MARCH 2021

Retail Buyer's Guide to Robotic Floor Scrubbers

A 10-point checklist for investing in autonomous cleaners



brain corp

Robotic floor scrubbers are needed now more than ever

While the rollout of COVID-19 vaccines brings with it a collective sigh of relief, in-store shoppers are projected to maintain their high expectations of sanitation and cleanliness long after the pandemic is officially over. That's why the adoption of a new breed of autonomous mobile robot (AMRs) that help overburdened employees automate tasks that are time-consuming, monotonous, and sometimes dangerous is essential — especially now. In particular, robotic floor scrubbers made by many of the same top global manufacturers that produce traditional ride-on equipment, do a better, more consistent job at cleaning hard surfaces, while freeing up staff to execute more complex, literally hands-on functions that only humans can handle. This, in turn, leaves retail managers with increased work hours to compensate for labor shortages, and helps businesses stay compliant with cleaning and sanitation guidelines and provide better customer experiences.

Copyright © 2021 Brain Corporation. **All rights reserved.**

Not all floor scrubbers are created equal

If your retail or grocery business is exploring how cleaning AMRs can drive innovation, efficiency, and better customer experiences in its brick-and-mortar operations, this resource will help guide your decision-making.

The following checklist is designed to help you understand what to look for when researching these powerful, self-driving robots for your business. We also include a section on how to think about robotic ROI, as well as key criteria for understanding whether robotic scrubbers are right for your business.

1 Safety

2 Ease of use

3 Data and reporting

4 Centralized management

5 Cloud-connected services

6 Dual cleaning modes

7 Scalability

8 Equipment

9 Support

10 Innovation

Copyright © 2021 Brain Corporation. **All rights reserved.**

Safety

When it comes to safety, it's critical for retailers to identify self-driving floor scrubbers that have a track record that's as proven as their cleaning performance.

Safety at scale

Safety-first architecture

- Look for a vendor with a clear commitment to safety and a proven track record for deploying *thousands* of robotic solutions in dynamic commercial environments, like retail and grocery stores.
- Peek under the robot's proverbial hood: Does it leverage two-level safety architecture, one for environmental assessment and advanced decision-making using AI logic and another for control overrides and shutdown capabilities to address potential emergency scenarios? This dual-layer approach ensures comprehensive safety coverage.
- What about capturing and iterating robotic performance based on robot operation in the real world? More robots in stores means more situations encountered and solved for, which leads to continuous improvements that make the robots even smarter and safer.



BOTTOM LINE

Retail environments are dynamic and unpredictable, making it all the more important to select autonomous floor scrubbers with proven experience navigating safely around shoppers, employees, and merchandise.

Copyright © 2021 Brain Corporation. **All rights reserved.**

Ease of use

Sophisticated technology doesn't provide much value unless its intended end-users can easily deploy and operate it. Here are some questions to think about:

Implementation

Easy to operate for non-technical users

- Can the robots be rolled out within 1-2 days at any location, requiring no specialized engineering effort to set up and deploy?
- How familiar will the robotic floor scrubbers be to your staff? Are they based on an existing ride-on scrubber they're likely already familiar with? When exploring robotic solutions, consider how easily the machines can be integrated into regular workflows.
- What kind of methodology do the robots leverage to make it easy for non-technical employees to set up cleaning routes? Can employees handle it themselves through, for example, a "teach-and-repeat" methodology, or does it require outside technical assistance?
- Does the robot integrate intuitive design principles, including a universally understandable user interface to make the robot as easy to use as possible?



BOTTOM LINE

Cleaning robots that are not simple and easy to operate from the get-go will go unused, diminishing ROI and making it harder to get a robotics program off the ground. It's important to choose an autonomous vendor that is committed to straightforward, intuitive user experiences designed to increase usage and efficiency.

