Real-time Fleet Management Solution

A scalable mobile and web solution that automates transportation workflows, enhancing compliance, reducing fraud, and improving overall fleet performance.

Overview

- Delivered a custom, multi-tenant Fleet Management Solution (mobile and web) to automate core logistics and compliance workflows.

- Digitized processes including Electronic Logging Device (ELD) compliance for service hours, eDVIRs (inspections), and mileage tracking.

- The solution significantly reduced fuel consumption by 13% and insurance premiums by 6% by improving safety and route efficiency.

- Provided drivers, mechanics, and fleet managers with real-time data to drive quicker, data-driven decisions and reduce fraud claims by 15%.

Client Profile

Our client is a US-based technology startup serving the transportation industry with safety and compliance solutions. They offer cloud-based solutions that help fleet operators decrease downtime and improve performance.

Challenges: Manual Compliance and Low Visibility

- **Compliance Risk:** Manual logging of driver service hours and vehicle mileage was time-consuming, error-prone, and failed to meet regulatory requirements (e.g., ELD standards).

- **Operational Inefficiency:** Manual processes for inspection logs, repair tracking, and document management reduced visibility into actionable data.

- **Scaling Difficulty:** The lack of a digitized, automated platform meant operational inefficiencies and compliance risks intensified as the client's business grew.

QBurst Solution: ELD-Compliant Digital Platform

We developed a fully customizable and quick-to-deploy fleet management platform, utilizing Java, Kotlin, Swift, and a microservices architecture (Spring Boot, React, AWS Cloud) to digitize and automate critical transportation and logistics workflows.

- **Full Digital Ecosystem:** Delivered web and mobile applications (iOS/Android) for geographical tracking, electronic service hour logging (ELD compliance), and digital document storage for regulatory purposes.

- **Integrated Workflows:** Seamlessly integrated eDVIRs (Electronic Driver Vehicle Inspection Reports) with the mechanic repair process and automated work order creation based on inspection/diagnostic inputs.

- **Compliance Simplification:** Simplified DOT audit preparation, accident investigations, and claims management through automated data capture and readily accessible digital documentation.

Technical Highlights

- **Hardware Integration:** Connects with various truck-data port adapters via Bluetooth (BLE), following J1939 and OBD2 protocols to send parsed logs to the servers.

- **Automated Logging:** Electronic logging automatically captures and updates driver duty status based on engine activity and vehicle movement detection.

- **Behavior Monitoring:** Monitors driver behavior (harsh braking, speeding) to generate a Driver Score.

- **GPS Optimization:** Features GPS-enabled route optimization and real-time fleet tracking using Google Maps.

- **Financial Reporting:** Compiles fuel tax information by jurisdiction to ease quarterly filings.

Impact

- **Fuel Efficiency:** Optimized route planning and vehicle maintenance tracking led to a 13% reduction in fuel consumption.

- **Cost Savings:** Improved safety and compliance processes resulted in a 6% reduction in insurance premiums.

- **Fraud Prevention:** Enhanced tracking and data accuracy reduced total claims resulting from fraud by 15%.

- **Operational Streamlining:** Digitized documentation, accident scene management, and real-time alerts ensured 'on-time service' and quicker process closures, replacing error-prone manual logs.