



Next Tier Products (NTP)

Rationale to Implement a KAS Robot Leasing Program

Executive Summary

Next Tier Products recommends a KAS autonomous floor-cleaning robot leasing program to reduce custodial operating costs while improving consistency, transparency, and safety of cleaning operations. Based on your provided cost analysis, a KAS lease at \$36,000 per year is approximately 32%–37% less than a single custodian’s estimated fully loaded annual cost of \$53,592–\$57,556. That equates to \$17,592–\$21,556 in annual savings per unit per year. In addition to direct savings, Avidbots’ proprietary autonomy and the Avidbots Command Center (ACC) provide verifiable, real-time cleaning performance data across campuses—delivering accountability to administrators and the community.

1) The Financial Case: Predictable Savings and Budget Stability

Cost comparison from district-provided analysis (KAS Robot Savings):

Annual cost	Custodian	Floor-cleaning robot
Salary / lease	\$37,939–\$40,227	\$36,000
Employer retirement contribution (11%–14%)	\$4,249–\$5,752	—
Estimated employer-paid single medical coverage	\$8,500	—
Payroll taxes	\$2,904–\$3,077	—
Estimated annual total	\$53,592–\$57,556	\$36,000

• **Annual savings per unit: \$17,592–\$21,556** (about \$1,466–\$1,796 per month), or ~32%–37% lower than the fully loaded cost of a custodial position. **This is a per building savings...**

- **Hidden personnel cost avoidance:** The savings are conservative because they exclude many additional personnel costs schools increasingly offer to compete for talent (e.g., paid leave, bonuses, shift differentials, clothing allowances, and various insurances). The robot incurs none of these costs, widening the effective savings gap over time.
- **Budget certainty:** A fixed annual lease helps insulate facility budgets from benefit inflation and wage pressure, providing multi-year predictability.



2) Operational Excellence with Avidbots Autonomy

KAS is powered by **Avidbots Autonomy**, the proprietary AI system designed for a fully autonomous clean in dynamic environments:

- Each deployment starts with a facility map and cleaning plan. At the beginning of every cleaning, KAS scans the environment in real time and compares it to the plan, then selects the best route to **maximize productivity while minimizing human intervention**.
- Advanced capabilities include: **advanced dynamic planning, real-time obstacle avoidance, intervention-free operation, a 360° environmental view, and advanced obstacle detection**.
- **Tailor-made for tight spaces:** KAS is designed for agility and high productivity where other machines struggle, offering greater flexibility to clean more areas across education settings.

Implications for schools:

- Reliable, consistent cleaning of corridors, libraries, cafeterias, and other high-traffic spaces—even when layouts shift due to events or furniture moves.
- Reduced disruption: autonomous operation and efficient routing support cleaning during off-peak windows with minimal oversight.

3) Accountability and Transparency with Avidbots Command Center (ACC)

ACC provides web-based, real-time oversight of cleaning operations for one building or an entire fleet:

- **Live view** to quickly locate robots and see current status.
- **Instant access to cleaning reports** to confirm work completion, coverage, and performance.
- **Fleet management dashboards** that support smarter decisions about where and when to clean, from identifying under-utilized robots to comparing cleaning performance across locations.

For district leaders, ACC translates directly into board- and community-ready documentation of cleaning quality and resource utilization.

4) Workforce Optimization and Student-Centered Reinvestment

- By offloading repetitive floor care, districts can **redeploy custodial time** to higher-value tasks: preventive maintenance, safety checks, event setups, and rapid response needs.



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- The **operational dollars saved** (\$17,592–\$21,556 per unit per year) can be redirected to instructional priorities (curriculum materials, student supports, classroom technology) or to reduce deferred maintenance backlogs.
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5) Risk Mitigation for K–12 Environments

- **Labor market volatility:** Leasing reduces exposure to recruiting challenges, overtime, and escalating benefits costs.
 - **Operational resilience:** Avidbots' autonomy and fleet visibility help maintain service levels across campuses, even with changing layouts or schedules.
 - **Safety and presentation:** Consistent, commercial-grade cleaning supports safer, dry, streak-free floors that reflect well on the school environment.
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6) Implementation Plan with Next Tier Products

1. Site Assessment & Mapping

NTP coordinates mapping and initial plan creation. KAS subsequently scans and optimizes at the start of each clean for ongoing adaptability.

2. Pilot & Validation (60–90 Days)

Deploy at two representative campuses (e.g., one elementary, one secondary). Validate coverage targets, run times, and report quality via ACC.

3. Training & Handover

Train day and night custodial teams on daily operation, consumables, and reporting access for leaders.

4. Scale-Up & Governance

Expand to additional sites after pilot KPIs are met. Establish monthly dashboards for principals and district leadership.

7) Key Performance Indicators (KPIs) for Board Oversight

- Square footage cleaned per shift and per day
- Coverage percentage and successful plan execution rate
- Time-on-task versus exception/obstacle rates



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- Number of custodial hours redeployed to higher-value work
- Comparative performance across schools using ACC dashboards

Conclusion and Recommendation

The KAS leasing program presents a clear, data-backed opportunity to lower operating costs and raise service quality. With an estimated **32%–37% annual savings per unit** versus a fully loaded custodial position, combined with verifiable performance through **Avidbots Command Center** and proven **Avidbots Autonomy** for dynamic school environments, this initiative is a fiscally responsible modernization of custodial operations.

Recommendation: Authorize a **60–90 day pilot** at two campuses with the KPIs listed above. Upon meeting targets, expand district-wide and lock in predictable multi-year lease pricing.

Appendix A. Personnel Costs Often Added to Custodial Positions (for context)

Examples noted in district materials that do not apply to the robot and thereby further widen savings over time include: comprehensive medical, life insurance, long-term disability, dental, Section 125 participation opportunities, paid sick/business days, paid holidays, vacation accruals, longevity and attendance bonuses, shift differentials, and annual clothing allowances.