

# Robolution by Gausium

Total Autonomous Cleaning Solutions, One Stop Service.



Aug 2025



# One

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## Company Profile

# About Robotec

Robotec, as an authorised dealer and service partner of Gausium, is pleased to present an advanced cleaning solution tailored for large-area facilities such as hotels, convention and exhibition centres, casinos, airports, and shopping centres. Leveraging the latest in AI-powered cleaning robotics, Gausium robots deliver efficiency, consistency, and cost savings while enhancing environmental sustainability.



30,000+

Units of  
Worldwide  
Delivery



70+

Countries and  
Regions of Presence



500+

Cities  
Worldwide



4000+

Customers  
Worldwide



500M

Kilometers of  
Cleaning  
Operation



300B

Square Meters of  
Cleaning Coverage



# About “Gausium”

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## Brand Name Story

The name “Gausium” was inspired by Carl Friedrich Gauss, a brilliant mathematician who contributed significantly to the fields of mathematics and science. Gauss’s contributions to mathematics have paved the way for the development of SLAM (Simultaneous Localization and Mapping), which is essential for many applications in robotics. Many of the mathematical techniques used in SLAM, such as Kalman filter, least squares estimation and maximum likelihood estimation, have their roots in Gauss’s work.

Naming the company Gausium is not just a nod to Gauss’s legacy, but it also channels his spirit of pursuing precision and innovation, which are the key values Gausium wants to embody and deliver to their customers.





# Honors & Awards

Globally Recognized Leader of Innovation



CMS Purus Innovation Award  
"Winner 2023 - Large Machines"  
Scrubber 50 Pro  
(2024 Edition)



Middle East Cleaning, Hygiene & Facilities  
Awards 2023  
"Innovative Product of the Year"  
Phantas



2023 Sanitary Maintenance  
Distributor Choice Award  
Phantas



ISSA Innovation Awards 2022  
"Innovation of the Year"  
Phantas



Amsterdam Innovation Award 2022  
"Smart Technologies & Digitalisation"  
Scrubber 50 Pro



European Cleaning & Hygiene Awards 2022  
"Technological Innovation of the Year"  
Scrubber 50 Pro



INCLEAN Excellence Awards  
Top 1 Oceanian commercial cleaning  
industry award  
Scrubber 50 Pro



# Milestone







# Two

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## Product Presentation



# Product Portfolio

## ➤ 6 Key Cleaning Functions

Scrubbing, Vacuuming, Sweeping, Dust Mopping, Degreasing, and Diffusing.

## ➤ Compatibility with Various Floor Types

Hard and Soft, All Surfaces Covered.

## ➤ Comprehensive Solutions for Diverse Scenarios

Malls, Offices, Supermarkets, Hotels, Warehouses  
Factories, Transport Hubs, Hospitals, Campuses,  
and More.





# Phantas – Commercial Robot Floor Cleaner for Small to Midsize Spaces

## Key Features



**All-in-one Floor Cleaning**  
Integrates vacuuming, scrubbing, sweeping, dust mopping.



**Strong Passability**  
Effortlessly passes through and cleans narrow aisles and under-table areas.



**Zero Distance from Edge**  
Able to clean along the edges zero-distance-close, leaving the edges spot-free.



**Auto Spot Cleaning\***  
Autonomously performs spot cleaning where waste is detected, bringing up to 4X efficiency improvement.



**Floor Type Recognition**  
Identifies flooring types and automatically adjusts brush height to protect flooring materials.



**Smart Integrated Handle**  
Automatic mode shift (Auto/Manual) via handle position detection, and effortless control with power assistance and superb durability.



## Specification

Dimension: 540×440×617 mm | 21.3×17.3×24.3 in

Practical Cleaning Efficiency: 350-700 m<sup>2</sup>/h | 3,767-7,535 ft<sup>2</sup>/h

Cleaning Width: Scrubbing 330 mm | 13 in;  
Vacuuming/Sweeping 410 mm | 16.2 in

Clean/Waste Water Tank: 11.5 / 10.5 L | 3.0 gal / 2.8 gal

Max. Runtime: Scrubbing 4.5 h; Vacuuming 4 h; Sweeping 14 h; Dust Mopping 10 h

Charging Time: ≈ 2 h

Max. Cleaning Speed: 0.8 m/s | 1.8 mph

Min. Pass Width: 600 mm | 23.6 in

Min. Distance from Edge: 0 mm

Gradeability: 8°

Sensing System: LiDAR, 3D Depth Camera, RGB Camera, Anti-Drop, Anti-Collision

Note: The specifications are derived from Gausium's test results. The actual performance may vary in specific applications.



# Vacuum 40 - Commercial Robotic Vacuum Cleaner for All Indoor Scenarios

## Key Features



**3 in 1 Cleaning**  
Integrating vacuuming, sweeping, dust mopping



**H13 HEPA Filter**  
Medical-grade air purifying capability



**Adaptability**  
Working perfectly on varying flooring types, be it a hard surface, a low pile carpet or a high pile carpet



**24 KPA Powerful Suction**  
Strong suction performance— effortlessly picking up fine dust and debris



**Zero Distance from Edge**  
Able to clean along the edges zero-distance-close with side brushes and high-precision sensors



**Multi-purpose Diffuser Kit**  
Optional diffuser kit for humidifying or aroma diffusion



## Specification

Dimension: 800×690×890 mm | 31.5×27×35 in

Max. Cleaning Efficiency (Theoretical): 1200 m<sup>2</sup>/h | 12,900 ft<sup>2</sup>/h

Dust Bag: 12 L | 3 gal

Max. Vacuum Pressure: 24,000 pa

Cleaning Width (with side brushes): 720 mm | 28 in

Max.Runtime: Vacuuming 3 h; Mopping 18 h

Charging Time: ≈ 2 h

Max. Cleaning Speed: 0.9m/s | 2.0 mph

Gradeability (Auto Driving): 8°

Sensing System: LiDAR, 3D Depth Camera, RGB Camera, Anti-drop Sensor, Air Pressure Collision Sensor

Note: The specifications are derived from Gausium's test results. The actual performance may vary in specific applications.



# Scrubber 50 – AI-Powered Robotic Floor Scrubber for Medium to Large Spaces

## Key Features



**3 in 1 Cleaning**  
Integrating scrubbing, sweeping, dust mopping.



**Superb Productivity**  
Say goodbye to wasted time and laborious cleaning routine with a theoretical cleaning efficiency up to 2,527 m<sup>2</sup>/h.



**5-Stage Filtration System**  
Reducing around 80% of freshwater consumption.



**Ergonomic Manual Mode**  
Easy manual operation - effortlessly walking and steering the machine with the ergonomic handle.



**Minimal Human Intervention**  
Optional workstation for self-docking power charging, water refill and discharge.



**Spot Cleaning Mode**  
Scanning the cleanliness of the nearby floor and autonomously performing spot cleaning where wastes are detected, bringing up to 4X efficiency improvement.



## Specification (V4.2)

Dimension: 810×700×1070 mm | 31.9×27.6×42.1 in  
Practical Cleaning Efficiency: 500-1,300 m<sup>2</sup>/h | 5,382-

13,993 ft<sup>2</sup>/h

Cleaning Width : 460 mm | 18.1 in

Clean/Waste Water Tank: 30L / 24 L | 7.9 gal / 6.3 gal

Max. Runtime: Scrubbing 3 h; Dust Mopping 8 h

Charging Time: ≈ 2 h

Max. Cleaning Speed: 1.2 m/s | 2.7 mph

Min. Pass Width: 800 mm | 31.5 in

Gradeability: 4.6°

Sensing System: 2D LiDAR, 3D Depth Camera, RGB Camera, Anti-Collision Sensor, etc.

Note: [1] The specifications are derived from Gausium's test results. The actual performance may vary in specific applications. [2] Alternative configurations compliant with IEC 63327 are available upon request. Please note that the corresponding specifications may vary depending on the chosen configuration.



# Omnie – AI-Powered Robot Floor Cleaner for High-Dynamic Environments

## Key Features



**OmniVision**  
360° camera coverage with 360° object detection and a 360°bird’s-eye view for seamless remote service.



**OmniLiDAR**  
360° LiDAR coverage, optimized for large highly dynamic industrial environments.



**OmniClean**  
Pre-sweeping FREE\*, scrubbing with a wider 52cm cleaning path while simultaneously swallowing up to 10L trash per hour.



**OmniSpotCleaning**  
Precisely identifying and cleaning both dry and wet waste powered by AI deep learning.

\* Coming soon.



