Self-Service, Online Preventive Maintenance Reservations

Flagship software provides solution to PM compliance issue

With shrinking or stagnate budgets and resulting staff cuts, most government departments are trying to figure out how to get more done with less. It is more important than ever to manage your available resources as efficiently as possible.

For Gary Horwald, Fleet Manager for the City of Santa Barbara, the main challenge was getting departmental compliance with the prepared PM schedule.

The City of Santa Barbara's Fleet Management Division recently implemented a self-service, online preventive maintenance (PM) reservations and scheduling program as a tool to help them manage their fleet resources. This has resulted in efficiency improvements such as decreased staff time needed to manage the PM program, improved PM schedule compliance and increased customer satisfaction.

Problem

Fleet Managers know the impact a good preventive maintenance (PM) program can have on your bottom line. Because most fleets have limited resources, scheduling and planning for preventive maintenance is an important part of such a program.

The City of Santa Barbara had a robust PM program in place and prepared a PM calendar for the entire City each month. A senior staff member would spend between 8 and 16 hours a month producing and then adjusting the PM schedule.

For Gary Horwald, Fleet Manager for the City of Santa Barbara, the main challenge was getting departmental compliance with the prepared PM schedule. For example, a vehicle scheduled for Friday might have a calling on Friday morning saying, "I really need this vehicle today, can we do it next Tuesday instead?" The result was not enough work on Friday and too much work next Tuesday. Very quickly fleet resources were out of balance with the City's needs. This situation multiplied by a large variety of 500 vehicles and equipment in the fleet results in a big problem.

Requirements

The Fleet staff brainstormed possible solutions. Instead of fleet staff choosing the schedule date, the question became: "what if" the customer could see a calendar of available service days and could choose the best time frame that worked for them. This was the beginning of the city's journey to seek out a self-service, online scheduling program for PM services.

The Fleet staff then proceeded to come up with the following wish list for the ideal PM scheduling program to meet its needs:

1. The customer interface must be intuitive and easy to use.
2. The customer must automatically be notified when their vehicles and equipment are coming due for service via email.
3. The customer must be able to see and choose available time slots for servicing.
4. The scheduling program must know what level of service (A, B, C or D) that a particular vehicle is due for. In order to accomplish this, the program must interface with the City's existing fleet management software program.
5. The program must know how long that particular service for that lass of vehicle will take.
6. The program must allow various classes of vehicles to be assigned to definable technician resource groups. This allows for the available time to be identified and controlled.
7. The program must allow for the available resources to be adjusted as staffing resources change (such as people taking vacation, etc).
8. The system must send email reminders of service appointments and keep track of no-show appointments.

Need for fully automated PM function

In June of 2010, Horwald contracted with Flagship Fleet Management, L. L.C. to provide the services to develop an online PM reservation system, email server integration and fleet maintenance system integration. He chose Flagship because other fleets in his area had experienced success with Flagship products and services. When Horwald first spoke with the company about his PM reservations system requirements, Flagship quickly understood his requirements. They were also able to provide additional system capability and requirements to design not just an online reservation system, but full PM management capability.

Instead of fleet staff choosing the schedule date the question became: "what if" the customer could see a calendar of available service days and could choose the best time frame that worked for them.

PM - An Interdependent System

For any interdependent PM system to function properly, it first requires solid equipment class PM schedules and unit meter data. Horwald's shop already had the solid equipment class PM schedules. The Flagship solution interfaced with his existing fleet management software and could use it to obtain the most recent fleet history and PM due requirements.

Smart reservations

The automated PM scheduling program understands the shop labor constraints and space/ work bay constraints. Labor constraints are not only constrained by total available hours, but also by each technician's proficiency working with a resource class. Equipment classes are assigned to a resource class.

Available PM hours are defined by resource class. The City of Santa Barbara has 5 resource class groupings comprised of light vehicles, fire, police, parking enforcement scooters, and heavy equipment. The resource class is definable and would be different for each fleet.

Labor resource allocation

The available hours for each resource class can be adjusted up or down according to schedules and work demands. Again, the complexity associated with who can work on what and for how long is completely shielded from the customer. They just see a web calendar with days and available time slots to choose from. The result is customers are left with constrained scheduling options, but never see the complexity being managed behind the web enabled scheduling calendar.

City email Server Integration

A big part of the system is the city email server integration. Department liaisons and some drivers get automated emails advising them of equipment due for service. The email contains a link to the scheduling program web site.

