

Profit-Building Routing



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GPS and other strategies to reduce drive time & save fuel



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If you own or manage a company that relies upon repeatable maintenance or lawn application services you realize you're only creating value for customers and making money when you're working on their properties. Mowing, lawn fertilization, cleanups, mulching, prepping for seasonal color, aerations – the particular task doesn't matter. You can only bill for the work that you do.

Getting your equipment ready, loading the trucks and getting to job sites does not generate revenue for your company. Any way you look at it, this is time lost.

Getting to job sites more efficiently is the main reason that companies began equipping their service vehicles with GPS tracking more than a decade. While GPS technology hasn't been universally adopted in the industry, there's no arguing that it's adoption by companies with service routes has resulted in the saving of millions of hours of production and millions of dollars in saved fuel.



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Joe Janssen

GPS vehicle tracking allows a company to know where its vehicles are at all times. It's a great aid in locating the most efficient routes, avoiding traffic congestion and accident sites, and ensuring that vehicles aren't being used for unauthorized trips. In addition to providing directions, data

collected by GPS gives management a tool to measure the number of stops, time at each stop, fuel consumption and miles between stops, among other variables.

In the end, however, this is just data, and how it's used and integrated with customer needs and conditions on the ground is what really matters. Yes, GPS is a great tool for routing for many companies, but it's hardly the end-all and be-all when it comes to routing employees and equipment to job sites.

In fact, many successful green industry contractors do just fine without it, says Joe Janssen, who has more than 30 years of experience in all phases of the industry.

Janssen, vice president of business development for Servello & Son, Inc., DeBary, Fla., says few, if any, strategies for reducing drive time and saving fuel are better than building route density. Ultimately, landscape or lawn care companies that provide repetitive production work should focus on clustering as many of their same-service customers as possible in the smallest geographical area.

"Sometimes, obviously, you have accounts that have needs that don't fit that concept and you have to travel," Janssen admits. For those clients, consider having your crews start at the furthest accounts from the shop and work their way back during the day. That way, if there's an equipment failure during production or the weather turns nasty and they have to return to the shop, they will have serviced the furthest accounts and won't have to go back the next day.



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Being able to measure average miles per service as delivered allows Scotts LawnService to fine-tune its daily route selection process and trim miles from technicians routes, saving fuel and boosting production.
IMAGE COURTESY SCOTTS LAWNSERVICE.

Another strategy that some companies use to reduce drive time and increase production is to use a workweek of four 10-hour days. Obviously, many companies have too much to do during the busy spring season to make a four-day schedule work for them, says Janssen. In fact, employees may have to work five or six days just to keep up with production. But, it's worth considering when production schedules return to normal.

Also, planning open-ended routes that stop where the next day's schedule begins gives employees the opportunity to continue working if they have the extra time. Of course, both the employee and the manager need to agree on working a route into the next day's schedule. When heavy weather is predicted for the next day, planners might offset expected delays by starting the additional route, even allowing a minimum amount of overtime to save opportunity costs.

In addition, when one crew finishes early while other crews are still

working, and possibly behind schedule, sending the crew that has finished into a nearby route to assist will increase customer satisfaction and develop a sense of camaraderie within the division, says Janssen.

Trailer issues

And, of course, there's the "no left turn" rule. This is as much a safety issue as it is an efficiency issue. Service trucks turning left, and especially trucks pulling trailers full of equipment, are competing for road space with oncoming traffic and, of course, can get stuck at busy intersections.

While we're on the topic of trailers, do you have a system to check that they're properly loaded, properly secured and that turn signals and brake lights are functioning? A simple checklist will do the trick. Every trailer should be inspected every workday before it leaves the yard. Nothing's more disruptive to a day's production than getting pulled over and ticketed because the lights aren't working, says Janssen.

GPS the starting point

But, let's get back to GPS technology and how it's being used in the industry.