## Specification

Dimension (L×W×H): 810×700×1070 mm | 31.9×27.6×42.1 in

Max. Cleaning Efficiency (Theoretical):

Scrubbing: 2,621m²/h | 28,212ft²/h;

Dust Mopping: 3,604 m²/h | 38,793 ft²/h;

Scrubbing Width : 520 mm | 20.5 in

Clean/Wase Tank: 33 L / 24 L | 7.9 gal / 6.3 gal

Max. Runtime: Scrubbing: 3 h; Sweeping: 8 h

Charging Time: 2 h

Max. Cleaning Speed: 1.4 m/s | 3.1 mph

Min. Pass Width: 800 mm | 31.5 in

Sensing System: 3D LiDAR, 2D LiDAR, 3D Depth Camera, RGB Camera, Anti-Collision, Anti-Drop

Note: The specifications are derived from Gausium's test results. The actual performance may vary in specific applications.

# Scrubber 75 – Heavy-Duty Robotic Floor Scrubber for Large-Scale Environments

## Key Features



### Superb Productivity

Integrating scrubbing, sweeping, dust mopping and degreasing; Up to 3,000 m<sup>2</sup>/h cleaning efficiency.



### Oil Stain Cleaning

Able to mark oil stains in the map and perform thorough oil cleaning.



### Ergonomic Manual Mode

Equipped with stand-on pedal and steering wheel for users to effortlessly carry the machine around.



### 5-Stage Filtration System

Reducing around 80% freshwater consumption.



### Advanced Lighting System (75 P)

Offers flashing lights, headlights, and other lighting elements to clearly communicate the machine's position.



### Minimal Human Intervention

Optional workstation for self-docking charging, water refill and discharge.



## Specification (75 P Ver.)

Dimension (L×W×H): 1370×962×1417 mm | 54×38×56 in

Max. Cleaning Efficiency (Theoretical): 3,000 m<sup>2</sup>/h | 32,300 ft<sup>2</sup>/h

Cleaning Width: 750 mm | 29 in

Clean/Waste Water Tank: 75 / 50 L | 20 gal / 13 gal

Runtime: 4-6 h

Charging Time: ≈ 5 h

Max. Moving Speed: 1.1 m/s | 2.5 mph

Min. Passable Width: 900 mm | 35.4 in

Gradeability: 8°

Sensing System: 3D LiDAR, 2D LiDAR, 3D Depth Camera, Air Pressure Collision Sensor, Millimeter-wave Radars

Note: The specifications are derived from Gausium's test results. The actual performance may vary in specific applications.



# Beetle – Heavy-Duty Autonomous Sweeper for Industrial Environments

## Key Features



### 3D Laser

Ensures robust, reliable operation in challenging environments, whether in low-light conditions, high-dynamic areas, or open spaces.



### Spot Cleaning Mode

Proactively detects and cleans waste using RGB camera and AI algorithms, bringing 4X efficiency improvement and covering over 40,000 m<sup>2</sup> in one night.



### High-Power Suction Motor

Efficiently handles a wide range of debris, from fine dust and sand to larger materials like paper scraps, bottles, and even wood chips.



### Effective Dust Control

Prevents airborne particles by capturing fine dust securely in the trash bin through advanced negative pressure and filtration.



### High-Capacity Trash Bin & Battery

Equipped with a 45L large trash bin and a durable battery with a 4-8 hour runtime.



### 750mm Path Clearance

Navigates narrow aisles adeptly with a 750mm path clearance, providing smooth operation in tight spaces.



### Zero-Distance Edge Cleaning

Delivers zero-distance cleaning along edges, ensuring no gaps are left behind.

## Specification

Dimension (L×W×H): 960×650×680 mm | 35.4×25.6×26.8 in

Max. Cleaning Efficiency (theoretical): Regular: 3,780 m<sup>2</sup>/h | 40,688 ft<sup>2</sup>/h

Cleaning Width (with side brushes): 750 mm | 29.5 in

Trash Bin: 45 L | 11.9 gal

Max. Air Flow Volume: 1,320 m<sup>3</sup>/h

Runtime: > 4 h

Charging Time: 2 h

Edge Cleaning Capability: 0 mm | 0 in

Max. Moving Speed: 1.4 m/s | 3.1 mph

Sensing System: 3D LiDAR, RGB Camera, RGB-D Camera

Note: The specifications are derived from Gausium's test results. The actual performance may vary in specific applications.

# Docking Stations

With the charging docks, the robots can automatically charge themselves. With the workstations, the robots can perform automatic power charging, water refill and sewage discharge.

CD-01



(Works with Vacuum 40 and Scrubber 50)

CD-04



(Works with Phantas)

WS-01



(Works with Scrubber 50)

WS-02



(Works with Scrubber 75)

WS-03



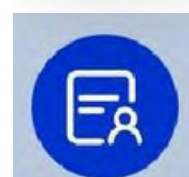
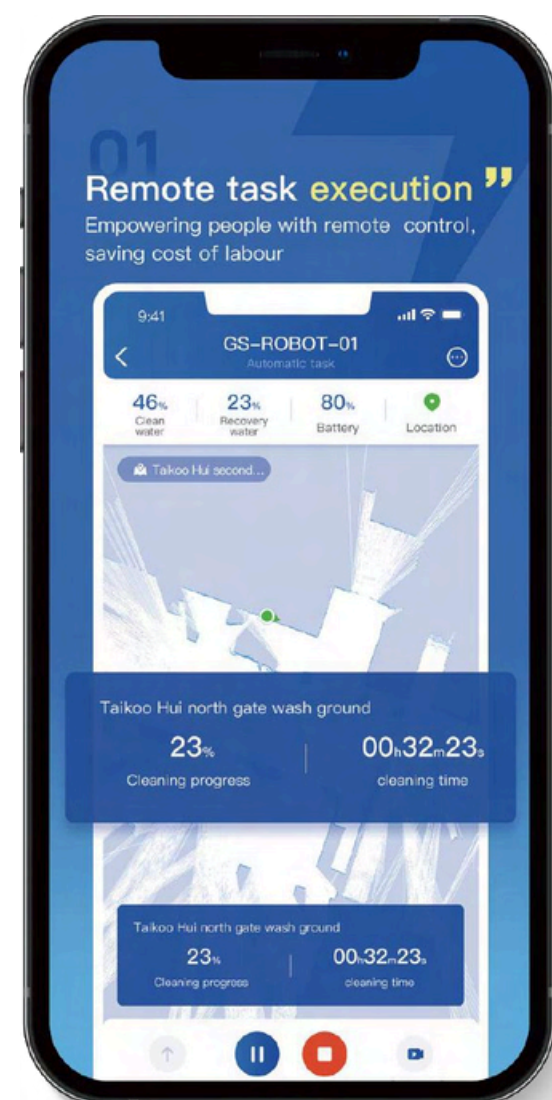
(Works with Phantas V1.3 or higher)

## Specification

	CD-01	CD-04	WS-01	WS-02	WS-03-S
Dimension (L×W×H)	410×500×650 mm	345×195×689 mm	530×450×1040 mm	1270×660×1270 mm	510×558×702 mm
Weight	12 kg	9 kg	30 kg	100 kg	23 kg
Max. Power	650 W	735 W	650 W	1200 W	730 W
Rated Voltage	100 V - 240 V	220 V ± 22 V	100 V - 240 V		
Operating Temperature	-10℃~45℃	0℃~45℃	0℃~45℃	-10℃~45℃	1℃~45℃
Operating Humidity	20%~75% RH				
Storage Temperature	-40℃~45℃	-30℃~70℃	-40℃~45℃		-20℃~70℃
Storage Humidity	20%~93% RH				

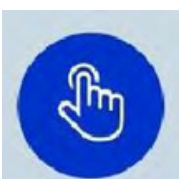


# Gausium Mobile



## Online Training Courses

Get access to a series of instructional videos in the mobile app showing the proper and safe ways of operating the robots



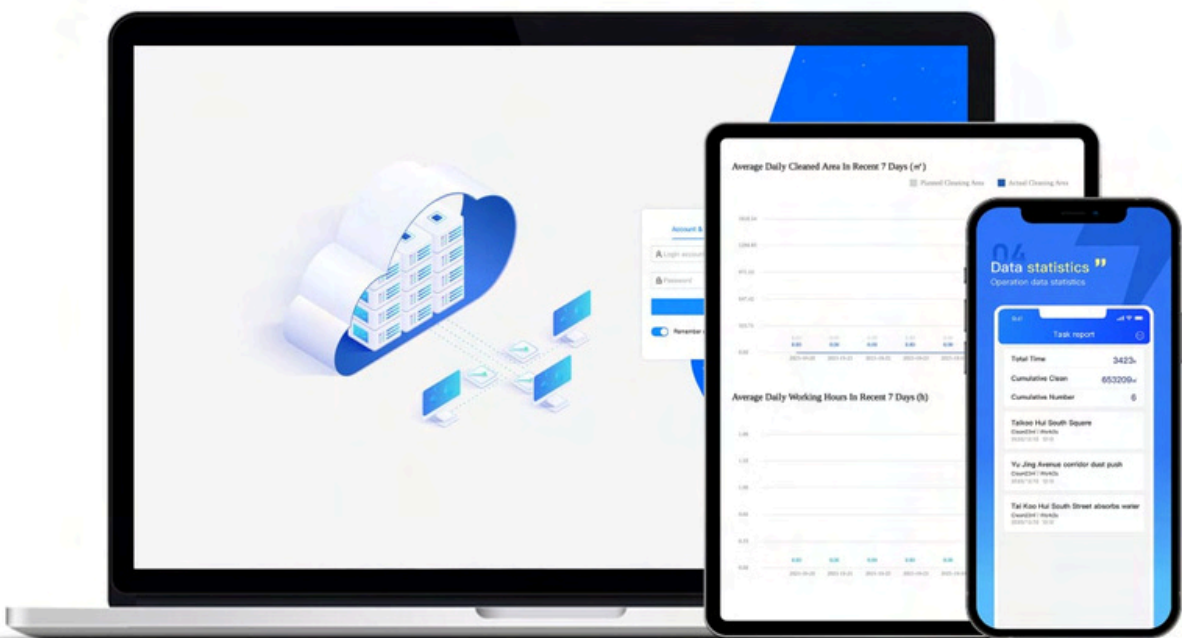
## Effortless Operation on Your Smartphone

Control your cleaning robots anytime, anywhere for remote start/stop, navigation, scheduling, and more.



