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Paul DeLong

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David Yarbrough offers practical tips for successfully deploying mobile communications solutions.

CASE STUDY: Fleet communications

In 2010, Yarbrough Transfer Company (YTC) made the decision to implement mobile communications devices throughout its 50-truck fleet. In addition to gaining the ability for real-time GPS tracking for every truck in its fleet, YTC also deployed printers, scanners, power inverters and Wi-Fi hotspot devices into each truck.

YTC is one of the first carriers in the country to deploy this combination of technologies into its fleet. Because the integration of such technology is new, YTC's implementation process was relatively lengthy, lasting about a year from time of purchase until full deployment.

Why did we decide to implement such an expensive and extensive mobile communications solution? Over the past five years, YTC has invested heavily in technology. We budgeted for and created a large-scale software and hardware deployment plan that affected all levels, from the office staff all the way down to our drivers and maintenance technicians. We upgraded our transportation management software (TMS) and accounting and asset maintenance software. We implemented document management software that allowed us to index, store and access critical business documents. The next logical step was to deploy a mobile communications device that would integrate with new technology.

Questions to answer

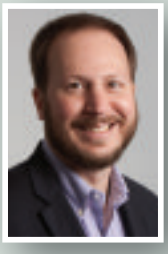
The first question we had to ask and answer was what operational and administrative goals could a mobile communications solutions allow us to achieve? We believed that our investment would help create significant operational and administrative efficiencies; give us competitive advantages by providing customers with benefits not offered by our competitors; and give us both short-term and long-term financial savings.

We had no way of knowing for certain whether we would be able to achieve those goals. As a manager, any time you assess whether to invest in your company's capital equipment – regardless of whether that investment is in technology or revenue-producing equipment – you have to gather information, make educated estimations about the potential return on investment (ROI), and then determine whether the ROI is worth the time, effort and expense.

In our case, we were able to achieve almost all of our goals. We can take the GPS tracking information generated by our mobile communications devices and integrate it with each order in our TMS, creating time-stamped records of each pickup and delivery event. With this real-time information, we can easily coordinate with critical third-party services, such as crane and rigging companies, escorts, highway patrol and port services.

Other technologies we deployed include in-cab scanners that allow drivers to transmit proofs of delivery and other documents in near real-time; in-cab printers paired with proprietary software that allows our operations department to print trip permits and other critical documents directly into each truck; and Wi-Fi hotspots in each truck, which ensures drivers are connected to the wireless network no matter where they are located geographically.

YTC can now track customer orders and related documents, revenue-producing asset utilization and driver and administrative employee records. We can provide customers with real-time, time-



THE AUTHOR

David Yarbrough, executive vice president of Yarbrough Transfer Company, was the implementation team leader during the process of his company's mobile communications solution implementation.

The Yarbrough Transfer Company management team includes, from left, John Bussard, vice president of fleet operations; Fred Blevins, vice president of operations; David Yarbrough, executive vice president; and Jim Yarbrough, president.

stamped pickup and delivery data for all of our loads and also perform sophisticated financial reporting in real-time. This has led to business efficiencies resulting in significant cost savings annually.

A true commitment

However, the deployment of mobile communications devices can be a complex, lengthy process. In managing the implementation, I learned several key things that I believe managers seeking to do the same should consider.

First, you should research and determine the range of mobile communications technology available, covering the spectrum from the most basic devices to the most cutting-edge technology on the market. Once you are familiar with what is available, you can make a decision on the level of technology that suits your business.

Second, make sure that the solution you choose integrates fully with your TMS. Assess the capability of the vendor to feed GPS tracking and other critical data automatically into your TMS so that operations managers and dispatchers can access information about the status of your loads directly from your TMS, as opposed to having to access this information through another system. In many cases, if the carrier is utilizing electronic logs, the mobile communications vendor also typically can feed information about your drivers' remaining hours of service for the day or week into your TMS, which allows the fleet planner to better plan and utilize fleet and driver assets.

Finally, to deploy a mobile communications solution successfully, carriers should assemble an implementation team led by an experienced manager and comprised of key managers in IT, maintenance, operations, business administration and other relevant departments. The team should create and outline goals to achieve during and as a result of implementation and deployment.

It is a good idea to create an action item list, to which all members of the implementation team have shared access, and to be updated by team members as tasks are completed, milestones are achieved, and/or challenges are encountered.

The implementation team leader should assign each team member with tasks and action items specific to his or her area of expertise, and he or she should expect to get frequent updates from the team regarding the status of action items. This will keep the implementation on track, keep costs down and ensure that the process runs smoothly.

There are a number of things a carrier should look for in a mobile communications vendor. The following is a non-exhaustive list of general issues and questions to evaluate:

Integration. Consider the ability of the vendor's mobile communications device to integrate with your existing TMS and the level of that integration. In other words, how many of the data points generated by the device can be integrated and used in your chosen TMS? The more data points that can be integrated into your TMS the better – even if you don't use them all at first, there may be data points that you want to use and integrate at a later time. Consider the use of common data points such as: vehicle speed; hard braking and stability control events; GPS positional data and the frequency with which that data is created and transmitted; transmission of maintenance fault codes; vehicle inspection reports; hours of service and driving hours available by day and week; registration and transmission of driver complaints; time-stamping of pickup and delivery events; the ability to track detention time; idle percentage and fuel efficiency of the engine; and ability to communicate with the driver via the device.