Don't be an Idler

In urban driving, significant energy is lost to idling at stoplights or in traffic. The Consumer Energy Center says that 17.2 percent of the energy in fuel is lost to idling. In fact, the Center reports that just 15 percent of the energy from the fuel in your vehicle's tank gets used to move it down the road or run accessories, such as air conditioning. The rest of the energy is lost to engine and driveline inefficiencies and, of course, idling.

For every two minutes a car is idling, it takes about the same amount of fuel to go about one mile," says the Center, that reminds that "idling gets zero miles to the gallon." The same is true for allowing more than 30 seconds for an engine to warm up, another significant fuel waster.

Can the same be said for other large gasoline or diesel-powered landscape equipment? It would seem to be the case.

There are two types of GPS tracking systems – passive and live tracking. Both depend upon the installation of an electronic GPS tracking device, but a passive tracker lacks a transmission capability and functions mostly as a recording device. In a passive system, information like location, rates of speed and travel routes are recorded on an internal memory device (memory card or flash memory) that can be downloaded to a computer later. There is a one-time cost for the GPS tracking device and no monthly charge.

By contrast, active GPS tracking provides almost immediate access to the

location of vehicles. The system requires not only the installation of a tracking device in a vehicle, but also computer software to enable an owner or manager to track the vehicle's location and view other data that's been collected by the vehicle's on-board tracking device and sent via cellular or satellite transmitter within literally seconds. Users pay a monthly fee for this service.

First, recognize that incorporating changes in services, weather conditions, employee capabilities, logistics and seasonal variations along with past GPS results provide a more complete scheduling program. However, relying solely on past GPS reports to plan future route scheduling is problematic.

When route planning is reduced to repeating a stagnant grid in a finite geographic area, and assigning a set number of lawns to be serviced in an eight-hour day, employees tend to stretch out the work to fit the allowable time. Landscape maintenance and lawn care are dynamic businesses and things change quickly. Employees feel the urgency when faced with expanding responsibilities and will adapt to those challenges.

Keith Burrell, program manager, Scotts LawnService, Marysville, Ohio, explains that their GPS software is a starting point for schedule planning. "GPS tracking has been a large component of our ability to drive service delivery efficiency. It's a given you need to have an optimized route for the technician to follow, but we found that in the planning phase is where you can really drive efficiency. We use the GPS data collected in the field to measure our routing effectiveness.

"Once we were able to measure average miles per service as delivered we were able to fine-tune our daily route selection process. This ability to measure, with improved selection, gave us the ability to trim over 1.7 million miles or 10 percent out of service delivery," he says.

"One of the biggest factors in our ability to manage service delivery was our ability to manage our service backlog," says Burrell. "With proper service backlog we shoot for around 100 services per technician and are able to produce tight efficient routs for our technicians. The service backlog is the number of jobs in the pool of available work for that technician."

Many operational factors come into play with managing service backlog, he adds. But, ultimately it boils down to making routes tighter and being able to better forecast where technicians need to be over a longer scheduling window.

"Our GPS solution helps to drive daily route delivery efficiency," says Burrell. "But the biggest improvement we saw was with how we used the GPS data to measure improvements and drive our decision-making process in developing our daily routes."

"We still produce daily routes using a staff of routing professionals," says Burrell. "We have found that our ability to be flexible and react to daily and weekly changes in the scheduling environment is only possible with people. We have reviewed a number of automated computer based scheduling

solutions and, as long as our staff can outperform them, we will stick with the power of the human brain.”

Custom program

Gordon Landscape Co., Ont., Canada, has developed its own routing software. Says Eric Gordon, CEO, “We use only organic fertilizers so our team members are each trained in all aspects of turf and lawn care management, this allows our teams who cut and manicure to monitor and apply as needed to ensure the healthiest lawn possible. All this is uploaded in real-time to our proprietary tracking software, providing us with a clear record of time, date, application rates, conditions and results.”

Reviewing and analyzing completed route reports along with integrating relative variables helps to fine-tune route planning. Discuss any variations with technicians and make them aware of the need to record their activities. Employee input is invaluable and helps to foster goodwill. Making changes without seeking input from technicians might strike them as arbitrary.

