





PROJECT DEMO **SMART-FIN**

Organizational Income and Expense Tracking System

Date : 07/11/24



AGENDA

- Project overview
- Core features
- Technology stack
- Architecture overview
- Key integrations
- Challenges and solutions
- Future enhancements

PROJECT OVERVIEW

- **Goal:** To develop a comprehensive financial management platform to help organizations efficiently track income, expenses, employee roles, attendance, and project financials.
- **Objective:**
 - Provide data-driven insights for informed decision-making and operational efficiency.
 - Streamline financial reporting and ensure real-time financial visibility.
 - Enhance security through role-based access control.

USER-SPECIFIC FEATURES

Organization Head Features:

- Global and project-specific income and expense tracking.
- Real-time financial dashboard with performance summaries.
- Manage organization details and oversee role-based access control.

Project Manager Features:

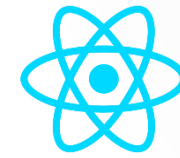
- Assign employees to projects and track project budgets and expenses.
- Access detailed project-specific financial reports.
- Ensure budget utilization aligns with project goals.

Finance Manager Features:

- Manage income and expense records, generate invoices, and process transactions.
- Generate financial analytics reports to provide insights into project performance.



TECHNOLOGY STACK



chakra

Frontend:

- **UI Framework:** React with TypeScript.
- **Components:** Chakra UI for a responsive, user-friendly interface.

Backend:

- **Framework:** Node.js with TypeScript.
- **Architecture:** Microservices for organization, project, employee, and analytics services.
- **Role Management:** Implemented user roles for secure, role-based data access.



TECHNOLOGY STACK

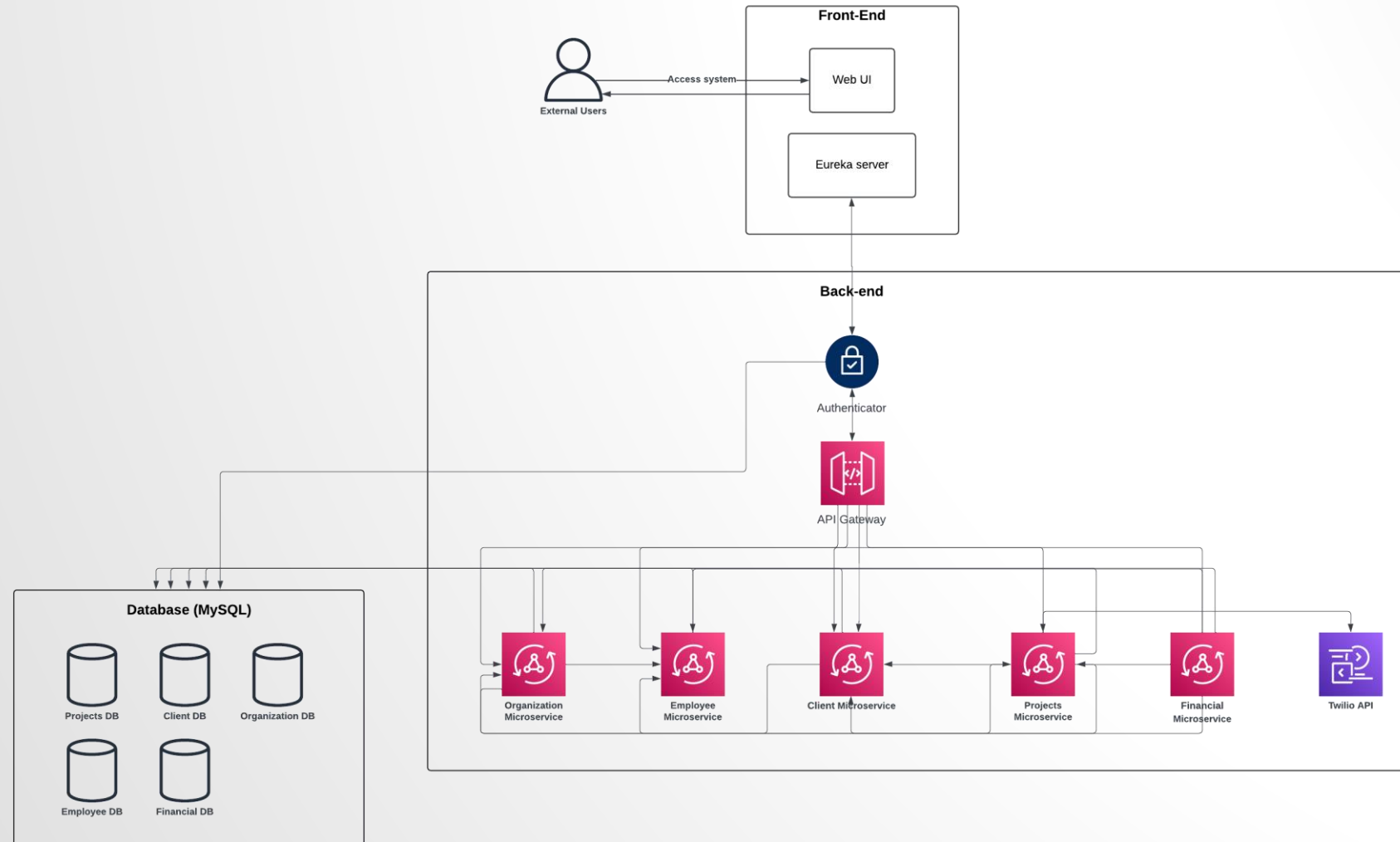
Database:

- **JWT (JSON Web Tokens)** for secure user authentication and authorization.
- **Ensures role-based access control (RBAC)** to data and functionality, based on user roles (Admin, Project Operational Manager, Finance Team, Employees).

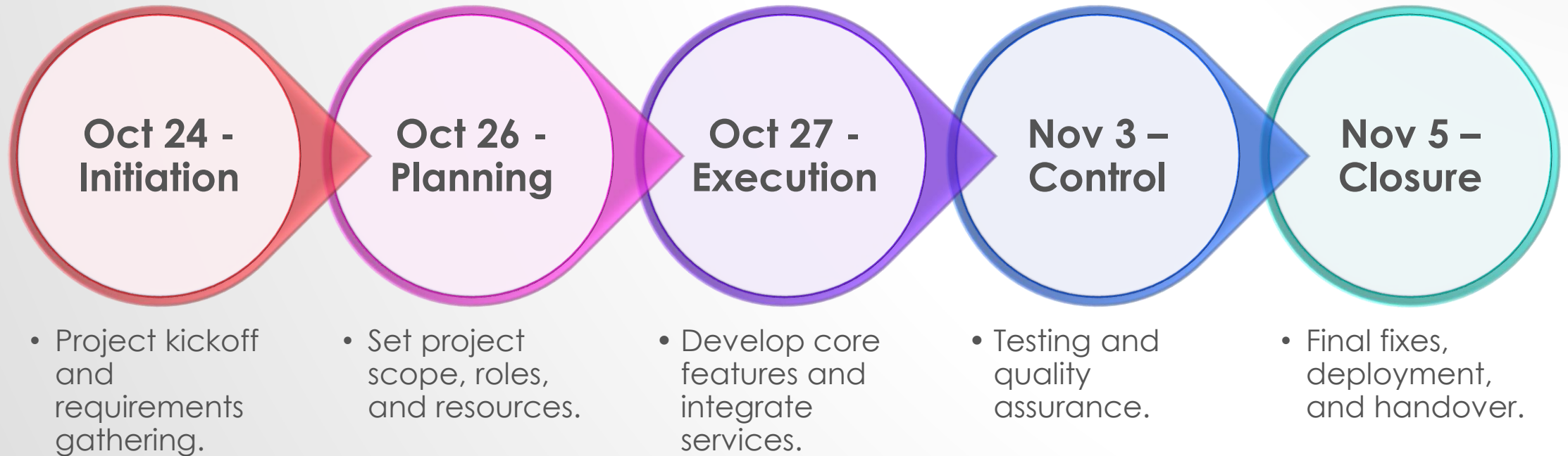
Authentication & Authorization:

- **MongoDB** for document-based storage.
- **Mongoose** for schema modelling.

ARCHITECTURE OVERVIEW



PROJECT TIMELINE



CHALLENGES AND SOLUTIONS

Challenges:

- **State Management:** Handling complex project and employee data states across microservices.
- **Employee Allocation:** Ensuring accurate and efficient employee assignment to projects, considering budget and role restrictions.

Solutions:

- Implemented a **state management** solution in the frontend for smooth data flow.
- **Developed a role-based allocation module, making employee assignment flexible and budget-compliant.**

FUTURE ENHANCEMENTS

- **Messaging & Notification Service Integration:** Real-time updates for budget thresholds, significant expenses, and attendance alerts.
- **Payment Gateway Integration:** Facilitate secure payment processing for employee reimbursements and client payments.
- **Currency Conversion Integration:** Provide accurate currency conversions for international transactions.
- **AI Integration for Employee Performance Analysis:** Use AI to evaluate employee performance metrics, providing insights for project success and workforce development.

THANK YOU

