g., every Tuesday or 1st of each month)  
• Add notes (special instructions or leave details)  
  
How it helps:  
When an industry user posts a requirement like "PLC Troubleshooting in Chennai", the AI matches based on:  
• Location radius (e.g., within 30 km)  
• Availability time window overlap  
• Skill match (from profile tags)  
• Pricing compatibility (optional filter)

## 2. RFQ, Bids & Purchase Orders (PO)

• RFQ (Request for Quotation): Created by the industry user to invite quotes for services, products or experts.  
• Bid: Vendors and professionals respond with price, timeline, terms.  
• PO (Purchase Order): Once a quote is accepted, the industry issues a PO to proceed.  
  
Standard RFQ Example (Industry User):  
• Title: “Annual Maintenance of Boilers”  
• Description: Scope of work  
• Due Date for Quotes: [Date]  
• Execution Timeline: [Start-End]  
• Contact: [Team Member]  
• Approval Status: Draft / Pending / Approved  
  
Standard PO Example:  
• PO Number: Auto-generated (e.g., PO-2025-0043)  
• Issued To: Vendor/Professional name  
• Items or Service Description: Line items  
• Rates and Totals: Tax details included  
• Payment Terms: Advance/Installments/After Completion

## 3. Team Hierarchy – Industry Users

Industry users can add multiple team members like engineers, managers, finance officers.  
  
Hierarchy Levels:  
• RFQ Creator – Engineer/Maintenance  
• Approver 1 – Procurement Head (approves quote)  
• Approver 2 – Finance (approves PO & Payment)  
• Admin – Adds/removes users  
  
Example – Large Industry Workflow:  
1. Ravi (Engineer) → Creates RFQ  
2. Priya (Procurement) → Reviews quotes, selects vendor  
3. Kumar (Finance) → Approves PO & releases payment  
  
Example – MSME Workflow:  
• Suresh (Owner) creates RFQ, approves PO, and handles payment.  
  
System: Role-Based Access Control (RBAC)  
Permissions are defined by roles – only authorized users can approve/issue actions.

## 4. Team Hierarchy – Vendors

Vendors (Service, Product, Logistics) also have team hierarchies.  
  
4.1. Service Vendor Example (PowerServe EPC Pvt. Ltd.)  
• Neha (Sales) – Sends bids  
• Sanjay (Operations) – Accepts PO, deploys team  
• Meena (Finance) – Issues invoice, tracks payments  
• Rajesh (Admin) – Adds/removes team members  
  
4.2. Product Vendor Example (ValveTech Systems)  
• Rohan (Sales) – Receives RFQ, creates bid  
• Priya (Dispatch) – Confirms availability, updates shipping  
• Manoj (Finance) – Monitors POs and invoices  
  
4.3. Logistic Vendor Example (QuickCrane Logistics)  
• Nikita (Sales/Booking) – Handles RFQs & Quotes  
• Karthik (Field Ops) – Manages vehicle dispatch  
• Ramesh (Finance) – Sends invoices  
  
System: Dashboard shows only allowed actions per role.  
• Sales Team – See RFQs, submit bids  
• Ops Team – See assigned jobs  
• Finance – Track payments and generate invoices

## 5. AI Matching & Automation

AI evaluates every RFQ and matches the best-fit stakeholders.  
  
Matching Criteria:  
• Skills – Tags from user profiles (e.g., “PLC”, “Compressor”)  
• Location – Within specified radius of job site  
• Availability – Based on calendar of professionals  
• Cost – Rate compatibility (optional filter)  
• History – Prior ratings or completion speed (future roadmap)  
  
AI Output:  
• Ranked Suggestions: Top 3-5 matching vendors/professionals  
• Smart Reminders: Professionals not yet bidding but matching will be notified  
• Learning: Improves as platform grows (collaborative filtering)  
  
Use Case:  
Industry in Chennai posts RFQ for PLC troubleshooting →  
AI checks: professional skills + Chennai-based + available on required date → suggests 3 experts with availability calendar preview.

## 6. Enhancements & Implementation Suggestions

For Interns and Developers:  
  
• Use react-big-calendar for weekly/monthly views  
• Use mapbox/autocomplete for location tagging  
• Use Supabase roles for RBAC (role-based access)  
• Define role templates for Industry & Vendor setup  
• Create clear workflows for: RFQ → Bid → PO → Execution → Payment  
  
Other Suggestions:  
• Notification system per role (e.g., “New RFQ Received”, “Bid Accepted”)  
• Dynamic calendar visibility: show jobs/availability only to relevant users  
• Audit trails: log who approved/rejected what and when  
• Attachments in RFQ, Bid and PO (PDF uploads)