



Case Study:  
**CAPITAL DISTRICT  
TRANSPORTATION AUTHORITY**

**Using Analytics for Performance Improvement  
to Improve Rider Satisfaction**



**Quick facts:**

**Organization:** Capital District Transportation Authority

**Industry:** Public transit

**Location:** Albany, NY

**Employees:** 650

**Customer since:** 2017

**Website:** [www.cdfa.org](http://www.cdfa.org)

**Solution:** Diver Platform with Zight consulting services

**KEY TAKEAWAYS**

- ❑ *CDTA is currently tracking and working to improve performance on 23 KPIs in critical areas such as ridership, revenue, cost, and on-time performance.*
- ❑ *Using Diver Platform, Zight is helping CDTA gather data on its routes and performance in order to improve the performance, the rider experience and the number of riders.*
- ❑ *CDTA's analytics application will also enable it to better train operators by using driver data from the vehicle management system.*

**BACKGROUND**

The Capital District Transportation Authority (CDTA) is the public transit system that services Albany, N.Y., and the surrounding communities of Rensselaer, Saratoga, and Schenectady. The organization has a total ridership of 16.4 million passengers each year. Half of the region's population of approximately 769,000 people lives within ¼ mile of CDTA's bus service.

CDTA's mission is that the organization plans, finances, implements, and delivers transit services that take people where they want to go in the Capital Region safely, efficiently, and at a reasonable cost. In 2017, CDTA was named the Best Mid-Size Public Transportation System in North America by the American Public Transportation Association (APTA).

**THE CHALLENGE**

As a public transit company, CDTA's goal is to get people where they need to go—and get them there on time. However, unpredictable factors such as traffic, weather, and fleet maintenance can get thrown into the mix.

CDTA has turned to technology in order to further optimize its operations and help it improve performance in key areas.



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*—Luc van Wijngaarden, CEO, Zight*



### **THE GOAL**

*As part of its technology goal, CDTA wanted to use analytics in order to:*

- Improve the performance of its bus routes to exceed its internal goal of having 75% on-time performance.*
- Be able to gather data on its fleet and routes in order to provide the optimal schedule for its bus routes.*
- Use data on operator performance from the vehicle management system to better monitor and train operators.*

### THE SOLUTION

CDTA has partnered with INIT in order to upgrade its intelligent transportation management system (ITMS). This would provide CDTA with many benefits such as a mobile app for passengers, a customer-friendly website, and new signage. As a result of this implementation, CDTA is gathering large volumes of data.

Part of the project includes analytics technology and services provided by Zight, a Dutch company that specializes in business intelligence for the transit industry. Zight helps its customers improve profit, performance, and passenger satisfaction through the use of better decision-making.

Through Zight, CDTA is using Dimensional Insight's Diver Platform to pull together and visualize its data from three different systems:

1. **Ticketing:** This includes passenger payment and bus check-in information.
2. **Planning:** This includes all routes and the scheduled times for each stop.
3. **Vehicle management system:** Includes computers on each vehicle that store GPS data, actual boarding times for each stop, and operator driving behavior.

One of the benefits of Diver is that it is able to handle large volumes of data from a variety of different technology systems, as is typical in transit systems. At CDTA—as with all of its clients—Zight is implementing Diver using a four-phased approach.



**Phase 1:** Zight works with CDTA to define the data strategy and KPIs that would be used to measure performance improvement.

**Phase 2:** Zight designs dashboards with KPI owners. By working in tandem with each other, CDTA can ensure that only relevant, meaningful information is displayed on its dashboards and that its users are engaged and own their projects.

**Phase 3:** Zight develops the transit intelligence system by bringing together the relevant data sources in Diver Platform.

**Phase 4:** Zight deploys the system at CDTA. Working together, the companies focus on performance improvement and ROI using Lean Six Sigma principles.

Luc van Wijngaarden, Zight’s CEO, says this approach works because it creates a true partnership between CDTA, Zight, Dimensional

Insight, and INIT. “The most important thing is we all have our own strengths and we bring them to the table. CDTA has its requirements and subject matter experts, while Dimensional Insight and INIT bring the technology expertise. My team has the experience in working with public transport systems all over the world, and we can bring these learnings to the process.”

CDTA currently has 23 KPIs that it is measuring in eight different departments. These KPIs include measurements such as ridership, revenue, cost, and on-time performance. The organization has also implemented targets for each of these KPIs that it wants to meet.

### WHAT’S NEXT

According to van Wijngaarden, the deployment process is one of continual refinement, and CDTA continues to adjust its goals and visualizations. “The KPI owners get new ideas, so you find that the set of dashboards is a living thing that you need to readjust. Thankfully, Diver is not just robust, but flexible as well, so the visuals can be adjusted easily.”



### About Dimensional Insight

Dimensional Insight is the leading provider of integrated business intelligence and data management solutions. Our mission is to make organizational data accessible and usable so everyone from analysts to line of business users can get the information they need to make an informed, data-driven decision.



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