

MassTransit

BETTER TRANSIT THROUGH BETTER MANAGEMENT

South Carolina's Virtual Transit Enterprise Reaches Tipping Point

Caroline March-Long

May 2nd, 2006

Tipping Point (Noun), definition: the moment of critical mass, the threshold and the boiling point. It is the point when everyday things reach epidemic proportions and dramatic changes tip the scale.

The recently issued evaluation of South Carolina Department of Transportation's (SCDOT) Virtual Transit Enterprise (VTE) is an interesting and important read, especially for other states and providers looking to leverage IT for common purposes. Prepared for the U.S. Department of Transportation's Federal Transit Administration (FTA), the 72-page report documents in detail how one state set out to improve the efficiency and effectiveness of rural public transit through state-of-the-art technology.

It shows that any dramatic change requires people to reframe the way they think about how things can be accomplished. Just as we've seen the healthcare industry grapple with the changes brought on by now using electronic medical records, transit providers must relearn how they accomplish their everyday tasks.

South Carolina Department of Transportation's VTE journey started in 1999 and is still in process. And while the VTE project's first phase is scheduled to end late June, 2006, it is really only beginning. The tipping point has been reached, and South Carolina providers are eager for more and more technology. But that wasn't always the case.

Starting Out

To fund the VTE project, federal grants plus an additional 20 percent SCDOT match brought the total budget to \$3.97 million. This budget had to cover some very aggressive goals: give smaller public providers the same technology resources as large providers, automate planning and reporting to reduce overhead and turnaround time, minimize the cost of technology and total cost of ownership, and make transit service more flexible and responsive to rider needs.

Bill Doyle who heads up the VTE Project since February



Santee Wateree Regional Transportation Authority, the second largest small urban/rural provider in the State, now delivers and manages their transit service through automated dispatching and scheduling and an improved radio system.

2004 points out that, "the research showed that a merger between technology and transit had never been attempted before on such a statewide scale. I applaud SCDOT and the FTA in its leadership role in laying the foundation for such a project."

Yet, South Carolina's rural make up didn't make this any easier. Rural operators in the state have wide service areas covering more than one county and trips cover many miles, especially from rural pick-up points to more urban job centers. The VTE project set out to bring rural, urban and council on aging operators onto one centralized, shared computer system, allowing SCDOT to access operating and vehicle statistics for all providers in a common format, and allow providers themselves to leverage each other's resources. At this time, 15 providers are part of the project.

Reality hit early on in the project during 2000, when it came to infrastructure and training. “Our office, like many others, was still doing processes manually and drivers were tallying passenger rides by a count of hands. So, we could not move forward until we got some basic computer equipment,” says Ann August, executive director of Santee Wateree Regional Transportation Authority, the second largest small urban/rural provider in the State.

With VTE funding in hand, providers such as Santee Wateree could finally get more powerful computers, servers, high-end printers and high-speed connections, as well as the training needed to operate Windows-based systems.

As systems were upgraded across the state, SCDOT issued and awarded a scheduling and dispatching software contract in December 2001 to RouteMatch Software, based in Atlanta. Chosen for its past success with rural systems and flexible and easy-to-use software, RouteMatch began in 2003 to roll out the scheduling and dispatching software to providers, starting with smaller systems first to work out any issues.

In hindsight, many wish the opposite had been done. Doyle remarks that, “we moved ahead with a state-wide implementation, but in retrospect, we might have been better off picking a specific region, working out all the issues in one place and then applying that model to the rest of the state. We had some fundamental issues to address that had to do with the rural nature of the state and some basic technology issues.”

Gaining Consensus, Again

Four years after the inception of the project, the stress and strain of adopting new technology was taking its toll.

“When I came on the project in February 2004, there was resentment and frustration and some active resistance to using the new technology. My job was to turn this trend around and build back confidence and buy-in,” says Doyle.

Bill Doyle dove right in. “I personally went and visited with each provider, explained the goals of the VTE project again, and provided the moral support they needed to give this technology project another chance, and then we established a better way to communicate.” From that point forward, providers could discuss issues and get help through group conference calls, discussions during Mass Transit Partnership meetings and direct calls to either Bill Doyle or a RouteMatch Software employee dedicated to South Carolina.

Once the stakeholders were back on board and the benefits were becoming apparent, “it was like a switch had been flipped on,” notes Doyle. “They began to think in technology terms and focused on what it was doing to make their job easier and serve their customers better.”

Listening to Ann August at Santee Wateree, there is a laundry list of benefits from the scheduling and dispatching for her demand-response service. “We can now go into our main system and pull up everything we need to track service in one place. Are trips increasing or decreasing, are denials up, how many wheelchair passengers rode today? It was so convoluted before and now we have this information at the click of a button.”



Bamberg County Handy Ride Collaborative Group.

The Bamberg County “Handy Ride” program plans to emulate the success of the Allendale “Scooter” in providing new public transit services when it launches on May 1. Persons in photo represent the Lower Savannah Council of Governments, Bamberg County and participating funders and coordinating agencies.

