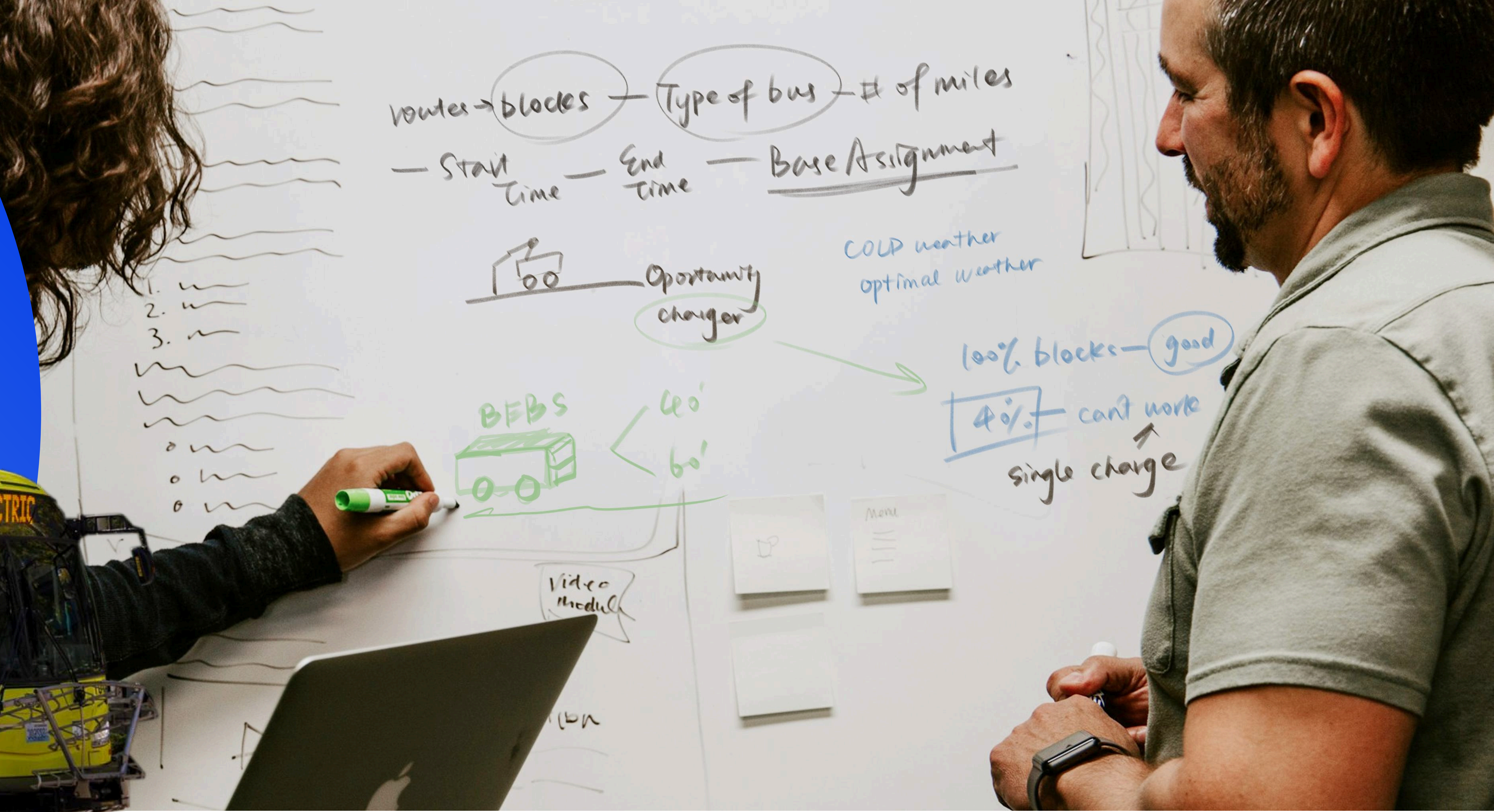


ZETA

Zero Emission Transit Analysis

A simulation tool for zero-emissions transition planning



Problem

King County Metro is leading the transition from diesel buses to a zero-emission fleet, with plans to achieve full zero-emission status as soon as 2035. To begin this project, we conducted user interviews with 5 employees and identified the following key challenges in their current zero-emission plan.

