Neo™ for education

CUSTOMER STORY

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Avidbots Neo offsets staffing challenge

Cleaning automation in the Thief River Falls School District

Jason Hruby had a problem and it wasn't getting better. In his role as Building and Grounds Supervisor for the Thief River Falls School District in northern Minnesota, he simply could not retain the janitors needed to clean the 600 thousand square feet of educational facilities he oversaw. Responsible for the grounds at four schools spanning 72 acres, he once supervised a crew of 30. Through attrition and a lack of new applicants seeking employment, his staff is now half the size as it once was, forcing Jason to seek alternative solutions.

Challenges for educational facility management

Maintaining high standards for cleanliness, especially in the wake of global health events

Presenting an inviting learning environment for students, staff and teachers

Navigating heavily trafficked areas requiring frequent cleaning, multiple times per day

Keeping floors consistently clean and dry to minimize slip hazards for students, staff and teachers

Ensuring surfaces are disinfected regularly while being able to track and measure each cleaning operation

An endless labor cycle including recruitment and retention challenges coupled with rising labor costs

Keeping Thief River Falls clean

Lincoln High School is the largest of the facilities in the district and its 790+ students ensure it's a busy place. Hruby elaborates, "There's a lot of traffic. It's an open campus facility with kids coming and going bringing dirt and mud into the building on their shoes. It's just the nature of the beast when you're dealing with schools and kids. They bring all sorts of germs with them to school so a regular and consistent disinfection of high-touch surfaces is important. It's a new challenge every day."

"The biggest issue for us recently has been the staffing piece," says Hruby. "Not knowing who's consistently going to show up and how we're going to get our buildings clean."

Lacking the manpower to address every cleaning space, Hruby and his team focused on the high priority jobs. "The decrease in manpower could be seen in the quality of our work. We were concentrating on just getting the garbage out of the classrooms and not cleaning and disinfecting every nook and cranny."

Administrators were beginning to notice during the course of the school day. After school, extracurricular events became "all hands on deck" efforts in which maintenance staff, teachers, administrators and students stayed late to clean up.

Hruby recalls, "The tipping point was when we had only two staff members to clean 200 thousand square feet, and we had school the next day with two more events in the gym."

Onboarding Neo

Together, onsite, Avidbots techs and facilities personnel work closely together and review every facet of Neo's operation, then guide the machine through the school — mapping out cleaning and disinfection plans, setting start and end positions, defining no-go and slow down zones and adjusting granular cleaning settings (such as the amount of water used and brush pressure) for best results on different floor spaces and types.

Neo onboarding includes:

On-site mapping of areas of floor to be scrubbed and surfaces to be disinfected.

On-site training with modules tailored for custodial staff and supervisors — covering hardware, software, Avidbots Command Center and maintenance.

Creation of customized cleaning plans optimized for maximum productivity while minimizing human intervention.

Enter Neo (a.k.a. Rosey)

Hruby felt confident he could turn the situation around, but his decision would be a first in the Thief River Falls School District. He knew automation and robotics had been successfully deployed in other educational environments in North America and began researching solutions. Avidbots permitted the school system to try a Neo autonomous floor scrubbing robot with the Disinfection Add-On for a month. The robot was immediately put to work at Lincoln High School, outperforming other solutions tried. Neo was the only solution providing surface disinfection in addition to floor scrubbing.

Over three days, custodial staff received immersive training in everything related to Neo. Hruby recalls how the Avidbots team prepared them to use the robot. "They told us before they ever got here: Day one training is going to be this. Day two training is going to be this. We knew what to expect when the Avidbots tech arrived. We were very comfortable when the trainer left on what we needed to do to operate it and make the building cleaner and safer."