Flexibility and pragmatism of vendor. If you have a business need or requirement for your mobile communications solution that is not on the "standard list" of device features, how willing is the vendor to help you implement non-standard uses of the device, such as the installation of third-party software or modification of the device's operating system? If you have needs of this nature and your chosen vendor is inflexible, you may not be able to achieve all of your goals.

Customer service by vendor. How does the vendor assist you in implementing their devices and software? Do they assign you an implementation consultant who you believe will be a valuable member of your implementation team? For the potential vendors that are on your "short list," ask to meet the implementation consultant and assess his or her strengths and weaknesses. How responsive is the vendor going to be to your trouble calls? Ask to meet or have a phone call with the support team leader. What is the vendor's support team's average response time to the generation of a trouble ticket, and what is the average time it takes the support team to resolve a trouble ticket? How accessible is the vendor's management? Ask for customer references – specifically heavy haul carriers – and check them by either visiting them and taking a look at how they have set up their system or having an in-depth discussion about their opinion of the pros and cons of the vendor's solution. If you have a TMS that is commonly used by other carriers, try to check references

> "Yarbrough's system will be able to comply with the EOBR regulations that the FMCSA will promulgate in the near future."

Yarbrough Transfer Company has implemented mobile communications devices throughout its 50-truck fleet.

that are using the same TMS that your company uses.

Flexibility of pricing plans. Many of the mainstream vendors require you to sign a contract for a data plan to go along with the device. How good is the vendor's data network? Does it effectively cover your operating territory? How flexible is the pricing plan? Does the pricing of the data plan seem fair? Can you pool the data plan among all of your devices, or do you have a data limit specific to each device? Does the device allow for the use of wi-fi, thereby eliminating potential terrestrial or satellite charges? Do you get a discount for signing a longer-term contract?

Scalability and ability to grow with your fleet. Does the vendor offer a broad range of services, devices, apps and accessories? If not, you may want to consider choosing a vendor that will be able to grow with your fleet. If you want to implement non-standard, value added features, such as GPS navigation, printing, scanning, or texting, does the vendor have a good variety of options available, at reasonable prices?

Ease of use. Even though technology is becoming more ubiquitous in the industry and particularly amongst the driver population, the driver population generally is aging, and may not be as technologically savvy as your company's back-office and operations employees. Are the devices easy to use for drivers? Are they primarily touch screen, or do they require a significant amount of typed input?

Generally, the less keyboard input required, the easier the devices will be to use for drivers that are not as technologically savvy. Mobile communications devices should function as much like a tablet computer as possible.

> "Known as data logging, the system collects performance and behavioral information about the truck and how it is being operated."

What about cost?

The costs of mobile communications devices vary widely based on functionality, processing power, scalability, and the number of data points that they can capture. Devices typically range anywhere from $750 to $2,500 per device, not including the costs of installation and any additional accessories, such as printers, scanners, wi-fi devices, and holsters or protective devices, which could push the price upwards of $3,500 per unit. In addition, as previously mentioned, many vendors will require you to sign a contract for a data plan, the prices for which can range from $25 to $50 per month, per device. Make sure you consider all the potential costs and budget appropriately.

Carriers should look to achieve benefits or efficiencies in:

- tracking trucks and status of loads,
- reducing the workload and call volume for you operations, dispatch, planning, and back-office teams,
- gaining access to fleet utilization data, including off route and empty miles,
- ease of tracking your fleet's state mileage for IFTA reporting and auditing,
- ease of using electronic logs and auditing those logs,
- ability to print and scan in the cab of the truck,
- decreasing the time it takes to receive proofs of delivery from drivers which also decreases the time it takes for invoicing the customer, and
- ease of communications with drivers.

If you are unable to achieve efficiencies in most or all of these areas through the implementation of a vendor's mobile communications solution, you may want to consider looking at another vendor.

The YTC system will be able to comply with the EOBR regulations that the FMCSA will promulgate in the near future. Although we have not enabled the electronic logging functionality yet, the system has the capability to record drivers' hours of service and feed that information directly into our TMS so that our fleet planner and dispatchers can see the hours that drivers have used for the day, and also for the previous seven days. The system allows us to monitor our drivers to ensure that they are not running hot (i.e., in violation of the HOS rules).

The system also collects performance and behavioral information about the truck and how it is being operated by the driver, known as data logging. These devices collect a significant amount of information about our trucks and how they are being operated. The system records maintenance fault codes, hard braking events, stability control events (i.e., if the truck is in danger of a rollover event), the speed at which the truck is traveling at various points in time, and engine idle percentage and MPG.

The primary problem you are likely to encounter in deploying mobile communications devices is driver resistance. However, if you select a good vendor, if the implementation is done properly (i.e., you do a significant amount of planning and testing prior to the the roll-out of the device), if you educate your drivers on how to use the devices prior to roll-out, and if you offer your drivers some value-added technologies such as in-cab printing, scanning and Wi-Fi hotspots, although there likely will be some initial resistance by your drivers, after about four to six months of using the devices daily, your drivers not only will grow to accept and rely on the devices, but they will be upset if and when the devices may occasionally go down. Thorough testing of the device and driver training prior to roll-out are critical to ensuring a successful implementation. ■