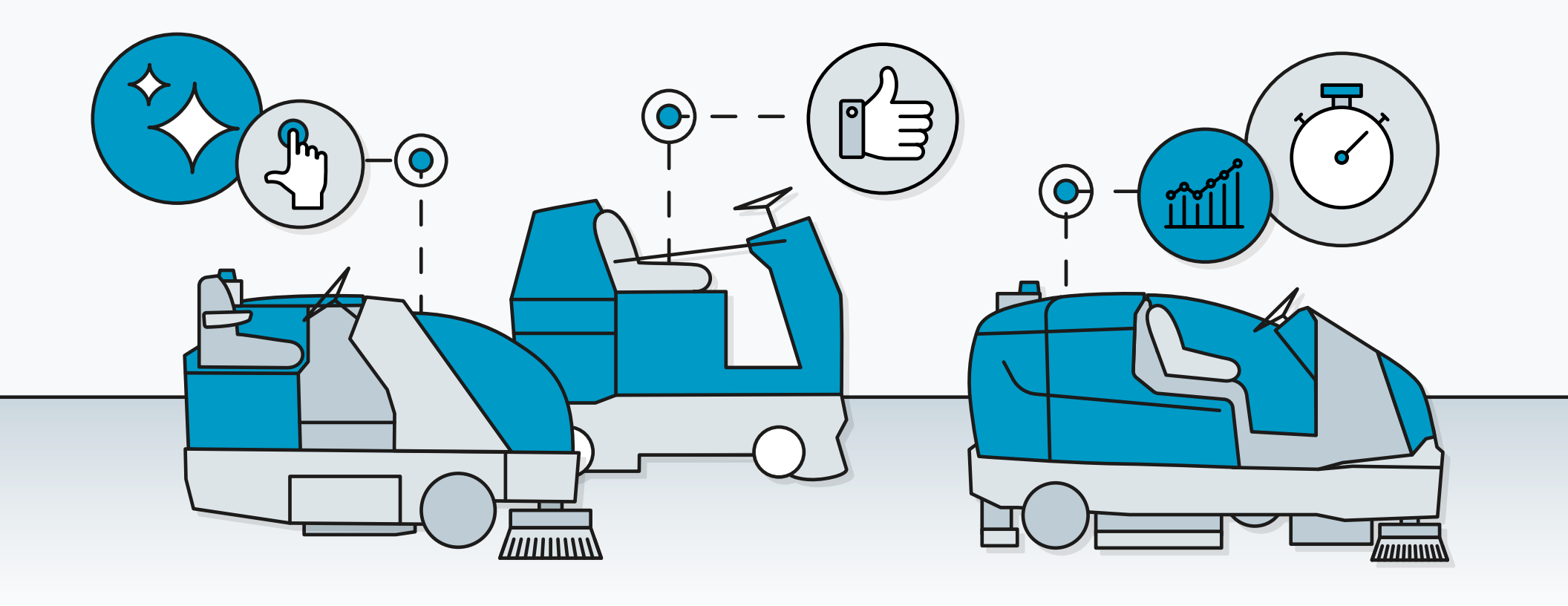
Cleaning under pressure

Five critical challenges impacting industrial cleaning — and how to stay ahead of them



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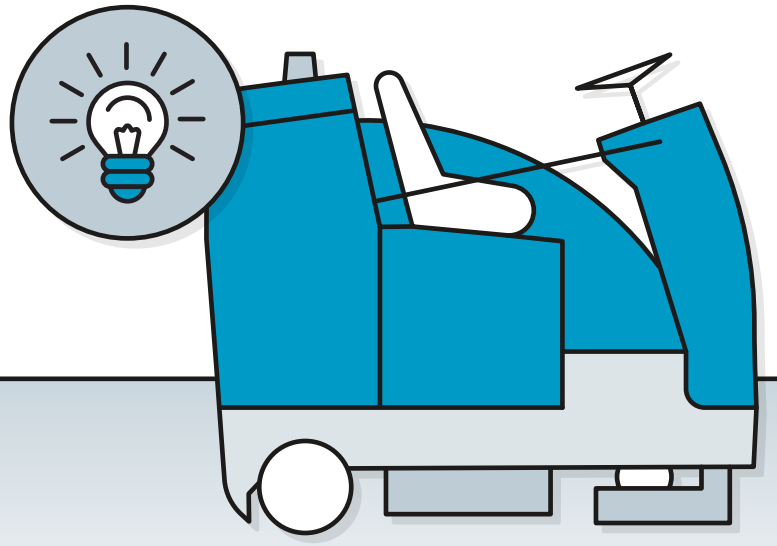


