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Cleaning Products: The Top 10 Innovations

A decade's worth of tools and products that have profoundly changed the way we clean

By Stacie H. Rosenzweig and Dan Weltin

Every day, it seems building service contractors are inundated with direct mail touting the latest in cleaning products and technology. “Revolutionary!” the ads say. “It will change your life!” “Everything is better, faster, cheaper, more!”

Of course, not everything can be revolutionary, and that’s OK. Many of our product workhorses have been around for decades, in close to original form. Take toilet paper, for instance — we’ve seen recycled paper and jumbo rolls, but the form and function itself hasn’t changed in years. But we wouldn’t want it any other way. After all, if it ain’t broke...

But, there also have been breakthroughs, and these are the products we celebrate as we present our Top 10 Product Innovations of the last decade. While this list is by no means exhaustive, we believe it is a well-rounded sampling of the innovations suppliers have provided over the last 10 years, and that have been discussed in the pages of *Contracting Profits* since its inception in 1996.

Over the last decade, previously unheard-of product categories, such as microfiber, foam soap and touchless restrooms and have popped into facilities everywhere. On the other hand, not all of these products were introduced since 1996 (the backpack vacuum and chemical dispenser, for instance), but they’ve moved from overseas or from the fringes into the mainstream American cleaning market. Other products, such as green chemicals, floor finish polymers and computer software, have been around for more than 10 years, but in the last decade, they’ve improved so tremendously we can’t imagine life without them. Other innovations profiled in this story aren’t products, per se, but changes in design that make life easier for the operator, such as ergonomics and alternative power sources. As it’s just about impossible to rank these products quantitatively, or in terms of relative impact or sales, they are presented in alphabetical order.

BACKPACK VACUUMS

Designed with an emphasis on ergonomics, backpack vacuums are lightweight and its wand and hose configuration helps reduce stress on user’s wrists. With its maneuverability and accessibility to hard-to-reach areas, backpack vacuums have been a staple to team cleaning. Over the years backpack vacuums have undergone many major improvements, including incorporating battery power and HEPA filtration technologies, as well as improving overall user comfort by reducing the machine’s size and weight and developing harnesses designed especially for the woman workforce. Backpack vacuum can weigh less than 10 pounds and have suspension systems that distribute the weight across the hips instead of the shoulders for ideal balance and maneuverability. Studies show this kind of vacuum can greatly reduce the time and effort needed to vacuum.

BATTERY-POWERED EQUIPMENT

In the beginning, there was one power source — elbow grease. Early vacuum cleaners involved suction provided by hand pumping, if that. Floors were cleaned with mops and buckets, and that was it. Then came



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corded and fossil-fuel-powered machines, much to the relief of hardworking janitors everywhere. Over the last decade, batteries have joined the growing list of power options. Today's batteries are lighter, longer-lasting and quicker-charging than ever, allowing building service contractors more productivity and maneuverability with less equipment downtime.

CHEMICAL DISPENSING SYSTEMS

Chemical dispensers have come a long way since they were first introduced to the market in the 1980s. Back then, BSCs' most common option was what is often referred to as the "glug-glug" method – manually mixing big jugs of chemical while guessing at the ratio. But this system was inadequate – too high a concentration and the chemical can damage a surface, cause health and safety issues and waste money. However, not enough concentrate and the mixture wouldn't be effective. Today's dispensers help alleviate the guesswork. Dials, knobs and push buttons automatically mix the right balance of chemicals every time. "Control mechanisms as a whole have been one of the top five significant cleaning innovations in recent history. Control helps with quality, safety, cost-effectiveness, training and communication," says Dave Frank, president, American Institute for Cleaning Sciences.

ERGONOMICALLY DESIGNED TOOLS AND EQUIPMENT

During the Clinton administration, the U.S. Occupational Safety and Health Administration proposed a strict ergonomics standard for American workplaces, and BSCs feared they would have to buy entirely new tools and equipment, not to mention spend precious time training their employees, to comply with the new standard. While ergonomics regulation never came to pass, innovation in ergonomic design did, allowing janitors to work more safely and comfortably even in the absence of a law.

Lightweight mops, ergonomic buckets and backpack vacuums are some of the industry's more prominent improvements, but such innovations are available across product categories. "Manufacturers have created longer handles for dusters, enabling workers to reach high areas without strain," we reported in our September, 2001 issue. "Lobby dustpan handles now have an L-shape, which fits workers' hands better than traditional, vertical ones. Dotted string-knit gloves provide cushion and offer a better grip, which helps reduce hand fatigue. Some pump-up air compression sprayers now include trigger sprayer locks that don't require the worker to continually press down on the thumb release. And BSCs can use a new table mover to reduce lifting strain during set up, take down or relocation activities. The device placed in the middle of a table, uses casters to allow the table to be rolled rather than lifted into place."

