



July, 2022

Company Profile Presentation



About Gausium

Gausium (alias "Gaussian Robotics") is a leading smart solutions provider of AI-integrated autonomous service robots. Currently, Gausium's products and services include commercial floor cleaning robots, indoor delivery robots and supplementary accessories like docking stations, cloud platform and application software.

Founded in 2013, Gausium built its class-leading autonomous navigation based on advanced SLAM technology and integrated it into cleaning machines in 2017. It has since committed to providing total solutions of autonomous floor cleaning for extensive applications across industries and scenarios, and managed to set the industry benchmark with currently the world's most comprehensive commercial cleaning bot portfolio consisting of Vacuum 40, Scrubber 50, Scrubber 75 and Sweeper 111. In 2021 and 2022, Gausium launched its first autonomous delivery robot "X1" and the groundbreaking new cleaning product line "Phantas", marking the strategic expansion of its service robot ecosystem.

By 2021, Gausium's cleaning robots have been deployed in over 40 countries across 6 continents, recognized by thousands of satisfied customers with millions of autonomous operational hours accrued and billions of square meters covered.

With a vision to lead the smart digital transformation of the service sectors, Gausium brings the world's most comprehensive commercial cleaning robot portfolio and empowers people to work smarter and live happier with our innovations.

40⁺
countries

150M^{km}
cleaning track

180⁺
patents

2,000⁺
customers



Corporate History

This is just the beginning. By leveraging the infinitely scalable robotics technologies useful to a multitude of product areas and business units, Gausium will be able to meet a wider scope of market needs in the future.

In 2013,

Gausium (alias "Gaussian Robotics") was founded by Edward CHENG, starting as a solutions provider of SLAM (simultaneous localization and mapping) and integrated robotics software.

In 2014,

the startup team of Gausium robotized a traditional cleaning product at the request of a cleaning equipment company. By integrating navigation algorithms and robotics software into the traditional equipment, Gausium created its first-generation cleaning bot "prototype".

In 2015,

a Singaporean facility services company ordered 6 units of Gausium's preliminary cleaning robot model, and gave positive feedback after putting them into use. Inspired by the success, Gausium started the R&D of commercial cleaning robots and managed to build a full-fledged manufacturing supply chain.

In 2017,

Gausium launched its first floor cleaning robot "Scrubber 75" at CCE Shanghai. A year after, the R&D team started to develop a smaller-sized model "Scrubber 50", which later became the company's iconic best-seller. Gausium has since dedicated to extending the cleaning product line to encompass a broader range of applications.

In 2020,

Gausium formed a comprehensive commercial cleaning bot portfolio consisting of Vacuum 40, Scrubber 50, Scrubber 75 and Sweeper 111, covering the cleaning requirements of a wide range of facilities with varied sizes and floor surfaces.

In 2021,

Gausium launched its first indoor delivery robot model "X1", announcing the company's entry into the field of autonomous delivery.

In 2022,

Gausium introduced its brand-new cleaning product line "Phantas"— a game-changing innovation for the cleaning industry. The two moves are significant milestones of Gausium's brand extension, and marked the company's strategic expansion of its service robot ecosystem.

Milestone

2013,10

Founding of Gausium

2014,6

SLAM 1.0
launched in the market

2014,11

Birth of Gausium's first-generation commercial cleaning robots

2015,11

The first-generation Gausium commercial cleaning robots. landed in Sentosa, Singapore

2017,5

Launch of Scrubber 75

2020,10

Establishment of Gausium Experience Center in Netherland

2020,7

4,000+ units deployed
worldwide 150 million km
of cleaning track accrued

2020,4

Launch of Vacuum 40

2019,3

Gausium cleaning robots occupying 80% of Asia-Pacific market share (China included)

2018,5

Launch of Scrubber 50
Completion
of Series A Funding

2021,4

Completion of Series B Funding

2021,10

Completion of Series C Funding Led by Capital Today, SoftBank Vision 2

2021,11

Launch of Gausium's first delivery robot X1

2022,5

Launch of the ground-breaking
new cleaning product line Phantas

Statements

Our Mission

Gausium designs, develops and manufactures AI-integrated autonomous service robots that co-work with people as a complement and enhancement.

