Detroit Department of Transportation (DDOT) services the greater metro Detroit area and even extends their service ¾ mile further than the furthest fixed route bus stop in the area. DDOT contracts with Transdev's IntelliRide division to provide ADA demand response operations with curb-to-curb paratransit service. With this brokerage system, Transdev handles all scheduling, dispatching and reservations for DDOT, and all drivers are subcontracted.

DDOT uses a fleet of approximately 49 vehicles and completes an average of 1,000-1,200 trips on weekdays across seven transportation providers. On weekends, DDOT expects 300-400 trips on Saturdays and 250-300 trips on Sundays, adding up to approximately 26,000 trips on a monthly basis.

With 30 employees operating the paratransit department coupled with the large volume of demand response rides they provide, DDOT is categorized as a larger transit agency.

The Challenge

Larger transit agencies face unique challenges compared to smaller transit agencies. Large transit systems face more complex scheduling, dispatching, and billing processes because of the sheer size of their fleets, their day of service operations, and the fact that they are often dealing with multiple providers. Large transit agencies have a longer span of operational requirements, more days of service, and usually, multiple depot locations for vehicles.

DDOT is no exception, and was facing challenges that were hindering operations and efficiency. Examples of specific issues they were dealing with include:

- Poor or disjointed communication issues between management and drivers due to paper manifests and reliance on antiquated technology

- Coordination between DDOT, the previous broker, and subcontractors were cumbersome due to the largely manual process of scheduling and moving trips

- Limited visibility into driver data, scheduling, and execution

- Manual scheduling that resulted in drivers always running behind schedule

Additionally, DDOT was not seeing any real benefits with their legacy scheduling software, and in fact, it was contributing to the overall operational challenges that they were facing. DDOT's frustration with the previous legacy software stemmed from several issues including:

- Staff was required to collect all pick-up calls for the next day by 4:30pm and pool all of the trips into a report to send to each provider manually, which created disjointed delivery of customer trips

- Zero visibility into how the trips were being booked

- Because of the way that the trips were scheduled, they could have three provider vehicles all driving down the road at the same time to pick up one customer

Ultimately, DDOT's goal was to be more efficient, increase their rides per hour, and improve customer service. So, how did they get there?

The Solution

DDOT realized that they did not have the technical capacity and expertise to fix the problem. They put out a 5-year contract RFP and evaluated Ecolane as a potential new solution to help address their challenges and turn everything around. Ecolane was one of two options considered.

When comparing Ecolane with their legacy software, they noticed several major differences:

Ecolane

- Fully automated scheduling that reduced the number of staff needed to make schedules
- Increased flexibility to make adjustments to manifests
- Training was robust and thorough, with the Transdev partnership
- Software was more efficient
- Able to use Detroit-based providers

Previous Legacy Software

- 15 people were needed to schedule trips
- No flexibility to change the trip manifest
- Manual schedule creation with 20-year-old software

	Previous Software	Ecolane
Fully Automated Scheduling	✕	✓
Flexibility For Manifest Adjustments	✕	✓
Optimize Operations For Maximum Efficiency	✕	✓
Robust & Thorough **Software Training**	✕	✓

There was no question in DDOT's mind as to what software would take their program to the next level, and they ended up choosing to transition away from their legacy software and implement Ecolane software instead.

They implemented the Ecolane DRT Brokerage software solution with the following capabilities:

- Touch screen MDT software on Android tablets (100% MDTs in all vehicles in operation daily)
- SMS Text Messaging
- Self-Service Web Bookings
- Google Transit Integration
- Sub-Contractor Portal for added visibility
- Advanced reporting system with ad-hoc reporting tool

The Implementation

Ecolane was able to provide more resources on the ground during the implementation process and throughout the service contract because DDOT is a larger agency.

It was decided that a brokerage model for DRT would work best for DDOT. Once Ecolane DRT was configured utilizing the provider rates, the software was able to search for first availability from the "least cost provider", so it automatically created efficient schedules to maximize cost savings. During the implementation, Ecolane conducted a risk assessment to ensure a smooth implementation process. A risk assessment highlights operational issues and brings them to the forefront so that they can be addressed and corrected upfront. The time that it takes to conduct a risk assessment is totally dependent on the number and locations of depot stations. With DDOT's risk assessment, Ecolane spent three days as opposed to spending only one day for a smaller agency's assessment.

