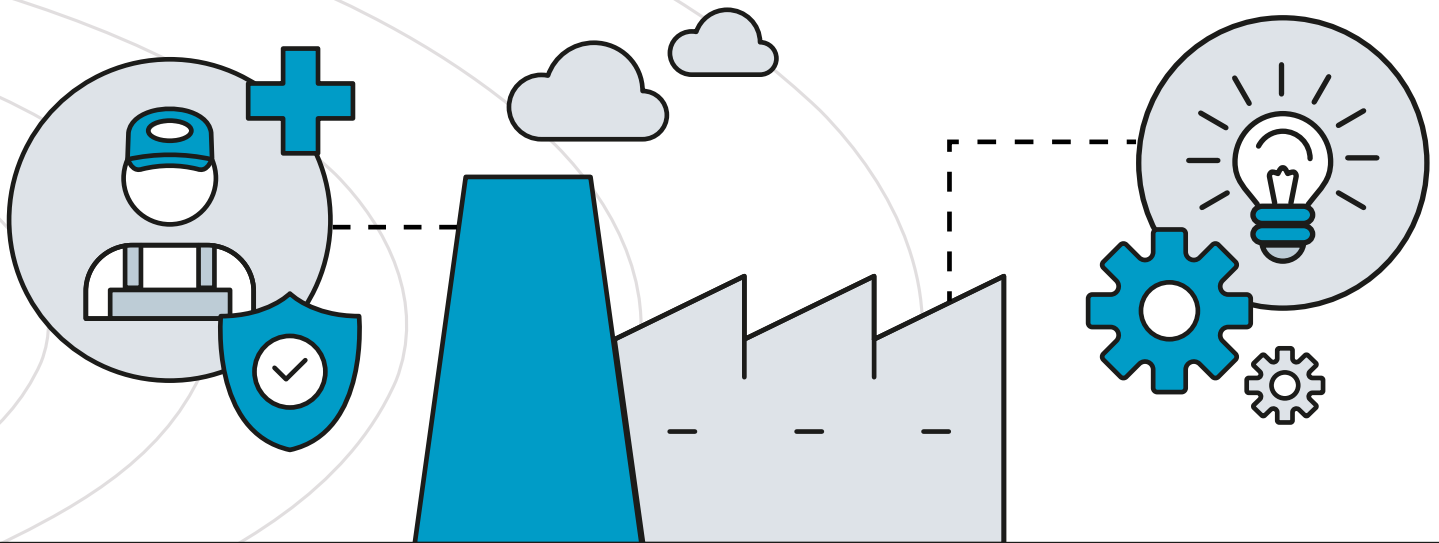




# Guide to reducing cleaning costs for industrial facilities

Keep your facility safe  
and clean for less





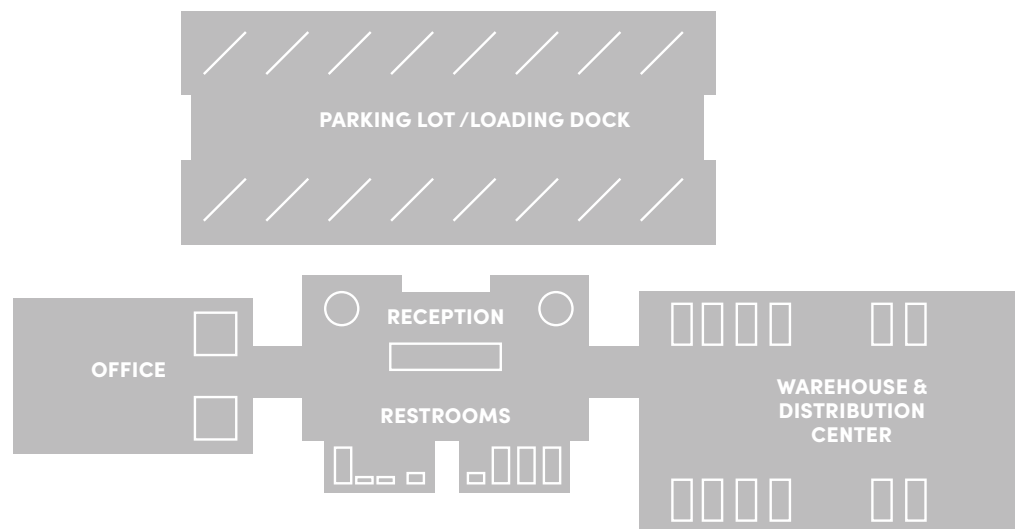
**Keeping your facility clean is important for protecting your employees, production line, products, and overall operations. You also want to keep costs down by being as efficient as possible. Five key items to consider are understanding your space, leveraging new technology, addressing labor challenges, enhancing safety, and maximizing productivity.**

## Understanding your space

Understanding the challenges your space presents is critical to your success. Consider the square footage and temperatures, types of floor surface, types of debris present—from liquids and grease to dust and debris—in different areas.

