Industry Solution

Supermarket & Retail Industry
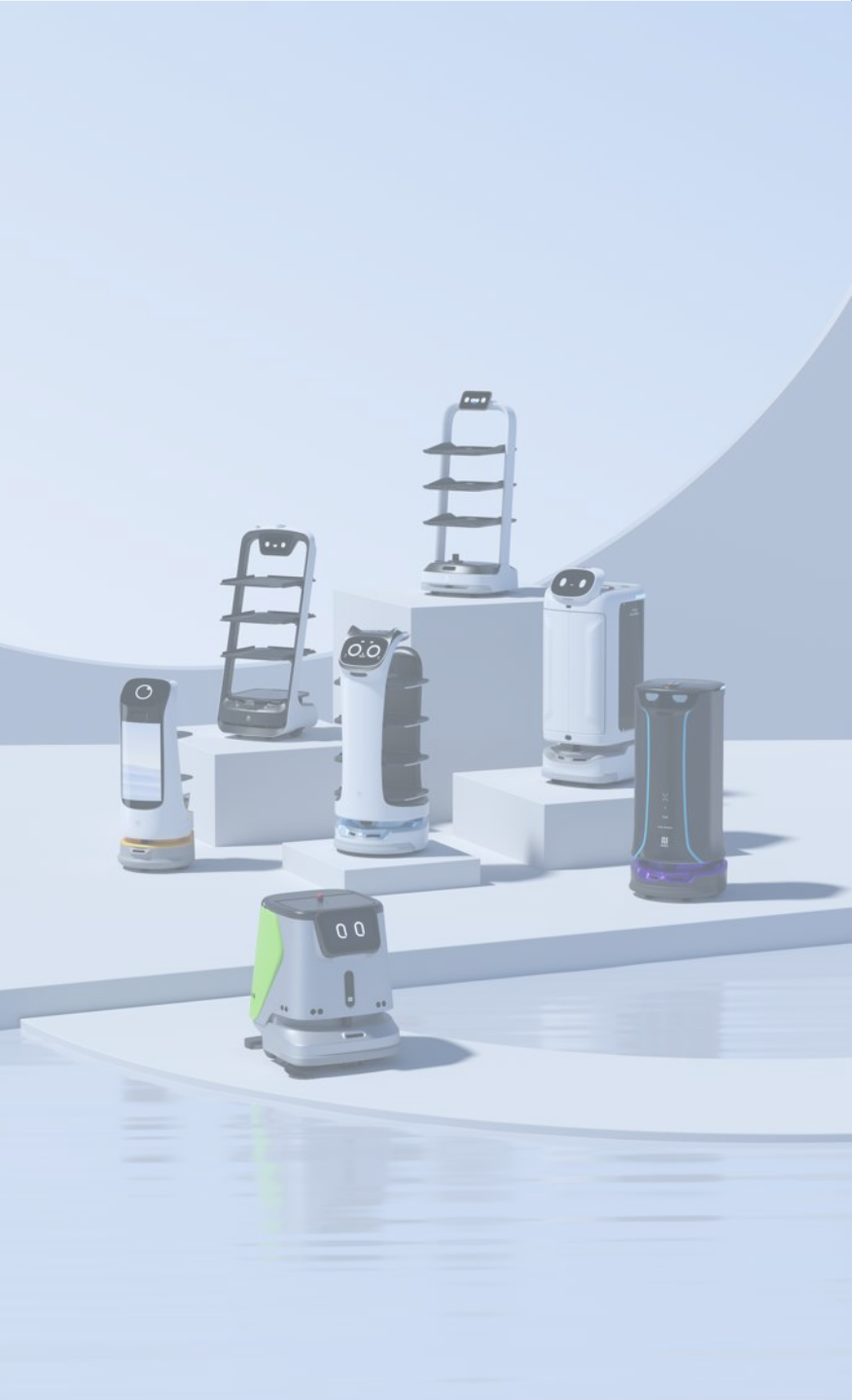
CONTENT

01
Scenario Solutions

Significance of Supermarket & Retail Marketing Upgrades on Smart Robots

Advantages

Three core competitiveness of supermarkets:

High-quality products, reasonable prices, good services experience

Consumption Behavior

Characteristics of consumption behavior:

- 70% of supermarket consumers don't have any plan, with random shoppers in the majority.
- The average stay time is 15 minutes at a supermarket and 15 seconds in a section.
- 75% of people make decisions in 5 seconds.
- If people don't see what they want, 40% of them will buy something else

Industry pain point

Business Pain Pozints:

High cost

- High labor, recruitment, and management costs of salespeople
- Miscellaneous costly expenses and complicated communication and settlement with supermarkets
- High costs of annual updates to advertising materials
- High advertising costs of dynamic videos in supermarkets

Limited marketing patterns

- Fixed display and limited promotion points
- Outdated marketing patterns that no longer attract consumers' attention
- Undynamic, limited, and inflexible advertising and publicity
- Untargeted static advertising that is unable to deliver the intended value

PUDU

2023

Pudu Robots Understanding of Retail Marketing Scenario

Core target of Smart Robot Marketing Solutions:

Efficiency

Deliver what customers want quickly and efficiently

Focus

Deliver exactly what you want to show to the customer

What it takes to be a robot for retail marketing?

1.Efficient & agile	2.Wide coverage	3.Precisely targeted	4.Diversified & flexible	5.Smart & easy
Quiczkly lead customers to desired locations	Spread marketing content to every corner	Deliver the right content to the right person, at the right place, and at the right time	More freedom of choice in functionality to fully meet customers' personalized demands	Make complex supermarket marketing management easy and fun

PUDU

Mobile Promotion Platform Solution

Bring promotions directly to customers' eyes

The robot can become a mobile promotional platform that travels through the entire store in accordance with the set working mode

Brand ambassador with changeable skins

More freedom of display with an open rack design

Creating festive atmosphere

Save Manpower
- Intelligent unmanned promotion:vslam and other technologies ensure accurate positioning and obstacle avoidance, no need for manual support
- continuous work for long hours, saving money, effort, and worry

Strong Promotion with Temperature
- Multiple interaction modes, allowing consumers to experience different consumption pleasures
- actively exposing products in front of consumers, improving purchase probability

Wide Coverage
- Compared to traditional fixed-point booth promotions, robot mobile promotion platforms can carry products to any location in the store
- expanding the exposure area of products from the booth to the entire store

Varied Skin
- Embodied as a brand ambassador, making brand influence more direct and lasting