DDOT was also in the process of relocating during the implementation process, which added an extra layer of complexity, but was not an issue for the Ecolane implementation team.

The DDOT team helped Ecolane make the implementation process successful because their leadership and management teams were hands-on with full support. When learning a completely new software system, implementation can be challenging for an agency, but the process can be managed successfully with a helpful training and support team.
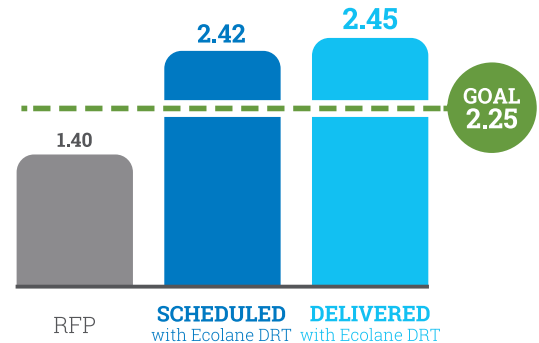
Ultimately, the project was completed on budget and on time. From contract signing to go-live , it took less than 5 months to complete implementation.

The DDOT team expected to have a negative budget impact initially with the implementation, but instead saw a positive budget impact immediately.

The Results

With Ecolane software successfully implemented, DDOT saw immediate results:

- Rides Per Hour increased from 1.4 (under the previous legacy software) to 2.42 (scheduled productivity) and ultimately 2.45 (delivered day of service productivity)

- 23% improvement in On-Time Performance (OTP)

  - OTP was previously 60%-70%, but jumped to 80% immediately on the first day after using Ecolane software

  - Current On-Time Performance is 85%-90%

- Achieved their highest ridership figures in history: 6,375 rides per week

2.42   **2.45**

1.40

GOAL
2.25

RFP

SCHEDULED
with Ecolane DRT

DELIVERED
with Ecolane DRT

Most notably, customer service has greatly improved for DDOT riders:

- Complaints have dropped from 25 per week to only 2 per week with Ecolane software

- In a recent random survey of 500 customers, there were only 8 total complaints

- Greater mobility options for Detroit residents with over 100 same-day trips

DDOT increased visibility into all levels of employees, most notably the drivers. With MDT software, they can now see driver GPS position in real time, can communicate with drivers in real-time, and can provide customers with an accurate ETA when they call in for more information. With the ability to see when vehicles are at capacity, DDOT can also provide better customer service by negotiating with customers directly in the event that the vehicle for their scheduled trip reaches capacity and can check ride availability to make sure runs aren't overbooked, preventing issues for customers before the onset.

Operationally, DDOT has been pleased with the overall results:

- Increased visibility into all levels of employees, most notably the drivers
- Increased productivity through RPH, revenue miles, and service miles
- More efficient grouping of trips by geography, time, and/or common destination
- Improved accountability to ensure that policies and procedures are followed
- Ability to implement new policies based on trends seen in data analysis
- With demand response software, the schedulers can book trips directly to a vehicle as opposed to sending to a provider
- The significant increase in Rides Per Hour was a result of the software's constant optimization
- The software books the runs efficiently enabling the agency to "run cut" and gain savings in operational costs

DDOT will soon launch a joint effort with the City of Detroit Workforce Development Department, because of the success achieved with Ecolane software.

Customer Comments

"Ecolane has been the direct link to the improvement of ADA service for our customers. Since our partnership with Ecolane and Transdev began, both the timeliness and overall service quality has significantly improved in the past year."
  – Dan Dirk, CEO, DDOT

"The function we're most happy about is the ability to schedule trips to a dedicated vehicle. This allows us to see availabilities so we can determine next steps to schedule a trip. If runs are full during certain times, we receive an error message explaining a specific trip cannot be scheduled. This allows us the option to negotiate different times to satisfy and service the consumer successfully."
  - Simone Lowe, Operations Manager, IntelliRide, A Division of Transdev North America

Interested in seeing how Ecolane can turn around your
transit agency's operations, too? Schedule a free software
demo today by visiting us at ecolane.com/DDOT.