Scaling Retail & Industrial Cleaning with Robotics

BACKGROUND: PG-HOLDING ZRT.
is one of Hungary's leading facilities management providers, delivering both soft and hard FM services within commercial and industrial facilities, across more than 150 locations nationwide.

PG-Holding is one of Tennant's biggest customers within Central and Eastern Europe and has been a valued partner for more than 20 years, and provides outstanding services to their customers through the hundreds of owned Tennant cleaning machines used daily in their cleaning operations.

With 950 employees, PG-Holding manages cleaning and maintenance for a wide range of facilities including 63 Tesco stores, Bosch and Michelin plants, and five-star hotels.

Together, these sites amount to approximately 1,000,000 m² of floor space cleaned every day.

As the company grew, so did the pressure to deliver consistent, transparent, and sustainable cleaning results — all in the face of an increasingly constrained labour market.

THE CHALLENGE
Manual cleaning methods were reaching their limits. PG-Holding Zrt. faced several interlinked challenges:

- Large floor areas: Production halls, shopping centres and retail sites require frequent, thorough cleaning, which was becoming increasingly difficult to deliver using manual equipment alone.
- Labour shortages: Recruiting and retaining cleaning staff became more difficult, particularly around holiday periods when demand remained constant but labour resources were scarce.
- Inconsistent quality: Without digital monitoring, it was difficult to verify cleaning coverage or address missed areas quickly.
- Sustainability pressures: Key clients expected reduced water and chemical usage as part of their ESG commitments.

"Keeping facilities spotless during peak retail hours was a big challenge. We needed a solution that was reliable, sustainable and could operate without constant supervision — even on weekends and holidays."

— Lajos Kovács, Board Member,
PG-Holding Zrt.

EXPLORING ROBOTICS

PG-Holding Zrt. evaluated several options, from increasing staffing to testing other robotic suppliers. Many alternatives lacked strong service coverage, reliable performance, or GDPR-compliant data management. In short, they needed a cleaning machine partner they could trust.

Tennant's T16AMR, T7AMR and X4 ROVR, powered by BrainOS®, were selected because they offered:

- Reliable performance with local service support and SLA guarantee.
- GDPR-aligned, trustworthy data handling and detailed heatmap reporting.
- Ease of use, with intuitive operator controls for quick staff adoption.
- Trusted brand recognition with PG-Holding's enterprise customers.

"Service and support were non-negotiable for us. Tennant's SLA response times, GDPR-aligned data handling and trusted brand reputation gave us confidence we could scale robotics across our sites."

— Tibor Verebes , Business Development Director, PG-Holding Zrt.

DEPLOYMENT

PG-Holding currently operates:

- 2 × T16AMR in large production facilities.
- 1 × T7AMR in Allee Shopping Mall, Budapest.
- 1 × X4 ROVR in retail and tight spaces.

Robots are scheduled to clean during off-peak hours but can also run ad hoc routes on demand. Teams supervise remotely via tablets or smartphones and focus their time on detail work along edges, staircases, and high-touch areas.

"At first, some staff were unsure the robots would deliver. But once they saw the data reports and heatmaps verifying the cleaning coverage, trust and enthusiasm grew quickly. Today, our team genuinely loves working with the machines."

— Tibor Verebes, Business Development Director, PG-Holding Zrt

CONCLUSIONS - KEY BENEFITS & MEASURABLE OUTCOMES

INCREASED EFFICIENCY & COVERAGE

- Over 2.5M m² cleaned by the T7AMR to date.
- More than 1M m² cleaned in a single year by a Tennant T16AMR.
- Consistent cleaning during weekends, holidays, and overnight periods.
- Data-backed coverage reports shared with clients for full transparency.

OPTIMISED WORKFORCE UTILISATION

- Staff redeployed from repetitive, heavy scrubbing to higher-value tasks.
- Significant reduction in PG-Holding staff fatigue and manual handling injuries.
- Upskilling opportunities as cleaners learn to operate and manage robotic equipment.

SUSTAINABILITY & REPORTING IMPROVEMENTS

- Approximately 40% reduction in water and chemical usage compared with manual methods.
- Support for clients' ESG and sustainability reporting with downloadable data logs.
- ec-H2O NanoClean® technology reduces chemical dependency.
- Transparent proof-of-service strengthens trust and client relationships.

CLIENT & PUBLIC ENGAGEMENT
PG-Holding's clients have noticed the difference:

- Leaders and managers from a large shopping centre and entertainment complex in Budapest have praised the robots for their consistent quality and reporting transparency.
- Shoppers regularly comment on the robots, with many seeing them as a sign of innovation and modernization.
- At a major automotive plant in Kecskemét, the robots have been in continuous operation for three years, demonstrating reliable performance and supporting stable, high-quality cleaning results across large industrial areas.

Attila Gorbai, General Manager of Tennant CEE, says "PG-Holding Zrt is a valued partner that has trusted Tennant for over 20 years, and they were among the first in the region to embrace our robotic cleaning technology. Their confidence in Tennant — across both commercial and industrial environments — reflects a shared commitment to innovation, performance, and future-ready cleaning."