09 Fleet Management

Industry	Transport/Fleet Management	Client	CAR5 – Carsharing Service
Role	Project Manager, Solution Architect		
Key Result	A car-sharing service was launched from scratch, featuring its own application and mobile application, and an integrated management system was delivered. The infrastructure was migrated to AWS Cloud, significantly improving transparency and system reliability.		

Situation	Task	Action	Result
The client (CAR5) planned to launch a new carsharing service from scratch and faced the necessity of creating all the required IT infrastructure and software for fleet management. This included integration with in-car IoT devices, interaction with third-party service providers, and ensuring high system reliability and scalability to support a growing user base and fleet.	In my roles as Solution Architect and Project Manager, my task was to establish the carsharing service entirely from scratch. This involved team formation, requirements gathering and analysis, solution design, implementation, integration with in-car IoT and third-party service providers, and the migration of all IT infrastructure to the AWS cloud. The ultimate goal was to deliver an integrated management system, enhance operational transparency, and improve system reliability.	**Project Team Formation:** I assembled and organized the team responsible for developing and implementing the car-sharing service. **Requirements Gathering and Analysis:** Conducted a detailed collection and analysis of business requirements for the carsharing service, including user scenarios, operational processes, and technical specifications. **Solution Architecture Design:** As a Solution Architect, I developed a comprehensive architecture for the car-sharing platform, encompassing the backend, frontend, databases, and mechanisms for interaction with IoT devices and external services. **Technology Stack and Cloud Platform Selection:** Made decisions on using PHP and Web for application development, 1C for internal accounting processes, and AWS Cloud for hosting the entire infrastructure, ensuring scalability and reliability. **Development and Implementation Management:** As Project Manager, I oversaw the entire software development lifecycle, ensuring that the developed modules met requirements, and managed the implementation process. **Integration with IoT and Service Providers:** Led efforts to integrate the system with IoT sensors, installed in cars (for tracking location, door status, fuel level, etc.), as well as with various external service providers (payment systems, mapping services, etc.). **Migration of Infrastructure to AWS Cloud:** Organized and supervised the process of migrating all server infrastructure and databases to the Amazon Web Services (AWS) cloud environment, which significantly enhanced fault tolerance, security, and scalability. **Testing and Launch:** Organized comprehensive system testing and its phased launch into production.	**A Carsharing Service Launched from Scratch with Custom Applications:** A fully functional carsharing platform was successfully created and implemented, including its own custom web and mobile applications. **Integrated Fleet Management System:** Seamless interaction was achieved between various system components, including in-car IoT devices. **Enhanced Operational Transparency:** The system provides full transparency of all operations related to car usage, their status, and interactions with clients. **Significantly Improved System Reliability:** The migration of infrastructure to AWS Cloud and architectural decisions led to high fault tolerance and reliability of the carsharing platform. **Scalable Solution:** A foundation was established that could support rapid growth in both fleet size and service user base.