Our Vision

Gausium wants to lead the smart digital transformation of the service industries with continuous innovations, and empower more people in the world to work smarter and lead happier lives with the products and services we provide.

Our Value

Gausium believes that technology should be properly used to serve people. We create safe, ergonomic and eco-friendly robots to support human activity and help people to work more precisely, efficiently, and comfortably.

Our Brand

Positioning with 3 “I”

Innovative

Intelligent

Infinite

At Gausium, innovation never stops. We keep innovating to create value for the society and promote world progress. Our AI-integrated autonomous solutions empower smart working and boost digital transformation of industries, and ultimately help build an intelligent society. On our way of pursuing constant improvement and breakthrough innovation, we explore the limitless capacity of technology and unlock infinite possibilities for business and society. These efforts are in line with our self-positioning as “Innovative”, “Intelligent” and “Infinite”.

Principle of 3 “S”

Smarter

Safer

Simpler

Gausium’s products are developed under the principle of “Smarter, Safer, Simpler” to better address the customers’ needs. Our revolutionary autonomous solutions enable smarter work process and guarantee a safer public environment. At the same time, we strive to simplify the usage and maintenance of our products with hassle-free setup, powerful and intuitive application software and 24/7 technical support.

Awards



Amsterdam Innovation Award 2022
“Smart Technologies & Digitalisation”
Scrubber 50 Pro



A' Design Award 2022
Phantas & Delivery X1



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



reddot winner 2022

Red Dot Design Award 2022
Phantas & Delivery X1

Executive Team



Edward CHENG

CEO

Founder of Gausium

M.S., Electronic Engineering,
University of Cambridge



Baoxing QIN

CTO

Mobile Robotics Expert

Post doc, Singapore-MIT Alliance
for Research and Technology
Ph.D., Mechanical Engineering, NUS
B.S., Mechanical Engineering, SJTU



Liang PENG

Sales VP

Sales Expert

Former Sales Head, Granges Aluminum China
Former Sales Manager, Alcoa
EMBA, Holt International Business School