Tight, confined spaces like bathrooms and break rooms, require a certain set of cleaning tools, while larger, more open spaces allow you to use bigger, more robust cleaning equipment.

It's also important to consider the type of dirt, dust, debris, and soils that need to be cleaned. If your crew typically sweeps before scrubbing, consider using an integrated machine that can pick up dust and debris before scrubbing to reduce time spent doing both tasks. Some cleaning machines offer on-board wand attachments to enhance productivity by allowing one-pass cleaning. If dust is an issue, look for equipment that offers excellent dust filtration, reducing the need for additional passes.





# Leveraging new technology

One of the most promising and rapidly growing robotics use cases is leveraging sophisticated autonomous floor scrubbers to optimize and enhance floor cleaning in warehouse spaces. Autonomous floor scrubbers can help address several of the operational challenges and business goals around the logistics and costs of facility cleaning:

## **CLEAN MORE FREQUENTLY—AND MORE CONSISTENTLY**

Robotic cleaning machines enable more frequent floor cleaning without increasing labor costs. The consistent performance of robotic floor cleaners help give warehouses confidence that facilities are being cleaned thoroughly and properly, every time.

## **GIVE STAFF MORE TIME FOR CORE RESPONSIBILITIES**

Robotic floor cleaners allow warehouses to leave the frequent, methodical floor scrubbing to robots—freeing up more time for employees to focus on their core responsibilities and day-to-day warehouse operational needs.

## **PROVIDE PROOF OF COVERAGE**

Real-time performance data from robotic cleaning machines validates cleaning, demonstrating that warehouse operations are taking additional steps to protect inventory.



**Clean up to 13 hours  
a day with robotic  
cleaning machines\***

*\*T16AMR can scrub up to 13 hours per day using Lithium-Ion battery option*



# Addressing labor challenges

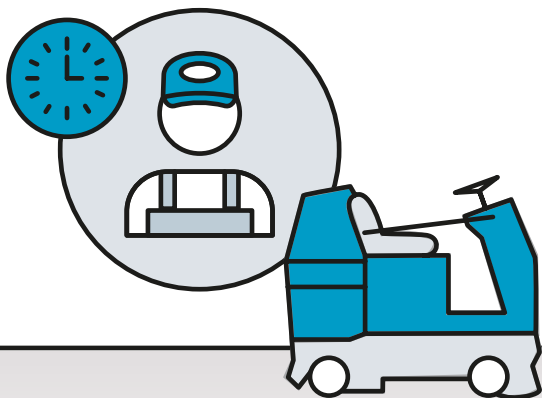
Managing costs is one of the biggest challenges industrial facility managers face. Not only are you responsible for monitoring equipment and service costs, but you're also tasked with overseeing the cost of labor and training. With unemployment at record lows and workforce shortages gripping nearly every industry, your organization needs to strategically evaluate every opportunity to work smarter, not harder.

Labor is always a major operational cost. But today, many warehousing operations are facing both rising labor costs and a shortage of qualified, experienced and reliable talent to fill out staffs.

With the rapid advance of robotic technology, truly autonomous, intelligent robots are now an essential part of the modern warehouse. Robotic floor scrubbers can help address several of the operational challenges and business goals around the logistics and costs of facility cleaning, including labor challenges.

Robotic cleaning machines directly address the supply-demand imbalance presented by rising cleaning demands and limited labor resources, allowing warehouses to leave the frequent, methodical floor scrubbing to robots—redeploying staff to other value-added tasks.

Additionally, robotic floor cleaners can help manage cleaning operations, even with high staff turnover—and help reduce high costs of equipment damage from operator error during manual operation, reducing the cost to clean. Plus, by showing employees how robotic floor cleaners will free them from monotonous floor cleaning, they'll understand that this technology allows them to focus on complex responsibilities that will empower them to more directly contribute to the goals of your organization.



