



## Charter Global

# CASE STUDY – Revolutionizing Transit Accessibility: Streamlining Access with Automated Eligibility Management Tool Implementation

### About the Client

In 2020, Charter Global undertook a transformative project for a transportation services provider. The client faced a challenge with manual processing of eligibility applications for riders requiring door-to-door transportation. This case study highlights the innovative solution implemented by Charter Global, introducing an automated Eligibility Management Tool (EMT) to streamline the process.

### Project Goals

The project was designed and executed within a tight 20-week timeframe, employing an agile methodology. This involved sprint-based development, a meticulously structured product backlog, and features/requirements into epics and stories. Continuous engagement with the client through demos ensured alignment with expectations.

### Key Challenges

The client encountered a substantial influx of paper-based applications from riders unable to use fixed route transit systems regularly. Agency users manually assessed eligibility, leading to inefficiencies, delays, and a lack of scalability. The goal was to create an automated system that digitized application submissions, assessment processes, and approvals. Similarly, it was assessed that each customer required a different workflow.

## Project Description

Charter Global devised a comprehensive solution by building and deploying EMT as two distinct artifacts: EMT-UI (User Interface) and EMT-API (Application Programming Interface), following microservices design principles.

**EMT-UI:** It is a frontend single page responsive web application developed using Vue.js and Vuetify framework. Authenticated users can access the application content. It caters to both customer and agency users, enabling online application submissions, defining workflows, appointment schedules, status tracking, and comprehensive management capabilities. This responsive interface ensures accessibility across various devices.

**EMT-API:** It is a backend microservice application that exposes all EMT business capabilities as REST APIs. It is implemented in Node.js using Express Web framework and other libraries. EMT-API uses Postgres database for data storage to support JSON format and wide querying strategies. It communicates with the Routematch internal and external systems to complete the customer eligibility assessment.

The tech stack in this project encompassed Node.js, Vue.js, Vuetify, Express, Axios, GraphQL with Apollo for efficient data retrieval, HTML5, CSS for seamless design, Postgres SQL for database management, Docker and AWS deployment for scalable hosting.

## Results

The implementation of the EMT revolutionized the client's eligibility determination process. The automated system streamlined application submissions, assessment workflows, and approvals, significantly reducing manual intervention. It offered customer users a seamless online experience while empowering agency users with advanced filtering and management capabilities.

## Why Charter Global

Charter Global's successful deployment of the Eligibility Management Tool for a formidable transportation services provider stands as a testament to the power of automated solutions in optimizing transit service accessibility. By leveraging cutting-edge technologies and an agile approach, the project not only addressed existing challenges but also set a benchmark for efficiency and scalability in the transit industry.

Continued collaboration and enhancement of the EMT could include further integrations, usability improvements, and scalability measures to accommodate evolving transit demands and technological advancements.

This case study illustrates how the collaboration between a transportation services provider and Charter Global brought forth an innovative solution that redefined the transit industry's approach to eligibility determination, setting a new standard for efficiency and accessibility.

## About Charter Global

Charter Global drives innovation in IT projects and business operations by defining strategy and providing consulting, digital solutions, custom development, and skilled resources. With an established customer base of Fortune 1000 industry leaders and over 100 successful project implementations, our experience and proven methodologies enable our professionals to deliver industry leading solutions in cloud technologies, open source, DevOps, mobility, CRM, AI/ML, AWS, SAP, Microsoft & Pega BPM.