## Cloud-based Digital Management

Get real-time visibility of operational status; receive detailed task reports with data on cleaning efficiency, duration, area covered, etc.; keep informed of consumables status and receive health alerts for predictive maintenance.



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# Three

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## Comprehensive Solutions



# Use Scenarios

Model		Phantas	Vacuum 40	Scrubber 50	Omnie	Scrubber 75	Beetle
Product Image							
Cleaning Feature		<i>Scrub / Vacuum /Sweep / Mop</i>	<i>Vacuum /Sweep / Mop</i>	<i>Scrub / Mop / Sweep (brush)</i>	<i>Scrub / Mop / Sweep</i>	<i>Scrub</i>	<i>Sweep</i>
Recommended Coverage Area		<i>&lt; 1,500 square meters</i>	<i>&lt; 3,000 square meters</i>	<i>&lt; 5,000 square meters</i>		<i>&gt; 5,000 square meters</i>	<i>&gt; 5,000 square meters</i>
Recommended Use Scenarios	Retail Store	●	○	○	○	○	○
	Supermarket	●	○	●	●	○	○
	Warehouse Club	○	○	●	●	●	●
	Shopping Center	○	●	●	●	●	○
	Office Building	●	●	●	●	○	○
	Hotel	●	●	●	●	○	○
	Healthcare	●	●	●	●	○	○
	School	●	●	●	●	○	○
	Exhibition Hall	●	●	●	●	○	○
	Transport Hub	○	●	●	●	●	○
	Manufacturing Plant	○	○	●	●	●	●
	Warehouse	○	○			●	●
	Underground Garage	○	○	○	●	● <i>(Scrubber 75 P)</i>	○

“●” = *Highly Recommended*, “○” = *Less Recommended*.



# Shopping Mall



Vanke Outdoor Plaza (Shanghai)



Bright Blue Whale World (Shenzhen)



Vanke Shopping Mall (Shanghai)



Wanda Shopping Mall (Shanghai)



# Supermarket



Coop (Sweden)



MAKEISET (Finland)



MAXI (Serbia)



Metro Supermarket (Shanghai)



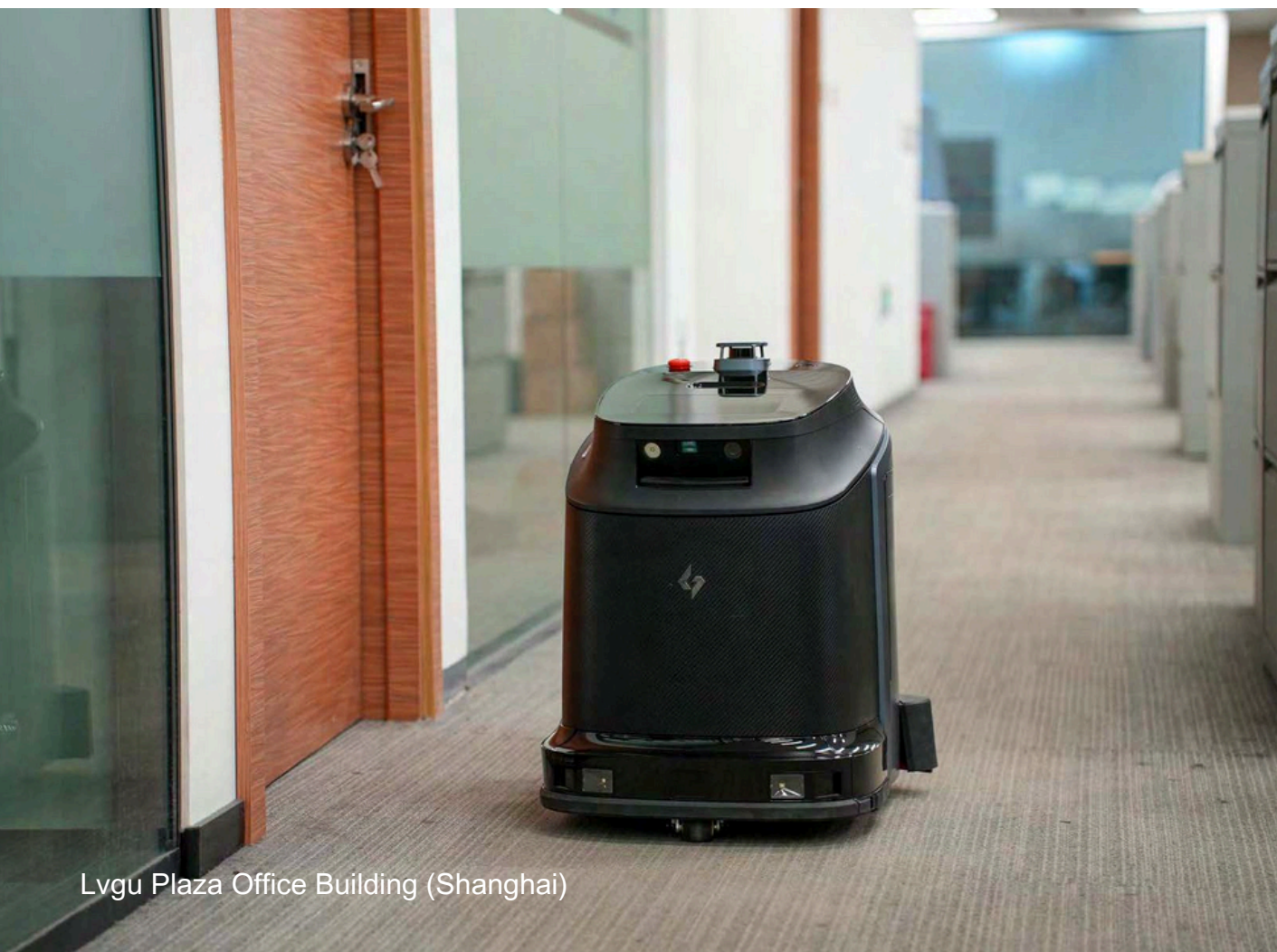
ICA Kvantum Varberg (Sweden)