INTRODUCTION:

All eyes on clean

In today's industrial environments, cleaning is no longer a background task — it's a frontline function that directly affects safety, productivity, and compliance. But keeping large, complex facilities clean isn't easy. Operations are stretched. Labor is tight. Standards are rising. And cost pressure is everywhere.

LABOR MARKET PRESSURE

3 in 4 global employers report difficulty filling roles[i]

RISING STANDARDS

The cleaning services market in North America is projected to grow at a **3.5% CAGR** through 2032.[ii]

RISING COSTS

In the U.S. manufacturing sector, unit labor costs rose **1.6% in Q1 2025**, which corresponds to **a 0.7% year-over-year increase** compared to Q1 2024.[iii]

This briefing explores the five most pressing cleaning challenges teams are facing across manufacturing, logistics, and heavy industry — and how forward-thinking organizations are adapting. For each challenge, we'll break down the issues, the side effects of not addressing them, and how modern solutions are helping facilities clean with more purpose, safety, and sustainability.

CHALLENGE 1:

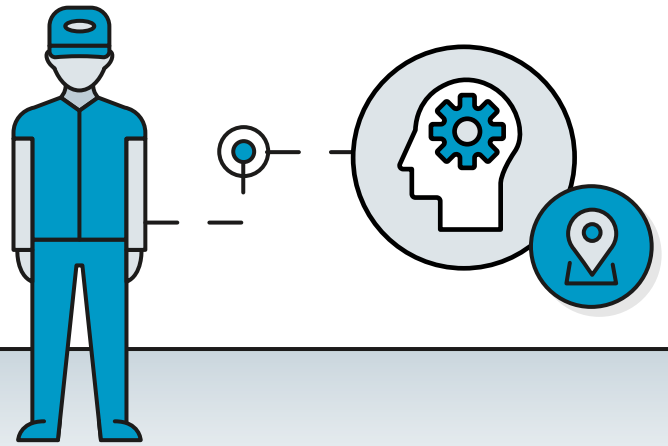
Balancing equipment costs with cleaning demands

Industrial budgets are under pressure. Energy, labor, and materials costs continue to rise, forcing many operations teams to defer capital investments — including in cleaning equipment. But delaying upgrades often leads to more expensive problems down the line, especially when manual cleaning stretches staff too thin or outdated machines underperform.

Q1 2025 data shows that manufacturing unit labor costs increased by 0.7%.[iii] Meanwhile, inflationary pressures and increased production demands continue to strain facilities trying to maintain safe, efficient environments with limited resources.

What facilities are facing:

- Limited budget for equipment upgrades, even as floor space and cleaning demands increase
- Difficulty justifying new machines without a clear ROI or internal buy-in
- Pressure to cut costs without compromising cleaning standards or staff safety



Lowering the barrier to better equipment

For many facilities, purchasing new equipment outright may not be realistic. But that doesn't mean they need to settle for underperformance. **Rental and reconditioned equipment programs** offer a flexible way to improve outcomes while keeping costs in check. These options can be particularly valuable for facilities with:

- Short-term cleaning needs (e.g. seasonal ramp-ups, new site openings)
- Existing machines that are being phased out gradually
- Lower-volume sites that still need industrial-grade performance