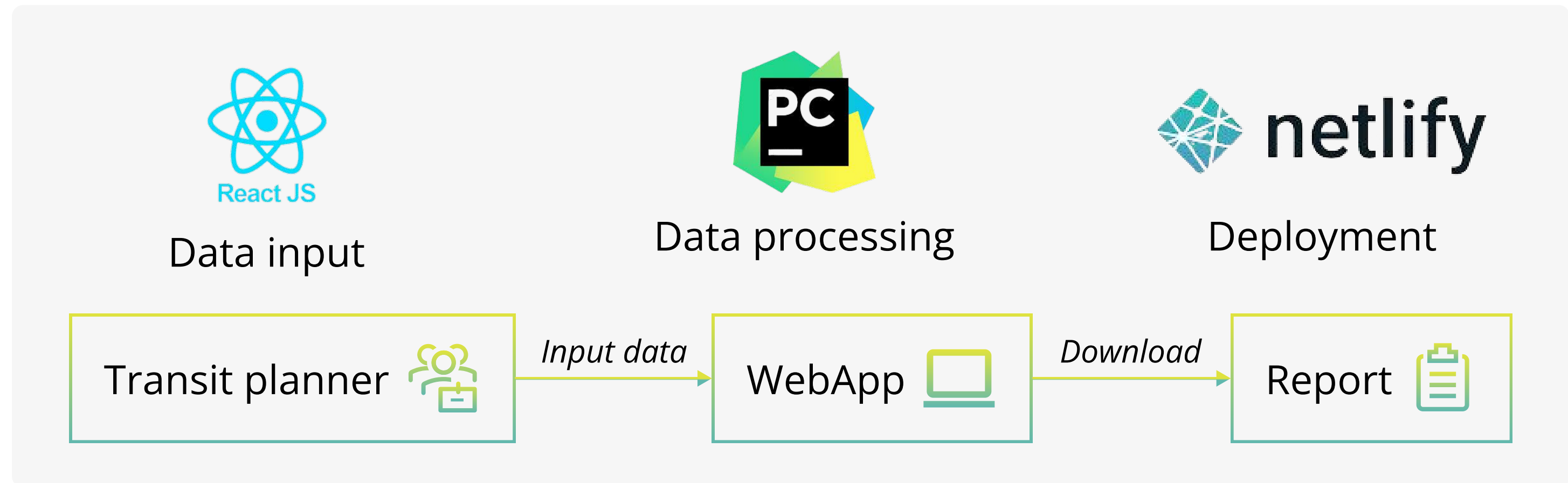
Solution

ZETA is a fleet and service data analysis and simulation tool designed to help transit agency's transition from diesel bus to an all-electric bus fleet. The tool serves as both an educational resource and a decision-making tool, replacing the need for extensive consulting reports with a more accessible, visual, and actionable approach. By replacing complex consulting reports with an intuitive and interactive tool, stakeholders can independently explore fleet transition strategies and make informed, data-backed decisions.

Key Features

ZETA offers streamlined onboarding and easy data upload for simulation. Adjust variables and simulate actions to view real-time outcomes. Users can generate comprehensive reports for different settings of scenarios, download reports in multiple formats, and easily share with stakeholders.

Technical Architecture



Approach

Field research+Interview SME

We gained comprehensive insights into the project through in-depth interviews with Subject Matter Experts and extensive field research.

Ideation+brainstorming

Our extensive brainstorming sessions and discussions with sponsors generated multiple viable solutions for the KCM-ZE project.

Review sessions with sponsor

We have multiple review sessions with our sponsor to monitor progress and ensure timely assistance to keep us on track.

Design+usability test

We developed a low-fidelity UX prototype that incorporates essential functionality, enhancing design iterations through user feedback.

Develop+ functional test

This design approach enabled us to conduct functional tests effectively



Lack of Suitable Solutions

Limited tools in the market offer tailored, comprehensive simulations for zero-emission fleet planning.



