



REVAMPING RAJ-SIMS PORTAL FOR OPTIMISED SUPPLY CHAIN MANAGEMENT

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BRIEF MOTIVATION

- Modernize systems:** The current RajSIMS portal lacks modern features and struggles to meet the evolving needs of users.
- Enhance user experience:** Improve user satisfaction by implementing intuitive interfaces and responsive design principles.
- Optimize supply chain management:** Streamline procurement, inventory management, and distribution processes for greater efficiency.
- Foster data-driven decision-making:** Implement features to consolidate demands, utilize consumption history, and provide real-time insights.
- Align with digital transformation initiatives:** Support the state's vision for transparent governance and efficient resource management through digital solutions.

OBJECTIVE

- Implement advanced UI components:** Utilize frameworks like React.js to develop modern and responsive user interfaces.
- Enhance authentication mechanisms:** Integrate secure authentication protocols for user access control and data protection.
- Optimize supply chain processes:** Develop algorithms and data structures to handle demands, supplies, and inventories effectively. Implement data analytics features: Utilize technologies like Azure DevOps for data analysis and decision support.
- Ensure scalability and reliability:** Design the portal architecture to handle large volumes of data and accommodate future growth.
- Foster collaboration and integration:** Enable seamless communication and data exchange between different departments and stakeholders.
- Enhance system performance:** Optimize code and implement caching mechanisms to improve portal speed and responsiveness.
- Ensure compliance and security:** Implement measures to comply with data privacy regulations and protect against cyber threats.
- Provide comprehensive reporting:** Develop tools for generating detailed reports and analytics dashboards to support decision-making processes.

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METHODOLOGY

Requirement Analysis: Initially, we conducted a thorough analysis of the existing Raj SIMS portal to identify its limitations and areas for improvement. This involved gathering feedback from users and stakeholders to understand their pain points and requirements.

Technology Evaluation: We evaluated various frontend development frameworks and technologies, ultimately selecting ReactJS for its robustness, flexibility, and strong community support. Additionally, we integrated other technologies such as Redux for state management and Axios for handling API requests.

UI/UX Design: Collaborating closely with UI/UX designers, we translated the project requirements into wireframes and design mockups. This phase involved creating a modern, intuitive user interface with responsive design principles to ensure seamless user experience across different devices.

Frontend Development: Leveraging ReactJS, we commenced the development phase by implementing the core frontend components of the Raj SIMS portal. This included coding interactive elements, navigation features, and authentication mechanisms to enhance security and user access control. Also implementation of condition-based rendering to display relevant views based on the department specified in the client ticket.

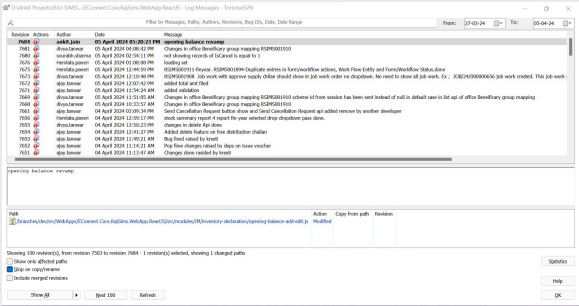
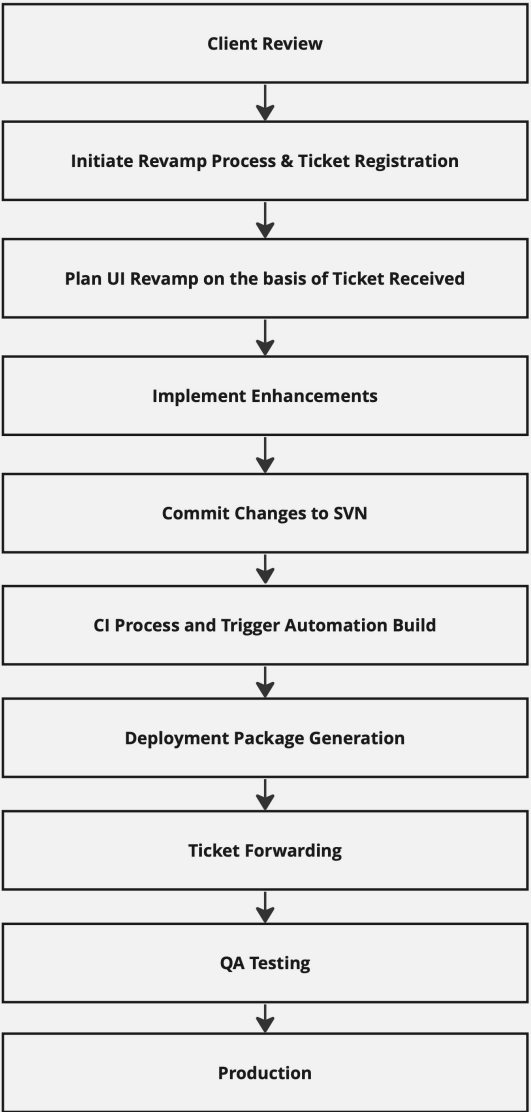
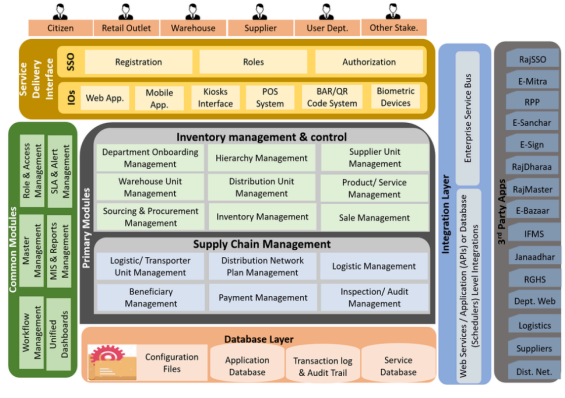
Integration with Backend: Working in tandem with backend developers, we established communication protocols and APIs for seamless integration between the frontend and backend systems. This involved exchanging data and implementing CRUD operations to fetch and update information from the database.