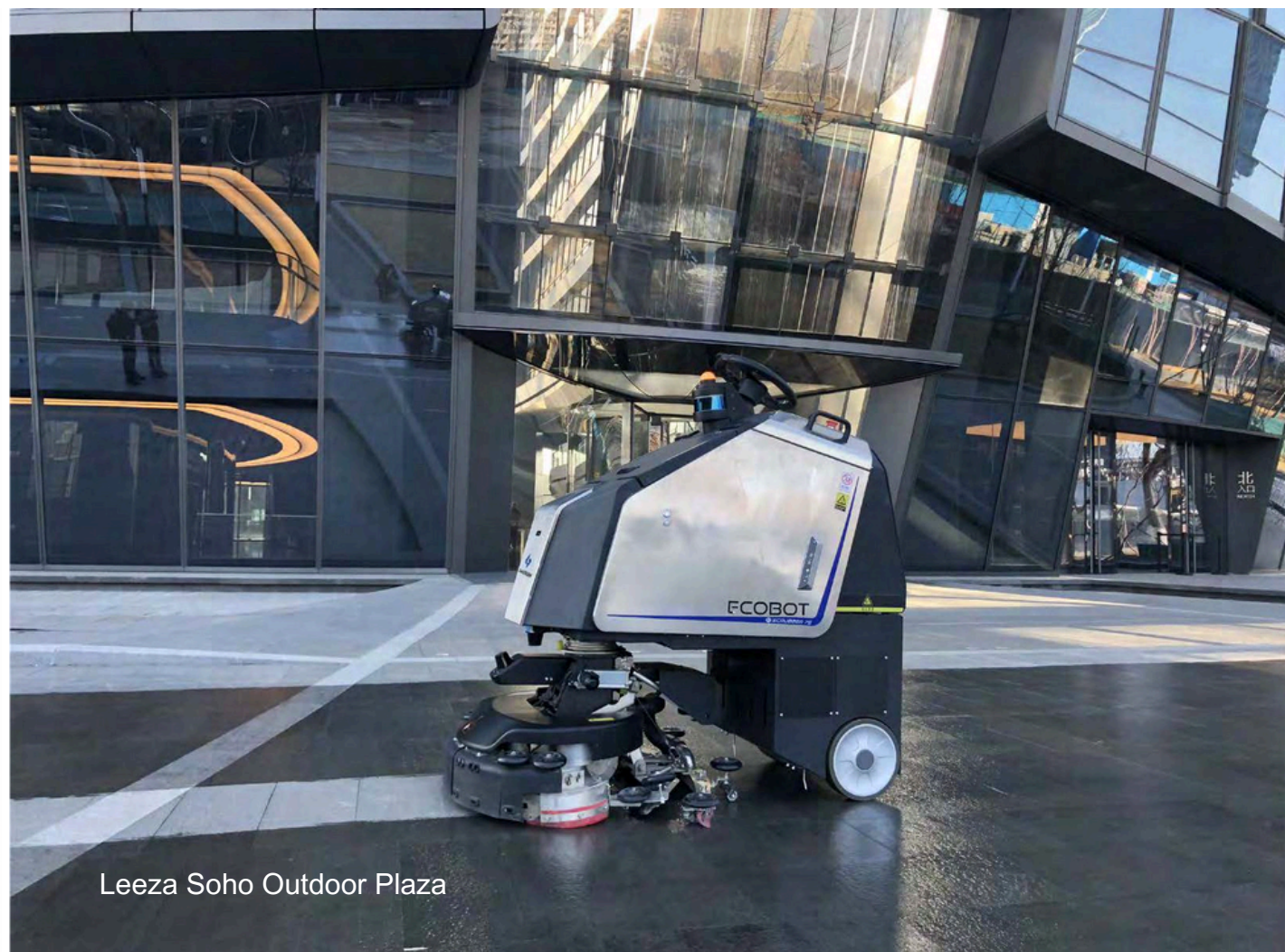
# Office Building



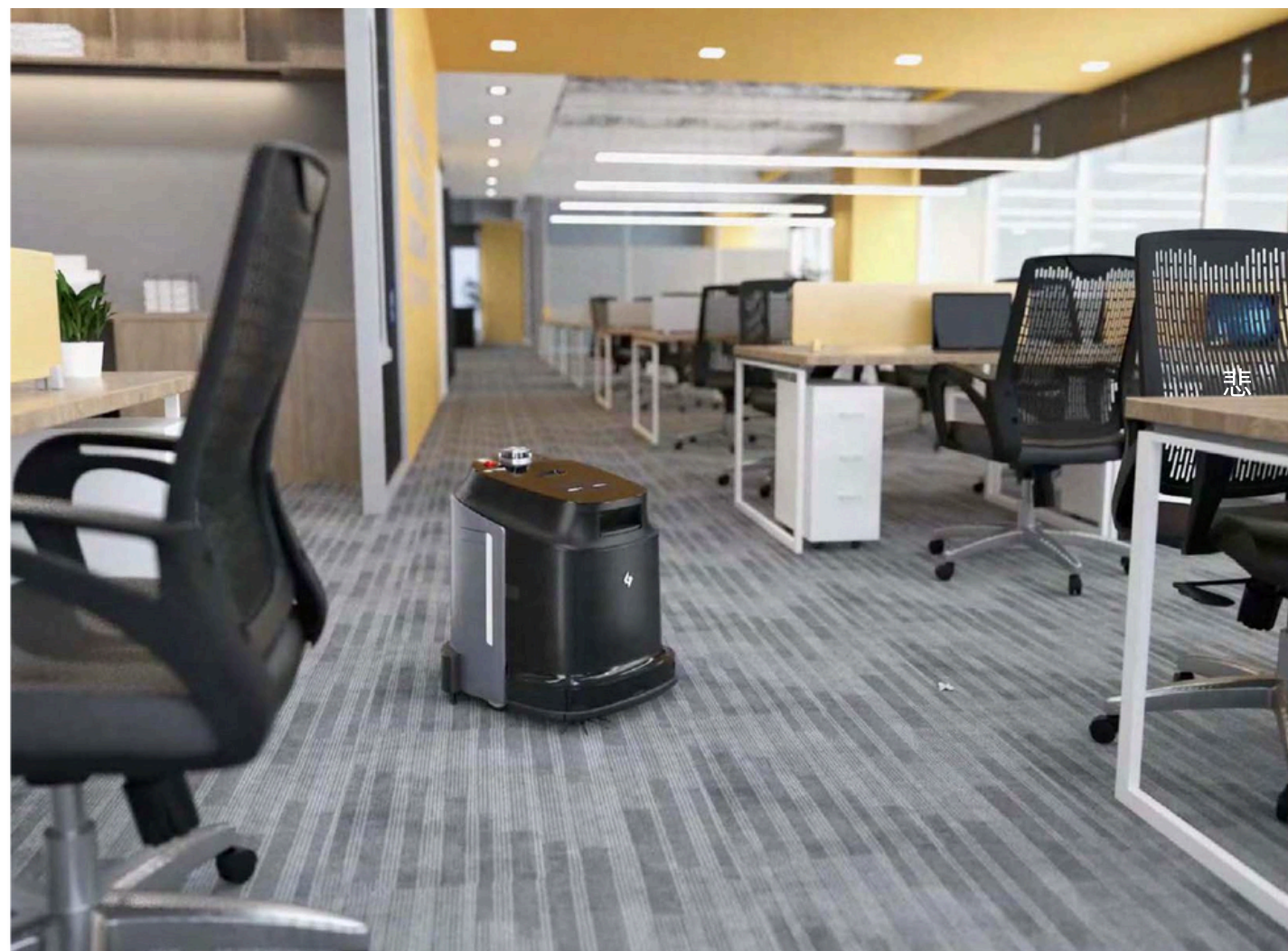
Leeza Soho (Beijing)



Lvgu Plaza Office Building (Shanghai)