Yuan LYU

HR VP

Human Resources Expert

Ph.D., Management, Hong Kong
Polytechnic University



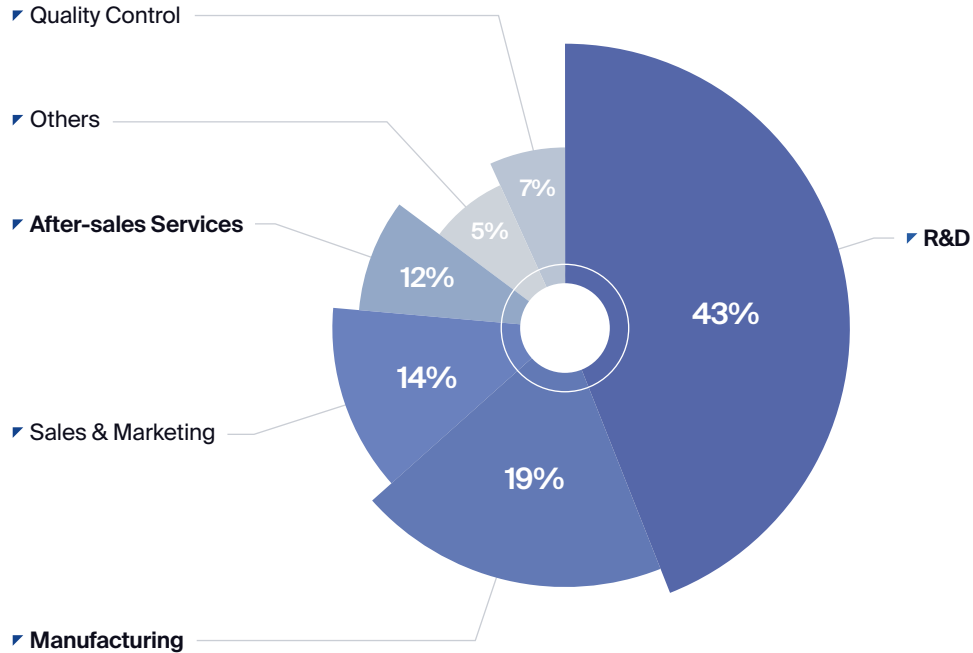
Yangming HUANG

Senior Director of Cloud Service

Cloud Computing & Big Data Expert

Former Senior Software Architect, Apple
Head of Infrastructure, Inceptio
M.S., University of Detroit Mercy
B.S., Shanghai Jiao Tong University

Talent



Technology-oriented



Strong Background



200+ Master & Above

Cleaning Portfolio

All-scenario Cleaning Robot Portfolio

All-embracing Floor Cleaning & Maintenance Services

Flagship Models

Scrubber 75

Indoor & Outdoor
Degrease/Scrub/Sweep/Mop



Sweeper 111

Indoor & Outdoor
Sweep



Vacuum 40

Indoor
Vacuum/Sweep



Scrubber 50

Indoor
Scrub/Sweep/Mop

Function Extensions

Scrubber 50 Sprayer

Indoor
Scrub/Sanitize



Vacuum 40 Diffuser

Indoor
Vacuum/Sanitize/Scent

Docking Stations

Charging Dock



Work Station

Power charging
Water Refill & Discharge

Strategy: Line Extension



Strategy: Brand Extension



Phantas

All-in-one cleaning robot
targeted at small-medium
commercial facilities



Delivery X1 Pro

Indoor
delivery robot

Technology



Algorithm

- Visual-LiDAR SLAM
- Environmental Perception
- Flexible Path Planning
- Smart Avoidance



Cloud Platform

- Statistics
- OTA Upgrade
- Remote Control
- Task Scheduling



Application

- All-embracing Cleaning Operations
- IoT Integration
- Docking Stations



Data

- Digital Management
- Predictive Maintenance
- Simulation

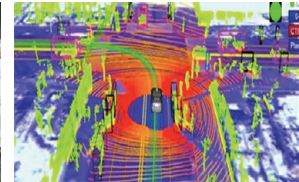
Easy to Use

Our technology allows the operator to operate the robot with minimal training. As a reliable co-worker, Gausium robots have all the features you would expect from an autonomous robot.