Wide Coverage Advertising Solution

Moving screens Maximizes the advertising coverage

The robots will cruise the entire map range and continuously play video advertisements in cycle , delivering the business influence to every corner of the store

Vslam technology
well adapted to complex
environments

Back rack
for delivery paper promotion
material

32 " touch screen

In-store marketing with a large ad display

Doble screen
Top touch screen for UI

Delivery pallet
for sample exhibition

18.5" Large Ad Screen

Advertisement easy edition
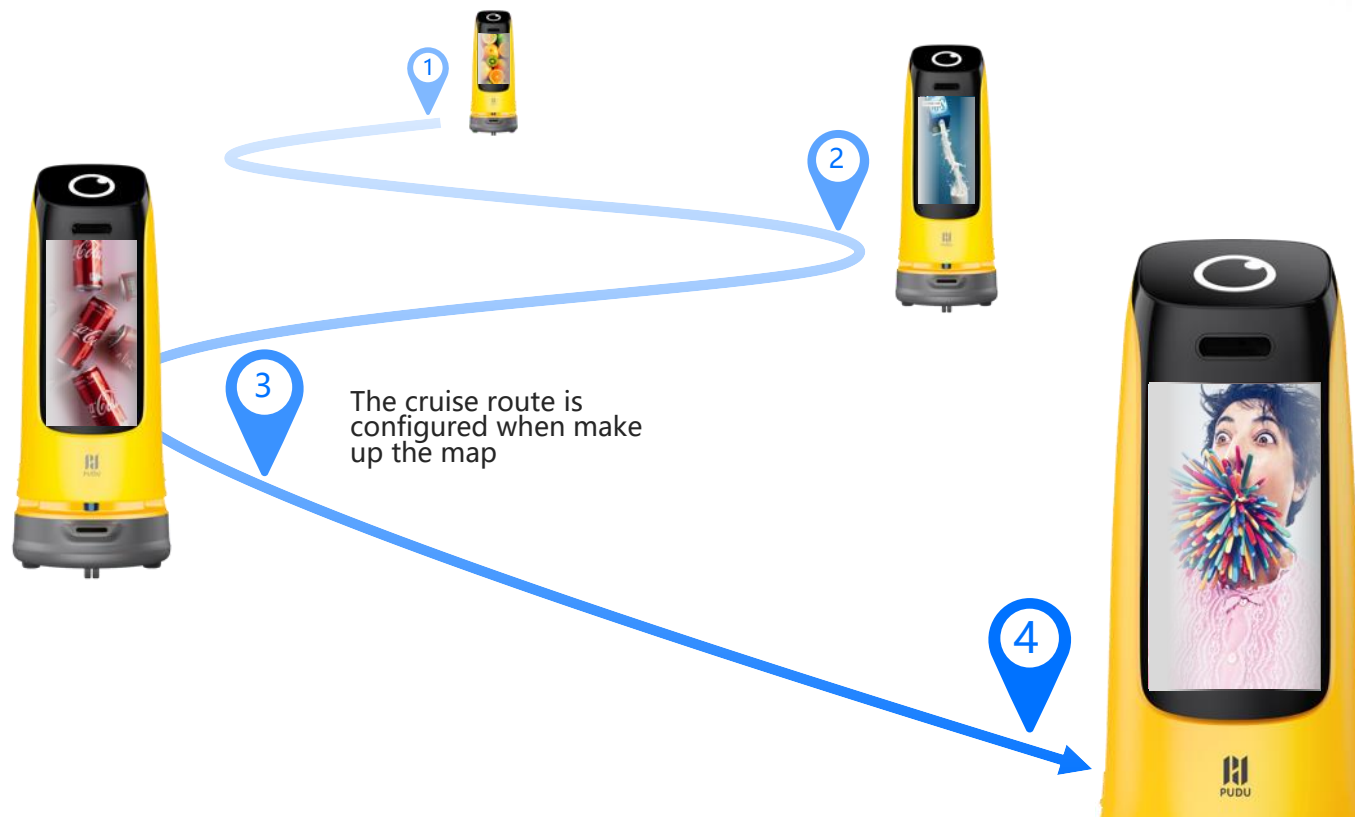
Cruise Precise Advertising Solution

Deliver exactly what you want to show to the customer

KettyBot can cruise along the preset route in the supermarket and display mobile ads, extending marketing reach to every corner Play designated advertisements at different points to make the brand more influential

The cruise route is configured when make up the map
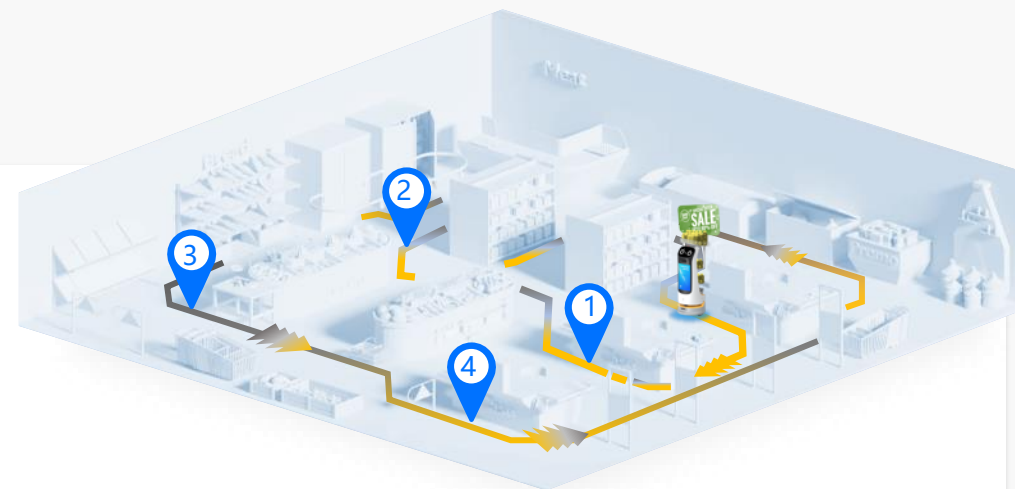
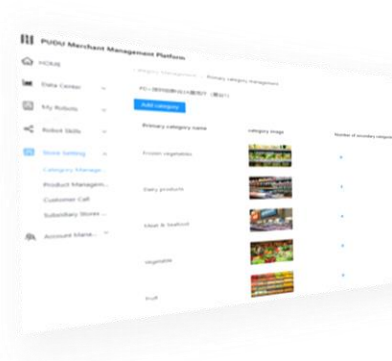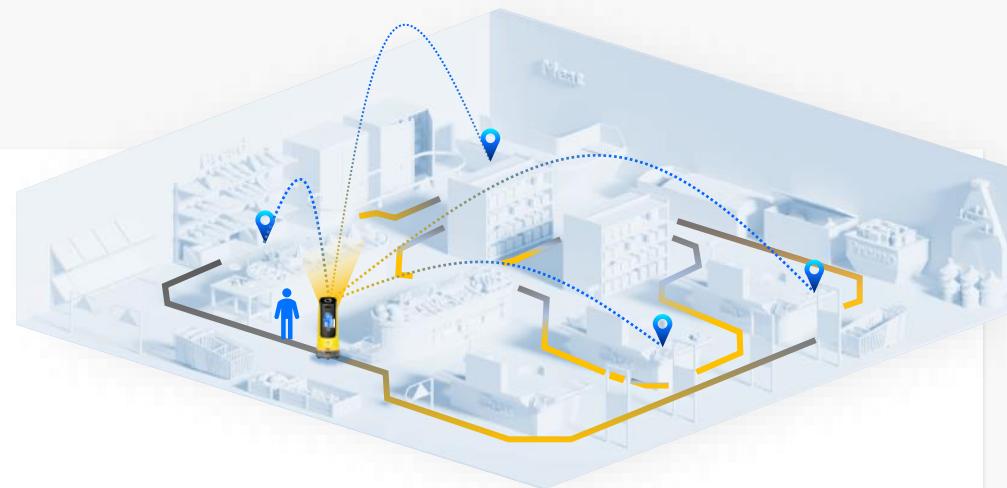Advertisement content can be configured on Pudu Merchant platform