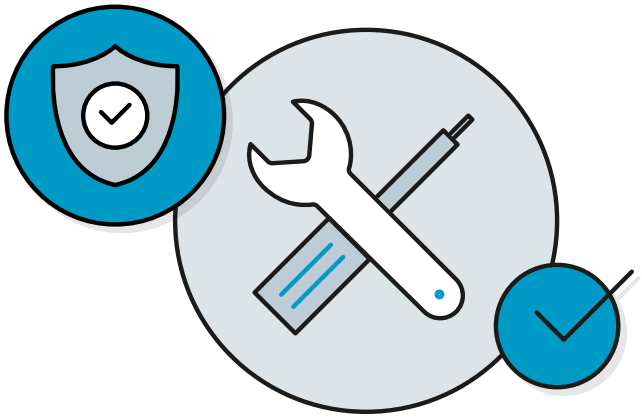
Measuring value across the operation

Cost efficiency isn't just about the purchase price. Mechanizing routine tasks and using automated or velocity-assisted machines reduces labor strain, increases consistency, and cuts time spent on rework. But to prove that value, organizations need a plan:

- Track time saved by replacing manual cleaning with mechanized alternatives
- Monitor consumables usage and maintenance intervals across different machine types
- Compare performance across rented, reconditioned, and new machines over time

Making the case internally

If cost is the primary barrier to change, make the ROI visible. Use cleaning logs, downtime records, and staff feedback to build a case that shows how a smarter investment leads to measurable improvements in labor efficiency, safety, and floor condition.



CHALLENGE 2:

Equipment reliability under pressure

In high-demand environments, cleaning equipment doesn't just need to perform — it needs to keep performing. Between continuous shifts, changing floor types, and unexpected debris, machines that aren't built to last quickly show their limits. The result? Delays, workarounds, and added risk.

The trickle-down effects of poor performing equipment

OPERATIONAL IMPACT	FINANCIAL CONSEQUENCES	TEAM FRICTION	LONG-TERM CONSEQUENCES
Cleaning missed due to machine downtime, affecting worker safety and operational efficiency	**Repeat costs from consumables wasted during ineffective cleans**	**Operators lose confidence in unreliable machines, slowing adoption**	**Reliability issues limit momentum for broader automation initiatives**
Rework caused by inconsistent machine performance across floor types	**Unplanned maintenance pulling budget from other facility needs**	**Maintenance staff overburdened by repeated interventions**	**Downtime leads to reactive cleaning strategies instead of planned routines**
Routing delays from machine stalls in shared production zones	**Capital locked in underused or broken-down assets**	**Cleaning teams default to manual labor when machines underperform**	

How to solve

Reliability isn't just about durable cleaning equipment. For operators working back-to-back shifts or managing teams across multiple sites, the real value lies in knowing equipment won't get in the way. That means fewer breakdowns, fewer maintenance calls, and support when it's needed — not weeks later. It's not just about the machine. It's about the partnership behind it.

THREE TIPS TO IDENTIFY THE RIGHT EQUIPMENT:

Choose machines that have a proven track record in similar industrial environments to your own — ask sales reps for case studies and examples during the selection process.

Look for features that **simplify troubleshooting and reduce the need** for service calls.

Prioritize suppliers that back their equipment with **responsive service and a long-term view.**

Lessons from the field – one machine, 30 years of reliable performance

Penygroes Concrete Products Ltd, a third-generation manufacturer in South Wales, used their original Tennant 95 sweeper for over 30 years before recently upgrading to the **Tennant 800 industrial sweeper**. The heavy-duty sweeper was selected for its durability, HEPA filtration system, and performance on indoor and outdoor surfaces. The result? Noticeably lower dust, easier maintenance, and a cleaner, safer site for workers.

"We've had a Tennant [machine] on site for over 30 years. Reliability, ease of use, and the level of service made it an easy choice to stick with Tennant."

— Rhodri Williams, Director, Penygroes Concrete Products Ltd

CHALLENGE 3:

Reducing physical strain and safety risks on the floor

Cleaning is physical work — and in industrial environments, it's often exhausting. Long shifts, vast spaces, and demanding surfaces and soils make it even tougher. Factor in underpowered or outdated equipment, and it's no surprise that injuries, fatigue, and turnover follow. Even with documented safety procedures, conditions on the floor can tell a different story — especially when cleaners are stuck wrestling outdated machines or navigating around avoidable hazards.

