

CEO MEMO

Purpose

The purpose of this memo is to address the operational inefficiencies caused by the separation of the HR and Payroll systems and to formally request the development of an integrated Dashboard application. This new system will unify data from both platforms without modifying their existing structures, enabling faster decision-making, improved accuracy, and more efficient management processes across the company.

Current Issues

Our company currently operates two essentials but fully independent management systems. Both systems have been in use for many years, are stable, and play a crucial role in daily operations. However, the lack of integration between them has begun to reveal significant limitations as the company continues to grow.

1. Human Resource Management (HR) System

The HR system is built on the **HUMAN_2025 SQL Server database** and manages the company's core human resource information. Based on the database schema, this system currently manages:

- **Employee master data**

(from the *Employees* table)

FullName, DateOfBirth, Gender, PhoneNumber, Email, HireDate, Status,
DepartmentID, PositionID.

- **Organizational structure**

(from the *Departments* and *Positions* tables)

Department definitions and official job titles.

- **Internal shareholder dividend information**

(from the *Dividends* table)

DividendAmount and DividendDate tied to employees participating in internal programs.

The HR system serves as the **primary and authoritative source** for all employee identity, employment, and organizational data.

2. Payroll System

The Payroll system is built on the **PAYROLL MySQL database** and handles payroll calculations and attendance tracking. According to its schema, this system manages:

- **Employee payroll profiles**

(from *employees_payroll*)

Synchronized employee information required for payroll calculations.

- **Department and position references for payroll**

(from *departments_payroll* and *positions_payroll*)

Mirrored copies of HR departments and positions.

- **Monthly salary transactions**

(from *salaries*)

BaseSalary, Bonus, Deductions, NetSalary, SalaryMonth.

- **Attendance records**

(from *attendance*)

WorkDays, LeaveDays, AbsentDays per month.

The Payroll system is the company's official financial processing platform and the authoritative source for salaries, attendance, and payroll reports.

Major Challenges

1. Time and Effort in Data Compilation

Whenever HR and Payroll data need to be combined for reporting or shareholder inquiries, HR and Payroll teams must extract data separately and manually consolidate the information.

This process is slow, error-prone, and inefficient.

2. Inconsistent Employee and Organizational Data

Updates in the HR system—such as department changes, position reassignment, or status updates—are not automatically reflected in the Payroll system.

This leads to:

- Incorrect salary calculations
- Conflicting department or position names
- Outdated employee status in payroll

These inconsistencies reduce data reliability and employee trust.

3. Fragmented and Limited Reporting

Each system only reports on its own data domain:

- HR → Employees, departments, positions, dividends
- Payroll → Salaries, attendance

There is no unified view that combines HR, payroll, attendance, and dividends into a holistic report.

This prevents management from accessing integrated insights for strategic planning.

4. Lack of Automated Alerts

The current systems provide no proactive notifications for:

- Employees approaching work anniversaries
- Employees exceeding allowable leave days
- Significant changes in salary trends

Managers must manually review data, resulting in delays and inefficiencies.

Business Requirements

Given the company's rapid growth and the increasing complexity of HR and payroll processes, an integrated solution is required.

Since both systems are stable and critical to daily operations, **their existing database structures must not be modified**.

Instead, the company requires a **new centralized Dashboard system** that will connect to both databases and provide integrated features.

1. Integrate Information from Both Systems

The Dashboard must:

- Connect to **HUMAN_2025 (SQL Server)** and **PAYROLL (MySQL)**
- Map and align employees, departments, and positions
- Synchronize employee updates from HR to Payroll when necessary
- Provide APIs to fetch and update data consistently
- Create a unified data view for reporting

2. Employee Management

- Display the complete employee list from HUMAN_2025
- Search employees by name, department, or position
- Add new employees into HUMAN_2025 and generate linked records in employees_payroll
- Update employee details and synchronize relevant payroll information when department, position, or status changes
- Prevent deletion if related payroll or dividend records exist

3. Payroll & Attendance Management

- Display payroll details from PAYROLL (BaseSalary, Bonus, Deductions, NetSalary)
- View monthly salary history per employee
- Retrieve and display attendance information (WorkDays, LeaveDays, AbsentDays)
- Support payroll adjustments when HR updates require salary recalculations

4. Department & Position Management

- Display all departments and positions from HUMAN_2025
- Add, update, or delete departments and positions with constraint validation
- Synchronize changes to departments_payroll and positions_payroll
- Prevent inconsistencies between HR and Payroll systems

5. Reports & Analytics

The Dashboard must provide integrated reporting, including:

- HR reports: employee counts, department breakdowns, status distribution

- Payroll reports: salary totals, salary averages by department, monthly salary trends
- Attendance reports: total leave, absences, work days
- Dividend reports from HUMAN_2025
- Visual charts, time-series graphs, and consolidated analytics

6. Alerts & Notifications

The system must generate automated notifications for:

- Employee work anniversaries (1, 3, 5, 10 years, etc.)
- Employees exceeding leave limits
- Significant salary discrepancies across payroll cycles
- Optional email notifications for monthly payroll releases

7. Security & Access Control

To ensure proper authorization and secure access to the Dashboard, a dedicated authentication module must be implemented **without modifying the existing HR or Payroll databases.**

System Requirements:

- **Use a separate Authentication & Authorization database**
Stores users, roles, permissions, and audit logs
- **Role-Based Access Control (RBAC)**
Defines roles such as Admin, HR Manager, Payroll Manager, Employee
- **Secure Authentication**
Hashed passwords, session or token-based login
- **Audit Logging**
Track all user actions for compliance
- **No modification to HR or Payroll DBs**
All security logic must reside in the Dashboard and its dedicated auth database

Integration Constraints

To protect the stability and integrity of current systems:

- **No structural changes** (tables, columns, constraints) are allowed in HUMAN_2025 or PAYROLL
- All new functionality must be implemented in the Dashboard
- Integration must use APIs or direct read/write via a controlled Data Access Layer (DAL)
- Data synchronization must be logged, auditable, and recoverable

Dashboard System Overview

The Dashboard will serve as:

- A **central consolidation layer** between HR and Payroll
- A unified interface for HR Managers, Payroll Officers, and management
- A system that provides reporting, analytics, security, alerts, and controlled data synchronization
- A standalone system with its own authentication database and access control policies

Key Requirements

- Maintain the continued operation of both HR and Payroll systems
- Build an independent Dashboard application
- Ensure real-time or scheduled synchronization as needed
- Provide secure access control and full auditability
- Guarantee data consistency and reliability
- Offer meaningful reports, analytics, and alerts for decision-making

Conclusion

Integrating the HR and Payroll systems through a centralized Dashboard will significantly improve operational efficiency, eliminate data inconsistencies, and provide management with accurate, real-time insights.

With the expertise of our technical team, we are confident we can build a stable, secure, and scalable integration solution while preserving the integrity of our existing core systems.

IMPLEMENTATION ROADMAP (12 WEEKS)

Case Study	Main Tasks	Duration
Case Study 1	Analyze & document problem statements, business needs, system overview, and integration constraints	Week 1–2
Case Study 2	Design integration architecture, system models, data mappings, and cross-system workflows	Week 3–4
Case Study 3	Develop HR & Payroll integration APIs (read/write), synchronization logic, and error-handling mechanisms	Week 5–6
Case Study 4	Implement security module, authentication database, RBAC (roles & permissions), and audit logging	Week 7–8
Case Study 5	Implement Dashboard UI, HR/Payroll modules, reports, analytics, and automated alerts	Week 9–11
Deployment	Production deployment, user training, documentation, and stabilization	Week 12