Play designated advertisements at different points to make the brand more influential

Commodity Navigation Solution

Deliver what customers want quickly and efficiently

By searching words or clicking pictures, customers can easily get the information ,and may look for the items with the location they need, then KettyBot will guide them to pick up point

Click me for the information & navigation

6 custom grids with 10 functional links provide coupons, commodity lists, and video posters in case any time for customer to check information

Pudu Merchant platform Commodity catalog and list management tool to make the connection between SKU and location
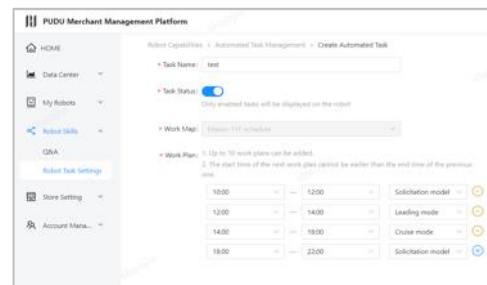
Time Schedule Solution

7* 24 hour uninterrupted work truly unmanned solution

Schedule robot tasks in advance. The robot will automatically switch operating modes according to marketing demands of different time periods in the operation of supermarkets, which further improves the robot's management efficiency.

Customer Attraction	Position Navigation		Cruise	Customer Attraction
10:00	12:00	14:00	18:00	22:00
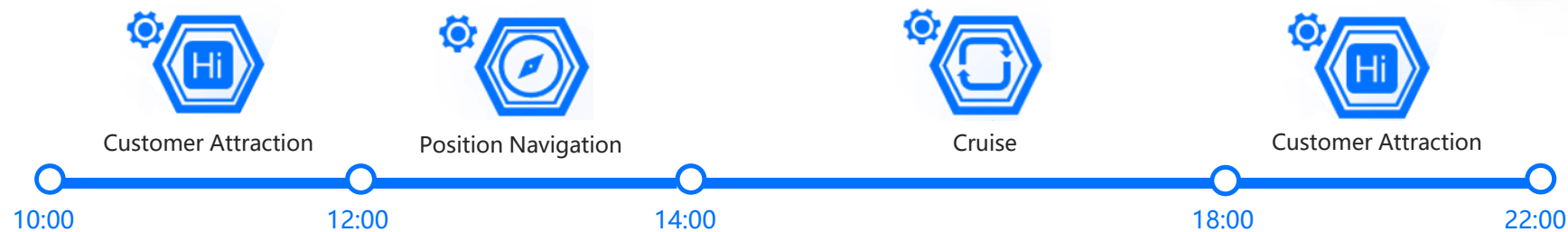
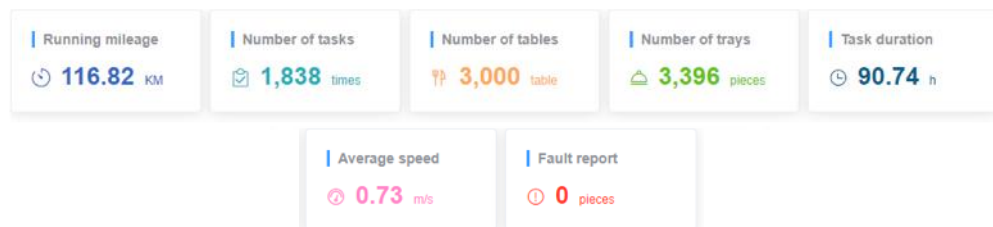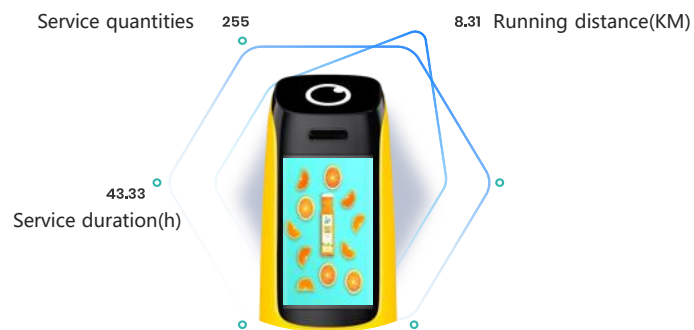With the automatic charging pile, the robot can work continuously for 7 * 24 hours

Robot Task Settings on Pudu Merchant platform

PUDU

2023

Operation Management Solution

PUDU Cloud

New PUDU MANAGMENT PLATFORM business cloud+robotics technology cloud

7x24 hours of uninterrupted uploading of business data, facilitating digital management. After the robot is connected to the IOT platform, it can achieve remote software upgrades, fault diagnosis and other services

Service quantities 255   8.31 Running distance(KM)

43.33
Service duration(h)

Running mileage	Number of tasks	Number of tables	Number of trays	Task duration
116.82 KM	1,838 times	3,000 table	3,396 pieces	90.74 h

Average speed	Fault report
0.73 m/s	0 pieces

PC: PUDU Merchant Management Platform

- Fully meets marketing requirements and facilitates business operations of supermarkets:
- Quick editing of personalized ads, music, and voice
- Commodity category management specially designed for supermarkets
- Hierarchical authorization management tailored for supermarket chains

Mobile phone App: Pudulink

- Marketing asset management
- Voice content management
- Anywhere and anytime

Accessories Solution

Abundant accessories , multiple choices

Types of accessories enable the robot more flexibility to perform every task in the best way possible.

