

Improving Efficiency

By Deri Ross Pryor

Efficiency. It's on everyone's mind these days, from soccer moms trying to juggle household budgets and play date schedules to high power executives trying to manage budget cuts and looming deadlines. Laundry facilities are not exempt from this struggle. In this economy, efficiency means finding ways of cutting costs without compromising the quality end product. We talked to several experienced members from different areas of the laundry industry to find out how their facilities are working towards improving efficiencies.

The first step in increasing efficiencies is identifying the need for improvement. Every facility has different factors that prompt them to look at their operation for areas of improvement. Graham Skinner, Director for Laundry Services at The Mission St. Joseph Hospital in Asheville, North Carolina, says that providing "quality, value and service to the customers" is the driving factor behind his facility's push for improvement.

Bill Jones, Director of Laundry at Michiana Linen Services in Elkhart, Indiana says that while for his facility financial improvement is the biggest factor, "The most common factors I have seen over the years is product flow (bottle necks) and a lack of contingency procedures when issues arise. 'Bottle necks' usually occur due to plant layout design flaws, insufficient equipment, and space limitations. I have commonly observed management getting too caught up in their daily tasks and not being able to step back and adjust the product flow to eliminate the bottle necks. The other common mistake is not having contingency procedures in place when problems arise. Machines will breakdown! There must be an automatic alternative procedure in place when this happens. The most efficient laundries have this process down pat."

Bob Corfield, president and founder of Laundry Design Group, LLC, says he sees "three essential elements that are driving laundry improvements: controlling or reducing cost of operations, growth or assimilation of more volume due to acquisition, and compliance with regulations and standards related to infection control, workplace safety and environmental sustainability 'green' programs. While you could choose any one of these elements as the primary driver, usually it is a combination of all of them that finally result in action being taken."

James Mangini, Linen Services Manager for Maine Medical Center says that for his plant labor costs was the driving factor. His facility built an entirely new plant, utilizing consultants in the planning process. Going from an antiquated system to



a fully automated one, the facility was able to shave off five full time employees at a significant savings. Automating the plant dropped the number of times a piece was touched from eleven down to four.

While facilities may have different driving factors, it seems the desired end result is the same: giving the highest quality product or service to the customer. To that end, making sure the improvements are completed correctly and quickly is essential. However, this also will vary from facility to facility. Some improvements are a simple fix that can be done in a matter of days, while others may take months or years. Jones acknowledges that it is also a matter of what it is being improved upon, man or machine: "Training the staff, retraining the staff, and then retraining the staff until it sticks is the hardest part. If the project is equipment related, it could take months just to get machinery manufactured."

Our Top Key Performance Indicators -
Pounds per hour produced
Soiled carts dumped/pounds separated
Number of tunnel loads (transfers)
Number of loads washed in conventional washers and turnaround time between loads
Pieces per hour per work station person, including hand folded items
Carts packed per hour/operator

David Chadsey, Managing Director at Laundry-Consulting, Com, adds that if the improvements are part of a health care expansion, a certificate of need may be required. "This process can take quite a long time," says Chadsey. "Planning models for laundry can extend several years out." Skinner points out that his plant is finishing a complete plant retro fit four to five years in the making.

Some facilities use consultants to gauge if and where improvements are needed, while others use a variety of other methods. Skinner says he relies on customer and staff feedback, as well as standard laundry key performance indicators (KPIs). Jones seconds that, calling KPIs the "vital signs" of any laundry, adding that he benchmarks "against the rest of industry and strives for best practices."

"If you don't measure essential items," says Corfield, "then start to measure. Benchmarking your operations is the best way

to justify investing in change and the expected benefits from that change... You need to be able to make a case for improvement that can be defended with facts.”

Davin Alto, Laundry Plant Manager of Bay Pines VAHCS feels that “utilizing a Production Management software program is crucial. Tracking and trending shows managers specific problem areas to target for assessing needs and identifying opportunities for improvement.”

Mangini says in order to plan efficiently, his plant needed to write its own standards. He points out that each facility will have their own standards due to difference in customers, expectations, equipment, etc. In his case, standards from multiple facilities were researched. In addition, they took top performers in their own facility along with less experienced workers and collected information from them in order to make their expectations reasonable. Using this approach tailors the operations to the unique needs and abilities of each facility, which in the end ensures the highest efficiency.