**30% increase in productivity due to robotics across all industries, including cleaning, in the next 10 years.<sup>6</sup>**



# Enhancing safety

Keeping your facility clean and safe, and ensuring the safety of employees and visitors is an important job for facility managers. Reducing cleaning-related hazards—including slippery floors, poor indoor air quality, and handling and mixing chemicals—will make your facility safer and reduce potential costs.

## **REDUCE SLIP AND FALL INCIDENTS**

According to the Centers for Disease Control and Prevention, falls are among the leading causes of unintentional injuries in the United States, accounting for approximately 7 million emergency visits annually.<sup>1</sup>

Slip and fall incidents involving employees frequently result in disabling injuries, lost workdays, reduced productivity, and expensive workers compensation claims. The annual direct cost of disabling occupational injuries due to slips, trips, and falls is estimated to exceed \$10.26 billion per year, according to the 2022 Liberty Mutual Workplace Safety Index.<sup>2</sup> Work injuries on average cost \$42,000 per accident,<sup>3</sup> and the average workers compensation claim is \$48,575.<sup>2</sup>

In the warehousing and transportation industry, unintentional falls are the second leading cost for non-fatal claims with more than five days away from work.<sup>2</sup>

## **WAYS TO REDUCE SLIP AND FALLS**

- Ensure your cleaning equipment and team are not leaving standing water behind when cleaning. Excellent water recovery systems on machines reduce the chance of slip and fall injuries.
- Make sure you don't have excessive chemical buildup that may make floors slippery. Chemical-free cleaning makes floors safer by removing accumulated cleaning chemical buildup that makes floors slippery.
- Use National Floor Safety Institute (NFSI) certified products to ensure your floors are high-traction and safer for employees and others in your facility. Using floor cleaning equipment that is NFSI-certified as "high-traction" helps make your floors safer for employees.

**In the warehousing and transportation industry, unintentional falls are the second leading cost for non-fatal claims with more than five days away from work.<sup>2</sup>**



# Maximizing productivity

While you can't add hours to the day, you can make sure your employees are spending their time wisely on the clock.

## **WAYS TO OPTIMIZE TIME SPENT ON CLEANING**

- Reduce the need for team members to hop on and off machines to use a broom or mop to clean in tight spaces by leveraging machines that allow you to clean close to racks, pallets, and equipment.
- Choose power sources that meet the needs of your cleaning schedule, including batteries that enable crews to maximize time and floor cleaning capacity.
- Select equipment with pre-set options that allow team members to start cleaning immediately, reducing set up time while providing consistent cleaning results.
- Maintain equipment to ensure it continues to provide peak performance.
- Address labor challenges with robotic floor scrubbers, giving employees the ability to use their time to focus on high-value tasks.

**Ready to make a change? Call a Tennant expert today.**

**Contact a Tennant specialist to learn more about how a partnership with Tennant can help you drive efficiency and lower your cost to clean.**

**tennantco.com**

## **SOURCES**

1. Centers for Disease Control and Prevention. (2020). WISQARS Data Visualization. Explore Nonfatal Injury Data Visualization Tool. <https://wisqars.cdc.gov/lcnf/>
2. Liberty Mutual Insurance. (2022, June 17). 2022 Workplace Safety Index. The Top 10 Causes of Disabling Injuries. <https://business.libertymutual.com/insights/2022-workplace-safety-index/>
3. National Safety Council. (2021, January 27). Work Injury Costs. Injury Facts. <https://injuryfacts.nsc.org/work/costs/work-injury-costs/>
4. National Safety Council. (2020, September 10). Workers' Compensation Costs. National Council on Compensation Insurance's Workers Compensation Statistical Plan 2017-2018. <https://injuryfacts.nsc.org/work/costs/workers-compensation-costs/>
5. Liberty Mutual Insurance (2020, May). Workplace Safety Index 2020; Transportation & Warehousing. [https://business.libertymutual.com/wp-content/uploads/2021/04/WSI\\_1008.pdf](https://business.libertymutual.com/wp-content/uploads/2021/04/WSI_1008.pdf)
6. <https://www.abiresearch.com/press/over-half-million-mobile-robots-be-shipped-warehouses-globally-2030/>  
<https://www.buildings.com/articles/43101/autonomous-mobile-robot-scrubbers>