Keeping track of passengers by agency is vastly improved, according to Ann. “We can sort passengers by name, date range, agency name and what agency code they are riding on – Medicare, Council of Aging, Rehabilitation and so on. All this helps us bill more accurately.”

The Move to Wireless

Once scheduling and dispatching is in place, providers are eager to move to vehicle tracking and monitoring, also called automated vehicle location (AVL). “We came to the point where we needed to expedite the implementation of GPS tracking. So, for many systems, we decided to install a mid-tier GPS solution from Nextel that was cost-effective. We only needed a Nextel phone and software on a local PC in order to track vehicles,” says Doyle.

In Santee Wateree, they are fine with this solution. “We’re phasing in the Nextel system and have cell phones in our vehicles so we can track miles and location. But, for rural areas such as ours, this is also important for safety reasons. We now have more advanced radio access (800 MHZ system) to respond to emergencies, in case someone on board gets sick or in the event of a natural disaster.”

A full blown AVL implementation – with mobile data terminals on board the vehicle – is scheduled to go live in the Spartanburg Regional Healthcare System (SRHS) in June, 2006.

With 1,700 trips per day and 47 routes that often cover long stretches – some from the North Carolina/South Carolina border to the Coast – SRHS is very eager to get the AVL capability up and running.

“We expect half of our fleet to be outfitted with on-board terminals by the middle of 2006. We will be able to track our vehicles in real-time, knowing the exact time of pick-up and drop-off. And, we can immediately determine open seats and

make vehicle or route adjustments to improve the efficiency of our service,” says Jimmy Riley, manager at SRHS.

AVL comes with another bonus – no more manual data entry. “This will basically eliminate back-end data entry. The vehicles will transmit the route and passenger information electronically to our main office, doing away with the time-consuming need to key in data from the log sheets,” adds Riley.

Removing Rural Obstacles

In the lower Savannah region, it’s about as rural as it gets. As Lynnda Bassham, director of Human Services for the Lower Savannah Council of Government (COG) describes it, “Our area covers six counties and is mostly rural with unrelated transportation providers, and many areas don’t even offer any public transportation.”

As the VTE project was unfolding, the Lower Savannah COG received funding and designation from SC DOT to become the state’s first regional transportation coordination project. As a result, they also received RouteMatch’s scheduling and dispatching software, and digital radios and Nextel cellular GPS units for the coordination effort.

First, the Lower Savannah regional transportation management agency (RTMA) was formed, comprising a range of agencies, county governing bodies and public transportation providers with the common goal of coordinating more effectively on a regional basis to solve some of the most vexing transportation issues.

Bassham is very proud of the achievements they’ve made so far with coordination technology. She points to a prime example: One of the most rural and poorest counties in the state, Allendale county, was only able to offer one trip per day, shuttling workers two and half hours one-way to work at Hilton Head resorts.

“Under the umbrella of the RTMA coordination project, we worked with local groups and agencies, including the Low Country Regional Transit Authority, to solve this problem. After nine months of meetings and planning, we ended up forging a public transit system using existing human service vehicles, with a mobility manager based in Allendale. We now have 109 regular passengers using the system,” notes Bassham.

Success in coordination comes down to technology and collaboration. To forge this new public transit system, human service agencies agreed to share seats on their vehicles and sell tickets to the public or agencies, which purchase transportation for their consumers. When an agency transports another agency’s client, they are reimbursed an agreed-upon passenger mile rate, while the public will pay \$2.00 for every ten miles traveled. The new local Mobility Manager takes trip requests and uses RouteMatch’s scheduling and dispatching technology, digital radios and Nextel cell phone GPS units in vehicles to meet the demand.

Lower Savannah is soon slated to receive a coordination module from RouteMatch that will help fill empty seats and

leverage regional resources. “Providers will post trips and work together to make routes more efficient and share empty seats,” adds Bassham. The success in Allendale hopes to be emulated in Bamberg County, where a new public transit service launched May 1st.

Moving Forward

As this phase of the VTE project nears its end, Bill Doyle reflects back on the lessons learned. “This has been a rewarding project for me and now, it’s a pleasure to work with all the providers as we all look forward to the next phase.”

If he had to do it all over again, what would be different? Bill stresses the need for “the involvement and buy-in of all stakeholders from the beginning and maintaining that buy-in throughout the duration of the program. You need to get your hands dirty and stay by the providers through thick and thin.”

But, that’s all in the past, according to Bill. “Now, they’re really turned on by the technology and they’re absolutely hungry for it!”

Although this phase ends late June 2006, the VTE project is funded through February 2008 to support the current infrastructure. The hope is for additional VTE funding to bring on added features such as voice recognition and smart card technology.

Now that the tipping point has been reached, funding may be the only issue holding South Carolina back from achieving a fully operational VTE. Providers don’t have to be convinced anymore; they are now believers in the power of technology.



RouteMatch Software

One Atlantic Center

1180 W Peachtree, Suite 1130

Atlanta, GA 30309

Phone: 404-876-5160

Sales: 888-840-8791

Fax: 404-898-1145

Online: www.routematch.com

Email: sales@routematch.com