Improving efficiency is not just a management issue. The entire staff has a stake in how well the laundry operates. Alto says wash floor personnel are “very instrumental...from ensuring the proper load size and correct formulas are being used, to titration and identifying what textile is to be processed when.” Jones considers them as “the engine that drives the train. They are arguably the most important people on staff.”

Sometimes improvements take thinking outside of the box. It is easy to get hung up on the obvious fixes, but there are countless ways to streamline processes or cut cost corners. Imagine the energy saved by maximizing the use of natural light or the savings on worker’s compensation costs by installing softer floor systems that reduce back strain. One innovative idea comes from Skinner’s facility: hiring an interpretive service organization for the Hispanic employees. “We are utilizing technology to provide for simultaneous translation during staff meetings,” he says. “It cuts down the time needed by half, which improves our financial efficiencies. All staff seem to like this better.”

Involving the entire staff also improves morale, which will further improve efficiency by virtue of fostering better work ethics. Alto’s facility capitalizes on this fact by offering their staff an employee buy-in. “Employees feel more important and connected to the whole process if they feel they have an important role. Overall morale improves, leading to less lost time at work, better production levels, and a higher quality product.”

Keeping up with ever-changing technology and products may be challenging but necessary to keep a plant financially efficient. Jones cautions against being drawn in by false claims by new products, however. “Linen replacement cost is generally the second highest cost on a laundry financial statement. Too often, a cheaper priced item comes along and managers think they are saving money, which they are in the short run, but over time it will bury you when you are buying twice as much

to keep fill rates up.” Since initial savings does not guarantee a positive long-term return on investment, staying educated through research and networking with others in the industry is invaluable to the decision-making process.

Some improvements can dovetail with other positive benefits. Jones says, “Water Recycling systems can reduce consumption 40 to 50%. Waste water heat recovery systems, boiler stack economizers, dryer coaxial ducting, low temperature washing chemistry, CBW Tunnel washers with high extraction presses, etc. are all necessary in today’s laundries in order to be cost competitive. Not to mention, it’s just the right thing to do for the planet.”

It’s apparent that the blueprint for building an efficient facility is not a one-size-fits-all process. Efficiency begins in the planning stages, but is something that is an ongoing process as the industry and technology changes. Each facility has to find their own way, utilizing industry standards to guide them, but building a model unique to their own needs and the needs of their customers. In the end, efficiency is something a facility measures against itself.

“Almost Steam-Less”

Laundry Design Group, LLC just completed a project that was investigated for its “green” aspects but ended up being funded for reducing the operating hours of the plant while saving energy. The combination of energy savings and reduced operating hours funded the project. This project converted an existing laundry that was dependent on steam energy from a central plant. When the plant was built in 2001 the steam condensate return was not returned to the central plant, but rather sent to the pit prior to sewer. The decision made at that time was taken to save construction costs.

Fast forward 10 years and an energy review of the site determined that the only user of high pressure steam on this site was the laundry. Our company was hired to provide the study and make recommendations for improvements if possible. We calculated the energy difference between eliminating or reducing the steam to the laundry overall and reducing the net pressure of the central plant to 80 psi steam maximum. The net energy benefit resulted in significant savings in energy costs which qualified for rebates and “green” project funding. We also saw process and operational improvements that were possible with the addition of heat recovery and non-steam ironing.

We recommended a strategy which added a waste heat reclamation system, rinse water reuse system and a replacement of their steam ironer with a Self-Contained Thermal Fluid Gas heated ironer. The result of these retrofits to the plant meant a 100% reduction of all 125 psi steam, and an 85% reduction in overall steam demand at the laundry. This “Almost Steam-Less” conversion of this plant had an added benefit of increasing dryer capacity, and allowing “no-conditioning” ironing of percale sheets and flannel blankets. Also, maintaining a ready supply of hot and tempered water eliminated “steam-up” time in the washers – which added nearly 5 more loads per day.

When the project was complete, the processing time was cut two hours per day for the plant and energy/water savings was over \$5k per month at current utility rates.

Considering direct labor and utility cost recoveries combined with the available rebate programs for “green” or sustainable projects, this project will have an effective ROI of under 4 years.

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