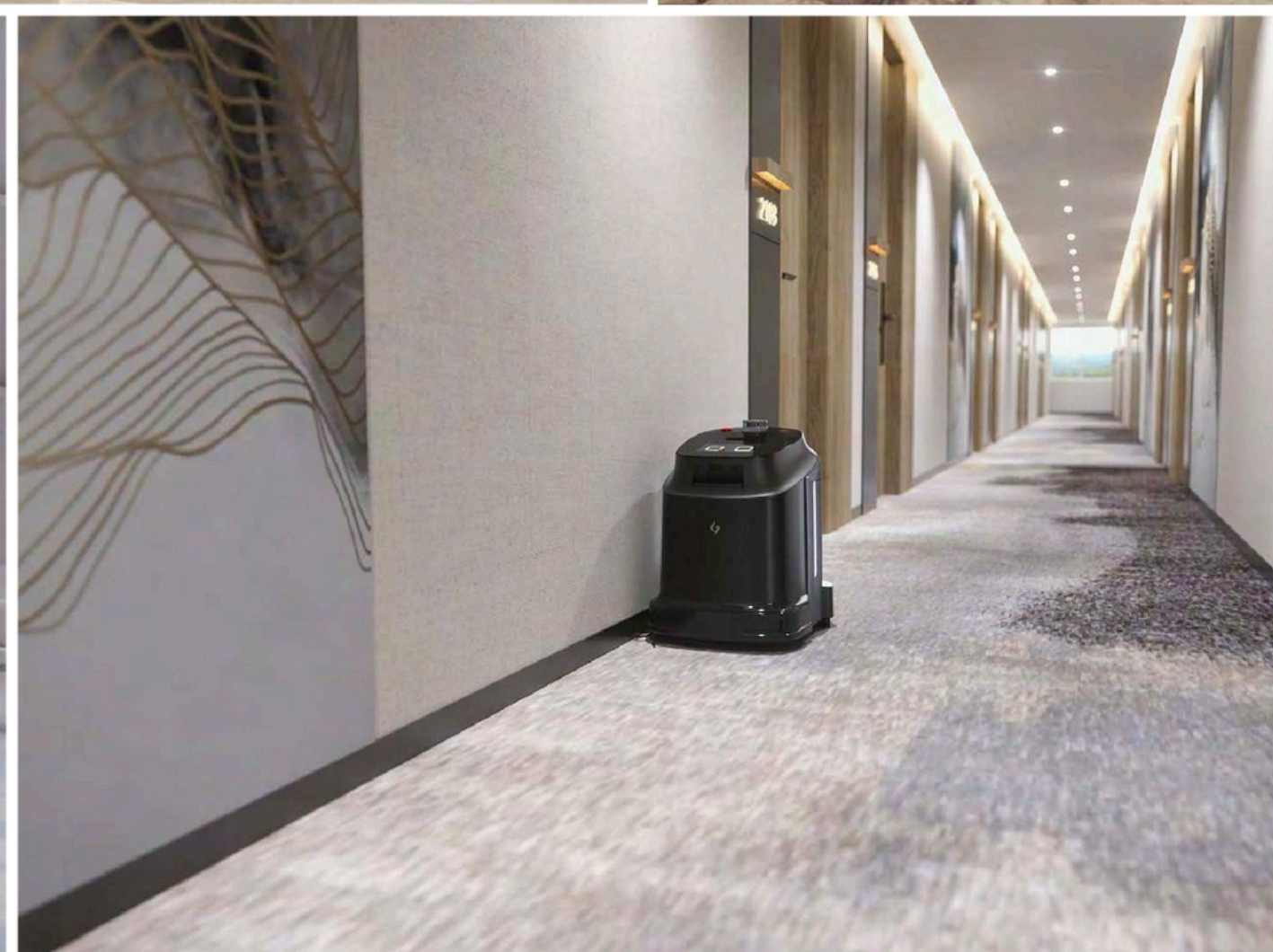
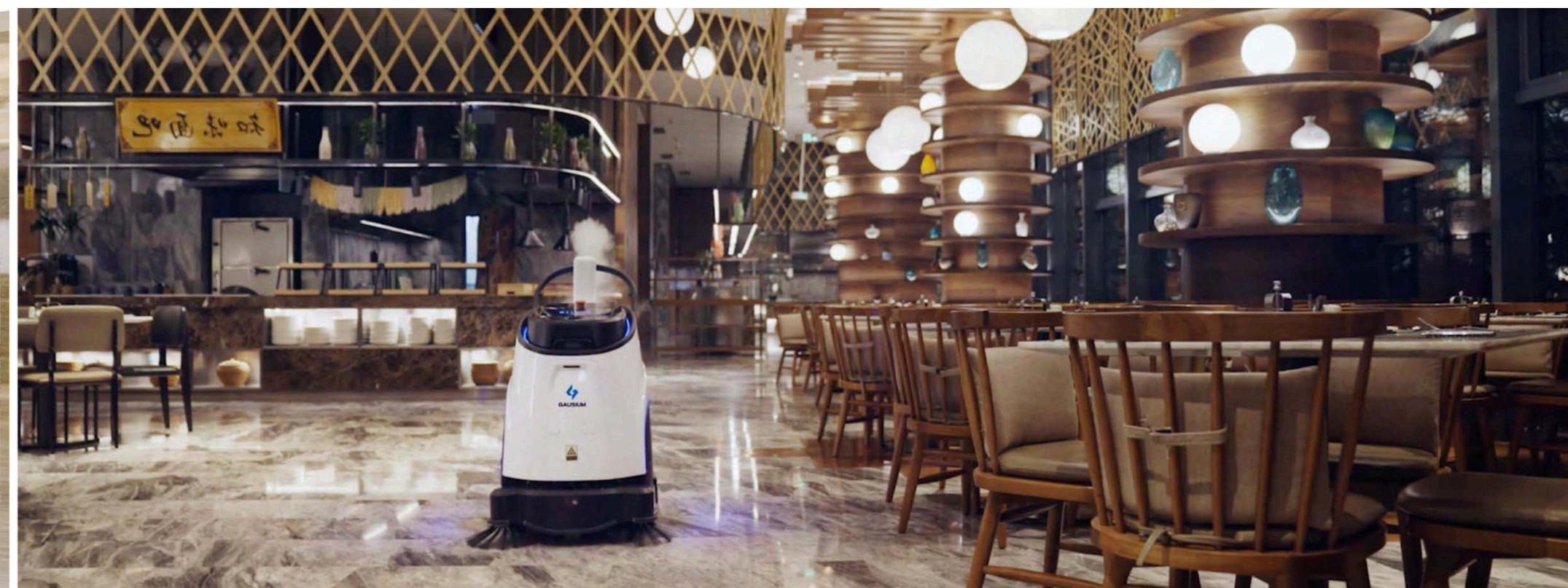
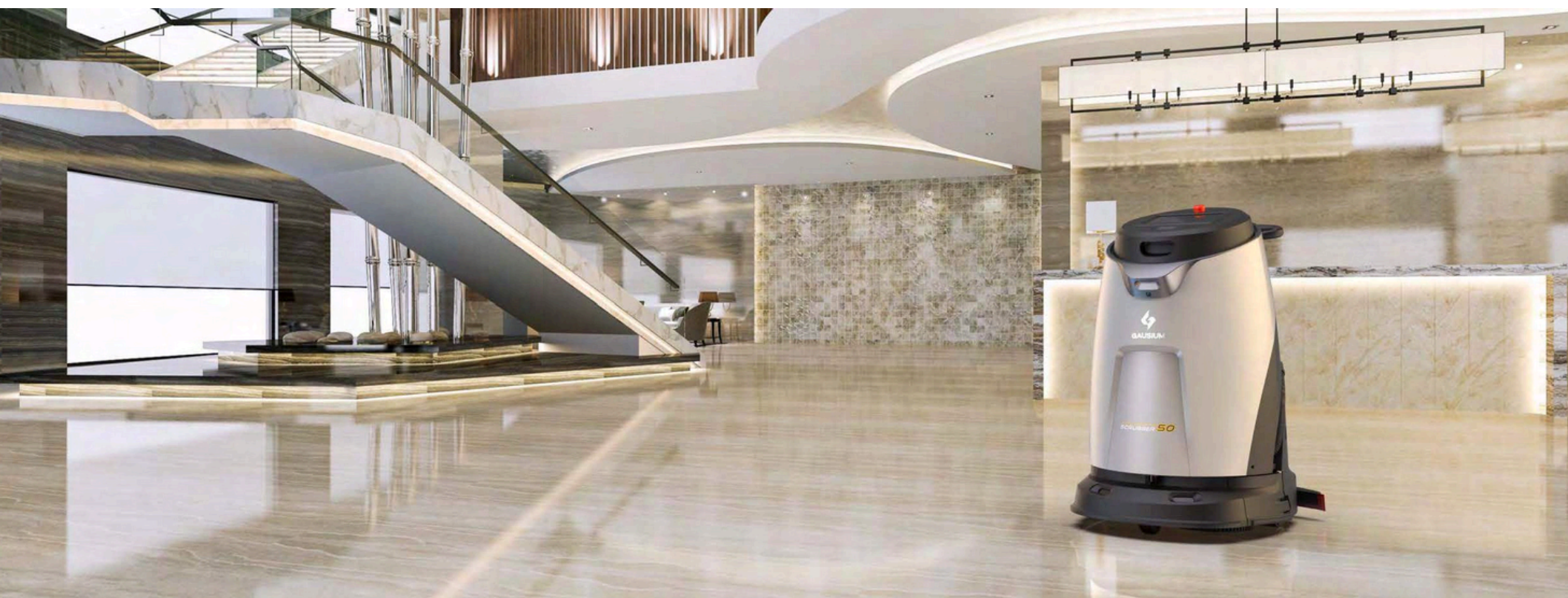