"It really wasn't hard to justify to anybody," says Hruby. "Everybody knows now that we're having a crunch on getting labor. They were seeing things not getting done and I said this is our next direction – automation. When we started demoing Neo, it was during the middle of the day. Kids were running around at lunch hour. Teachers were walking around. It was fun to be able to watch the robot work for the first time in an environment as busy as our school, stopping for people who were passing by and stopping for students who were sitting on the floor. It did what I expected it to do. During the afterschool shift Neo is put to work, providing surface disinfection, cleaning garbage bins, railings, water fountains and lockers. In the wake of the pandemic high-touch surface disinfection is crucial. With Neo we know exactly what was disinfected and when."

After the trial period, the Thief River Falls School District decided to purchase an autonomous floor scrubber for heavy duty floor cleaning and 3-D surface disinfection in the high school. Immediately, students and staff re-dubbed the Avidbots Neo, "Rosey" after the iconic robot housekeeper from The Jetsons animated television program.

Rosey goes to school

Rosey swiftly became part of daily routine at Lincoln High, traversing the hallways among the students. At first, the robot's presence was something of a surprise. Hruby recalls the students' reactions, "Most of the students would see it coming down the hallway and just stop. They didn't know what to do. It got to a point where it was an impasse. Neo kept going and the students were stopped in the hallway. Then the Neo would stop. And they'd look at us like, 'what are we supposed to do?' We'd just say, 'Go around.' So they'd go around, then they'd get far enough away, turn around and look, and Neo would take off again. Their reactions were pretty priceless."

Hruby and his team found the Disinfection Add-On to be a particular time saver. Rosey's 3-D coverage for surfaces above the floor line ensured doorknobs, seating areas, water fountains, lockers and more were sanitized to keep students healthy.
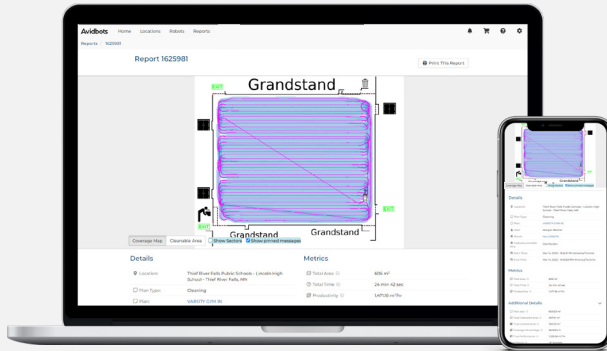
As the students of Lincoln High became acquainted with Rosey, Hruby and his team were familiarizing themselves with the real-time monitoring and rich analytics available through the Avidbots Command Center web-based app. "It's nice to see the live results when it's being used, where it is, how much water it's using, the pressure that's being used for scrubbing and what areas have been disinfected. I like that every Monday I've scheduled an email that reports just how well Rosey cleaned the week before. That kind of information is what I was looking for to justify the movement forward – to show the admin team that this is what the robot is doing with minimal supervision."

That information is helping the Thief River Falls School District evolve its approach to facilities cleaning and disinfection, adjusting staffing, responsibilities and Rosey's own cleaning paths for maximum efficiency. More so, having Rosey on the job has mitigated the problems associated with keeping cleaning functions fully staffed.

" Neo is always here. Neo never calls in sick. You push a button and Neo cleans. Now, it's just like a student wandering the hallways," says Hruby.

Real-Time Monitoring & Remote Assistance

While Neo is designed to operate autonomously, custodial managers can check in on a unit(s) at any time and get a host of useful information using the Avidbots Command Center web-app. The Avidbots Command Center is an intuitive, always-on, multi-language interface, accessible from any web-enabled device, to manage, monitor and measure robot scrubber fleets in real-time. The full reporting suite provides key metrics to ensure the robot is used to its full potential:

▶ Total area cleaned

▶ Total cleaning time

▶ Productivity

▶ Water consumption

▶ ...and more

The value of a multi-application autonomous floor scrubber

Autonomous floor scrubbers have gained acceptance across a wide range of commercial and public settings. Neo, powered by the Avidbots Autonomy, is a fully autonomous floor scrubber for large, high-traffic spaces. In addition to autonomous floor care, customers can disinfect high-touch 3-D surfaces with the Disinfection Add-on. The Neo solution features dynamic mapping capabilities with real-time obstacle avoidance.

