



SUSTAINABLE CASCADE

POWERING 'GREENER' LAUNDRIES WITH INNOVATION

Operators describe tech advances that are generating improved resource conservation, efficiency and throughput

By Jack Morgan

In recent interviews with operators about trends in improving the environmental performance of their commercial laundries, we learned that while “green laundering” tactics and motivations vary, the consensus view is that helping the earth can aid the industry, while demonstrating corporate social responsibility to customers and the public.

WHY BE 'GREEN'?

One pioneering operator in this area is mat launderer Carl-Johan Björkman. As CEO of Hr Björkmans Entrémattor,

Arlöv, Sweden, Björkman describes how his company has applied innovations aimed at shrinking his operation's carbon footprint, and how these efforts have helped him grow his business. As for reducing emissions, he notes that from the beginning route vehicles posed the biggest challenge for the business. Early on, he sought to mitigate these effects in the company he founded in 1993. “As a mat-rental company, delivery has the most environmental impact, through the fossil-fuel emissions and CO²,” Björkman says. “In 2001, we bought our first gas-driven vehicle and already in 2005 all our deliveries were made with biogas, which is CO² neutral.”

Björkman has always made green operations a priority, and it's paid off handsomely, he says, noting that “The lowest-possible environmental impact—not only for transportation—has always been part of our business model. Over the years, this has given us lots of publicity and created interest and

credibility for our company, which in turn has generated more customers.”

As the idea of environmentalism has evolved in the minds of policy makers and the public toward advancing “sustainability,” i.e., ensuring that people can thrive without depleting the earth's natural resources and protecting future generations, Björkman's green efforts have expanded in tandem with this trend, and they continue to generate positive results. “Sustainability, which today is even more important—especially among younger people—also helps us when we are recruiting more employees,” he says. “It's a win-win.”

Today's emphasis on environmentalism/sustainability is by no means limited to youthful startups or European operators like Hr Björkmans Entrémattor. Alscio Uniforms, Salt Lake City, a global company founded in 1889 when a 14-year-old George Steiner began peddling towels to local businesses on foot, is equally enthusiastic about the importance of controlling

the company's carbon footprint. "AlSCO Uniforms strives to be a good corporate citizen," says Adelaide Maudsley, general counsel for the company that operates in 14 countries. "Sustainability has always been a part of our culture. We are now formalizing and measuring our sustainability efforts. We firmly believe that profitability and responsible practices go hand in hand, and it is this conviction that drives us to continue to innovate, collaborate, and drive positive change, setting new standards for responsible corporate citizenship." Echoing Björkman's outlook, she adds that, "Sustainability is good for business growth. We have adopted the sustainability mantra: *It pays to keep green!*"

MAINTENANCE DRIVES SUSTAINABILITY

Publicly embracing a pro-environmental philosophy is one thing, but taking steps to advance sustainability goals is equally important. Maudsley outlined several initiatives that AlSCO Uniforms is pursuing in this area (see related article, pg. 10). Examples include deploying U.S.-made table linens with a 50%-80% longer life than some imported varieties. The company has also deployed electric fleet vehicles in the U.S., Australia, Germany and New Zealand, as well as hybrid vehicles in the United Kingdom (UK).

We could "bullet point" additional initiatives, but high-profile projects isn't the only way that companies advance sustainability and accrue the efficiency and public relations benefits that result from those actions. For Paul Jewison, general manager of Textile Care Services (TCS), Rochester, MN, a critical element of environmental friendliness centers on effective maintenance. "Here's what I think is sustainable," says Jewison, who's also vice president of engineering for Healthcare Linen Services Group (HLSG), St. Charles IL. "There's actually a couple of different components. It doesn't automatically mean being green because one aspect of

being sustainable is making sure you're maintaining all of your equipment."

Jewison's commitment to maintenance is a priority of his management of the TCS facility in Rochester, which he's overseen since its opened in 1993. In recent weeks, Jewison kicked off the first full makeover of the plant's wash aisle and finishing departments. This \$10 million project includes

the installation of three new tunnel washers in the 96,000-square-foot (8,918-square-meter) plant that's currently processing 650,000 lbs. (294,835 kg.) a week of healthcare and hospitality textiles. As the process began earlier this year, Jewison emailed us a photo of a steam pipe that a plumbing contractor had cut open. He was shocked by the quality of the pipe's interior because it demonstrated the attention to upkeep



"THESE WORKHORSES HANDLE OUR EXPANDING WORKLOAD."