Product display, drink sampling, and mobile sales Various optional accessories allow to offer a more powerful marketing effect.

Top tray - sample presentation

Tray flap - safer delivery

Sprinkle-proof cup holder
- stable bottled drinks

Sprinkle-proof cup holder
- stable bottled drinks

Configuration recommendation

Marketing Advertisement configuration recommendation

- Commodity Navigation Solution:
  1 set for KettyBot for each 800-1000m2

- Wide Coverage Advertising Solution:
  1 set for KettyBot or PuduBot2 for each 1500-2000m2

- Cruise Precise Advertising Solution :
  1 set for KettyBot for each 1000-1500m2

- Time Schedule Solution
  1 set for KettyBot for each 1000-1500m2,one set of battery charge station for each KettyBot

Delivery configuration recommendation

- Promotion Platform Solution:
  1 set robot for each 800-1000m2

- For brand promotion solution :
  1 set robot for one brand

Operation Data Analysis

	Mobile advertising screen robot	Traditional fixed advertising screen
Attractive ability	Make a profound impact through mobile+technology	Mainly graphic and lacking creativity, easy to forget
Easy Use	easy edition of Ads on merchant management platform	Manual replacement requires manual participation, which is time& labor consuming
Coverage	Supports mobility, with no fixed coverage limits	The general coverage area is within the range of 0-5m
Product cost	Only one-time purchase cost	Cost increases linearly with update frequency
Effective contact cost	1.11CNY/person	1.80CNY/person
Promotion commission	0	Typically around 2% of gross profit margin
Comprehensive operating costs	1000CNY /Mon	5000CNY /Mon

82 Number of human-robot interactions
per robot per day

2.85 Average daily running distance
2.85km per robot

1000 recognizes 550 people on a daily basis, and over **1000 people are covered** by weekend advertisements per robot

22375 Exposure area of mobile advertising is over 22375m2 per robot per day

PS :data analysis based on China market

PUDU

2023

Customer Value

A differentiated experience to attract more customers

KettyBot redefines customer experience with an eye-catching way to attract customers and a smart, thoughtful way to serve them

A novel approach for in-store marketing

KettyBot allows your marketing campaigns and special offers to reach more customers, delivering a higher conversion.

Manpower shortage is no longer a problem

Multiple delivery mode can well assist stores in completing tasks such as demo delivery , and delivering snacks, which will free up human workers from dull and duplicate tasks.

Robot-human collaboration to improve service and efficiency

Human workers collaborate with KettyBot in away that they can both do what they are best at. KettyBot is ready to assist and improve humankind working experience.

One robot for multiple needs

As a multitasker ,KettyBot can perform several tasks --marketing, delivering, guiding at the same time, assisting from front-end to back-end, meeting the propaganda and delivery needs of restaurants, cafes, bars, barbecue shops, hotels, hospital etc.

Unified management & IoT platform

Users can manage different models of Pudu robots simultaneously and analyze the operation of the robots through Pudu management platform.

PUDU

Requirement Analysis of Supermarket & Retail Cleaning intelligent Upgrades

Industry requirement

Hygiene & Safety
As a first-line region with direct consumer contaction,high cleaning quality and safety is always required

Environmental adaptation
Need to complete the cleaning work quickly with relatively high frequency to ensure the cleanliness all the time

High Frequency & Efficiency
Complex environment with large traffic volume, requiring more intelligence and flexibility

Pain points

Boring work
Operators tend to get tired after a long time

Inconsistent cleaning quality
Individual differences lead to different understanding of cleanliness

Mono-task
Can only perform a single task

High operating costs
Both labor and machine costs need to be considered

Short working hours
Can only clean continuously for 3-9 hours

Pudu Robots Understanding of Retail Cleaning Scenario

Cleaning Robot for Business Use

To expand the company's product line of commercial service robots in the cleaning industry and serve multiple cleaning scenarios, Pudu Robotics had created the new Pudu CC1, which is capable of scrubbing, sweeping, mopping and vacuuming, automatically recharging, automatically adding or draining water and digital cleaning

1.Good cleaning effect	2.Task Report Clearly visible	3.Multi-tasks conversion	4.Lower operating costs	5.Tirelessly
Capable of handling various complex clean environments	Quantitative Robot Cleaning Report	Able to achieve cleaning 4 cleaning modes	Only machine cost	Can clean continuously for 12-24 hours

Highlight of Pudu Cleaning Robots CC1

Multi-Machine Intelligent Scheduling
Systematic operation of robots in office buildings and residences
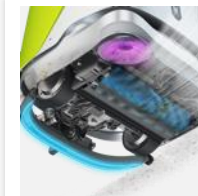
Versatile Cleaning
Modular Component Design Accessories such as side brush, roller brush, squeegee, and mopping sweeper can be loaded and unloaded within 1 minute)

Suit Various Floor Types
Suitable for both hard floors and soft carpets

5h Continuous Scrubbing
Extra-long run-time for cleaning

Digital Cleaning
Cleaning results are clearly visible in the automatically generated reports

Fit Corners Perfectly
Cleans every corner
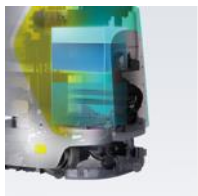
Auto Recharging & Automatic Water Addition & Drainage
No manual intervention worry-free and labor-saving

Intelligent Cleaning Solution

Intelligent & efficiency Robot Cleaning to set your hands free

According to different functional areas, ground materials, and cleaning SOP requirements to male the cleaning plan correlated with map areas,work modes, time schedule.
CC1 can completely executes the cleaning task independently as planned