OUTCOMES

- Increased efficiency and productivity in supply chain management operations.
- Improved user satisfaction and engagement with the revamped portal.
- Enhanced transparency and accountability in governance processes.
- Reduction in errors and delays in procurement and distribution activities.
- Better utilization of resources leading to cost savings for the government and stakeholders.
- Empowerment of decision-makers with actionable insights from real-time data analytics.
- Strengthening of the state's digital infrastructure and readiness for future technological advancements.
- Streamlined and error-free matching of PO and dispatch instruction IDs, minimizing discrepancies and ensuring accurate transactions.
- Improved user experience with the integration of popup modals, providing easy access to crucial information and enhancing decision-making capabilities.

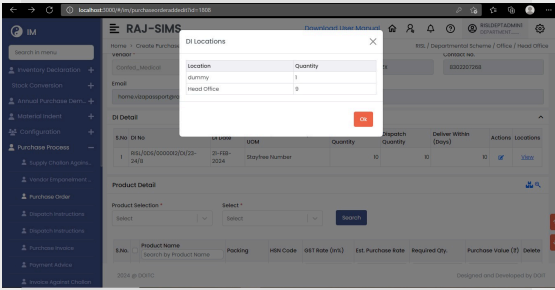
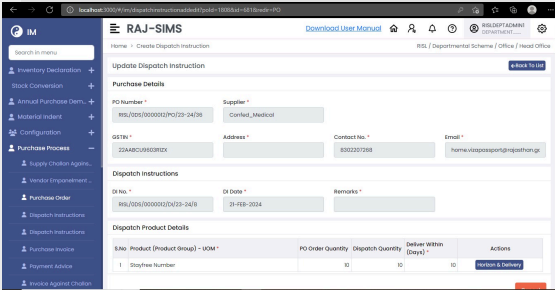
Testing and Quality Assurance: Throughout the development process, rigorous testing was conducted to identify and rectify any bugs or issues. This encompassed unit testing of individual components, integration testing to ensure smooth interaction between modules, and user acceptance testing to validate the functionality from an end-user perspective.

Deployment and Maintenance: Upon successful testing and approval, the revamped Raj SIMS portal was deployed to the production environment using SVN for version control. Continuous monitoring and maintenance activities were performed to ensure optimal performance and address any post-deployment issues promptly.



EXPECTED RESULTS

- Modern, intuitive user interface with responsive design principles for seamless user experience across devices.
- Enhanced authentication mechanisms ensuring secure access control and data protection.
- Optimized supply chain management processes for efficient procurement, inventory management, and distribution.
- Implementation of data analytics features providing real-time insights and decision support.
- Scalable and reliable portal architecture capable of handling large volumes of data and future growth.
- Improved collaboration and integration between different departments and stakeholders.
- Enhanced system performance with optimized code and caching mechanisms.
- Compliance with data privacy regulations and robust security measures to protect against cyber threats.
- Comprehensive reporting tools and analytics dashboards for informed decision-making.
- Implementation of conditions to verify and display the correct matching of PO ID and ID whenever required.
- Integration of a popup modal to display precise location and quantity details required, enhancing user convenience and efficiency.



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