Leeza Soho Outdoor Plaza



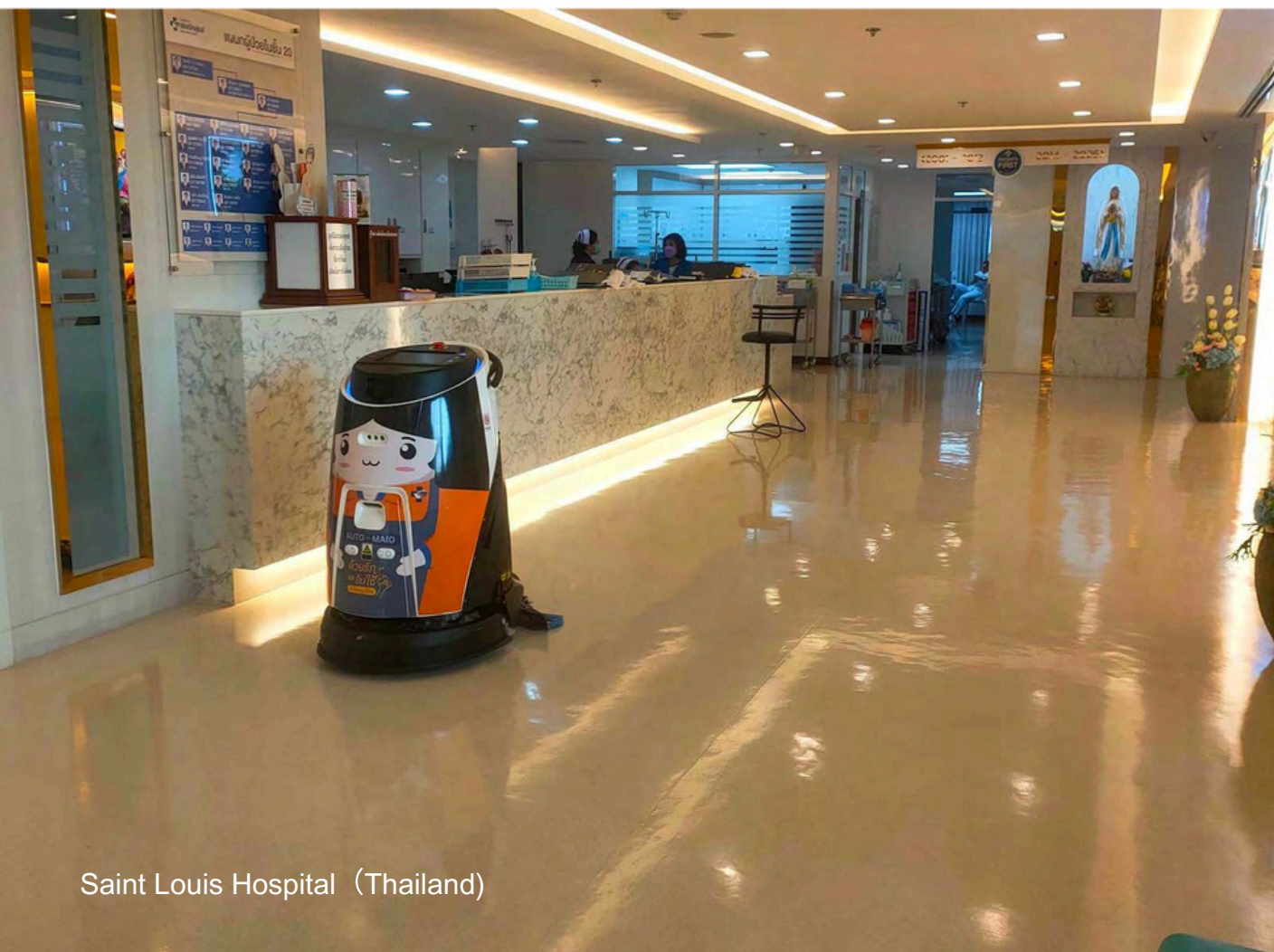


# Hotel





# Healthcare



Saint Louis Hospital (Thailand)



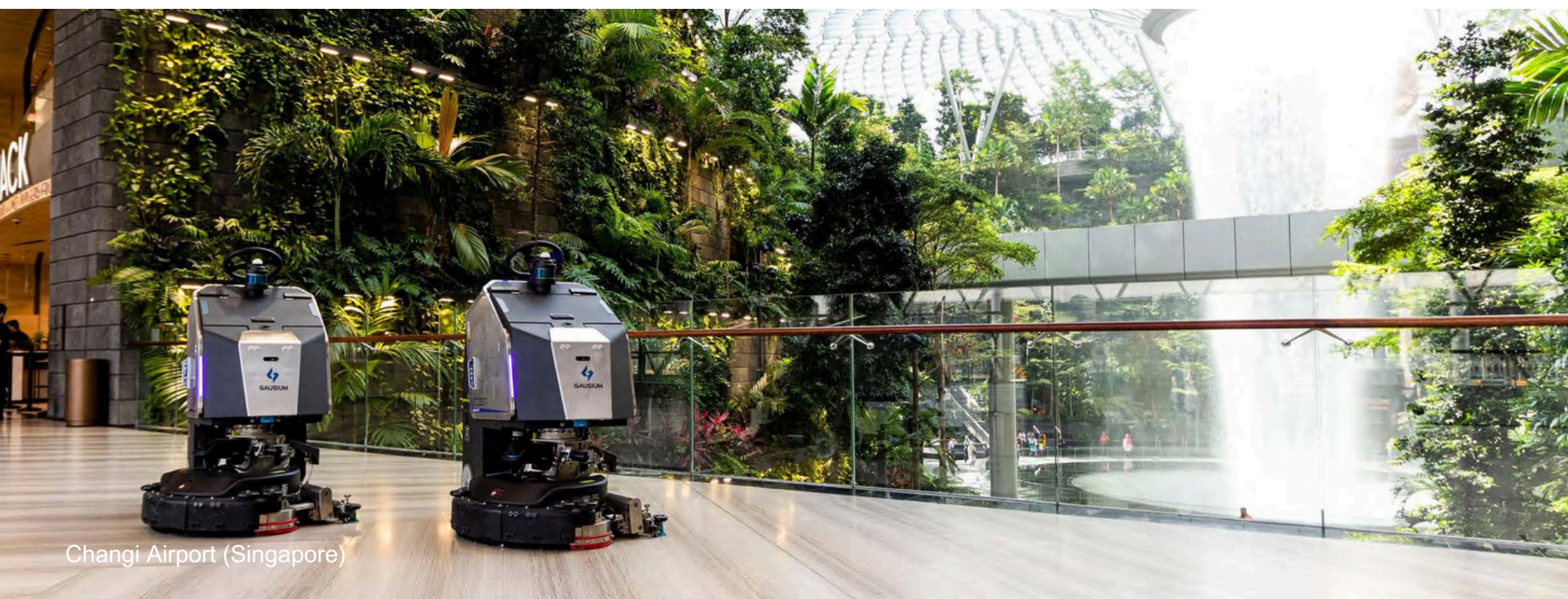
Saiseikai Kazo Hospital (Japan)



Thonburi Bamrungmuang Hospital (Thailand)



# Transport Hub



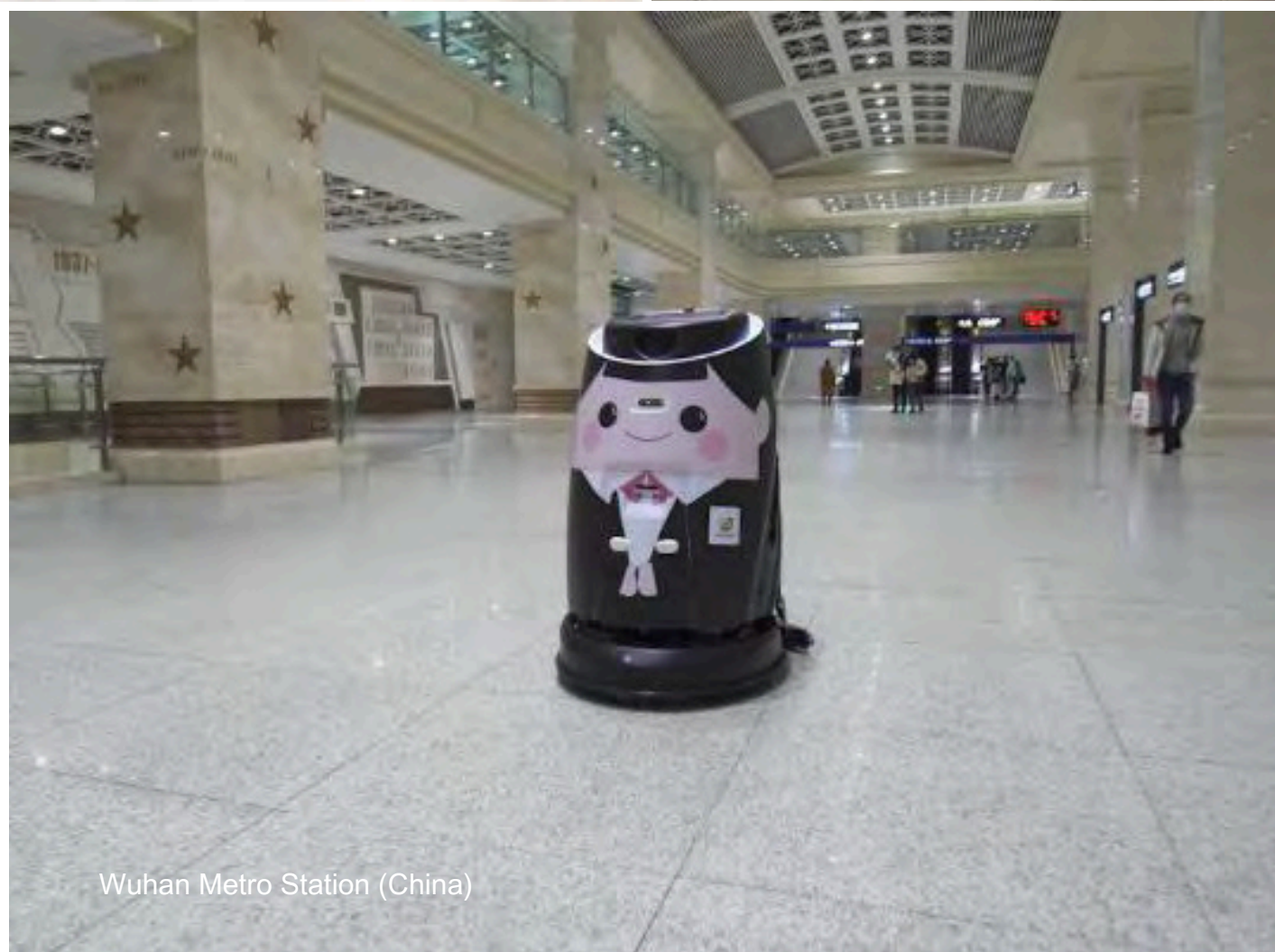
Changi Airport (Singapore)



