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Construction Financial & Operations Management System

Project Overview & Functional Specification

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Client: Terminator Engineering and Construction

1. Introduction

1.1 Background

Terminator Engineering and Construction operates multiple workshops and projects in parallel. Each project involves materials, staff, machines, vehicles and complex financial flows. Today this is handled mostly through spreadsheets or separate tools, which makes it difficult to see real costs per workshop, control salaries and advances, track inventory and waste, plan maintenance and produce clear reports.

AKD Systems proposes a web-based Construction Financial & Operations Management System tailored to the specific needs of Terminator Engineering and Construction, focused on finance, cost control and operations support.

1.2 Purpose of this Document

This document summarizes the target scope and major functions of the proposed system. It is used to align expectations before detailed technical design and implementation. Once agreed, it will be the reference for feature planning and phasing.

2. Objectives

The main objectives are to:

- Centralize financial and operational data for staff, workshops, machines, vehicles and inventory.
- Calculate true costs per workshop (labor, materials, machine and vehicle usage, maintenance).
- Provide flexible payroll with daily / weekly / monthly salaries, advances and partial payments.
- Control inventory with clear stock, consumption and waste tracking.
- Manage machines and vehicles with usage logging, maintenance plans and alerts.

- Generate professional reports at staff, workshop, machine, vehicle, client and item level, plus monthly summaries.
- Support management decisions through clear dashboards and consistent data.

3. Users & Roles

To be agreed with client, we suggest the below:

- Administrator – full access to configuration, all modules and reports.
- Finance / Accounting – salaries, advances, financial transactions and global reports.
- Workshop / Project Manager – workshops, staff assignments, consumption, machine usage and related reports.
- Inventory / Storekeeper – inventory items, stock movements (in / out / waste) and inventory reports.
- Maintenance / Fleet Manager – machines, vehicles, usage logs, maintenance plans and alerts.

Access rights can be refined according to Terminator Engineering and Construction's internal policies.

4. System Scope & Main Modules

4.1 Master Data Management

Central management screens will be provided for:

- Clients – contact data and list of their workshops.
- Staff – personal details, salary model (daily / weekly / monthly), base rate and status.
- Machines – code, type, brand / model, purchase date, current usage counter (hours / cycles).
- Vehicles / Cars – plate number, type, brand / model, current mileage.
- Inventory Items – name, category, unit, standard cost and minimum stock level.
- Workshops / Projects – name / code, client, location, planned dates and status (Future / Active / Completed).

4.2 Workshops & Clients

Workshops are the main cost and income units. The system will allow creation and follow-up of workshops linked to clients, with statuses (future, active, completed). Staff, machines and vehicles can be assigned to each workshop. Billed amounts can be registered per workshop to enable cost vs. income analysis.

4.3 Staff & Payroll Management

Key elements:

- Each staff member can be assigned to several active workshops at the same time.
- Salary type per staff: daily, weekly or monthly with a defined rate or salary.
- A salary / payments table per staff, including regular payments, extra payments and advances.
- Each entry records date, amount, period and (optionally) workshop allocation.
- Advances are recorded and automatically deducted from due salaries according to agreed rules.
- For each staff member, the system shows total due, advances, amounts paid and remaining balance.

4.4 Inventory & Materials Management

Inventory will cover construction materials and spare parts:

- Definition of stock items with unit, cost and minimum stock.
- Stock In: purchases and returns from workshops.
- Stock Out: materials issued to workshops.
- Waste: items lost, damaged or unusable, tracked with quantity, cost and optional reason.
- Alerts when stock falls below the defined minimum.
- Material issued to workshops is used to calculate material cost per workshop.

4.5 Machines & Vehicles (Usage & Maintenance)

Machines and vehicles will have dedicated usage and maintenance tracking.

Usage:

- Machines – usage measured in hours or cycles (per machine configuration).
- Vehicles – usage measured in kilometers or miles.
- Each usage entry records date, machine / vehicle, workshop (optional) and usage amount.

Maintenance plans:

- Services such as oil change, filter replacement, brake check or routine inspection.
- Intervals defined by usage (e.g. every 5,000 km or 300 hours) and/or by time (e.g. every 6 months).
- Last service date and last usage value stored for each plan.

Automatic calculations and alerts:

- When new usage is recorded, the system updates current mileage / usage and remaining usage until next service.
- Remaining days until next time-based maintenance are also calculated.
- If thresholds are reached, machines / vehicles appear in an alert list and warnings can appear on dashboards.

Maintenance records:

- Recording completed maintenance with date, type, cost and optional workshop.
- Linking any inventory items used (oil, filters, parts) and updating last service data.

4.6 Financial Transactions & Cash Flow

The system will centralize incomes and outcomes in a transactions structure. Each transaction has date, amount, type (Income / Outcome), category and optionally a related entity.

Examples:

- Incomes – invoices to clients per workshop, other income sources.
- Outcomes – salaries and advances, material purchases, maintenance costs, fuel, rent, utilities and other expenses.
- Transactions can be linked to staff, workshops, machines, vehicles, inventory items or clients.

This allows monthly and yearly financial reports and analysis of cost drivers (e.g. materials vs. salaries vs. maintenance).

4.7 Reporting & Analytics

Reports will be designed to be clear and exportable (e.g. PDF / Excel):

- Per Staff – salaries, advances, payments and workshop allocations per period.
- Per Workshop – material cost, staff cost, machine / vehicle cost, total cost, billed income and estimated profit / loss.
- Per Machine / Vehicle – usage history, maintenance history and cost, upcoming maintenance alerts.
- Per Client – list of workshops, total invoiced amounts and balances if applicable.
- Per Inventory Item – movements (in, out, waste), current stock and total consumption cost.
- Global Monthly – total income and total expenses per month, breakdown by category and key indicators.