Copyright © 2021 Brain Corporation. **All rights reserved.**

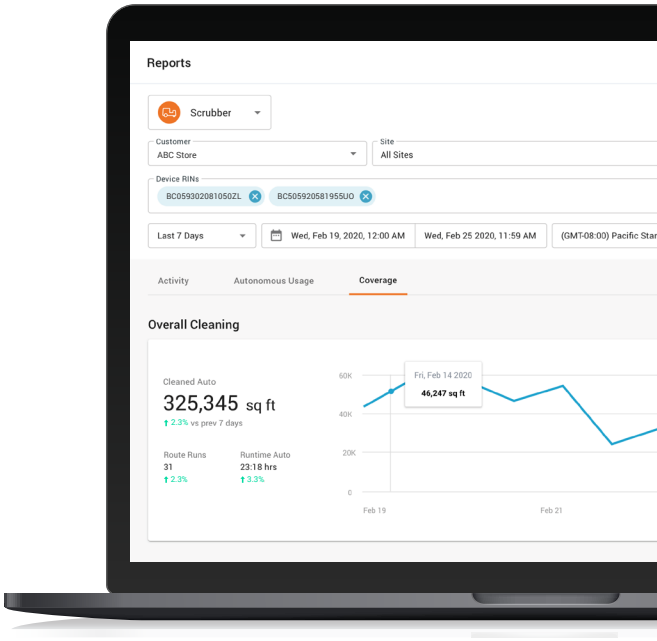
Data and reporting

Capturing operational data is the most effective way to track robotic performance and usage, ensure compliance, and measure the overall success of your autonomous cleaning program.

Cleaning KPIs

Flexible reporting options

- Opt for a robotic solution with near real-time data collection and reporting capabilities that can verify and optimize cleaning performance. Key performance indicators (KPIs) should include cleaning coverage (in square feet), routes run, autonomous usage, and visual heat maps to name a few.
- Seek reporting capabilities that include store-level robot data, as well as data by region, state, and even nationally for larger and more complex retail businesses. Make sure the solution provides an array of reporting options, such as web-based dashboards via a global fleet management portal and timely email reports.
- Look for a robotic solution capable of capturing and reporting critical operational metrics specific to the unique needs of stakeholders throughout your retail organization. This can include anyone from robot operators and store managers to regional and national executives.



BOTTOM LINE

Data not only allows for continuous improvements in robotic cleaning performance, but provides valuable proof-of-work metrics that can be used to meet corporate compliance standards more efficiently. It also delivers comprehensive visibility into your robotic cleaning program that can support strategic decision-making.

Copyright © 2021 Brain Corporation. **All rights reserved.**

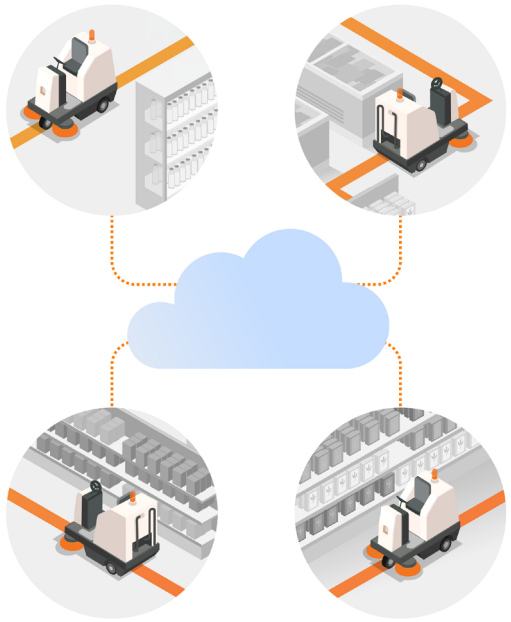
Centralized management

Choosing a holistic, platform-based approach to robotics — versus relying on siloed robotics vendors — will result in the simplified management and operation of these autonomous scrubbers.

Choice & flexibility

Ease of fleet management

- Are the cleaning robots powered by a comprehensive, AI-driven platform that enables you to pick and choose autonomous cleaning equipment best suited to your needs and specific applications? Whether you need a robot for your warehouses or retail sites, ideally the machines can operate on the same central platform, making it easier to incorporate them into your processes, train employees, and minimize operational complexity.
- Can the underlying software platform accommodate additional robotic applications (beyond floor scrubbers), enabling retailers to easily scale their robotic automation strategy for the future? This includes currently available robotic solutions such as autonomous vacuums, in-store delivery tugs, and shelf-scanning applications.
- Centralizing fleet data and reporting capabilities across applications enhances usage and maximizes robotic ROI without creating more siloed data.



