SYSTEM OVERVIEW AND EXECUTIVE SUMMARY

The proposed system is a comprehensive **Enterprise Resource Planning (ERP)** and Staff Portal platform designed to unify all organizational operations into a single, secure, and role-based digital environment. The system serves as the central backbone for daily activities across all departments, ensuring efficiency, transparency, accountability, and seamless collaboration. It is structured around modular components that reflect the organization's operational units, while sharing a common core system that connects data, workflows, and users across the enterprise.

At its foundation, the system is built to support role-based access control, meaning every user interacts only with the modules, data, and functions relevant to their role, department, and responsibilities. This design minimizes complexity for end users while maintaining strong governance, data integrity, and security. The navigation structure mirrors the organizational structure, allowing staff to intuitively access their tools and responsibilities without unnecessary overlap or confusion.

PURPOSE AND NEED FOR THE SYSTEM

The organization requires a centralized system to replace fragmented processes, manual workflows, and disconnected tools currently used across departments. Without a unified platform, critical information is often duplicated, delayed, or lost, approvals are slow, and management lacks real-time visibility into operations. This system addresses those challenges by providing a single source of truth for operational, financial, human resource, project, safety, and technical data.

The system is designed to improve decision-making by delivering real-time dashboards, reports, and analytics across departments. It also enforces standardized workflows, approval hierarchies, and compliance requirements, reducing operational risk while improving efficiency and accountability.

Ultimately, the system enables scalability, ensuring that as the organization grows, its processes remain structured, auditable, and manageable.

CORE SYSTEM BEHAVIOR AND ARCHITECTURE

The ERP platform operates around a shared core system that connects all modules. Upon login, users are presented with a centralized dashboard that provides an overview of activities, tasks, alerts, and performance indicators relevant to their role. A global search function allows users to locate records, documents, projects, and transactions across all modules, eliminating data silos.

Document management is a critical behavior of the system. Users can store personal, departmental, and project-related documents within a structured digital drive that supports version control, access permissions, activity logs, and standardized templates. This ensures document traceability, collaboration, and compliance with internal governance requirements.

Workflow and approval mechanisms are embedded across the system. Requests whether financial, administrative, procurement-related, or HR-based follow predefined approval paths with tracking, escalation, delegation, and full audit history. Notifications and alerts keep users informed of pending actions, approvals, system updates, and critical events through configurable channels such as email and mobile notifications.

The system also includes a centralized reporting and analytics engine, enabling cross-departmental performance tracking, key performance indicators, and custom report generation. A built-in help and knowledge base provides user guides, policies, and frequently asked questions to support adoption and reduce dependency on manual support.

DEPARTMENTAL MODULES AND FUNCTIONAL SCOPE

The Safety and Security module is designed to manage organizational risk, compliance, and emergency preparedness. It supports incident reporting and investigation, access control for employees and visitors, safety protocols,

regulatory compliance tracking, emergency response planning, health and safety management, and security personnel operations. This module ensures that safety and security activities are documented, monitored, and auditable.

The Project Management module enables structured planning, execution, and monitoring of projects across the organization. It supports project creation, task planning through visual tools such as Kanban boards and Gantt charts, resource allocation, budget and cost tracking, risk management, collaboration through shared documents and discussions, and formal project closure processes. This ensures projects are delivered on time, within budget, and with full visibility to management.

The Human Resources and Administration module manages the entire employee lifecycle, from onboarding to exit. It includes employee records, attendance and leave management, HR approval workflows, disciplinary processes, office administration, asset tracking, and policy governance. Executive and board-level administrative functions are also supported, ensuring structured management oversight and documentation.

The Procurement module streamlines purchasing activities by managing purchase requests, approvals, supplier records, contracts, purchase orders, goods receipt, and procurement analytics. This module ensures cost control, supplier accountability, and full traceability of procurement activities from request to delivery.

The Finance module forms the financial backbone of the system. It covers accounts payable and receivable, general ledger operations, payroll and compensation, budgeting, asset management, tax compliance, and financial reporting. The integration of finance with procurement, projects, and HR ensures accurate financial data, real-time budget tracking, and regulatory compliance.

The Warehouse module provides full inventory and stock management capabilities. It handles item master data, stock movements, warehouse location mapping, dispatch processes, audits, reconciliation, reorder thresholds, and

analytics. This module ensures inventory accuracy, minimizes losses, and supports operational continuity through proactive stock monitoring.

The IT and Support module manages the technical infrastructure and system administration. It includes user and role management, system configuration, backups, logs, hardware and network monitoring, and a support ticketing system with SLA tracking. A dedicated IT knowledge base supports internal users and reduces downtime through faster issue resolution.