Avidbots Neo Features

Neo is the world's leading automated floor scrubber for educational and public spaces. Using AI-driven automation, advanced hardware, cloud software and live services, Neo automatically navigates and scrubs floors and disinfects high touch surfaces in dynamic environments.

▶ Heavy duty, professional-level cleaning

Neo is ruggedly built with high-capacity water tanks, interchangeable long-life batteries, and adjustable brush scrubbing pressure and water flow for heavy-duty cleaning.

▶ Safe, secure operation

Designed with human and physical environment safety in mind, Neo's onboard suite of sensors and cameras delivers flawless navigation avoiding anything or anyone. Additionally, Neo is designed with several onboard safety features to protect both the robot and its environment.

▶ Simple, versatile cleaning configurations

The user-friendly touch screen interface and manual steering option make Neo easy to use. Disc and cylindrical brush configurations are available in multiple sizes to suit a wide range of facility floors and tasks.

▶ Remote fleet management and performance metrics

Managers can check in on Neo at any time, from anywhere in the world, and get a host of useful information using the Avidbots Command Center web-based app. The Avidbots Command Center is an intuitive, always-on, multi-language interface – accessible from any web-enabled device – to manage, monitor and measure Neo(s) in real-time, 24/7/365. The full reporting suite provides key metrics to ensure the robot is used to its full potential.

▶ 3-D surface disinfection

With Neo's Disinfection Add-On, schools can achieve a consistent, fully autonomous and measurable electrostatic disinfection, freeing time to focus on detail work. When equipped on Neo, you can easily change from floor scrubbing to disinfecting 3-D surfaces depending on daily requirements.
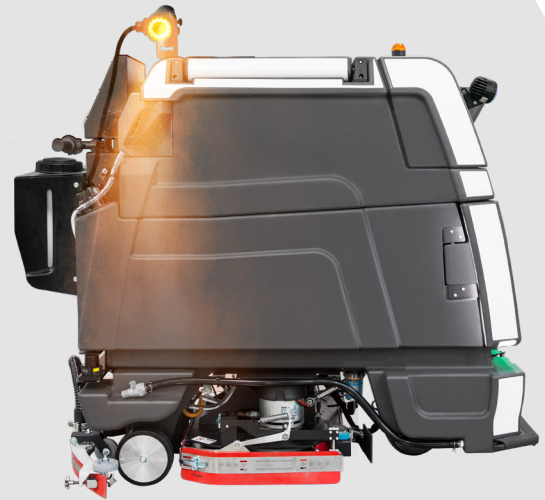
▶ Maximizing custodial staff efficiency

With Neo cleaning the school's floor area autonomously, management can assign custodial staff to core maintenance activities instead of physically scrubbing or operating manual machines. Not only does that maximize the high-value tasks custodial staff are able to complete, it can reduce employee injuries and absences due to repetitive strain and fatigue.

Why Avidbots?

Buying an Avidbots Neo isn't just buying a floor scrubber. It's investing in a technological future that can redefine your cleaning function, making it more productive, more cost effective and easier to run. More importantly, our robotics and AI technology open up new opportunities to make your business even more successful. We realize this isn't just about buying a product, or a technology, or even a business proposition. You want to buy into a trusted partner who can take you into the future of automated operations using cutting edge robotics. At Avidbots, we work side-by-side with our customers to earn that trust and realize all the benefits that robotics can bring them.

About us

Avidbots is a robotics company with a vision to make robots ubiquitous to unlock humanity's potential with a hyperfocus on autonomous cleaning. Our groundbreaking product, the Neo fully autonomous floor scrubbing robot, is deployed around the world and trusted by leading facilities and building service companies. Headquartered in Kitchener, ON, Canada, Avidbots is offering comprehensive service and support to customers on 5 continents.

Contact us

Learn more about Neo.

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