BOTTOM LINE

Retailers need to think about creating the right robotics foundation for today and the future. A platform-based approach to robotics allows each robot operating in a retail space to be managed through the same centralized platform. The result is a successful automation strategy that's easier to execute.

Copyright © 2021 Brain Corporation. **All rights reserved.**

Cloud-connected services

Technology is constantly changing. While trusted cleaning equipment is an essential component of a robotic scrubber, that robot staying up to date or quickly becoming obsolete will depend on its core technology. Make sure your investment is protected.

Automatic software upgrades

Operation in disconnected environments

- Do the robots you're considering offer free software updates and continual optimization via a cloud-connected operating system? These updates are key for providing seamless operation and powerful new cleaning features. They also deliver navigation refinements that ensure your system stays on pace with technological changes.
- Do all areas within your retail environment have good cellular connection? If not, it's important to know if your robot will still be able to function optimally when the connection is weak or non-existent. Ensuring your self-driving robot can operate seamlessly without being dependent on a cellular connection to navigate is key.



BOTTOM LINE

Investing in a cloud-connected software service that delivers free, automatic upgrades is critical to enhanced cleaning performance and operation. Equally important is making sure the machinery can work in disconnected environments for uninterrupted operation.

Copyright © 2021 Brain Corporation. **All rights reserved.**

Dual cleaning modes

When it comes to robotic cleaning, it's important to have both flexibility and familiarity in the equipment so custodial teams can maximize their success.

Familiar equipment

Switchable operation mode

- Does the robotic cleaner leverage the same, easy-to-use design that employees are familiar with in manual floor scrubbers, or is it an entirely new piece of equipment that employees might have trouble adjusting to? For example, scrubbers that don't utilize a ride-on design can be more difficult to use in manual mode.
- Can the scrubber toggle between autonomous and manual cleaning mode on the fly to manage spot cleaning and other urgent tasks?
- Can the robot show autonomous vs. manual usage through near real-time reporting and email dashboards? Having this information is key for understanding how the machine is operating so you can develop performance optimization strategies.



BOTTOM LINE

Look for vendors that offer robotic cleaning equipment already familiar to employees and can be used in either autonomous or manual mode for widespread adoption and consistent use.

Copyright © 2021 Brain Corporation. **All rights reserved.**

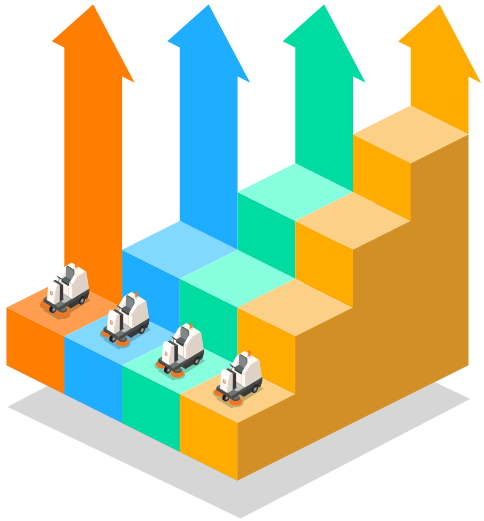
Scalability

Robots have arrived in retail. In fact, some of the world's largest retailers have deployed thousands of autonomous floor scrubbers at scale in public-facing store environments — and they're reaping the benefits of doing so.

Proven scale

Regional and global capabilities

- Deploying a handful of robotic units can be challenging, never mind hundreds or thousands of them. Regardless of whether you need 10, 25, or 2,500 cleaning robots, look for vendors with proven experience in scaling *large* fleets. This means thousands of successful robot deployments, millions of autonomous operational hours accrued, and billions of retail square feet covered. This real-world experience is critical in ensuring your robotic investment delivers the best ROI possible. Why invest in unproven robotics technology?
- Is your vendor capable of supporting your business now, as well as accommodate any future growth plans? Does your robot vendor have the ability to support your business across regions? And if your retail business is global, does the robotics vendor have the ability to deploy and support robots quickly and safely at scale in multiple locations worldwide?
- Does the vendor you're considering have a long track record of business success in the cleaning and manufacturing industry, or are they a startup that might not be around for the long haul?



