Web & Mobile app
for automated management
and monitoring of electrical
projects

A brief report about the project

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1. Brief Scope about the company

ELECPOWER is a company specializing in assembling and installing **electrical cabinets for various projects.**
Currently, the entire management process is handled on paper, making it inefficient and difficult to track.

This project aims to **automate the management of electrical projects, making it easier for both admins and employees to monitor progress, track resources, and streamline operations.**
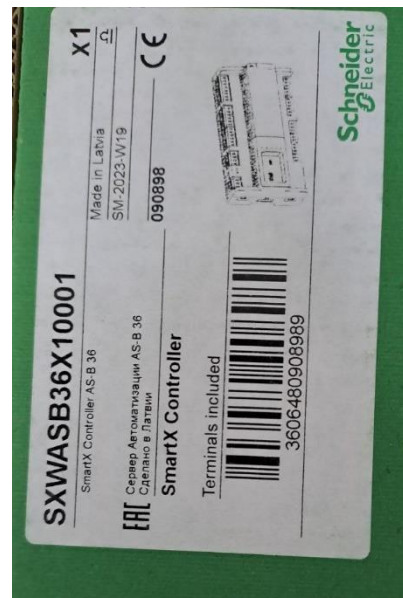
2. Project Overview

The system consists of two main components:

- **Web Application (for Admins)**
- **Mobile Application (for Employees)**

Each version has features tailored to its users.

picture of an electrical cabinet

picture of a material

3. Web Application Features

a. Project Management

Admins can:
- View all projects
- Create a new project by filling out a form
- Update or delete a project
- Track project progress and status.

To prevent long forms, after creating a project, the admin can later add necessary electrical components separately.

b. Resource Management

Admins can:
- Allocate and track electrical components for each project
- View available stock and quantity
- Filter by availability
- Add articles to a project

c. Electrical Cabinet Management

Each project has one Electrical cabinet. Once a project is created, a dedicated page for the electrical cabinet details will be generated

d. QR Code Management

Each Electrical cabinet has a unique QR code that links to its details.
- The QR code is generated automatically upon project creation
- It contains a unique URL
- Employees can scan it with the mobile app to access project information
- It can also be printed and attached to the physical Electrical cabinet for easy tracking

e. Employee Management

- manage employee profiles and assign roles within projects
- Add edit delete Employee profiles
- Search and filter functionalities

f. Reporting and analytics

- Generate reports for project process, resource usage and employee performance
- Analytical dashboard: graphs of projects timeline and resource allocation
- Export in PDF or Excel format

g. Notifs and alerts

- Keep admin informed of critical updates
- Real time notifs (project deadlines, resource shortage...)

4. Mobile Application Features

a. Project Assignment & Dashboard

- Employees log in and view their assigned projects.
- Display projects with progress indicators to see upcoming deadlines
- View Project details
- Status Update (in progress / completed)

b. Task Management

- Add tasks related to the projects
- View task details (description, deadline..)
- Add notes to report issues (missing materials, delays, malfunctions)
- Mark task as completed
- Edit/ delete tasks

c. QR code Scanner

- Employee navigates to the QR Scanner feature
- Scan QR code of the cabinet (using device camera)
- fetch and display details (technical details, maintenance history, assigned project info)

d. Intervention & Maintenance

Employees can take different actions post-scan:

- Confirm Installation Completion
- Request Maintenance if Armoire Needs Fixing
- Report on Malfunctions or Missing Components

If maintenance is needed, the app will notify the admin and generate an

intervention request.

e. Resource Tracking & Requests

Employees can track available resources (electrical components) for each
project and confirm their usage.
If a component is missing, they can request additional resources from the
admin.

f. Incident Reports

- Report issues or incidents during project execution
- Employees can attach images & notes to reports.
- Reports are sent to admins for review & action.
- Incident Tracking: View Incidents and their resolution tracking

g. Notifs and alerts

Keep employees informed about project updates, task changes, and schedule
alerts