



CASE STUDY: **KWRL TRANSPORTATION CO-OP**



“We tried all the top vendors and Samsara was absolutely superior.”

SHANNON BARNETT, DIRECTOR, KWRL TRANSPORTATION COOPERATIVE

Large-scale school bus fleet in Washington state coordinates routes and keeps buses running on schedule with Samsara’s wireless fleet tracking platform:

- 100 buses transporting 4,000 students daily and running weekend trips in Southern Washington
- Deployed Samsara VG33 vehicle gateways to continuously monitor fleet operations, optimize routing, and track historical fleet performance

Highlights:

- Real-time fleet monitoring supplies visibility into where buses are at any given moment, allowing team to keep them on route and on time
- Sensors track stop paddle and emergency light activation
- Engine fault code alerts are automatically decoded so team instantly determines criticality of faults
- Complete route history is used to build smarter routes and plan fleet expansion

Shannon Barnett, Director of KWRL Transportation Cooperative, is tasked with keeping 100 school buses and drivers, all spread across four school districts, on schedule and on route. He's focused on ensuring the efficiency, safety, and compliance of the fleet, which is the largest transportation group in Washington. Barnett's ultimate goal is to make the jobs easier for his hard-working drivers, so the team can collectively operate more efficiently.

KWRL was formed to build efficiencies of scale across four rural school districts in Southwestern Washington. It transports 4,000 students a day, and it's growing quickly. In fact, one of the districts is set to grow from 2,000 to 8,000 students by 2025.

Barnett is always looking for ways to make his driver's work easier and the operation more efficient. Since his drivers cover such wide areas, it's easy for them to make a wrong turn and get lost. Barnett is always on call to help if they get lost or have an issue.

When he began looking for a GPS monitoring system last year, Barnett wanted a solution that could keep up with his team's busy days. His existing, repeater-based system was just too slow. Barnett couldn't see where his buses were, where they were heading, or even if they were moving. He notes the system's 10-minute updates were “all but useless for real-time.”



Barnett began looking for solutions and Samsara was recommended by a trusted industry expert. Barnett thoroughly put Samsara to the test, comparing it to the top 5 GPS providers, and the answer was clear:

We evaluated the top six other vendors and found Samsara to be superior for:

- *User friendliness in our "keep it simple" litmus test*
- *The most timely and reactive coverage*
- *Specific sensor data such as stop paddle and emergency light deployment*
- *The most flexible and responsive to specific user needs*
- *The most affordable*

– Shannon Barnett, Transportation Director

Barnett installed Samsara VG33 wireless gateways across his fleet- simply plugging them into the diagnostics ports and zip-tying them under the dashboard of each bus. Barnett noted “the gateway install



took all of 10 minutes.” The team also wired in bus stop paddles and emergency lights via the VG33’s two auxiliary inputs. When they opened the Samsara Dashboard the difference was night and day.

“The information we need most often is now available at our fingertips.”

If drivers make an wrong turn or need help, Barnett just opens the Samsara Dashboard and sees the bus live on the map. He sees exactly where the bus is, where it’s going, and can talk the driver back onto main roads. The KWRL team also runs weekend trips transporting students to sports games, and if those buses have issues Barnett simply opens the Samsara App from anywhere. He no longer goes back to the office on the weekends or go back and forth on the radio asking “Where are you now? / I don’t know.”

📍 Vehicle battery voltage falls below 10 volts - 132

Resolved after 7 minutes Oct 25, 7:17am

Oct 25, 7:18am:

“'132' battery level has been below 10 volts for more than 1 minutes.”

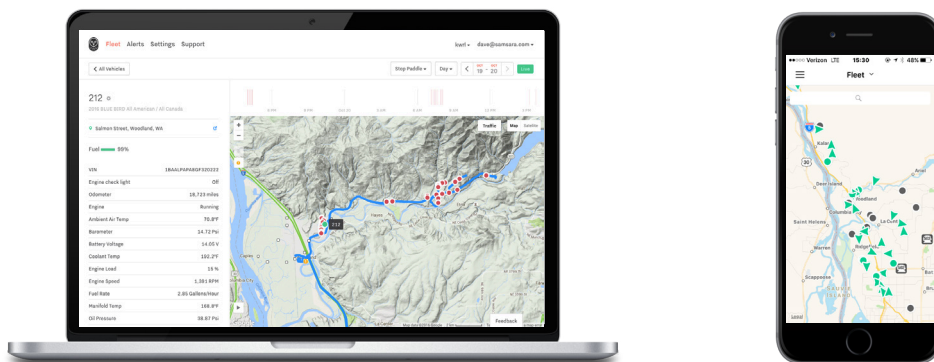
With such a large fleet, Barnett frequently gets calls about check engine lights. He’s set up Samsara Alerts so he’s instantly notified of vehicle fault codes. He coordinates with his mechanic to determine the fault severity and can make the decision to let the bus continue or be serviced.

“Now I have the most accurate information to make the best, safest decision, for our riders. This saves us hours - we no longer need to dispatch a mechanic and a laptop to the vehicle sitting idle deep in the Columbia River Gorge. We just see the fault code in Samsara and decide what to do.”

When transporting students, safety, accountability, and transparency are critical. Because of this, Barnett needed accurate historical data in addition to real-time visibility. His team connected the stop paddle and emergency lights so they can map when buses stop along their routes, all time-stamped and stored in the Samsara Cloud.

When a parent has a question about why a bus was not on time, Barnett sees the bus in the Samsara Dashboard and determines if it's running behind schedule or if the child was late. Using the stop paddle monitoring, he sees if buses made all their scheduled stops. If a child misses a bus, Barnett uses Samsara Dispatch to find the nearest bus and can add a stop. "We found Samsara to be the most accurate, interactive, and timely real time bus tracking."

Barnett is now sharing the real-time location of buses with parents using Samsara's Fleet Viewer. In a region with such cold winters and extreme geography, everyone wants to minimize the time students spend standing waiting for the bus, and with the Fleet Viewer parents can ensure their kids get to the bus right on time. It's something KWRL's parents and superintendents have always wanted, and now Barnett is adding it right in their existing parent portal. "Samsara was the only company flexible enough to network their product with our existing district operations systems to streamline operations."



On top of his daily responsibilities, Barnett and his team are charged with purchasing new buses and planning new routes as the school districts grow. With the Route Analytics Report, Barnett sees which routes frequently run slower or faster than planned, then communicates this to drivers and parents. He uses the data to modify and build new routes, as well as plan for new vehicle purchasing.

"It's truly a partnership. Samsara wants to make products to help make the industry more productive."

As an innovator, Barnett is always looking for the best way to run his organization. He says that while Samsara's product is superior, its customer service is the biggest selling part. He notes Samsara "has the best customer service out of every product or vendor we work with, from office supplies to school bus manufacturers."

"If you're looking for a GPS solution, you'll get the best experience with Samsara. You get a relationship where they listen and can build the product around your needs. You'll get a 'better fitting glove'."