Time-Consuming Analysis

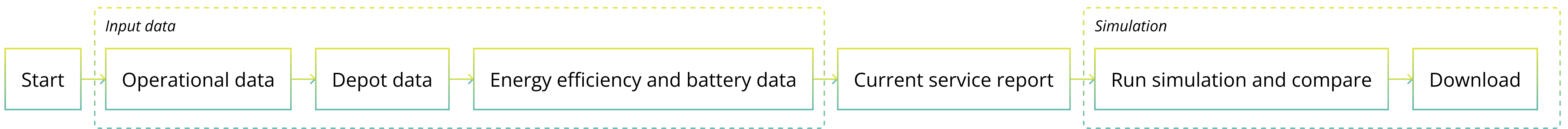
Requires 8-16 hours of preparation with consultants and an additional 2 hours to generate a single basic zero-emission report.



High Cost

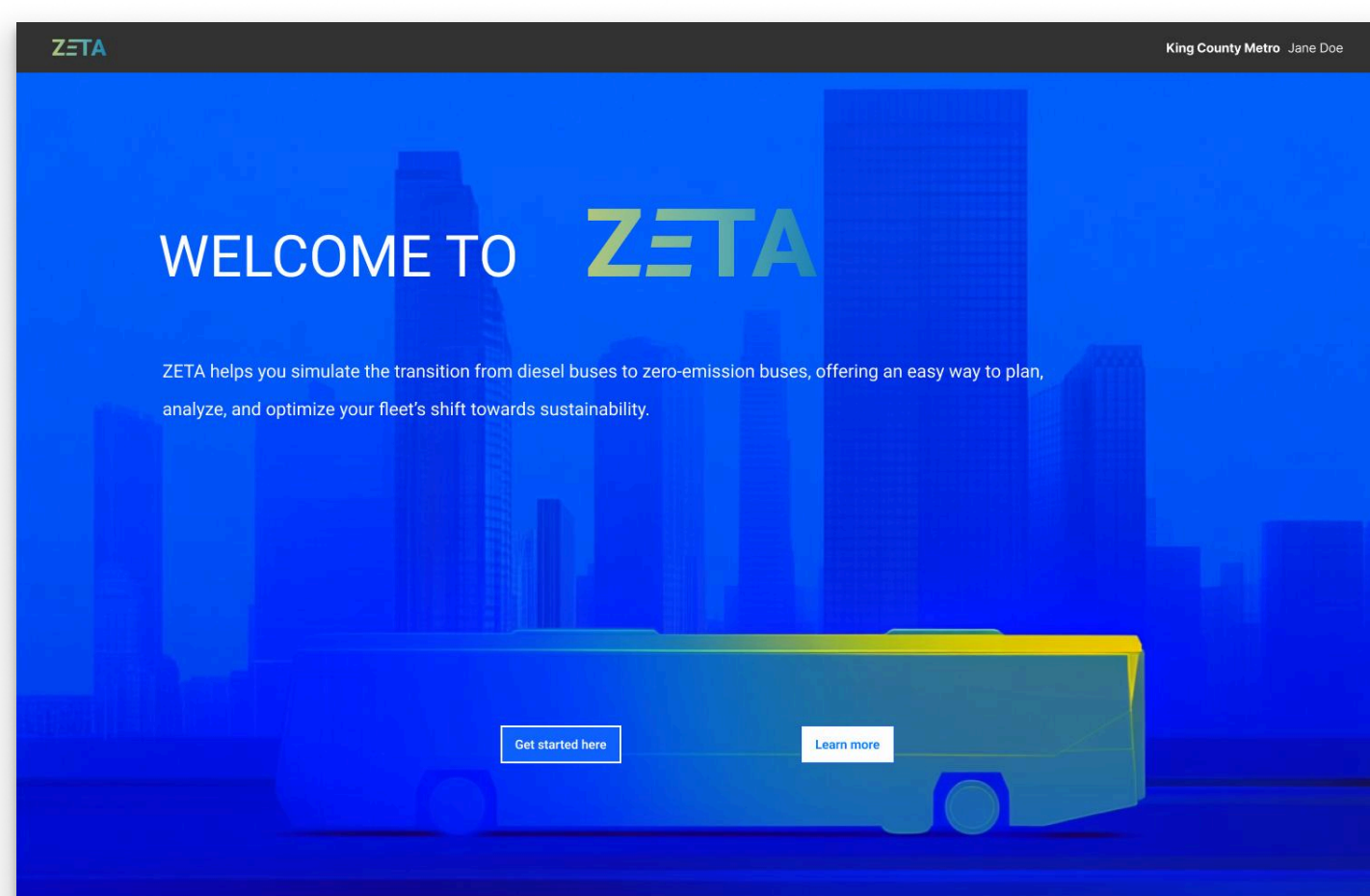
Agency spend up to several hundred thousand dollars a year on external consultants for zero-emission reports.