Gordon explains the techniques used at Gordon’s Landscape, “We break the metrics into variables such as time spent, conditions of workload and travel and distance. We then can measure, calculate and track workloads. Tasks become more efficient and work smarter during the process. This process applies to all seasons, spring, summer, winter and fall.”

Along with establishing a solid routing plan, pay attention to loading and departure times. Boosting productivity starts early in the morning by getting employees off to a good start to maximize daylight hours.

Space limitations at many landscape and lawn care shops complicate morning start-up. Some firms save on loading time, by preparing equipment and staging materials in the afternoon when crews finish their routes. They reduce congestion in their yards by staggering crew starting times. The more consistent crews are in loading and fueling, the more reliable management’s scheduling and routing becomes.



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The employee factor

One of the most effective strategies in developing solid routing schedules is in the initial selection and training of lawn technicians. Hiring decisions play a huge part in route planning and productivity. In other words, the most important component of any successful routing strategy is the competency and reliability of the people behind the windshield of your service vehicles.

All of the technology in the world and all of the strategies that you’ve put in place to get crews to job sites safely and efficiently aren’t going to work unless you have good, teachable employees with clean driving records. Employers are responsible for the safe and proper use of your vehicles and equipment. They must also realize that the unsafe driving will not be

tolerated.

Have you considered a “no idling” rule for your service crews? Leaving vehicles (or large power equipment for that matter) running unnecessarily, while seemingly insignificant at the time, adds up to a huge expense for a company over the course of a year.



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And while we’re on the subject of fuel use, the crews of Providence Landscape Group, serving the Charlotte, area market, use Isuzu NPR and the heavier duty NRR models, says Wiley Bennett, fleet manager. Some of the trucks are gasoline-powered and some have diesel engines. Bennett says the company is moving toward diesel because it gives better economy and it’s more durable.

“Fuel economy is a big issue. We always have to consider fuel costs when it comes to routing,” says Bennett. This is especially true for those crews that service a number of properties each day. This spring the company, which services commercial and high-end residential accounts, added an 18th maintenance crew so its fuel expenses are considerable.

Bennett says the needs of each particular property determine crew makeup, crew size and how it’s incorporated into the company’s routing. In the end, the object is to get employees to job sites “without zigzagging all over Charlotte,” says Bennett, who picked up mechanics training as a U.S. Marine and added small engine certifications in his tenure with Providence Landscape Group.

Although technical advancements, such as GPS and business management software with scheduling and routing features, help make landscape and lawn services more efficient, it’s only by careful examination of the data, use of the information developed, adjusting to the realities on the ground and the dedication and reliability that create real-time routing strategies that deliver services that grow customer satisfaction and opportunities.

Introducing Fleet Tracking to Your Employee

by Regan BillieAs scary as GPS fleet tracking sounds to drivers, you as the business owner need to convey that it will benefit them as much as it will benefit the company. Be open, honest and positive. Let your employees know the truth – you don’t think the worst of them and this is not a personal decision. Employees don’t often realize that it benefits them as well. Drivers now have proof of service, reduced interruptions, improved safety, correct time sheet reporting and quick support if a vehicle breaks down. The bottom line is that fleet tracking is not about tracking people. It’s about tracking expensive company property, lessening the risk of theft, and staying on top of your business without being in the vehicle with your driver.

Do

- Anticipate, listen and respond to employee concerns

- Give employees the benefit of the doubt and put yourself in their shoes
- Explain the need to decrease fuel costs and increase productivity

Don't

- Begin a conversation with "The GPS caught you doing ... "
- Assume one incident is a pattern of mischievous behavior
- Make rash decisions based on one occurrence without getting the whole story

Always remember that the vehicles are your company assets and you have the right to protect them. If your employees are doing their job correctly, there is no reason for concern on their part.

Regan Billie is a marketing coordinator for FleetMatics www.fleetmatics.com. Fleetmatics fleet tracking software is used by more than 14,000 customers, tracking over 240,000 fleet vehicles.

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