BOTTOM LINE

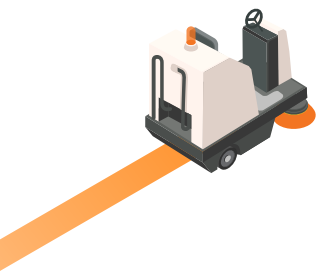
Proven scale is one of the most important considerations in choosing a robotics vendor. They need to show they can operate thousands of autonomous cleaners in complex environments with equal efficiency, safety, and performance.

Copyright © 2021 Brain Corporation. **All rights reserved.**

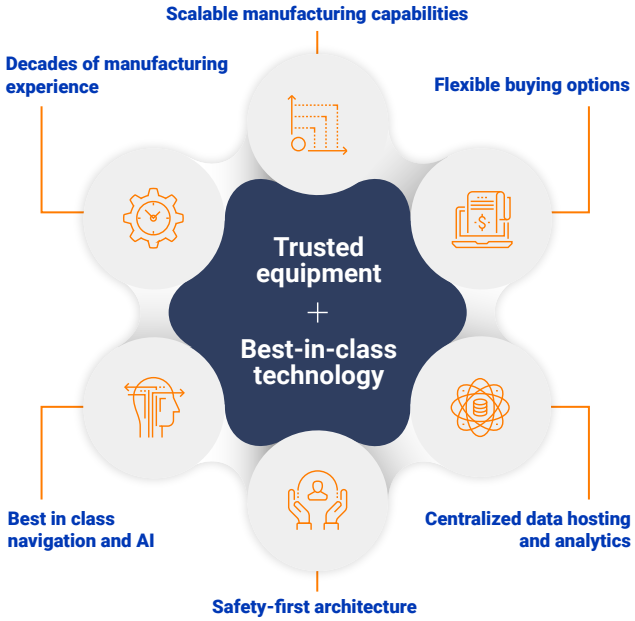
Equipment

Using proven, high-quality equipment is an essential part of cleaning performance. That's why, when it comes to making a robotic investment, retailers should look for a solution that combines the best of both worlds: trusted hardware from a known manufacturer and highly scalable, best-in-class autonomous technology.

Trusted equipment



- Does the robot vendor work with partners who have decades of experience in producing high-quality, professional-grade cleaning equipment? Or is the equipment relatively new and untested?
- Do they have experience developing proven equipment with cutting-edge AI navigation software?
- Does the equipment manufacturer have positive references from multiple retailers across a breadth of real-world use cases in environments similar to yours?
- Does the vendor and its partners provide autonomous cleaning equipment in multiple sizes, so you can leverage the solution that best fit your needs? And do they provide flexible buying options: purchase, lease, and rental?



BOTTOM LINE

Manufacturing quality can't be understated when it comes to choosing a robotic solution. In addition to advanced autonomous technology, make sure you choose a partner that provides trusted, world-class equipment that can scale with your needs, and one with decades of experience in the cleaning industry.

Copyright © 2021 Brain Corporation. **All rights reserved.**

Support

Managing robotic scrubbers at scale for large retail businesses requires dedicated customer support, from initial deployment and training to ongoing program optimization and troubleshooting.

Service network

Reputation



- How strong, experienced, and extensive is the vendor's service network for equipment issues? Is it hard to get replacement parts? Look for a vendor that has a large ecosystem from which to draw support on your behalf.
- Does the service team operate across all of your retail locations? This is critical for ensuring seamless operation across sites, regions, and even nationally.
- Does the vendor have a reactive or proactive approach to customer support? With the latter, a vendor will be able to anticipate your cleaning program's unique needs based on proven experience in the field with retail clients of all sizes.