Houston-based Triple D Uniform & Linen Service is benefiting from rapid growth in Texas. After processing 5.4 million pounds of linen in 2021, they anticipate delivering about 7.8 million by the end of 2023. They bought a new LX460 washer extractor (600 pound capacity) to join two older LX445s (450 pound capacity). All three are front-loading and user-friendly. "We chose LAVATEC for cost effectiveness and reliability," Jacy Henderson, Triple D's Vice President, says. "Our customers know we take care of business, and LAVATEC gets our needs taken care of."

Ours is a long running story: To learn more about the LX-Series Washer Extractors, visit lltusa.com or call 203.632.8777. See the full case study about Triple D at our website.

LAVATEC
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“SOME OPERATORS THINK THEY CAN CUT CORNERS ON MAINTENANCE AND REMAIN PROFITABLE. THIS APPROACH NOT ONLY UNDERCUTS ENVIRONMENTAL PERFORMANCE, IT ALSO FUELS TURNOVER BY WEAKENING STAFF MORALE. ‘YOU’VE GOT TO RUN THE PLANT LIKE YOU OWN IT,’ JEWISON SAYS.”

that TCS staff had applied over 31 years. “The plumbing contractor was astounded,” Jewison said. “Absolutely perfect. After all those years, it’s like a miracle.”

When asked why some companies neglect maintenance, which results in higher utility costs and downtime, Jewison says that it’s often a combination of frugality and arrogance. Some operators think they can cut corners on maintenance and remain profitable. This approach not only undercuts environmental performance, it also fuels turnover by weakening staff morale. “You’ve got to run the plant like you own it,” Jewison says, adding that imparting a sense of ownership is important when recruiting/retaining quality maintenance staff. To keep them motivated, Jewison suggests that companies, “Invest in them and make them feel like it’s theirs. Then they’re going to protect that equipment and take care of it.” This applies to plants that have all-new equipment, or older machinery. “People want to do a good job, and I’ve seen plants that are old, but they run really well. They’re nice and clean, and they have a lot of pride in those plants.”

Beyond making a strong commitment to maintenance, Jewison says that ensuring efficient and environmentally friendly laundry operations requires a culture of continuous improvement, coupled with monitoring/analysis. “We have a culture where we’re always trying to make improvements on things. Whatever equipment we have, we’re always trying to modify it and see if it gets better.” This approach benefits one’s bottom line as well as environmental quality. “Efficiency saves

water; it gets you more pieces per hour. I think that a culture of innovation really distinguishes a business,” he says. “You get into a lot of plants and they’re proud of what they’re achieving on their utilities. That’s the culture you want.” Documenting performance improvements is another critical aspect of proactive plant maintenance, he adds. This includes water, natural gas and electricity use. “You’ve got to monitor utilities every day—twice a day if you can,” he says. “You may need to invest in software that’ll measure everything you have. Because if you don’t have data, you don’t know where you’re going.” Jewison relies on the GLSS system from Gurtler Industries Inc. to monitor key metrics in real time. The GLSS avoids costly proprietary hardware in order to minimize startup and maintenance costs. It’s tracking solution features a streamlined interface that can be personalized for the specific parameters that are most important for the laundry. That makes it easier for laundry managers to monitor and review data, he says.

Technological innovation offers another way to boost sustainability in a laundry setting. For example, TCS’ newly installed tunnels will have Gurtler’s Vis-Tex™ system that uses UV light and an advanced oxidation process to treat press water for improved cleanliness and stain removal. Implementing innovative resource-conservation technologies demonstrates a company’s commitment to green operations. The TCS plant’s overall water use is slightly under .5 gallons per lb. right now. But that figure will likely drop when the tunnels are fitted with Vis-Tex, he says. “You put the Vis-Tex system on,

it will recover up to 50% of that water,” Jewison says. “So it’s likely we’ll probably be in the .27-.29 range when we’re done.”

Here’s a cautionary note for operators focused on continuous improvement in plant operations. In today’s inflationary environment, investing in improvements that lower utility consumption may not immediately translate to lower costs. Sometimes they just let you keep pace with rising expenses. For example, Sarah Wrubel, owner and COO for Continental Linen Service (CLS), Kalamazoo, MI, recently oversaw a \$7 million upgrade at her family-owned industrial/food and beverage/health-care laundry. The utility savings that resulted were significant. In a 2022-’23 comparison of consumption, CLS experienced a 2.3% per lb. savings on natural gas; a 5.2% savings on electricity; and a 7.8% improvement in water consumption per lb. processed. While CLS’ efficiency has improved, the company’s utility-cost savings are negligible. “The important angle for us was that all of our utility costs have risen significantly over the last few years,” Wrubel says. “Unfortunately, that has offset any savings we are experiencing due to more efficient equipment.”

