Centralizing Parts Procurement Saves Money, Increases Technician Productivity

Jill Schlabig Williams

Subject: Aurora Health Care
Location: Eastern Wisconsin
Size: 13-hospital system, including Aurora St. Luke's Medical Center
Staff: 80-person in-house clinical engineering department

A few years ago, Alan Gresch and his regional managers were talking about the money that a technician had saved purchasing a particularly expensive piece of equipment. "I wonder if anyone else knows about this?" Gresch idly said aloud.

Chances were slim that anyone else in the 13-hospital Aurora Health Care system knew about that particular deal. At that time technicians were each responsible for sourcing their own parts, and there was no formal or centralized system in place for sharing information.

All of that would change in January 2006, though, when a comprehensive reorganization of Aurora's clinical engineering department was undertaken. As part of that effort the entire parts ordering process was revamped and centralized, resulting in huge benefits to the entire healthcare system.

Challenge

With technicians spread across 13 facilities and no centralized parts procurement system, there was no easy way for technicians to share information about good deals on parts or problems with vendors. "One technician may have found a good source in terms of pricing or quality, but that information was rarely shared beyond that one site," says Gresch. "Across our system, many folks were doing the same type of work, but weren't getting the same information."

Regional manager Richard Netwal agrees. "It was clear we were missing an opportunity to share information. Beyond that, each technician was doing it all—sourcing and buying parts, plus expediting, tracking, and invoicing—and spending lots of time on the procurement process every day."

Parts specialists Brian Mirsberger (left) and Glenn Severinsen (right) helped develop a centralized parts procurement system at Aurora Health Care.

Another problem was overstocking of parts. "Technicians who want to provide as much uptime as possible tend to over-order parts," says Netwal. "That leads to a huge inventory of excess parts at each facility."

When Aurora began to reorganize its entire clinical engineering function in late 2005, the parts procurement process was a key target for improvement. The clinical engineering team undertook a study of the process, which revealed that at least one hour per technician per day was being spent on parts procurement. They found consistent overstocking of parts, and fragmented communication among technicians regarding the best sources for parts on both cost and quality.

It was clear that a new process was needed. "We had to take advantage of those opportunities to cut costs, free up wrench time for our technicians, and have specialists focusing on parts procurement," says Netwal. Their solution: centralize the parts procurement function.

Solution

Step one in the centralization process was to hire a quality parts specialist who knew the business, according to Gresch. They recruited and hired an expert who had been a biomed and also worked for a number of independent service organizations doing parts sourcing. Once

on board, that parts specialist helped develop the new, centralized program.

"Step two was to collect, catalog, and centralize our spare parts," says Netwal. Initially, front-line techs resisted this centralization, particularly those in the imaging arena. "We had to go back three times to get the stuff that people were hiding," he says. "We had to identify the space and set up software, creating a central inventory of parts that is now accessible across the system."

Once that inventory was collected, they hired a second parts specialist, Brian Mirsberger, who had a background in parts purchasing and inventory management for the airline industry. He looked at the inventory to determine what was still useful, what to throw out, and what to sell. "Much was obsolete or at the end of its useful life," says Mirsberger. "There was a lot of waste in the old system; we inventoried 3,000 line items of parts, but were able to use only 15% of it."

Today, with the centralized inventory, techs are no longer allowed to order on their own. Most requests go directly to purchasing and are immediately approved; only questionable items are flagged for a supervisor's review. "We didn't want to create a bottleneck," says Gresch. "It's critical to get parts ordered and turned around, so we've made the process as streamlined as possible."

The team worked with St. Croix Systems, its existing computerized maintenance management software (CMMS) vendor, to develop a parts module that provided an interface between its CMMS system and the materials management system.

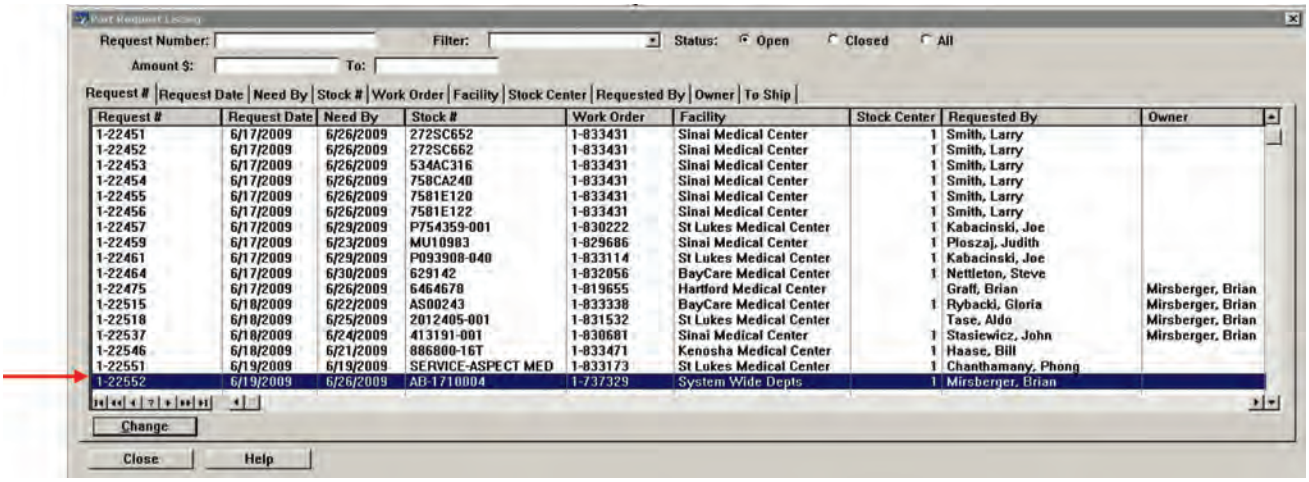
The new process has the technicians enter the required part directly on their work order, ensuring that all parts and associated costs are captured in the CMMS software. The parts request, identifying the urgency, then goes directly to the parts team who communicates back to the technician via Blackberry. The technicians receive e-mail notification at several steps of the purchasing process:

- Confirmation that parts request has been received
- Notification that the order has been placed with an estimated time of arrival (ETA)
- Alert that the part has been received and is at the location ready for them to install.

