



Quinnipiac University takes campus experience and reputation to the next level with autonomous floor cleaning

BACKGROUND

"Customer experience" has become a top differentiator for colleges, universities and other higher-ed institutions. Schools of all sizes are investing big money in renovating, upgrading and building new facilities and campus amenities. Ensuring those spaces are clean is critical to making the most of those facility investments. And like just about every other type of public space, users (students, faculty and staff, visitors) have higher expectations for consistent cleanliness and visual cues of cleaning.

At Quinnipiac University in Hamden, Connecticut, the Facilities team is responsible for cleaning 50,000 square feet of space every week across campus buildings used by the school's 10,000 students.

With 24 years under his belt at Quinnipiac University, Director of Facilities Jon Terry has a passionate perspective on how his team's responsibilities directly connect with the university's broader vision, ambition and sense of purpose: "To be a 21st-century learning institution, we cannot remain stationary—we need to stay ahead of accelerating technical, business, societal and environmental changes all around us," Terry says. "We excel as a learning institution because of our agility, hunger for continuous learning—and those same values drive the continuous improvement of our Facilities team."

CHALLENGE

Quinnipiac University's new Recreation and Wellness Center is the school's most utilized facility and a central part of the campus community. The enormous space houses multiple athletic courts with many different surfaces. "From about 6 a.m. until midnight, there's



always some group in the building doing something," says Terry. "Our athletic teams and recreation leagues, people coming to work out and workout classes run out of this space. That means there's always something to be done from a cleaning perspective."

Terry and his team have faced the same labor challenges as virtually every other organization over the past several years. "We're always balancing staffing challenges while ensuring we're keeping our campus spaces as clean as possible and meeting our high standards," he says. "Our team does a fantastic job. But we just didn't have enough time to clean every space as often as we'd like, or to get to all the small-but-important details all the time."

The expansion of the Recreation and Wellness Center gave Terry the opportunity to purchase new floor cleaning equipment. The Facilities team already had multiple Tennant cleaning machines, but wanted to explore all their options to see if innovative floor cleaning equipment could help them address specific challenges and add value in new ways.

"Facilities teams across the United States are asking 'How can we leverage AI and technology?'" says Terry. "How could we leverage technology to increase productivity and figure out how to do more of the things we weren't getting to, and therefore, improve the student/community experience in our buildings?"

Another goal was to elevate the Facilities team as an example of Quinnipiac's commitment to innovation and sustainability. "We want to be a staple for the university to market our forward thinking," says Terry.



SOLUTION

As they evaluated options for the expanded Recreation & Wellness Center, Quinnipiac's longtime Tennant rep gave the Facilities team a demo of the company's fleet of autonomous floor cleaning machines. Terry saw the potential right away. "We thought, 'If we can give this pretty routine task of floor cleaning to a machine, then we can focus on those details that make a difference,'" he says.

To build the business case for an autonomous mobile robot, Terry started by calculating the upfront difference in purchase price between a traditional (manual) cleaning machine and an AMR. Then, he estimated benefits like runtime, additional square footage that could be cleaned and additional work that the Facilities team could do with the labor hours saved. "We saw this as an opportunity for us to take our already high service level and bring it to an even higher level," Terry says.

To ensure due diligence, Quinnipiac also demonstrated other autonomous floor cleaning machines. The T7AMR and T380AMR outperformed the competition, and Terry recognized that the Brain technology was the best-in-class option from the interface side: "The Tennant and Brain combination was really next level," says Terry.

"Tennant worked with us to make sure we selected the right equipment to make sure we were successful," Terry says. Quinnipiac's key requirements included the ability to run the machine for multiple cycles a day. "We wanted to make sure we had the quick charging so we could turn the machine over quickly and have the ability to run the machine during the day and then bring it back out during the night shift to do more cleaning," says Terry. They also needed the machine to be ready to handle the large spaces of the Recreation and Wellness Center as well as fit through standard doorways to clean the facility's hallways.

Terry also recognized how Tennant robotics fit into Quinnipiac University's mission of green, clean innovation, and fostering a safe and healthy campus environment. "The T7AMR shows how the Facilities department is committed to innovation in order to continue to deliver our high level of customer service to our campus community," he says.



"Bringing the Facilities team on board was a transparent process. This machine gives us hours and hours of time back to do the things that we want and need to do, but don't always have time to do."

- Jon Terry

Terry says his team's familiarity with Tennant equipment was a big help in easing adoption. "Our staff was comfortable with Tennant equipment. Once we smoothed out some kinks and they started to understand how the machine makes them more efficient, we got their trust and support, and acceptance was unanimous," Terry says.



RESULTS

The Tennant T7AMR quickly made an impact that was both felt and clearly seen by the Quinnipiac University Facilities team. “We can visually see our Recreation and Wellness Center is cleaner,” says Terry. “We’re cleaning more frequently, and every time we take the machine out, it’s bringing back dirt and debris.” The T7AMR also enables the Facilities team to make sure the Recreation and Wellness Center’s hallways are getting cleaned daily. “That’s particularly important now that we have this new foodservice area in the building. That space brings more traffic, more spills, and we want to make sure that we’re keeping that highly visible area consistently clean,” Terry explains.

The benefits extend beyond floor cleaning as well. Before the T7AMR, it was common for staff to spend more than 10 hours a week riding manual floor cleaning machines. “Autonomous cleaning gives us a huge chunk of that time back, so our staff can focus on the details that they weren’t always able to get to before,” says Terry.



Terry notes that Quinnipiac is still learning how it can best use the T7AMR. “We’re still early in understanding all of the benefits that this new technology can provide to us,” he says. For example, Quinnipiac is looking to use the detailed reporting from the T7AMR to better understand how their facilities are cleaned. This will uncover opportunities to better allocate resources on the Facilities team, yielding additional labor efficiency gains that were among Quinnipiac’s core goals for deploying the technology.

With their first autonomous cleaning machine exceeding expectations, the Facilities team is looking at other opportunities to apply this innovative technology. Construction on two new academic buildings is underway on the Quinnipiac campus, and Terry is looking at whether the layouts and flooring types will be a good fit for autonomous floor cleaners. “We’re hoping to build the success case off of this first machine to make the case for additional machines,” he says.

The impact of the T7AMR is clear for the Facilities team, but the autonomous cleaning machine has also made a big and positive impression on the users of the Recreation and Wellness Center. “People on campus are all amazed at the technology when they see it,” Terry says. “Of course, you have some folks who can’t help but challenge it by stepping in front of it to see what happens. But we’ve had no issues or concerns from students, staff or faculty.”

Terry says this big-picture impact—elevating the “customer experience” for facility users, as well as enhancing the broader reputation of Quinnipiac University—is most valuable of all.

“Cleaning is more critical than ever in this day and age, and the Tennant T7AMR shows how Quinnipiac is staying at the forefront of technology and innovation that helps to create clean spaces and a safe, healthy, thriving campus environment.”

- Jon Terry