VZ- Streamlined Fleet Management: Powering 1.8 million vehicles for 80,000 customers

* **Background**
* Our client, a Fortune 30 telecom service provider provides fleet management software system to B2B clients in the US.
* This system was originally developed using a monolithic framework
* **Challenges**
* The monolithic (centralized) architecture resulted in scalability, reliability, and operational challenges for the client, which further impacted customer experience.
* **Solution**
* Creospan evaluated the existing architecture and identified scalability and operational gaps within it.
* Analyzed feedback received from the client and their "Why" behind transitioning to Microservices
* Proposed a modernized architecture based on Springboot, Kafka (Message Queue), and Microservices to meet the scalability, reliability, and operational needs of the client.
* Identified a path (timeline, resources) to transition to microservices architecture
* Added asynchronous elements to the architecture using Kafka technology to enable decentralization
* **Technology Stack**
* Old: Monolithic - React, Node.js, MySQL
* New: Microservices & Async - React, SpringBoot, MySQL, Kafka (Message Buffer)
* **Business Benefits**
* **Operational Efficiency:** 
  + A new design based on microservices, and asynchronous transactions allows for operational efficiency since multiple development teams can independently develop different components of this architecture in a parallel manner without impacting other components
* **Scalability & Reliability:**
  + The microservices architecture enables the client to scale each of these services independently and on the fly and enables our client to launch these services in different geographies.
* **Exemplary Customer Experience:**
  + It enables our client to deliver an exemplary customer experience since the new architecture and design enables our client to minimize outages caused due to synchronous and monolithic design.
* **Efficient CAPEX & OPEX (Cost Savings):**
  + Microservices architecture allows our client to scale each service per the needs of the market and thus minimizes the expenses linked with inefficient utilization of hardware and software resources