INNOVATION & MOTIVATION

Whether a laundry operator’s motivation is saving money or the planet (or both), the pace of improvements worldwide continues to accelerate. Below we review three examples aimed at saving natural gas, water and electricity.

First, Fabian Krause, managing partner for Coburger Handtuch & Matten Service (CHMS GmbH & Co. KG) in Rodental, Germany, told us he’s seen opportunities for savings in multiple areas in recent years, but he’s especially enthused about saving on natural gas used for drying with the LAVA-Cascade Drying system from Lavatec Laundry Technology Inc. “The development of more efficient machines is

an important pillar to saving natural gas, electricity and fresh water,” says Krause. “Throughout the last decade, the machines helped the laundries to save resources. There were not only further developments of the existing machines, but real innovations like Lavatec’s LAVACascade drying system.” The LAVACascade system is designed to save at least 50% in energy over conventional drying, according to the vendor, which describes a three-tier system for enhancing dryer efficiency. Phase I features high heat in the laundry load. In phase II, the system recaptures waste heat to maintain a consistent temperature. In phase III, the system ensures proper cooling. Each phase only takes a few minutes and the overall program is designed to save time and labor, as well as energy. Krause adds that additional improvements are in the works for removing impurities from wastewater. “We reduce lint with special filters to enhance the multiple use of process water,” he says. “We also plan to add an improved wastewater facility next summer. It will reduce our fresh water volume, and filter out plastics and all kinds of heavy metals to protect the environment.”

Second, Leena Kähkönen, manager, external communications for the Lindström Group, Helsinki, Finland, cited a water-conservation partnership launched in 2022 with Nalco Water, a division of Ecolab Inc. This initiative has generated positive results at Lindström’s plant in Chennai, India. The project, dubbed “Aquaest” has produced significant savings, Kähkönen


says. In an article published earlier this year by Lindström, the company notes that, “In just over a year, we recovered 74% of the water in the plant. We also reduced total freshwater usage in Chennai by 56%. The article, titled “Aquaest: Partnering with Nalco Water to optimize water use in India,” added that Lindström met its ambitious goals for water reuse by installing a semi-automated wastewater-treatment system and reverse-osmosis equipment in the plant. Sabarinathan Muthukumarasamy, the production manager for the Lindström/Chennai plant, praised the savings that the program has generated. “The water-recycling project promotes the safe reuse of wastewater and water conservation in order to create a more sustainable future for everyone,” he says. “This project is a green solution for grey water pollution.”

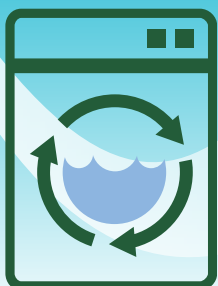
Third, Irvine, CA-based Prudential Overall Supply has moved aggressively to tap solar power to help generate electrical capacity outside of conventional utility providers. In July 2023, Prudential announced the completion of a solar project at its Milpitas, CA, clean-room plant. The system is sized for 474 kWDC (kilowatt direct current) and is expected to produce 724,000 kWh (kilowatt hours) of electricity annually, according to Jerry Martin, Prudential’s vice president of sales and marketing. The installation features 1,129 solar panels that will allow the plant to generate roughly 36% of its electricity needs. Martin says a second solar installation is slated for the company’s Fresno, CA, facility. Prudential CEO John

Clark commended the effort as step toward enhanced sustainability. “The solar project demonstrates innovation and accountability for our goal to be the industry’s environmental leader.”

For many operators worldwide, sustainability in the 2020s is more than just a matter of ensuring compliance and controlling costs. In fact, it serves as a key element of corporate social responsibility, or the “E” in Environmental, Social and Governance (ESG) programs. Brodie Quinton, co-CEO of Quintex Services Ltd., a Winnipeg, Manitoba, Canada-based independent, puts it this way, “If we are making a profit at the expense of our environment/community, then we are doing something wrong,” he says. In response, Quintex has pursued numerous sustainability projects, ranging from water reuse to LED lighting. “We feel that we (and other corporations) have a responsibility to improve our community, not just through environmental initiatives, but sustainability is an essential piece. We recognize the damage that is happening to our environment, and we want to be part of the solution.”

That viewpoint—coupled with a broad focus on continuous improvement and enhanced competitiveness—has helped generate a cascade of innovations aimed at powering greener laundries worldwide. **TS**

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