If they forget to schedule the equipment they get emailed again next week but with stronger wording. If the equipment has still not been scheduled after the second email notification, a third email with additional content is sent to the supervisor or department head. These managers understand the role of fleet operations and the team effort required to support them in the accomplishment of their work.
Once the customer makes the reservation, they get an immediate confirmation email and a reminder email the day before the equipment is scheduled for maintenance. If the equipment is a "no show" on the scheduled day, it will be added back on the email notifications list the following Sunday night. In the words of a neighboring fleet manager: "the system hounds them until they bring the equipment in for service."

Customer communications documented

All system communications, cancellations and missed appointments are documented by the system.

Fleet managers are very aware of the necessity to service equipment per OEM or regulatory requirements. Doing so on time is important and is often a regulatory requirement. Getting the equipment to the shop when the shop has staff and shop resources to perform the work is a balancing act.

For equipment not in your direct control, it requires department level management support, and often lots of staff time on the phone or email back and forth trying to get the equipment in for service.

All system communications, cancellations and missed appointments are documented by the system.

Now, all department and driver non-compliance is documented. The system logs how many emails were sent requesting that the equipment be scheduled for each PM as well as confirmation and reminder emails. It also logs canceled and missed appointments. Reports clearly document non-compliant vehicles and department history.

While non-compliance was not a major issue in Santa Barbara, Horwald likes the documentation feature of the software should it be needed. He also recognizes that this type of reporting can be very helpful in an environment that has less PM compliance support from customers and department heads.

Implementation

A great effort was made to anticipate all the needs to make this program successful. As with any custom built program some unanticipated challenges will arise once the program is put into use in a real world environment. According to Horwald, Flagship handled these challenges in a timely manner partnering with the City in the development so that the end product met the City's needs. With just under 500 equipment items being managed and good relationships with his customers, Gary wanted to work any kinks out of the system first, and was cautious in the application roll-out. In July 2010 the beta version of the application was only rolled out to one department. Two months later, after small bugs were worked out, it was rolled out to 3 more departments. Six months after the initial deployment 50% of the departments were using the on-line PM scheduling system. At 10 months Gary had the application deployed to all the city departments.

Shop Operations more efficient, less reactive

Alex Mayorga, City Fleet Supervisor, commented that the time it took to prepare the PM schedule used to take 8 to 16 hours per month; it has now been reduced by 75%, taking just 2 to 4 hours per month.
This has freed up his time to focus on other fleet needs.

The shop now has better PM schedule compliance. Fleet Management requires department compliance to help keep cost low while providing safe and reliable equipment. Managers and department heads get this and Horwald has found after they get one email like this the non-compliance stops and program acceptance occurs. This makes the shop more efficient because the equipment arrives when the shop has available labor and shop resources to allocate to it.

Now, because the customer had a say in when the work is to be done and are reminded the day before; the equipment arrives as scheduled and the shop has a balanced steady flow of work. While Santa Barbara was already achieving PM compliance, the shop had to jump through hoops to achieve it and not compromise other city business. Today, customers help drive the PM calendar rather than comply with it and the PM calendar requires far less modification because both the shop and the customer have effectively agreed on it.

Flexibility built in

But Mayorga is not locked into the automated calendar. Flexibility is built into the PM calendar so the shop can still react to unforeseen circumstances. In addition, the time allocated for each technician can be downed for vacations, dentist appointments and staff training. Now, because the customer had a say in when the work would be done and are reminded the day before, the equipment arrives as scheduled and the shop has a balanced and steady flow of work.

Improved Customer Satisfaction

Customers find the application intuitive and easy to use. All the complexity is shielded and they select available time slots that are the least disruptive to department operations. Customers have some say in when the equipment will be serviced rather than needing to react to a shop PM schedule. The email notification system provides a link to the PM scheduling calendar app, so they can quickly schedule and see the equipment they have already scheduled and when it needs to be in the shop. The day before the equipment is scheduled for service they get a reminder email identifying the equipment and telling them the time it should be at the city shop.
It is now easier for customers to comply with the PM program, but on a schedule derived from customer equipment need and within the resources available in the shop. Customers like having control of choosing service times that have the least impact on their operations.

The Flagship scheduling program has truly created a win-win situation as the customers and fleet division both gain efficiencies. Fleet is better able to manage and fully utilize their resources and customers have more control of the fleet that they need in order to do their jobs.

Editor's Note: We thank Gary Horwald, Fleet Manager of the City of Santa Barbara and Jeff Steinmetz of Flagship Fleet Management, LLC for their contributions to this article.