User Flow

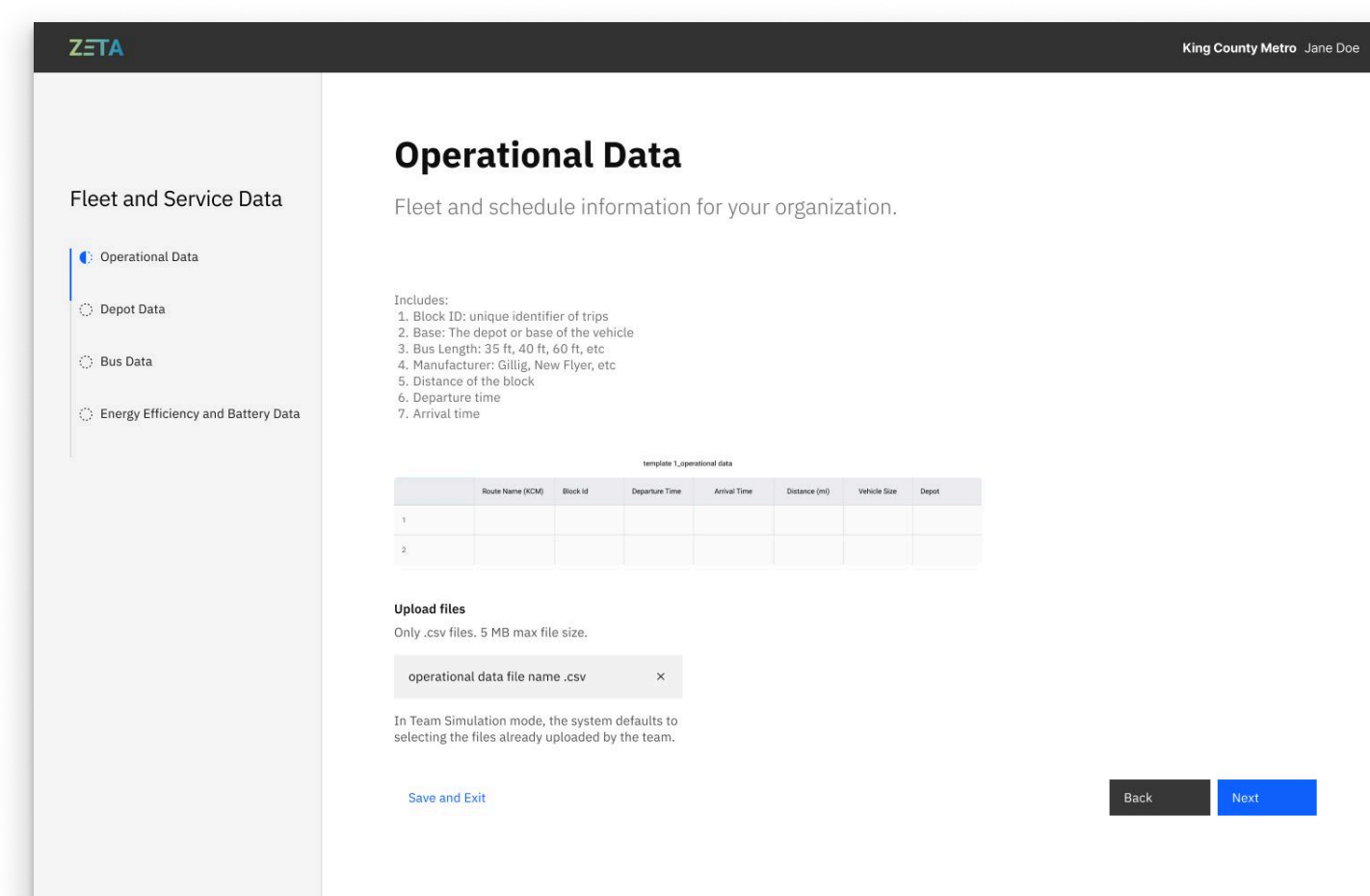


High-fidelity Prototypes

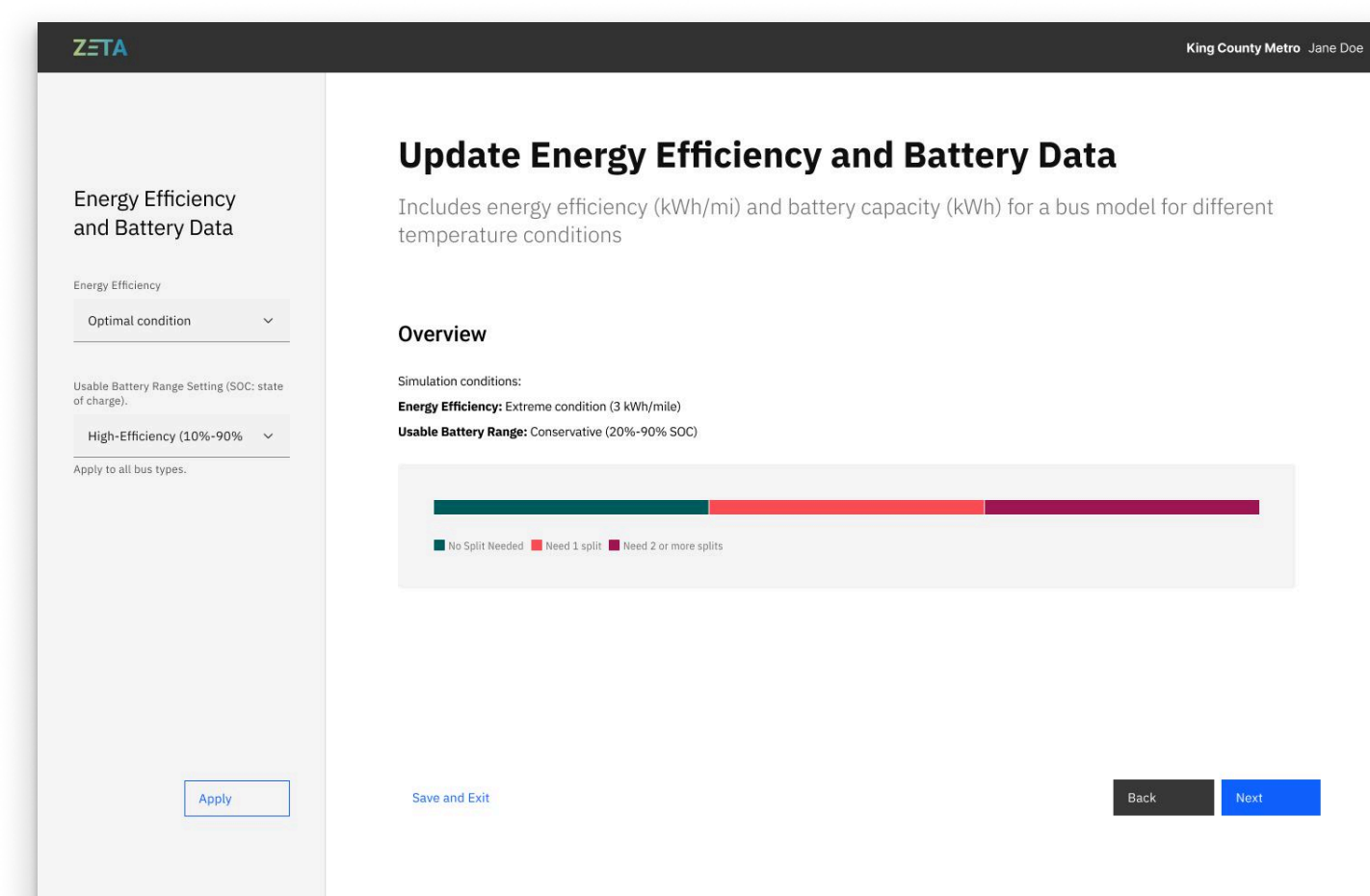
Step 1: Tool introduction & template



Step 2: Fleet and service data input



Step 3: Simulation decision



Step 4: Results and collaboration