Charles de Gaulle Airport (France)



St Pancras Station (UK)



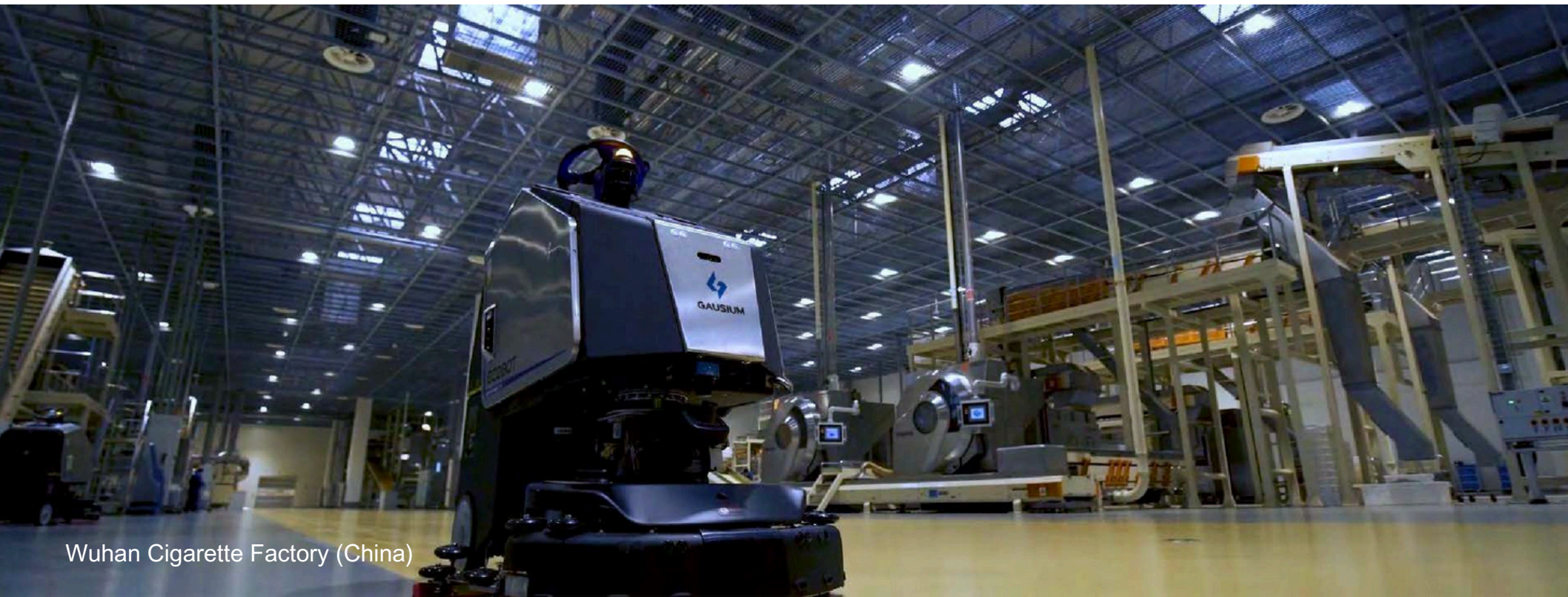
Wuhan Metro Station (China)



Helsinki-Vantaa Airport (Finland)



# Manufacturing



Wuhan Cigarette Factory (China)



Shimada Industrial (Japan)



GKN Aerospace Global Technology Center (UK)



Waste-to-energy Plant (China)

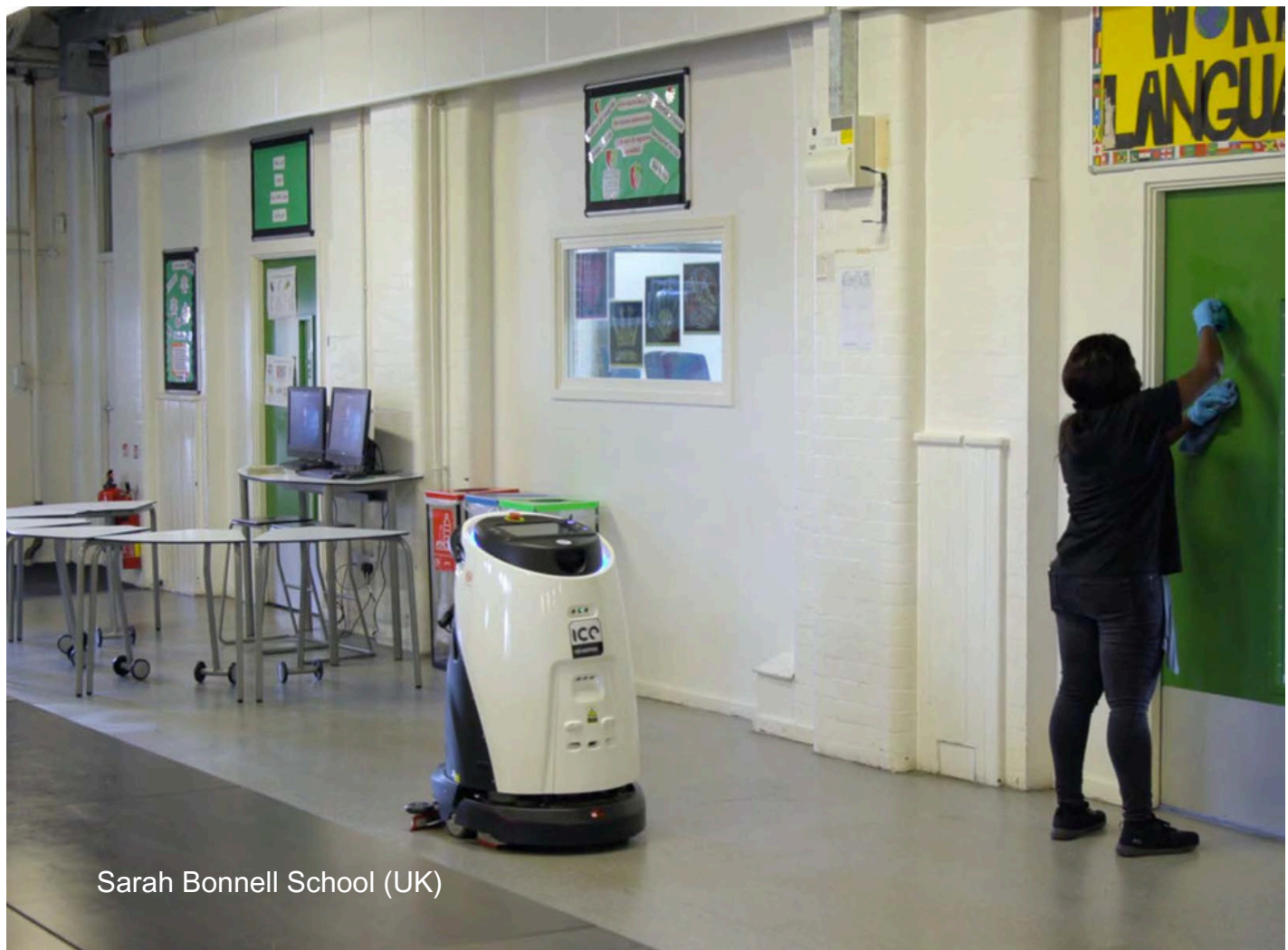
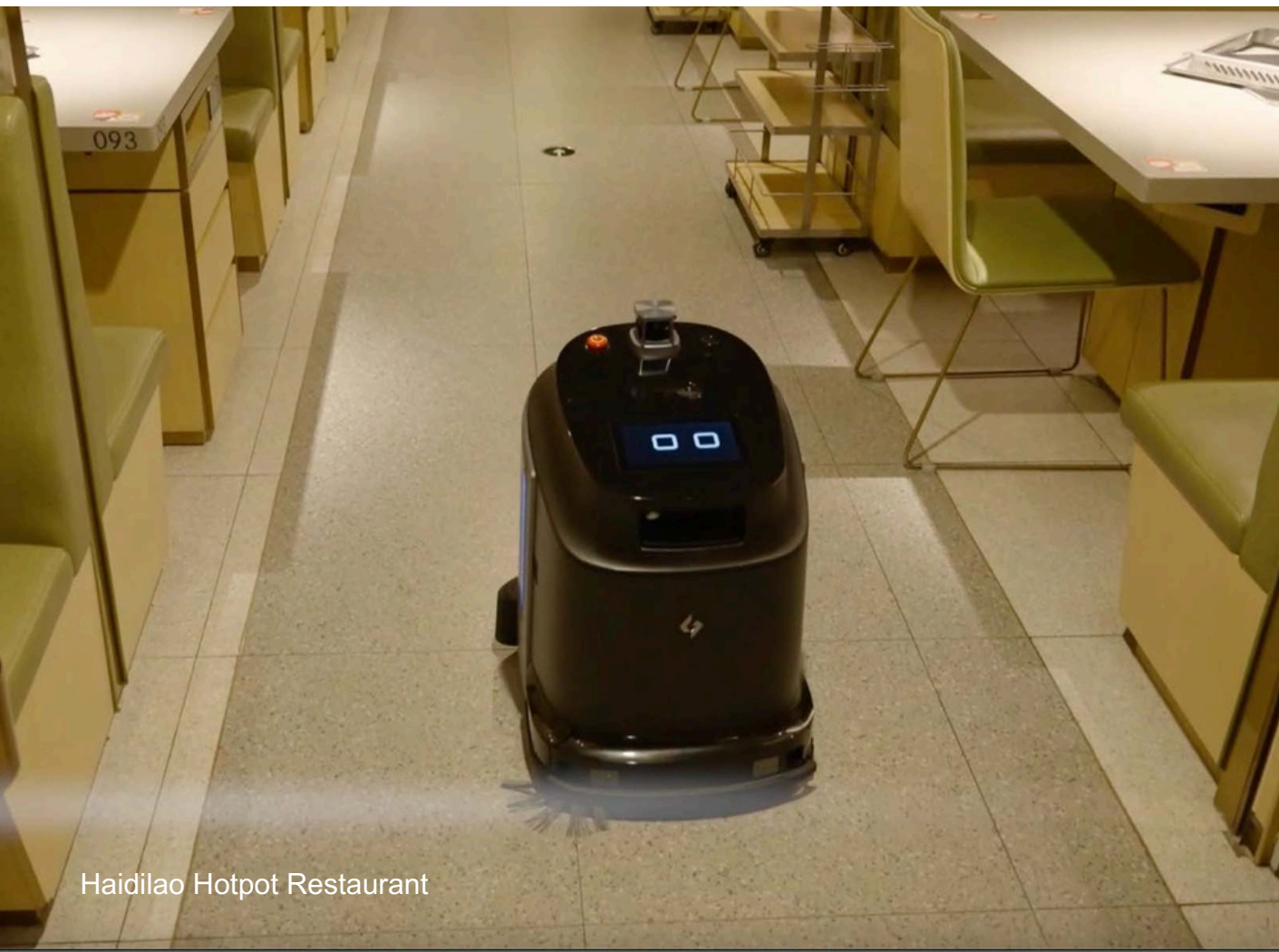