Scrubbing	Vacuuming	Sweeping	Dust Mopping	Battery Charge
8:00-10:00	14:00-16:00	16:00-20:00	22:00-24:00	0:00-5:00
Commodity area	Dining area	Dining area	Warehouse area	workstations
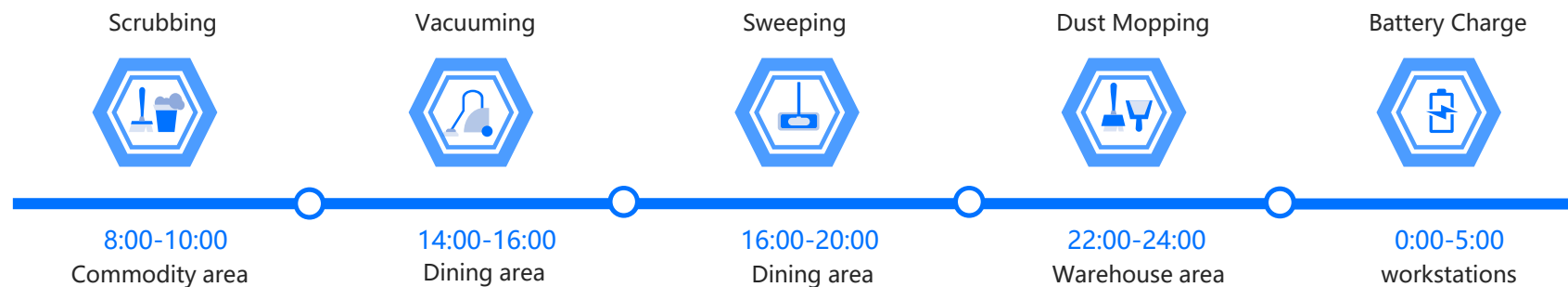
CC1 workstation

No manual intervention
worry-free and labor-saving

CC1 will automatically return to the workstation to charge the battery, fill and drain the water when it is necessary

Customer Value

1 set CC1 daily cleaning area = 8400m2 = 1.68 manual daily cleaning area

80%

CC1 can be applied to most application scenarios, **reducing the cleaning labor intensity by up to 80%,** and the remaining 20%, such as excessively narrow aisles and inconsistent floor conditions, require manual assistance

1000

Cleaning efficiency up to 700-1000 ㎡/h

It is recommended to configure 1 set of CC1 per 2000 ㎡

8

3.5h battery charging to full status

support :3-4h scrubbing，-5h vacuuming

maximum 8 hours sweeping

Simplify your cleaning processes

improve your workflow, pre-set program enables CC1 to start operating automatically and immediately with stable cleaning efficiency and higher quality of cleaning

Lower training and management costs

simple operation and user-friendly interface, set up and use in hours with minimal training

Reduce risks of workforce challenges

Avoid lack of human resource caused by employee absenteeism and turnover .Employees can focus on more complex responsibilities, ensuring more productivity.

Easy improvement for management

Digitization and visualization of cleaning effects with measurable records and reports, custodial inspections can be easily dealt with, and work status can be optimized.

PUDU

2023

Comprehensive Smart Robot Solution for Supermarkets & Retail

Enjoy yourself the interesting marketing solution design

Leave the complex technology insurance to Pudutech

Cruise advertising

Cruise customer attraction

Commodity navigation

Exhibition replenishment

Brand promotion

Mobil sales

Cleaning

Special offer

Positioning: High Precision

3D Perception& Obstacle Avoidance: Safe and Accurate

Independent Suspension: Flexible & Stable

PUDU Scheduler: Large-scale Collaboration

Cleaning Chassis: Highly Modular Design

Interaction & Design：Easy-control, Eye-catching

Pudu Supermarket & Retail Industry ECO

Establish the supermarket & retail industry ECO with Pudu robot as the bridge

- Make the supermarket operation more competitive, more efficient in management and more profitable channels
- Make the brand enterprise more influential, market promotion with more innovation
- Let consumers get better experience, higher efficiency and more intelligent services

————The introduction of more roles makes the marketing ECO of Pudu Robot more diversified and each participant gains more

Brand Enterprise

Third party APP

Supermarket

Digital management	Merchant management platform	Pudulink	Pudutech cloud	Pudu OS
Application layer	Customer attraction	Commodity navigation	Mobil advertising	
Data layer	Robot working status	Target management	Operation record	
network layer	WiFi		LoRa	Bluetooth / NFC / RFID
Equipment layer			Gate control / Elevator control / door control / IOT Equipment / 4G watch	
Basic technology	PUDU SLAM	PUDU SCHEDULER	PUDU MIR	

New Media

Consumer

02

Successful Cases

The New Star is Born

Pudu Robotics had successfully built up its partnership with Carrefour since 2022, which deployed BellaBot units, Pudu's smart delivery robot, at two of its retail stores in Warsaw, Poland at the frist beginning.

Because of the excellent performance ,it became popular rapidly , 20+ units of Bellabot had deployed in different Carrefour retail stores all over the country ,and many more is on planning …

With the new name : KERFUS

Bellabot converted to a Carrefour New Star!

Flexible Business Model

Rent Payment

Promotion Services

Operation Management

Equipment Purchase

Technical Support
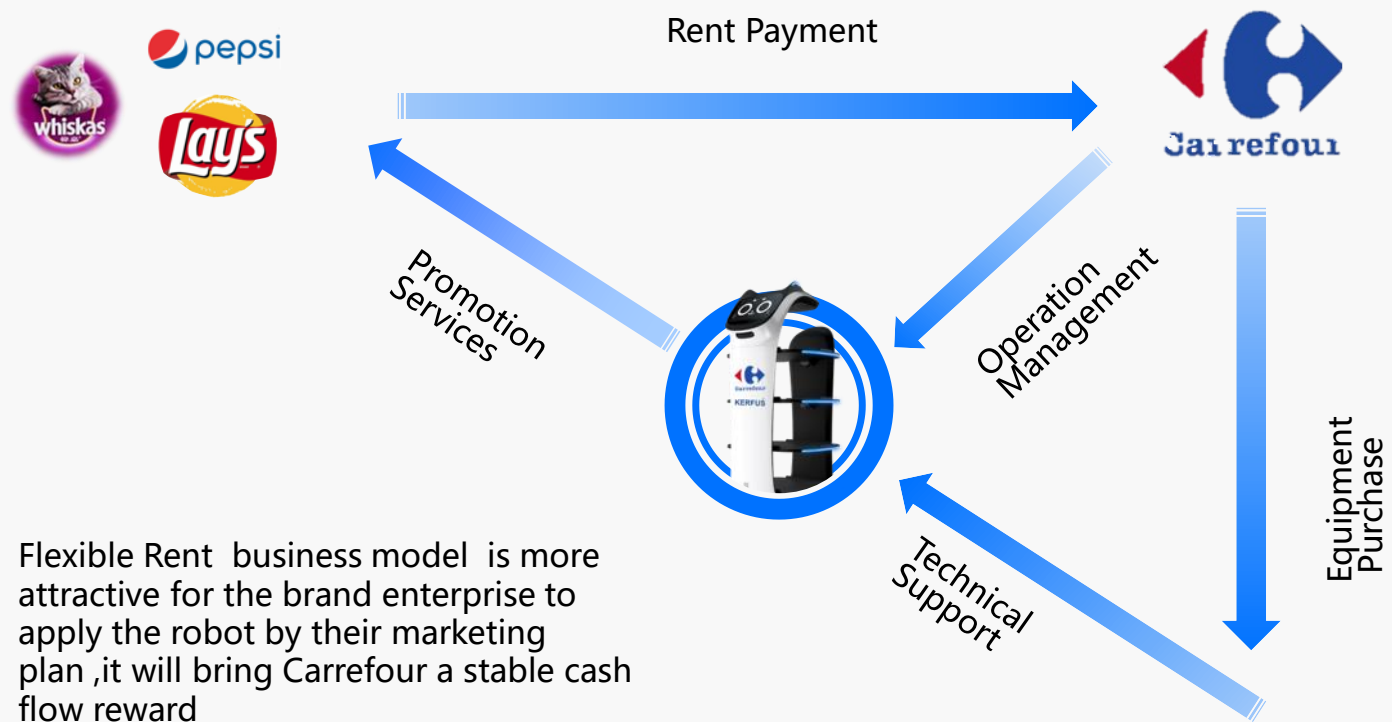
Flexible Rent business model is more attractive for the brand enterprise to apply the robot by their marketing plan ,it will bring Carrefour a stable cash flow reward