CONCLUSION

This ERP and Staff Portal system is not merely a collection of modules, but a fully integrated enterprise platform designed to align people, processes, and data across the organization. It enforces structure where needed, flexibility where appropriate, and visibility at every level of operation. By centralizing workflows, data management, approvals, and reporting, the system empowers staff, strengthens governance, and provides leadership with the insights needed to drive strategic decisions. For developers, this system represents a modular yet tightly integrated architecture that must prioritize scalability, security, usability, and cross-module interoperability from the ground up.

DEVELOPMENT ROADMAP

This section defines the complete development roadmap for the ZDESK ERP system. It translates the approved Navigation Menu and System Modules into clear, executable development work.

The objective is to ensure:

- Every listed module is implemented

- Frontend and Backend development run in parallel

- Developers clearly understand what to build, when, and how it connects

- No module, submenu, or control is skipped

This roadmap follows the actual system flow:

System Foundation → Authentication & Access → Core Shared Systems → Departmental Units → Reporting & Administration

The system is designed for **multiple companies/businesses**; therefore, all core entities such as companies, departments, roles, and permissions must exist before users or employees are created.

2. WORKING MODEL (MANDATORY)

- Two developers work in parallel at all times

- Backend builds data models, business rules, workflows, and APIs

- Frontend builds screens, forms, dashboards, and user interactions

- Every module follows:

  - Create

  - View

  - Edit

  - Approve

  - Track

  - Report

- All modules respect roles, units, approval flows, and audit logs

3. SYSTEM FOUNDATION – MULTI-COMPANY & ACCESS CONTROL (WEEK 1)

3.1 Company Management

Backend Responsibilities

- Company master records

- Company status and lifecycle

- Company-level configuration settings

- Company audit logs

Frontend Responsibilities

- Company creation interface

- Company listing and management screens

- Company profile view

3.2 Department & Unit Structure

Backend Responsibilities

- Department master records

- Department hierarchy

- Company-to-department relationships

- Department status tracking

Frontend Responsibilities

- Department management screens

- Hierarchy visualization

3.3 Roles, Permissions & Access Control

Backend Responsibilities

- Role definitions

- Permission definitions

- Role-to-permission mapping

- Department and company scope enforcement

Frontend Responsibilities

- Role creation and editing screens

- Permission assignment interfaces

- Permission matrix views

4. AUTHENTICATION & USER ACCESS (WEEK 2)

Backend Responsibilities

- User authentication (login and logout)

- Password reset and account locking

- Email verification

- Phone number verification

- OTP generation and validation

- Password change management

- User profile management (role, unit, permissions)

- Role-based access rules for:

  - Menus

  - Pages

  - Actions

- Login and access audit logs

Frontend Responsibilities

- Login page

- Forgot password page

- Email verification screens

- Phone and OTP verification screens

- Change password screen

- Error handling (invalid credentials, inactive user)

- Session handling

- Base system shell (header, sidebar, footer)

Outcome

- Users can securely access the system

- The system enforces identity, role, and permission rules

5. CORE SYSTEM – SHARED FEATURES (WEEK 2–5)

5.1 Dashboard

Backend

- Aggregated dashboard data:

    o Pending approvals

    o Assigned tasks

    o Alerts

    o Department-specific KPIs

- Role-based dashboard configuration

Frontend

- Dashboard layout

- KPI widgets

- Click-through navigation to source modules

5.2 Global Search

Backend

- Cross-module search engine

- Search across:

    o Records

    o Files

    o Employees

- Permission-aware search results

Frontend

- Global search bar

- Results grouped by module

- Quick navigation

5.3 Company Directory

Backend

- Employee directory APIs

- Organizational hierarchy

- Contact information

- Search and filtering

Frontend

- Directory listing

- Employee profile views

- Organization chart

5.4 My Drive (Document Management)

Backend

- File upload and download

- Folder hierarchy:

  - Personal

  - Company

  - Department

  - Project

- Version control

- Access permissions

- Activity logs

Frontend

- File explorer interface

- Folder navigation

- Upload and download actions

- Version history

- Permission management interface

5.5 Workflow & Approvals

Backend

- Generic workflow engine

- Request creation and tracking

- Multi-level approvals

- Delegation handling

- Escalation rules

- Approval history

Frontend

- Approval inbox

- Approval action screens

- Workflow progress indicators

5.6 Notifications & Alerts

Backend

- System alerts

- Approval alerts

- Notification preferences (email and mobile)