# Warehouse





Other





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# Four —————

## Competitiveness



# Operational Advantages





# Technological Advantages

Drawing on our comprehensive expertise in production, R&D, sales, and service, Gausium has crafted a cutting-edge technology strategy boasts four key industry-leading capabilities across algorithm, application, backend, and data layers. This strategy facilitates the shift from automation to intelligence while offering limitless scalability.



## Algorithm

**Mapping & Localization:** Mapping over 1 million square meters, providing precise positioning in complex environments with real-time map updates

**Environmental Perception:** Deep-learning-powered perception; identifying waste types with over 99% accuracy.

**Path Planning:** Offering multiple cleaning plans for highest level of flexibility and adaptability; multimodal approach for adaptive path planning and seamless switch

**Motion Control:** Smooth start and stop, agile turning, strong passability and gradeability.



## Backend

**Intelligent Operations:** Streamlined management allowing for task scheduling and remote control.

**Remote Maintenance:** Efficient remote upkeep featuring anomaly alerts, cloud-based processing, and OTA upgrades.

**Simulation Platform:** Software simulation providing a robust foundation for research and testing, enabling precise product structural design through mechanical simulation.

**Open API:** Integrating with AIoT, embracing the interconnected era of everything.



## Application

**6 Cleaning Functions:** Scrubbing, Vacuuming, Sweeping, Dust Mopping, Degreasing, Diffusing

**Fully Unmanned Operation:** Integration with IoT devices, automatic water and power replenishment

**Superior Performance:** High efficiency, extended consumable lifespan, adaptable to various environment requirements, etc.



## Data

**Digital Management:** Data visualization for insightful decision making

**Deep Learning Platform:** Fueling rapid product evolution with multi-dimensional data analysis and a closed data loop

**Intelligent Cleaning:** Streamlining operations with unified human-machine scheduling, collaborative map sharing, etc.



# Robust Manufacturing & Quality Control

## Intelligent Production Line

- In-house-developedhigh-precision fixtures and gauges
- Smart apps for automation version deployment, function testing, automated running, and one-click shipping configuration
- Integrated system management for R&D processes, NPI (New Product Introduction), and mass production processes

## Three-Tiered Planning and Delivery System

- 1.Fast response
- 2.Efficient multi-skilled worker training
- 3.Quality assurance in manufacturing





# Comprehensive Certification Credentials

Gausium has earned numerous prestigious international safety certifications, including ISO 9001, China's CR certification for robots, Europe's CE safety certification, the UK's UKCA certification, the US's FCC certification, and Canada's IC certification. Our robotic products fully comply with relevant ISO and IEC standards, as well as GDPR regulations, ensuring the highest levels of safety and data protection. We maintain rigorous quality standards and take pride in being the first Chinese supplier accredited by TÜV Rheinland for compliance with **IEC 63327** standards\*.

As of 2023, Gausium has filed a total of **666** patents, with **444** patents granted. Among these are **170** invention patents, **226** utility model patents, and **48** design patents.



IEC 63327 is an international standard that specifies the safety requirements for autonomous mobile robots (AMRs) used in industrial environments, ensuring their safe operation and integration.



# Commitment to Sustainability

Gausium is dedicated to reducing environmental impact through the development and deployment of sustainable cleaning solutions:

**Resource Conservation:** Our products are designed to minimize water and chemical usage, contributing to resource conservation and reduced environmental footprint. Our Scrubber 50 and Scrubber 75 feature advanced water filtration technology, reducing water usage by approximately 80%.

**Recyclable Materials:** Almost all materials used for producing our robots can be recycled and by reused after an average lifespan of 5 to 6 years. Our partners can offer the robot to be processed by The ECMR (European Cleaning Machine Recycling) for complete recycling and reuse of the materials.

**Sustainable Packaging:** The packaging of products is made with reduced material use and complete material flow-optimized recyclability, which consists of 100% recycled or biodegradable materials (three-layer cardboard and kraft paper).

**Eco-friendly Production:** Gausium's manufacturing facilities are certified according to ISO 9001 and ISO 14001.



The SDG Certificate for Phantas, Vacuum 40, Scrubber 50, and Scrubber 75, awarded by iRecycle and SGS.



# Global Service and Support

Support for Best uptime and productivity



**300+** highly skilled technicians trained and certified by Gausium

**24/7** constant and proactive response time anywhere in the world

**70%** malfunctions fixed via cloud-based diagnostics and troubleshooting



# Key Accounts



# Testimonials



The cleaning service partners operating the Gausium robot at the airport generally find it safe, easy and efficient to use it. The robot's adoption and awareness of its capabilities by the cleaning team and leveraging on its technology for its daily cleaning operations is increasingly improving.

— **Jerome Francis**

Changi Airport Operations Management (Singapore)



Our train presentation and station cleaning teams have been working tirelessly throughout the pandemic and the new Eco Bot (Scrubber 50) will help free up a lot of time, so colleagues can focus on additional sanitisation.

— **Simone Bailey**

Greater Anglia (UK)



With this technological robot, it renews itself day by day. It has systems that can take the elevator. Scrubber 50, a small one of which can take the elevator, charge itself, fill and empty its own water...If it sees a living thing, it changes its path. You can manage it via the panel, web or mobile. You have the cleaning done over and over again by using the remote panel without being there.

— **Nazli Uzunlar**

UFS Facility Services (Turkey)



We're talking about a business (Gausium) that is invested to create a comprehensive line that speaks to various needs of various discerning customers we have. People are embracing having that autonomous support in their business that's very reliable. The Gausium product line is certainly a leader in the innovation space. The technology that they built into the equipment is better than anybody else's.

— **Brock Tully**

Vice President Bunzl Cleaning & Hygiene (Canada)



The Gausium cleaning robots operate independently 24/7 without the need for manual assistance. This not only allows cleaning personnel more rest time but also enables us to save costs and enhance cleaning quality for our clients. Collaborating with Gausium not only generates revenue through their cutting-edge cleaning robots but also draws in a proactive influx of clients.


— **Romke Romkes**

CEO Groveko B.V. (Netherlands)





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