Media Exposure

Customer Introduction · Customer Feedback

Second Lighthouse Store in Europe

NO.1
consumer electronics retailer

1,000+
stores in Europe

2	**<2m**	**30+**
Floors	Passage	Stuffs

30+	**5300+**
Settled brand	Square （㎡）

Scheme High Light · Man-Robot Labor-division Cooperation

Staff care

- 7*24h continue working of robots make waiters' job easier ;
- Reduce staffs worklord during peak hours .

Cooperation division of labor

- Robots do fixed & repetitive works that giving staffs more time to take care of customers;
- staffs communicate with customer, kitty broadcast ads & navigation ,Everyone's characteristic makes the best use of it.

Scheme Value · Data Analyze

To comprehensively address issues such as infection and soaring labor costs

Human service

1 product	50% of the time	Working 8h	905.2$/month	2000 people
per man day	is spent on navigation	per day	Additional hourly wage increases	per day

VS

Promotion	Service	Navigation	Costs	Passenger flow volume

Human & Robot service
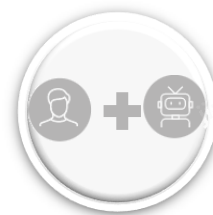
No limit	80% of the time	Working 7*24h	275.25$	2500 people
per man day	is spent on communication	per day	Robot monthly cost	per day
			629.95$	
			Cost saved	

PUDU

Successful cases

KettyBot @ GPA, Brazil

KettyBot @ Walmart, Chile

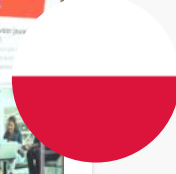KettyBot @ CMART, Malaysia

KettyBot @ Miles Hypermarket, Jordan

Successful cases

KettyBot @ Mengniu, China

KettyBot @ Miles Hypermarket, Jordan

KettyBot @ Media Market,Poland

KettyBot @ Tabris, Russia

PUDU

2023

Successful cases

BellaBot @ Carrefour, Saudi Arabia

BellaBot @ Carrefour, Jordan

BellaBot @ Gourmet Market, Thailand

BellaBot @ Carrefour, Taiwan

https://drive.google.com/drive/folders/1iCO2Jj3KQL46x9f4KyTKO4dwfFD8Kgu7?usp=share_link

