

Survey Report

Project Title: Development of a digital infrastructure

Company: Powerline Group of Industries

Prepared by:

Kripalaya Phukan(Group Leader), Vivek Ranjan, Subham Basumatary, Ashish Aind, Joydeep Nath, Pranjit Kumar, Kautilya Darshan Borah, Himangshu Khound, Pankaj Chetry

Department of Computer Science & Engineering, Tezpur University

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Company Overview

Powerline Group of Industries (PGI) is a premier power solutions provider headquartered in North East India. With over 25 years of experience, PGI specializes in the manufacturing and distribution of high-performance diesel and petrol generator sets. As an Authorized Original Equipment Manufacturer (GOEM) for Kirloskar Green Diesel Generators, PGI has established a strong presence in the region by delivering dependable alternate and standby power solutions.

Company Overview:

- **Name:** Powerline Group of Industries (PGI)
- **Established:** Over 25 years ago
- **Headquarters:** Opp. Dairy Gate, Near Namghar, Khanapara, Guwahati - 781022, Assam
- **Contact:** +91 361 2363881 / 2363882 | sales@powerlinegenset.com
- **Website:** www.powerlinegenset.com

Core Business:

PGI serves the North East Indian market with reliable, compliant, and efficient power systems tailored for industrial and commercial applications.

Vision & Mission:

To empower North East India with sustainable and eco-friendly power solutions while creating employment opportunities. The company aims to lead in quality, reliability, and customer satisfaction.

Products & Services:

- **Diesel Generators (3.5 kVA to 1010 kVA)**
Brands: Kirloskar Green, Kirloskar Chhota
Features: CPCB compliance, fuel efficiency, microprocessor-based controls
- **Petrol Generators (2.1 kW to 4 kW)**
Brand: Kirloskar Chhota Chilli
Features: Portability, key start, silent operation

Service Offerings:

- Pre-sales consultation
- Load and requirement analysis
- On-site installation & training
- Regulatory compliance support

Manufacturing & Quality Assurance:

PGI operates modern manufacturing units in Assam and Meghalaya with strict quality standards including ISO and CPCB Phase-II norms.

Dealer & Service Network:

A strong regional network covering all North Eastern states ensures timely service and delivery.

Clientele Includes:

- Government agencies & PSUs
- Hospitals & educational institutions
- Medium to large industries
- Telecom and banking sectors

Certifications:

- ISO Certified
- CPCB Emission and Noise Compliance

CSR Focus:

- Waste management and sustainability
- Regional employment and training

Leadership:

Led by a professional team focused on quality, innovation, and workforce recognition through initiatives like “Life @ Powerline”.

Survey Observations and Problem Statement

During our visit to the production facility located on Integrated Infrastructure Development Road in Kuhimari, Naltali—operated by Powerline Group of Industries—we had the opportunity to interact directly with the plant manager and observe departmental operations.

Key Observations: The facility is divided into major departments:

- Raw Materials
- Assembly
- Distribution

Despite this structured setup, the entire plant relies on **Google Sheets and manual bookkeeping** for data management.

Challenges Identified

- Lack of real-time data synchronization across departments
- Human error due to manual entries affecting inventory and scheduling
- Fragmentation of data leading to low visibility of overall operations
- Scalability issues limiting accurate reporting and analytics

We have also taken pictures in the venue of the same.



Solution Statement

To overcome the operational challenges faced by Powerline Group of Industries, we propose developing a Centralized Factory Management System (FMS). This system will serve as a single integrated platform, replacing the existing manual processes and spreadsheet-based management with automated, real-time, and scalable digital solutions.

The proposed Factory Management System is designed to streamline the entire operational workflow of the company — from employee management to inventory handling, production tracking, and reporting — enabling the company to make faster, data-driven decisions and operate more efficiently.

Key Objectives of the Proposed Solution:

1. Centralized Data Management

All operational data will be stored in a centralized database, ensuring:

- Real-time updates
- Elimination of data redundancy
- Accurate information access across all departments

2. Modular System Design

The system will be built in multiple interconnected modules:

- Employee Management
- Department & Role Handling
- Inventory & Raw Material Management
- Production Tracking & Work Order Management
- Attendance & Payroll Automation
- Reporting & Analytics Dashboard

3. Role-Based Access Control

Different types of users will have different access rights depending on their roles:

- Admin → Full access to all modules
- Department Managers → Department-specific access
- Employees → Limited personal access (attendance, payroll view)

4. Real-Time Reporting & Analytics

The system will provide:

- Visual Dashboards
- Automated Reports (Production, Inventory, Attendance, Salary)
- Exportable reports in PDF or Excel
- KPI monitoring for better management decisions

5. Technology Stack

Layer	Reason
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Frontend	Fast UI rendering, responsive design, component-based structure.
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Backend	Scalable RESTful API, real-time data handling.
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Database	Relational data management, reliable & secure.
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Hosting	Flexible deployment and scalability.
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6. Benefits of the Solution

- Reduction in Manual Errors
- Real-time Data Synchronization
- Faster & Smarter Decision-Making
- Easy Scalability for Future Requirements
- Improved Operational Efficiency
- Data Security & Backup Management
- Centralized Reporting for Management

Final Outcome

Once implemented, the System will become a digital backbone for Powerline Group of Industries — improving productivity, reducing human errors, and providing complete visibility of operations at every stage.

We have attached a sample image to show how the user interface might look like.

Factory Management System	Factory Management System		Logout	
	Dashboard			
	Employees	Raw Materials	Work Orders	Reports
	Production Status		Inventory Overview	

Factory Management System	Factory Management System		Logout
	Employees		
	Add Employee		
	Name	Role	Department

Employee Management

Factory Management System	Employee Management		Add Emple	
	Inventory			
	Add Item			
	Item	Quazing	Locations	Status

Inventory Management

Factory Management System	Factory Management System		Add Item
	Inventory		
	Add Item		
	Item	Department	Status

Inpection Tracking

Factory Management System	Production Tracking		Add Work Dider	
	Work Orders			
	Add Work Order			
	Order-ID	Destriction	Department	Status
				"View"
				View

Reporting Section

Factory Management Systems	Reports	
	Production Report	
	Inventory Report	
	Employee Report	

Conclusion

There is a pressing need for a **digital infrastructure** that:

- Automates data entry and tracking
- Offers real-time updates
- Integrates all departments into a unified digital ecosystem

This system will enable efficient operations, improved decision-making, and long-term scalability for the plant.