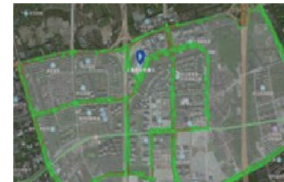
Gausium Visual-LiDAR SLAM



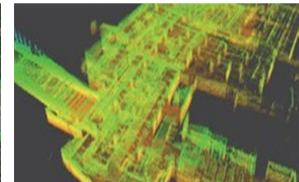
ENVIRONMENTAL PERCEPTION



DYNAMIC MAPPING



UNLIMITED MAPPING



3D MAPPING

Revolutionary SLAM and Perception

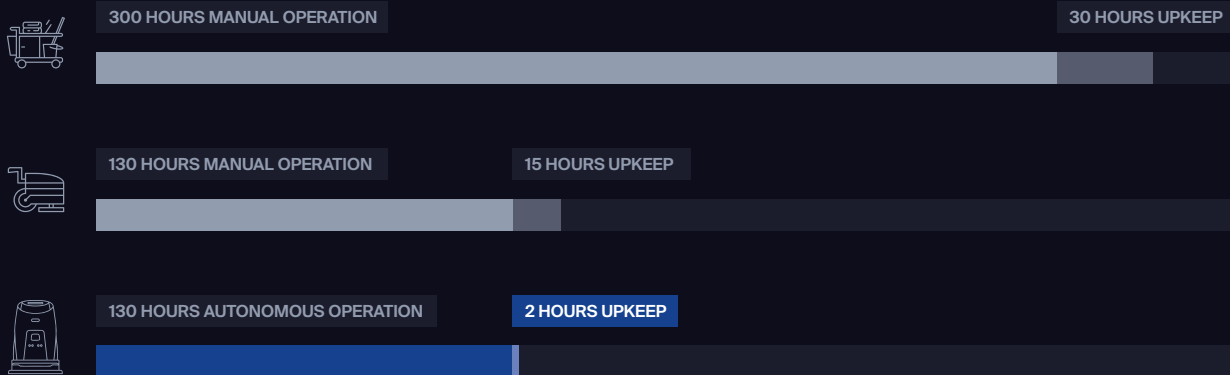
SLAM in the past mainly worked on mapping and positioning, but now Gausium utilizes Machine Vision to extract semantic information, upgrading data association from traditional pixel-level to object-character level. Semantic SLAM advances the applicability of SLAM technology in environment perception, navigation and path planning, enables robot to perceive the surroundings with significantly higher precision, smarter obstacle detection and avoidance capability in complex or dynamic environment.

Productivity



Gausium Robots vs Manual Cleaning

Gausium Robots Compared to Manual Cleaning & Manual Scrubber



Autonomous operation(no man-hours required)



Manual operation(man-hours required)operation(no man-hours required)



Upkeep (man-hours required)

Global Reach



Support for
**best uptime
and productivity**

200⁺ highly skilled technicians
trained and certified by Gausium

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



All-inclusive maintenance
and repairs

Global Cases



Transportation Hubs

Luton Airport Melbourne Airport Changi Airport
Hong Kong MTR Incheon International Airport
Shanghai Pudong Airport Helsinki Vantaa Airport

Logistics & Warehouses / Manufacturing

DHL Warehouse - Thailand Dilbosch - Spain
Nestle Factory - Poland Skoda manufacture - Czech
BMW Factory - Czech S.F. Express - China

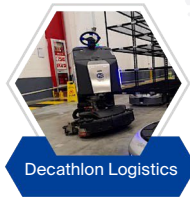


Hotels / Hospitals / Office Buildings

World Trade Center Amsterdam Allpay Building S-Space
Tencent Singapore JTC Office Building Rabin Medical Center
Thailand Saint Louis Hospital Singapore Queen Elizabeth Hospital

Retail & Shopping Centers

Carlingford Shopping Center - Australia Westfield - Australia
Lotte Mart - South Korea Paragon Shopping Center - Thailand
Carrefour - France Auchan - France
Shopping Center Sello - Finland



Education / Entertainment

National University of Singapore University of Toronto
Merina Bay Sands - Singapore Tottenham Hotspur Stadium - UK
Galaxy Casino - Macau Hommerson Casino - Netherlands

Global Cases



Scrubber 75 working at
Helsinki-Vantaa Airport, Finland



Vacuum 40 Diffuser
contributing to fighting against
COVID-19 in Hong Kong



Scrubber 50 Sprayer working
at Beijing Subway Line 11
(Shougang Park station) during
Beijing 2022 Olympic Winter
Games in China



Scrubber 50 Pro deployed at
World Trade Center in
Amsterdam-Zuid,
The Netherlands

Key Accounts & Partners

Media Coverage



Customer Testimonial

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)

The robot takes a lot of time off our work in the area, which we can put into more elaborate handicrafts. We have tested it intensively here and are sure that it will soon support us permanently in our day-to-day business.

— Georgios Sarantos

Dussmann Service (Germany)

Continuing to implement our innovative cleaning solutions with these robotic floor scrubbers and driers... There's a reason we're one of the UK's leading cleaning service providers.

— Mitie Cleaning Services (UK)

Our robots work 24 hours a day without compromising the efficiency. So, we provide a cleaner service with a unique quality and comfort level for our customers.

— Seris Konsalnet (Poland)

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.

— Nazlı Uzunlar UFS Facility Services (Turkey)



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