PUDU

2023

Successful cases
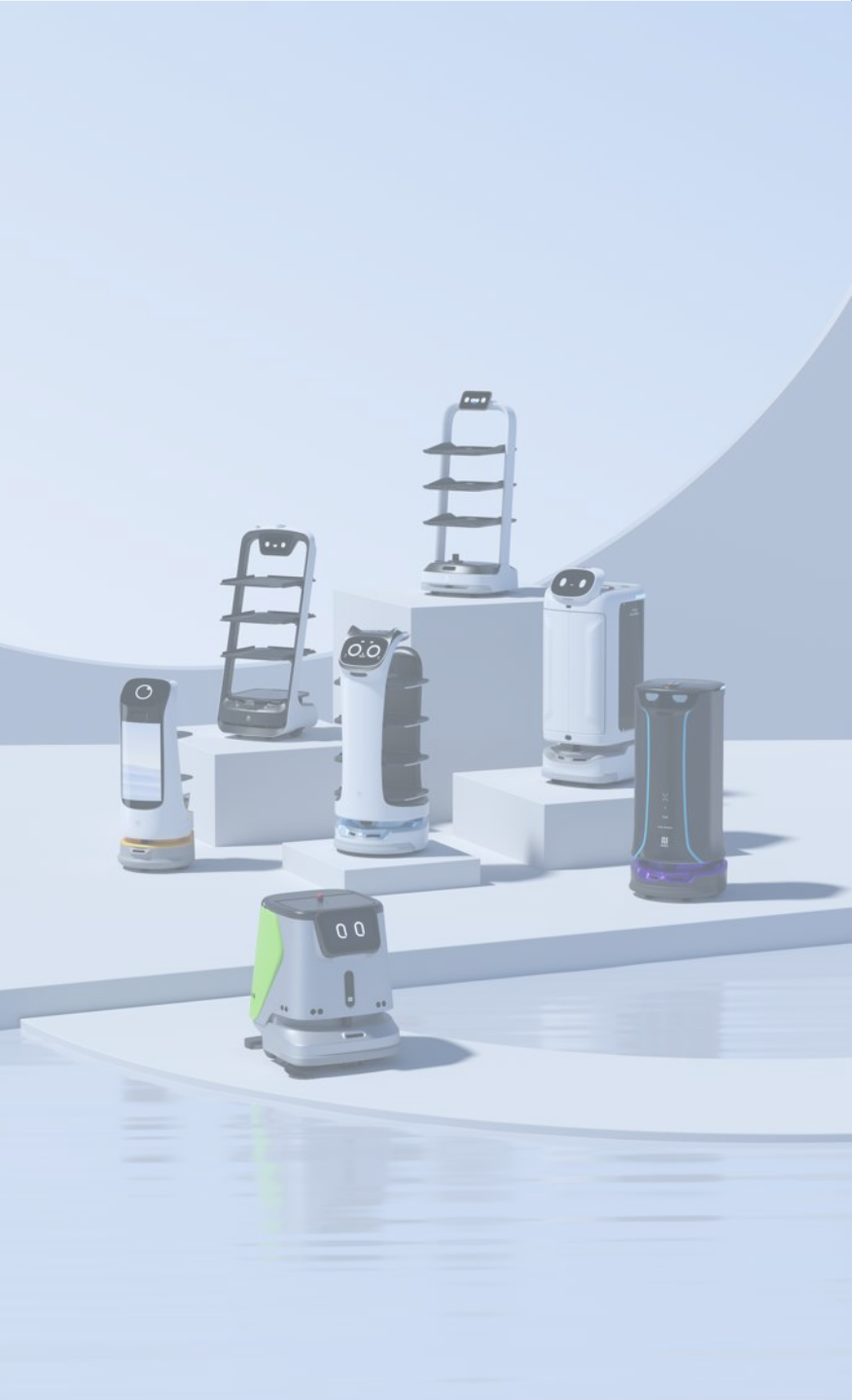

PuduBot @ Homeplus, South Korea

KettyBot @ The Cocoa Trees, Singapore
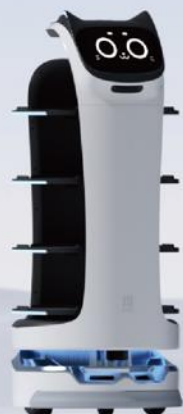
PUDU

2023

Successful cases

Cleaning Robot

03

Product Family Matrix

Creating truly useful robot to improve human productivity and quality of life

PUDU

Product Family

Delivery Robots

Bellabot	Pudubot 2	Pudubot	Kettybot
Swiftbot	Holabot	Flashbot	

Cleaning Robots

CC1
SH1

IOT Solutions

Pager

Autodoor

Elevator

4G/lora Watch

Table Tracker

Bluetooth Speaker

...

Accessories Solutions

Cup holder	Food cover
Tray	Display shelf
Self-charging station	...

Pudu Cloud

PUDU Merchant Management Platform	PuduLink App	PUDU Cloud Platform

Technology

PUDU OS	Positioning and navigation algorithm	Perceptual obstacle avoidance algorithm	Motion control algorithm
Multi-machine scheduling algorithm	AI interactive algorithm	Cloud platform algorithm	Simulation testing platform

1-N Customized Solutions

Voice	Emoji
Skin	SDK
...	

PUDU

Delivery Robots

BellaBot

Novelty、cute、fully-perceptive food delivery robot

GOOD DESIGN AWARD 2022

Contactless delivery	Multiple located	Tray Sensor
Flexibility	Personalized Presentation	Multi-interaction
Changeable battery	Safety	Service

PuduBot2

Latest、high-performance、extendable、adaptable, intelligent delivery robot for multiple scenarios

| Delivery mode | Shipping mode | Cruise mode |
| Direct mode | Dish-recycle mode | Birthday mode |

KettyBot

With Ad screen, serving as both a delivery and receptionist

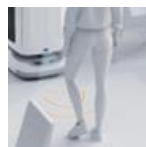| Minimum passability | AD (18.5") | Reception |
| Navigation | Voice interaction | Work plan |
| Delivery | Self-charging | Feature settings |

Delivery Robots

SwiftBot

Delivery Robot for Smooth Peak Hour Operations, Redefining Social Interaction between Humans and Robots

iF DESIGN AWARD 2023

Avoidance Reminder
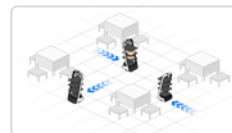
Operating Status Projection

Atmosphere Projection

Foot-activated Door Projection

PuduBot

reddot award best of the best

Classic Intelligent Food Delivery Robot, Pioneering the Industry of Trackless Delivery Robots

Scheduling

3D avoidance

Independent Suspension

Ultra-long Endurance

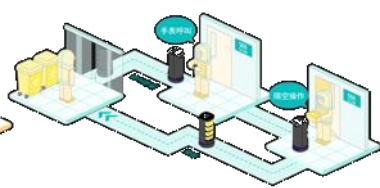Optimal Path Planning

Sun-resistant

HolaBot

First Delivery Robot with Remote Call Notification Function for Multiple Delivery Scenarios

Dish-recycle

medical waste recycle

FlashBot

Full-Scenario Delivery for Hotels, Offices, Apartments, and Residential Buildings

APP call

Independent cabin door

Customized disinfection time

Take elevator

Auto-door

Arrival notification

PUDU

2023

Cleaning Robots

PUDU CC1

All-Purpose Cleaning Monster: Four-in-One Scrubbing, Sweeping, Mopping, Vacuuming

A machine that integrates sweeping, mopping, vacuuming, and dusting, easily meeting all cleaning needs with just one device

dusting   mopping   sweeping   vacuuming
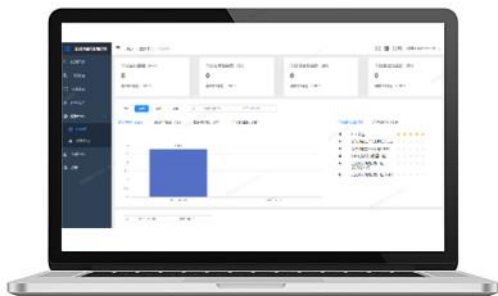
PUDU SH1

Professional Mini Digital Floor Scrubber: A More Professional and Thorough Cleaning Solution

The compact and flexible design allows for easy transition between tasks on multiple floors and surfaces

PUDU

2023

PUDU Cloud

PUDU Cloud Platform

For distributors

Management platform for managing business opportunities, clues, sub-distributors, merchant customers, and selling robots.

PC – Web

1) Singapore Group： https://css.pudutech.com
2) Germany Group： https://csg.pudutech.com
3) China Group： https://cs-internal.pudutech.com

PUDU Merchant Management Platform

For end-store

A platform for robot configuration, remotely controlling, managing stores and viewing robot operation data.