This flow of information cuts technician followup time and keeps everyone in the loop on parts status. At any point in the process, parts details are available on the central work order screen to anyone needing an update on equipment status. Plus, says Netwal, "The ETA information allows the technicians to plan their time more efficiently, resulting in huge productivity gains."

This automated system lets the team track and trend details on equipment parts, which can then be analyzed to aid in making better decisions. For example, says Gresch, "We're able to monitor appropriate shipping costs. We can identify which technicians are ordering parts via next day air and not installing them right away. These lead to 'opportunities for retraining' our technicians."

Data analysis also allows them to identify problems with suppliers in terms of speed of delivery and quality of parts. For example, vendors whose parts are routinely "DOA" (defective on arrival) are removed from the vendor list. "Our preferred vendor lists are very fluid," says Mirsberger. "We may have particular vendor at the top of a list, but if we encounter problems, they may not stay there."



Request #	Request Date	Need By	Stock #	Work Order	Facility	Stock Center	Requested By	Owner
1-22451	6/17/2009	6/26/2009	272SC652	1-833431	Sinai Medical Center	1	Smith, Larry	
1-22452	6/17/2009	6/26/2009	272SC662	1-833431	Sinai Medical Center	1	Smith, Larry	
1-22453	6/17/2009	6/26/2009	534AC316	1-833431	Sinai Medical Center	1	Smith, Larry	
1-22454	6/17/2009	6/26/2009	758CA240	1-833431	Sinai Medical Center	1	Smith, Larry	
1-22455	6/17/2009	6/26/2009	7581E120	1-833431	Sinai Medical Center	1	Smith, Larry	
1-22456	6/17/2009	6/26/2009	7581E122	1-833431	Sinai Medical Center	1	Smith, Larry	
1-22457	6/17/2009	6/29/2009	P754359-001	1-830222	St Lukes Medical Center	1	Kabacinski, Joe	
1-22459	6/17/2009	6/23/2009	MU10983	1-829686	Sinai Medical Center	1	Ploszaj, Judith	
1-22461	6/17/2009	6/29/2009	P093908-040	1-833114	St Lukes Medical Center	1	Kabacinski, Joe	
1-22464	6/17/2009	6/30/2009	629142	1-832056	BayCare Medical Center	1	Nettleton, Steve	
1-22475	6/17/2009	6/26/2009	6464678	1-819655	Hartford Medical Center		Graff, Brian	Mirsberger, Brian
1-22515	6/18/2009	6/22/2009	AS00243	1-833338	BayCare Medical Center	1	Rybacki, Gloria	Mirsberger, Brian
1-22518	6/18/2009	6/25/2009	2012405-001	1-831532	St Lukes Medical Center		Tase, Aldo	Mirsberger, Brian
1-22537	6/18/2009	6/24/2009	413191-001	1-830681	Sinai Medical Center	1	Stasiewicz, John	Mirsberger, Brian
1-22546	6/18/2009	6/21/2009	886800-16T	1-833471	Kenosha Medical Center	1	Haase, Bill	
1-22551	6/19/2009	6/19/2009	SERVICE-ASPECT MED	1-833173	St Lukes Medical Center	1	Chanthamany, Phong	
1-22552	6/19/2009	6/26/2009	AB-1710004	1-737329	System Wide Depts	1	Mirsberger, Brian	

Figure 1. Aurora's part request system. The parts procurement specialists monitor the screen for new part requests, process a part to be shipped from inventory, or create a purchase report.

For the two parts specialists on staff, their level of parts sourcing expertise has grown with experience. They are able to predict the need for consumables based on upcoming monthly preventive maintenance checks and service history, and maintain a stock of key items for immediate use. They're also learning to consolidate purchases and reduce the total number of purchase orders processed, leading to even greater savings.

In all it took the team one year to set up the centralized parts purchasing program, which now processes 1,700 to 2,200 parts requests each month.

Results

"We have proven that a centralized system works," says Gresch. Since implementing the program, the department has seen consistent annual parts savings of more than half a million dollars, and significantly increased technician satisfaction and productivity. Plus, they have found that better parts delivery contributes directly to increasing equipment uptime.

Technicians at Aurora have seen a 33% increase in wrench time. "Much of the time saved is due to the more efficient parts ordering process," says Netwal. While the technicians initially had a hard time letting go of their parts responsibilities and inventories, they now trust the system. "I need a part, I find it the next day," says one technician. "I just request a part, and it shows up."

They have seen equipment downtime greatly reduced. "For example, our metro region magnetic resonance and computed tomography services saw a 60% reduction in downtime, largely due to the parts sourcing program," says Netwal.

Gresch points to the increased data collection made possible by the centralization as a key benefit. "We've addressed the need to share information among the technicians, including data on lowest cost suppliers, best quality, and best delivery time. By collecting and evaluating those statistics, we can make better decisions, and that data will help us continue to get better."

In all, says Gresch, the revamp of the parts ordering process is part of the overall Aurora philosophy to allow employees to focus on their core competency. "Is their core competency fixing equipment, ordering parts, generating reports, or answering phones? We want to optimize our investment in the technicians. By centralizing the parts function, we've been able to do exactly that." ■

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