FLOOR FINISH POLYMER TECHNOLOGY

Years ago, cleaners used to finish their floors with wax from the carnauba palm. Today, the term "floor wax" is no longer appropriate, as many finishes are high-tech polymers involving no wax at all. Over the last 10 years, innovations in molecular chemistry have allowed engineers to create finishes with larger molecules and higher proportions of solids (without the dreaded mop drag), allowing for more shine and durability in fewer coats. Another innovation brought finishes curable via ultraviolet light onto America's floors. "Floor finishes are a far cry from the waxes and polishes of 20 years ago," we reported in our March/April 1997 issue. "New formulations ... are easier to apply, last longer, and look better — characteristics which ultimately reflect well on BSCs."



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GREEN CHEMICALS — THAT WORK!

A decade ago, “green cleaning” was something talked about in the margins. Some contractors cleaned green because they had to (if they worked for governments with “environmentally preferable purchasing” requirements), or because they felt strongly about the environment, but it wasn’t widespread. And, right or wrong, many BSCs believed less-toxic chemicals wouldn’t work well, or would require a lot more effort, or would cost several times more than their traditional counterparts. Now, however, there are dozens of jan/san manufacturers with green-product lines, and they’re selling fast. Certifying bodies such as Green Seal require extensive testing before a product can carry their labels — and, such testing requires proof of efficacy, not just chemical composition.

HAND CARE

Hand care products have seen numerous improvements throughout the years. One of the more well-known innovations is antibacterial soap. While controversial, studies have shown that antibacterial products do reduce or eliminate bacteria that can lead to disease more effectively than regular soap in some settings. Another improvement in hand care is foam soap. Instead of dispensing as a liquid, the soap is mixed with air as it is produced similar to shaving cream. Users don’t have to lather it up, which reduces as much as 10 seconds off the average 30 seconds it takes to thoroughly wash hands. As a foam, users use 40 percent less soap, helping to reduce product cost and harm to the environment as less product ends up in the waste stream. Lastly, hand sanitizers have proven to be an effective way to be able to clean hands anywhere, without the need for soap and water. “From the perspective of protecting public health, these hand sanitizers are valuable, but should be used in addition to soap and water rather than as a replacement. Some leading experts have indicated that if we could get people to wash their hands just five times per day, we could cut the rate of illness by 50 percent.

MICROFIBER

Microfiber arrived in America about five years ago after achieving success throughout Europe and Asia. But sales here continued to be sluggish until recent. Cleaning professionals are only just starting to appreciate the benefits of this new advanced fabric, including its ability to be laundered and reused over 500 times. Microfiber has more surface area than standard fibers and since it’s a smaller fiber, it can get into cracks and crevices too small for other materials. Microfiber often performs just as well with water as it does with chemicals. Today, microfiber products include mops, cloths, mitts and bonnets, and are predominantly used in healthcare and foodservice markets to reduce cross-contamination. However, many contractors recognize that same benefit when using the product in commercial settings such as office buildings.

OPERATIONS SOFTWARE

As more members of Generations X and Y begin owning and operating contract cleaning businesses, the industry has seen a push to organize operations digitally. One of the more popular software options is for workloading. BSCs can determine the number of labor hours specific jobs should require. This helps managers keep track of employee time management. Along with workloading programs, BSCs can use bidding software to help calculate accurate and competitive bids based on square footage, labor times and frequency. “People want to calculate bids relatively quickly. Instead of charging a number like four cents or six cents per square foot, [using software] is just as simple,” says Jim Peduto, president, Matrix Integrated Facility Management, Johnson City, N.Y.



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TOUCHLESS RESTROOMS

Remember the first automatic flush valve you saw? It was probably in an airport, which were the early adopters of automated restroom technology. They found the devices helped the high-traffic, round-the-clock restrooms stay clean and functional. In the last decade, the use of touchless technologies has skyrocketed. The flush valves have been joined by counterparts in sinks, and soap and towel dispensers. The benefits are multiple: touchless dispensers cut down on cross-contamination, encourage hand washing and discourage vandalism. Also, touch-free products reduce waste, as pre-determined towel lengths and delay times for toweling and soap can limit the amount of product a user can take. This also reduces the need for frequent refills and day portering.

And, touchless technology has moved beyond airports to nearly everywhere, from bowling alleys and schools to hospitals and manufacturing plants.
