



SIEMENS

Siemens helps keep Brightline on time

Unique, data-based maintenance program
guarantees 100-percent availability.

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Travelers arrive on time and relaxed when they take Brightline between West Palm Beach, Ft. Lauderdale, and Miami. The higher speed passenger rail service relies on Venture trainsets built and maintained by Siemens Mobility to give people a smarter way to travel in South Florida. Comprehensive maintenance performed by highly skilled Siemens technicians, who use proven solutions and the latest in digital monitoring and analysis, helps keep the fleet running on schedule every day.

Client Objectives

Brightline envisioned offering the ultimate passenger experience when it partnered with Siemens on the custom design of its five Venture trainsets. It also wanted to ensure on-time travel to make the train a real alternative to car trips bogged down by South Florida's intense highway traffic.

As manufacturing on the first trainset began in July 2015, Brightline recognized that a cutting-edge maintenance program would be crucial to keeping its trains on schedule. It would also be necessary to keep all five of its initial trainsets in running order during service hours. To ensure this high level of availability, Brightline signed a 30-year agreement to make Siemens its maintenance partner for the long term.

Brightline began revenue service in January 2018. The maintenance program was up and running by then, operating out of a renovated depot in West Palm Beach that was updated to meet the special requirements of quick turnaround service.

"This is a very modern train. Everything is being monitored and data is being collected on anything that is happening, be it a normal event or fault."

Tom Rutkowski
VP of Engineering and
Chief Mechanical Officer
Brightline

Maintenance Solution

To meet the company's need for 100-percent availability of its trains, Brightline and Siemens jointly developed a unique, full-service maintenance solution that is designed to eliminate expensive, unplanned downtime and get more mileage from fewer trains. Brightline management oversees the maintenance groups. To keep the trains on track, the strict performance regime imposes a fee on Siemens if a train is delayed for mechanical reasons.

Once daily passenger service ends between 10 p.m. and midnight, Siemens takes control of the trainsets at the depot where its technicians perform a carefully orchestrated routine of inspections and maintenance activities. Each day the computerized maintenance management system (CMMS) generates an electronic "book" that shows each technician specific activities to be completed. Since the maintenance window can be as short as five hours, not everything is done every day. The activities are divided over several days in a way that prevents equipment failures.

Remote monitoring is another enabler of preventive maintenance. Siemens cutting-edge digital technology uses sensors on the train's equipment to monitor current condition and compare it against scans of the ideal condition. The technology detects patterns that are analyzed by experienced Siemens technicians at the Data Analytics and Applications Center in Atlanta, Georgia, with additional support from experts in New Castle, Delaware. Their analysis helps determine when service is required. By monitoring equipment condition, maintenance becomes predictive rather than reactive.

"This is a very modern train," says Tom Rutkowski, VP of Engineering and Chief Mechanical Officer for Brightline. "Everything is being monitored and data is being collected on anything that is happening, be it a normal event or fault."

A mechanical desk at the West Palm Beach depot provides another level of support. Technicians are on call to immediately answer questions from the train engineer. These technicians also use remote monitoring to dig deeper into any problem and determine the best solution.

Customer Results

Service between West Palm Beach and Miami is running like clockwork as trains sail past slow-moving traffic on US Highway 1. The number of train passengers is increasing steadily as more people realize that the 79-mile-per-hour speeds offered by Brightline are twice as fast as those on the nearby highway, where speeds average 34 miles per hour.

Phase two efforts are already underway to take Brightline's unique brand of luxury to more locations throughout Florida. There will be stations at Orlando International Airport and Walt Disney World, making it attractive to vacationers as well as commuters. The goal after that is Tampa.

Brightline is introducing five new Siemens-built trainsets for the planned expansion. A maintenance depot is being built at the Orlando airport to house the service that will keep this new leg of the journey through Florida on time and even faster, with speeds reaching 125 miles per hour on the Orlando leg of the trip.

About Brightline

Brightline is the first privately funded passenger rail system in America in over a century. Brightline is designed to reinvent travel and take cars off the road by connecting city pairs and congested corridors that are too close to fly and too long to drive. Providing fast, efficient, hospitality-driven transportation featuring the latest in customer-friendly amenities, Brightline currently operates in Florida between Miami, Fort Lauderdale and West Palm Beach, with plans to expand to Orlando, Boca Raton, Aventura and PortMiami. The company is also on track to break ground between Las Vegas and Southern California.

About Siemens Mobility

Siemens Mobility is a separately managed company of Siemens AG. As a leader in transport solutions for more than 160 years, Siemens Mobility is constantly innovating its portfolio in its core areas of rolling stock, rail automation and electrification, turnkey systems, intelligent traffic systems as well as related services. With digitalization, Siemens Mobility is enabling mobility operators worldwide to make infrastructure intelligent, increase value sustainably over the entire lifecycle, enhance passenger experience and guarantee availability. In fiscal year 2018, which ended on September 30, 2018, the former Siemens Mobility Division posted revenue of €8.8 billion and had around 34,200 employees worldwide.



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