WHERE TEAMS FEEL THE STRAIN	WHAT BETTER LOOKS LIKE
Repetitive tasks with outdated or hard-to-maneuver machines	**Routine cleaning tasks are mechanized or automated, reducing physical strain**
Pushing heavy equipment across uneven or mixed floor types	**Floors are swept, scrubbed, and dried on a single pass — eliminating the need to close off large areas for safety reasons**
Increased slip risks from lingering moisture and incomplete drying	**Teams are upskilled through hands-on robotics training and implementation**
Exposure to harsh or irritating cleaning chemicals	**Fewer injuries and lower turnover from repetitive, high-risk cleaning work**

How to reduce the risk

Minimizing injury and strain isn't just about health and safety audits — it's about the small moments that make up every shift. Choosing equipment that's intuitive, comfortable, and purpose-built for the environment helps teams stay efficient and focused without compromising well-being or morale.

TIPS FROM THE FLOOR:

- Prioritize visibility, ease of control, and ergonomic features
- Avoid overcomplicated interfaces — make training faster and less stressful
- Consider ride-on, velocity-assisted, or robotic floor cleaning equipment to reduce fatigue and improve efficiency

What it looks like in practice

All American Foods, a distribution business in the United States, upgraded from a walk-behind scrubber to a **T16 ride-on scrubber** with **ec-H2O® technology** to keep up with increased warehouse traffic. The T16 delivered stronger performance, covering more floor area with less operator fatigue, and helping improve safety by reducing greasy buildup in high-traffic areas.

"The T16 with ec-H2O outperformed all other machines we've tried. We can clean our entire facility in a couple of hours when our walk-behind took 20. It removed caked-on dirt the first time we used it — and the floors stay cleaner."

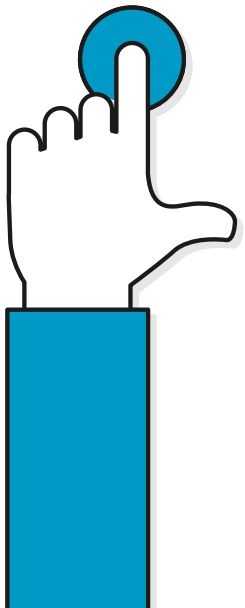
— Jim Flanagan Jr., Operations Manager, All American Foods

CHALLENGE 4:

Turning data into action — and accountability

Even in the most modern industrial sites, cleaning is often a blind spot. Managers rely on checklists or whiteboards to track what's been cleaned, when, and how well. But in large, shared facilities, that lack of visibility leads to missed areas, repeated work, and a lack of accountability when expectations aren't met.

WHERE GAPS SHOW UP	WHAT DATA-CENTRIC CLEANING LOOKS LIKE
Managers have zero visibility into machine use, route coverage, or cleaning frequency	**Real-time usage and equipment telemetry data that flags underperformance or inefficiencies**
Confusion between shifts about what's been done and what hasn't, leading to frustrated teams and underserved areas	**Automated reporting for equipment health and performance audits**
Limited ability to tie cleaning performance to KPIs or compliance efforts	**Confidence that the cleaning plan is being followed — every shift**



How to make it work

Data doesn't clean the floor — but it helps teams avoid doing the same job twice or missing high-risk areas. **Connected equipment**, telemetry dashboards, and **robotic equipment** make it easier to manage cleaning like any other industrial process — with tracking, accountability, and performance improvements over time.

WHAT TO LOOK FOR:

- Machines that log routes, hours, and maintenance needs automatically
- Dashboards with built-in reporting that make it easy to interpret data into insights
- A service provider who is investing in robotics innovation and data-centric cleaning technology

Implementing data-centric cleaning at scale

Veritiv, a distributor with sites across North America, rolled out **Tennant T16AMRs** in 20+ locations to replace manual cleaning. After the first 43.6 million square meters cleaned autonomously, employee feedback highlighted cleaner floors, fewer delays, and more time to focus on higher-value work.

"We have a report that comes out every Thursday that keeps us aware of the activity and how we're utilizing the scrubber from hours of service, as well as square footage that the autonomous scrubber is covering throughout the facility."