BOTTOM LINE

Seek out vendor partners that have an extensive and experienced service network for managing a variety of critical issues related to both hardware and software. This will help ensure you get better service and achieve much faster ROI on your robotic investment.

Copyright © 2021 Brain Corporation. **All rights reserved.**

Innovation

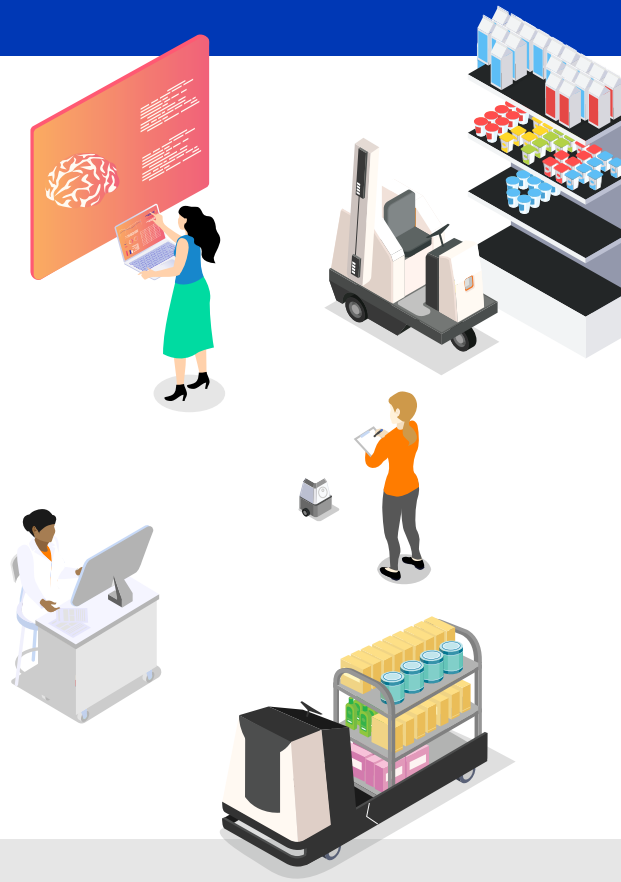
The retail industry is constantly transforming and confronted by the need to adopt emerging technologies to stay ahead in the highly competitive digital landscape.

Ability to innovate

Commitment to innovation



- Seek a robotics vendor capable of and driven by the constant pursuit of innovation so your business can continuously improve its safety and operational efficiency, and is able to realize ROI faster.
- Look for a track record of innovation at the software level as well as improvements with hardware.
- For robots with a separate software as a service (SaaS) subscription, do subscribers benefit from ongoing innovations and improvements including bug fixes? Will any new features and robot performance optimizations come at an additional cost to your business, or are they free?



BOTTOM LINE

Choose a vendor that is not only committed to keeping up with innovation, but also has an eye on the future. This will help your business continuously improve operational efficiencies and leverage emerging technology to stay ahead of your competitors.

Copyright © 2021 Brain Corporation. **All rights reserved.**

Beyond dollars & cents: Evaluating robotic ROI

When thinking about the ROI of your robotic floor cleaning program, also consider the value your business would place on greater efficiency, productivity, safety, and consumer trust. It's important to take a holistic view of ROI that doesn't just focus on the bottom line, but keeps other intangibles in mind as well.

Cost savings

Instead of replacing workers, autonomous robots help flatten the curve of absenteeism, high attrition, and the cost to hire and train new staff. They also help offset rising labor costs.

Cleaning quality

Self-driving floor scrubbers move at a more consistent speed, allowing for a deeper clean, and they don't get distracted by competing priorities like stocking shelves and helping customers.

Increased work hours

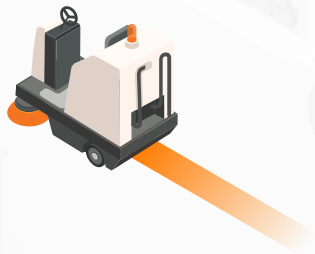
In addition to cleaning, robotic scrubbers also give back valuable work hours that can be used for other important tasks that robots can't do. This includes sanitizing high-contact surfaces and assisting customers.

