



Proposal: DPR IQ

Daily Progress Report Intelligence Platform

Client: CALIM Technologies PVT LTD.
Submitted to: Mr. Davis Varghese, Director

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1. Executive Summary

DPR IQ is a comprehensive construction project management platform designed to streamline daily progress reporting workflows. The system provides role-based access for different stakeholders including Project Managers, Planning Engineers, Safety/Quality personnel, and Risk Engineers. The platform integrates AI-powered report generation, voice-to-text capabilities, and comprehensive resource tracking to enhance project visibility and reporting efficiency.

2. Project Objectives

- 1. Streamline Reporting Processes** - Automate daily, weekly, and monthly progress report generation
- 2. Enable Multi-Role Collaboration** - Provide tailored interfaces for different project stakeholders
- 3. Enhance Data Collection** - Implement voice-to-text and photo capture for field reporting
- 4. Improve Project Visibility** - Real-time tracking of activities, resources, and project status
- 5. Leverage AI Intelligence** - Automated report summarization and intelligent content generation
- 6. Ensure Data Integrity** - Centralized document management and approval workflows

3. Scope of Work

3.1 User Management & Authentication

- Multi-step user registration with company verification
- Role-based access control system
- User profile management with authorization credentials
- Two-factor authentication support
- Screen-level permission management

3.2 Project Setup & Configuration

- Project information management (client, location, budget, timeline)
- Resource category definition and customization
- Workflow configuration for different project types
- Master data setup for construction activities

3.3 Daily Progress Reporting

- Dashboard for report type selection (Daily/Weekly/Monthly)
- Project overview with executive summary generation
- Work progress tracking with completion percentages
- Activity-wise progress monitoring with variance analysis
- Voice-to-text input capabilities for field reporting

3.4 Site Operations Management

- Safety observations and incident reporting
- Quality control documentation and issue tracking
- Weather conditions and environmental impact recording
- Challenge identification and solution tracking
- Site photo documentation with location tagging

3.5 Resource Management System

- Direct labor workforce tracking (skilled trades)
- Indirect labor monitoring (management, administration)
- Third-party contractor resource management
- Construction equipment utilization tracking
- Resource allocation and optimization insights

3.6 Production & Quantity Tracking

- Production quantity management across multiple categories
- Progress monitoring with planned vs actual analysis
- Status tracking (On Track, Delayed, Completed)

- Cumulative progress reporting
- Resource productivity analytics

3.7 Risk & Stakeholder Management

- Risk identification and assessment workflows
- Impact analysis and mitigation planning
- Stakeholder communication tracking
- Change request management and approval flows
- Meeting and visitor documentation

3.8 Document & Media Management

- Centralized document repository
- Photo and media upload with metadata
- Version control and document approval workflows
- Export capabilities (PDF, Excel formats)
- Audit trail maintenance

3.9 AI-Powered Features

- Intelligent report summarization for weekly/monthly reports
- Content generation from structured daily inputs
- Pattern analysis and trend identification
- Predictive insights for project completion
- Voice-to-text processing with multi-language support

3.10 Reporting & Analytics

- Automated report generation across multiple timeframes
- Role-based dashboard customization
- Real-time project status visualization
- Performance metrics and KPI tracking
- Export and distribution capabilities

4. Technology Stack

Frontend Technologies:

- Vue.js 3 for dynamic user interfaces
- Bootstrap 5 for responsive design
- HTML5 with modern web standards

Backend Technologies:

- Python 3.11 with FastAPI framework
- RESTful API architecture with automatic OpenAPI documentation
- MySQL 8.0 database with SQLAlchemy ORM
- Redis for caching and session management

AI & Integration Services:

- OpenAI GPT-4 API for content generation
- Web Speech API for voice-to-text functionality
- Cloud storage integration for media files
- Email notification and communication services

5. Project Timeline

Phase	Duration	Key Activities	Deliverables
Planning & Architecture	1 week	Requirements finalization, system design, database schema	Technical specifications, Integration Design
Core Development	3 weeks	User management, project setup, progress tracking, resource management	Core platform functionality
AI & Advanced Features	1 week	AI integration, voice processing, reporting features	AI-powered features, voice capabilities
Testing & Deployment	1 week	System testing, deployment, user training	Live system with documentation

Total Project Duration: 6 weeks

6. Budget Estimate

Total Project Cost: LKR 415,000

6.1 Payment Schedule

Milestone	Description	Percentage	Amount (LKR)
Project Initiation	Agreement signing and project kickoff	20%	83,000
Design & Architecture	System design and technical specifications	20%	83,000
Core Development	Main platform functionality development	40%	166,000
Integration & Testing	AI features, testing, and deployment	15%	62,250
Project Completion	Final delivery and training	5%	20,750

7. Deliverables

7.1 Software Deliverables

- Complete web-based DPR IQ platform
- Mobile-responsive user interface
- Role-based access control system
- AI-powered reporting capabilities
- Voice-to-text integration
- Document and photo management system
- Export and reporting functionality

7.2 Documentation & Training

- User manuals for all roles
- Administrator documentation
- Remote training sessions for key users

7.3 Technical Deliverables

- Complete source code with documentation
- Database schema and setup scripts
- Deployment guides and infrastructure requirements
- Security configuration guidelines

8. Support & Maintenance

8.1 Included Support (12 months)

- Bug fixes and issue resolution
- Minor feature enhancements
- Technical support via email and phone
- System updates and security patches
- Performance monitoring and optimization

8.2 Support Terms

- **Response Time:** Critical issues within 4 hours, standard issues within 24 hours
- **Support Hours:** Monday to Friday, 9 AM to 6 PM (GMT+5:30)

9. Implementation Approach

9.1 Development Methodology

- Agile development with bi-weekly progress reviews
- Iterative development with client feedback integration

9.2 Quality Assurance

- Code review and quality standards enforcement
- Automated and Manual testing implementation
- Performance and scalability testing
- User acceptance testing coordination

10. Success Metrics

- System deployment within agreed timeline
- All functional requirements implemented and tested
- System uptime of 99.5% or higher

11. Additional Considerations

11.1 Infrastructure Requirements

- Cloud hosting environment (specifications to be provided)
- SSL certificates for secure communication
- Backup and disaster recovery systems

11.2 Third-Party Service Costs (Excluded in the development cost)

- OpenAI API usage
- Cloud storage costs (based on usage)
- Email service provider fees

12. Conclusion

The DPR IQ platform represents a comprehensive solution for construction project management and progress reporting. With integrated AI capabilities, voice-to-text functionality, and role-based workflows, the system will significantly enhance reporting efficiency and project visibility for CALIM Technologies.

Our team's experience with similar construction management platforms and AI integration ensures successful delivery of this project within the specified timeline and budget.