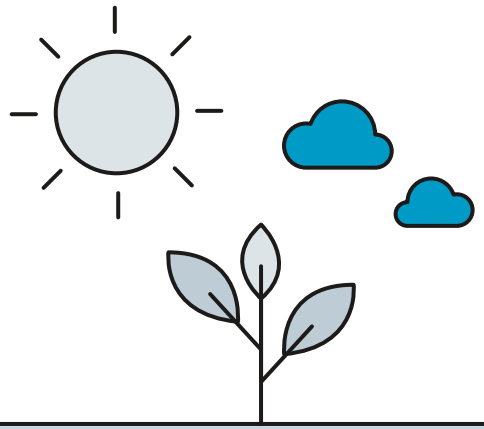
— Hassan Wright, Operations Manager at Veritiv

CHALLENGE 5:

Meeting sustainability targets without compromising performance

Sustainability expectations are increasing — driven by stricter regulations, investor scrutiny, and a growing push toward circular, low-impact operations. Yet cleaning remains one of the more complex areas to make progress. Many teams are still working with older equipment that relies on heavy chemical use and high-water consumption, while also struggling to measure or report environmental performance effectively.

ROADBLOCKS TO MORE SUSTAINABLE CLEANING	WHAT PROGRESS LOOKS LIKE
Traditional cleaning relies on harsh chemicals and heavy water use	**Machines that clean effectively with little or no chemical use**
Older machines often lack efficiency or modern emissions standards	**Water-saving technology that works even in large, debris-heavy spaces**
Facility teams struggle to prove progress against ESG goals	**Built-in tracking to document and report performance**
	Greater use of fully electric, lithium-ion powered cleaning equipment



How to clean without compromise

Start by understanding where the biggest environmental impact happens — often in daily routines. Swapping out chemical-dependent cleaning for **ec-H2O NanoClean® technology** or low-moisture systems reduces environmental harm without adding time or labor. Lithium-ion batteries extend runtimes and reduce downtime — helping operations and sustainability teams meet in the middle.

WHERE TO START:

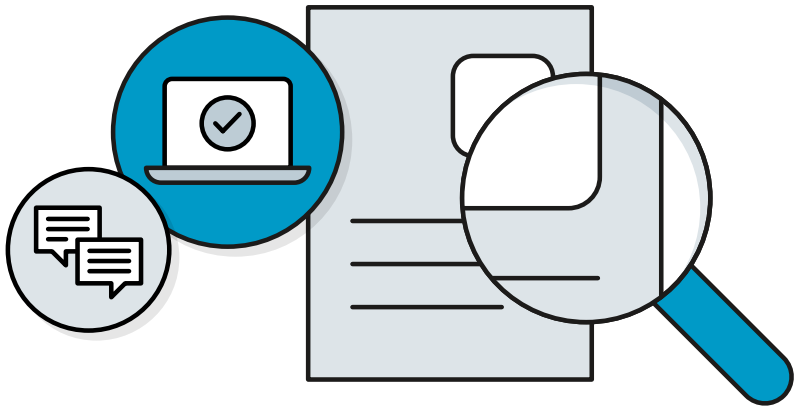
- Look for machines with proven low-water and detergent free systems
- Choose lithium-ion models that support long shifts with minimal charging downtime
- Work with suppliers that can help measure and report performance

Sustainability meets performance: real-world results

CNH Industrial's team in Lebanon, Indiana swapped their manual floor cleaning process for a T16AMR robotic scrubber using ec-H2O NanoClean® technology. Not only did they free up over 40 hours a week in labor, but the global industrial manufacturer was able to eliminate chemical use altogether — improving floor safety and aligning directly with their corporate sustainability goals.

"This machine does align really well with our sustainability values. We're very happy with the T16AMR."

— Neil Dellinger, Facility Manager, CNH Industrial



Bring your cleaning strategy up to speed

Whether your challenge is uptime, safety, data, or sustainability, Tennant has the industrial equipment and support to help you move forward with confidence. We've worked alongside facilities like yours for decades — and we're ready to help solve for what's next.

Contact Us

Request a site consultation and get more information about how we can support your industrial facility.

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