- Read and unread tracking

Frontend

- Notification bell

- Alert listings

- Notification preferences screen

5.7 Reports & Analytics

Backend

- Cross-department KPI calculations

- Custom report builder logic

- Data export functionality

Frontend

- Reports dashboard

- Filters and parameters

- Charts and tabular reports

5.8 Help & Knowledge Base

Backend

- Knowledge articles

- Categories

- Version control

Frontend

- Help center interface

- Searchable articles

- Policy document views

6. HRM & ADMINISTRATION (WEEK 5–7)

6.1 Employee Management System (EMS)

Backend

- Employee records

- Employment history and status changes

- Document attachments

- Transfers and exit processing

Frontend

- Employee directory

- Employee profile pages

- Transfer and exit workflows

6.2 Attendance & Leave

Backend

- Clock-in and clock-out logic

- Leave rules and policies

- Leave balance tracking

- Approval workflows

Frontend

- Attendance dashboards

- Leave application forms

- Leave balance views

6.3 Approvals Workflow (HR)

Backend

- HR approval queues

- Expense approval handling

- HR document approvals

Frontend

- HR approvals dashboard

6.4 Management & Directors

Backend

- Executive role records

- Board meeting management

- Meeting minutes storage

Frontend

- Board meeting interfaces

- Minutes viewing screens

6.5 Discipline & Compliance

Backend

- Disciplinary case records

- Warnings

- Policy violation tracking

Frontend

- Case management screens

- Restricted access handling

6.6 Office Administration

Backend

- Office supplies tracking

- Asset management

- Maintenance request handling

Frontend

- Request submission forms

- Asset listings

6.7 Policies & Governance

Backend

- Policy document storage

- Policy acknowledgment tracking

Frontend

- Policy library

- Acknowledgment interfaces

7. SAFETY & SECURITY UNIT (WEEK 7–9)

Backend

- Incident reporting and management

- Incident logs and case escalation

- Evidence storage

- Employee, visitor, and contractor access control

- Entry and exit logs

- SOP and compliance tracking

- Emergency alerts and drill simulations

- HSE records:

    o Risk assessments

    o Hazard identification

    o Accident and injury records

- Security operations:

    o Personnel management

    o Duty rosters

    o Patrol logs

Frontend

- Incident reporting forms

- Incident dashboards

- Evidence upload and viewing

- Access log interfaces

- Emergency alert screens

- HSE dashboards

- Duty roster and patrol views

8. PROJECT MANAGEMENT UNIT (WEEK 9–12)

Backend

- Project creation and templates

- Task management with dependencies and milestones

- Gantt chart and project calendar logic

- Resource management:

  - Human resources

  - Equipment

  - Materials

- Project budgeting and expense tracking

- Cost variance analysis

- Risk and issue registers

- Collaboration records

- Project closure and audit records

Frontend

- Project dashboards

- Kanban boards

- Gantt charts

- Resource allocation screens

- Project financial tracking

- Risk and issue management screens

- Collaboration threads

- Project closure reports

9. PROCUREMENT UNIT (WEEK 12–14)

Backend

- Purchase request creation and tracking

- Approval workflows

- Supplier registration and evaluation

- Contract and SLA management

- Purchase order lifecycle

- Goods receipt processing

- Procurement reporting

Frontend

- Purchase request forms

- Supplier profile screens

- Purchase order and GRN views

- Spend analysis dashboards

10. FINANCE UNIT (WEEK 14–17)

Backend

- Accounts Payable

- Accounts Receivable

- General Ledger

- Payroll and compensation processing

- Budget creation and budget vs actual tracking

- Fixed asset register and depreciation

- Financial statement generation

Frontend

- Invoice and payment screens

- Payslip views

- Budget dashboards

- Balance sheet and profit/loss views

11. WAREHOUSE UNIT (WEEK 17–19)

Backend

- Item master management

- Serial and IMEI tracking

- Warranty management

- Stock receiving and issuing

- Internal returns and adjustments

- Warehouse storage locations

- Dispatch and delivery tracking

- Physical stock audits

- Reorder thresholds and alerts

- Warehouse analytics

Frontend

- Inventory dashboards

- Item detail views

- Stock request interfaces

- Warehouse mapping views

- Audit and reconciliation screens

12. IT & SUPPORT UNIT (WEEK 19–21)

Backend

- User account management

- Role and permission administration

- System settings

- Backup management

- System logs

- Hardware asset tracking

- Network monitoring

- Support ticketing system

- SLA tracking

Frontend

- System administration panels

- Support ticket dashboards

- Knowledge base interfaces

13. FINAL SYSTEM STABILIZATION (WEEK 21–24)

Both Developers

- Full system testing

- Role and permission validation

- Workflow validation

- Cross-module integration testing

- Bug fixing

- Performance optimization

- System documentation

- Full auditability, reporting, and governance are achieved