Proof of work

Unlike manual machines operated by cleaning staff, autonomous robots have the ability to capture near real-time operational metrics and KPIs, such as cleaning coverage, routes run, and autonomous usage. These are vital to verifying and optimizing performance.

Brand value

How committed is your business to cleaning and innovation? By investing in autonomous scrubbers, you'll be sending a visible sign of that commitment, resulting in a positive impact on your brand image among the consumers.



Copyright © 2021 Brain Corporation. **All rights reserved.**

Is your retail business ready for robotics?

Floor cleaning robots are a cost-effective investment for many retailers looking to increase cleaning performance, enhance customer experience, reduce costs, and keep pace with innovation. Are robotic scrubbers a good fit for your business? Consider the following criteria to find out:

CRITERIA	CONSIDERATION
Does your retail business have over 25 locations?	Autonomous floor scrubber solutions provide the best ROI when deployed at scale in at least 25 locations.
Do you spend at least two hours per day cleaning store floors?	Robotic cleaners provide the highest ROI for stores and facilities that clean at least two hours per day.
Do you currently use manual floor scrubbers?	Consider an autonomous floor scrubber solution from a recognized and reputable manufacturer of manual floor scrubbers that can also service your equipment with factory direct technicians.

Copyright © 2021 Brain Corporation. **All rights reserved.**

CRITERIA	CONSIDERATION
Do you currently use contracted or in-house cleaning staff?	Robots allow retailers to have more control over their cleaning operations, ensuring cleaning quality meets your standards.
Are you keeping up with cleaning due to COVID-19?	Robots free up valuable time so focus can be placed on essential human-only tasks like cleaning high-contact surfaces.
Do you lack visibility into what cleaning tasks are getting done each day?	Robotic floor care solutions provide advanced performance metrics and KPIs in near real-time to give you greater visibility into your cleaning operations.
Does your vendor provide documented safety architecture?	The single most important capability of a robotic scrubber is its ability to operate safety in high-traffic, commercial environments. Make sure your vendor has a proven track record of operating safely at scale.

Copyright © 2021 Brain Corporation. **All rights reserved.**

Why top retailers choose BrainOS-powered solutions

Commercial cleaning robots are quickly becoming the new operational standard, especially in grocery and retail due to their powerful benefits and rapid adoption. Retailers of different sizes — from regional chains to national and global retailers — choose BrainOS®-powered robotic floor scrubbers because of our proven cleaning performance, safe operation, ability to scale, and ease of use. Plus, Brain Corp works with the world's leading original equipment manufacturers (OEMs) to create trusted solutions that lead in the market.

A Trusted Network of Equipment Manufacturers

Brain Corp partners with the world's leading floor care OEMs to create autonomous robots at scale.

ICE ROBOTICS

KÄRCHER

Minuteman® More Than Just "Clean"

Nilfisk®

SoftBank Robotics

TENNANT®

#1

In deployed autonomous mobile robots in commercial public spaces[1]

15,000+

BrainOS-powered robots deployed by OEM partners[2]

4 million+

Total autonomous hours of operations, a majority in retail environments[2]

60 billion

Square feet covered autonomously across three continents[2]

[1]ABI Research
[2]Brain Corp network statistics

Copyright © 2021 Brain Corporation. **All rights reserved.**

About Brain Corp

Brain Corp is an AI software leader that powers the world's largest fleet of autonomous mobile robots operating in commercial indoor public spaces. The BrainOS platform and its cloud-connected autonomy service are used by global manufacturing partners to successfully build, deploy, and support commercial robots at scale across industries and applications. Through intuitive software and controls, BrainOS also enables end customers to easily leverage the power of robotics to offload repetitive, labor-intensive tasks related to floor care, in-store inventory delivery, and shelf-scanning. This frees employees' time to focus on higher-value responsibilities. Working with its partners, Brain Corp has deployed over 14,500 robots within retail, grocery, malls, airports, hospitals, warehouses, and other industries.

For more information, please visit **www.braincorp.com.**

Copyright © 2021 Brain Corporation. **All rights reserved.**
Braincorp.com | 858-689-7600
BRA20-004-02262021