PC – Web

1) Singapore Group： https://businesss.pudutech.com
2) Germany Group： https://businessg.pudutech.com
3) China Group： https://business.pudutech.com

PuduLink App【iOS】　　　PuduLink App【Android】

PUDU

2023

IOT Solutions

Pager
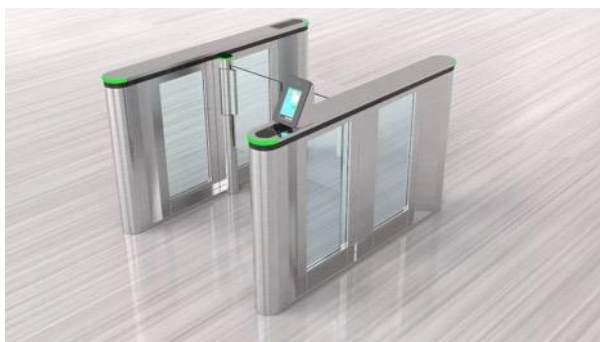

4G/Lora Watch

Elevator

Auto-door

Bluetooth Speaker

Table Tracker

Accessories Solutions

Ketty's Accessories

Enclosed protective cover

Overhead display shelf

Rear housing unit

Self-charging station

Retractable tray border

3-Axis spill-proof cup holder

Fixed beverage holder

Enclosed Protective Cover

Bearing tray（Bella）

Cup holder（Bella）

1-N Customized Solutions

PUDU OS

Robot SDK

Skin

Customized Emoji

Customized Voice

Customized Software

Combined with 3rd party hardware

More options to come soon

04

PUDU Introduction

PUDU Introduction

Pudu Robotics

In 2016, Pudu Technology was founded in Shenzhen as a national high-tech enterprise that specializes in research, design, production, and sales of commercial service robots. After seven years of development, Pudu Technology has established hundreds of service points worldwide, with business in over 60 countries and regions, delivering more than 56,000 units. It has become a leader in the field of commercial service robots globally. In the age of intelligence, Pudu Technology will continue to uphold the "inventor's spirit" and solidify its technology, refine its products, create truly useful robot products, and enhance the efficiency of human production and life.

* Relevant statistics as of December 2022

Mission

Use robots to improve the efficiency of human production and living

Vision

To become the world's strongest commercial service robot company

BE INVENTIVE

BE CUSTOMER CENTRIC

THINGKING IN THE LIGHT OF FIRST PRINCIPLES

BE ENTERPRISING & ACCOUNTABLE

PURSUING FOR THE ULTIMATE

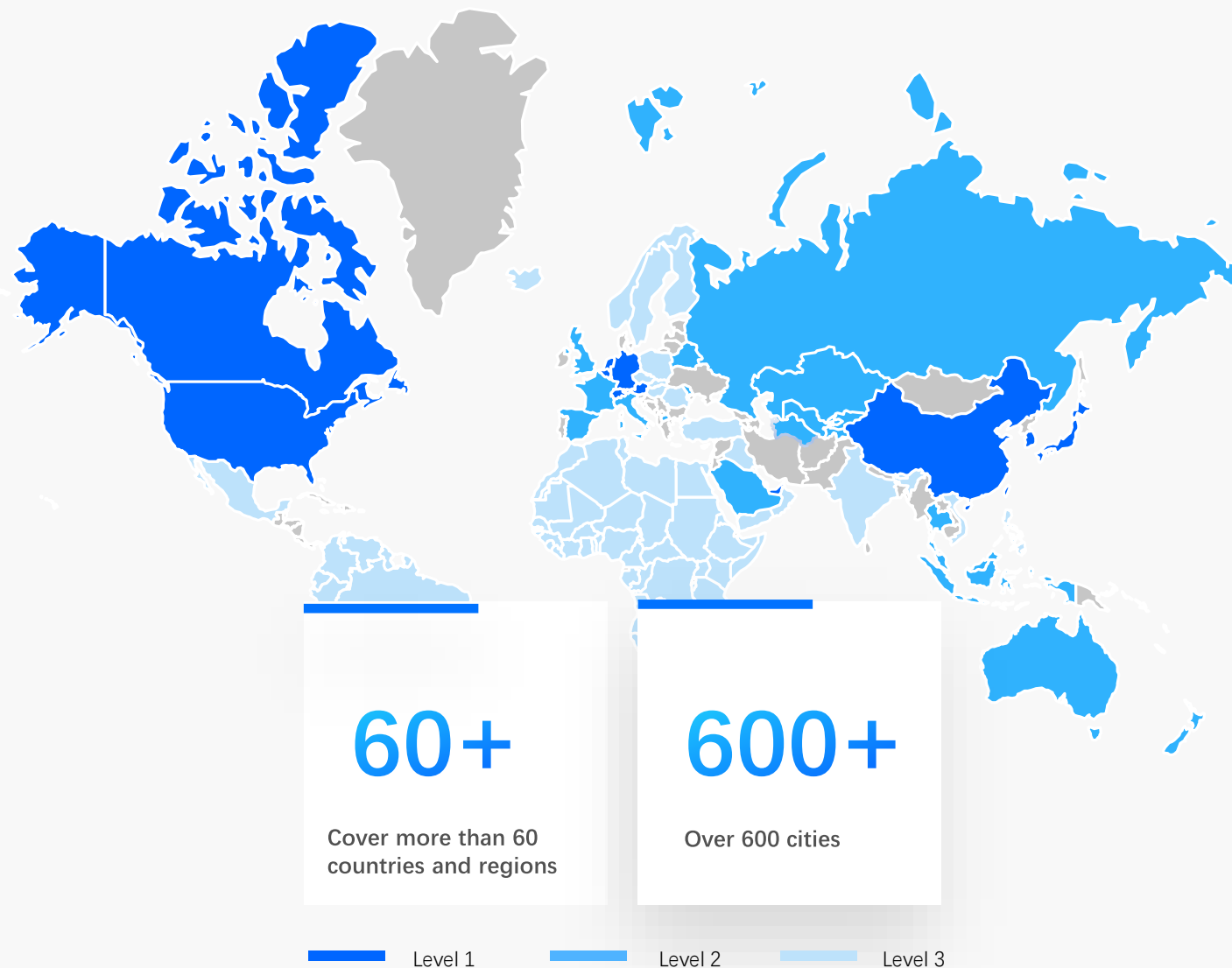MOVING FAST

BE OPEN-UP

EMBRACING CHANGE

Scale Advantage

Globalization

Pudu Robotics has established a business presence in North America, Europe, East Asia, Asia-Pacific, the Middle East and Latin America. The products have been exported to more than 60 countries and regions around the world, covering more than 600* cities worldwide. Pudu Robotics has established a trustworthy international brand image and become one of the representative enterprises of China's "intelligent" manufacturing abroad.

* Relevant statistics as of December 2022

60+
Cover more than 60 countries and regions

600+
Over 600 cities

Level 1　　　Level 2　　　Level 3

Scale Advantage

The world largest commercial service robot manufacturer

Total Sales Quantity

56,000+

56,000+ * units have been sold worldwide

Market Share in All Scenarios

TOP1

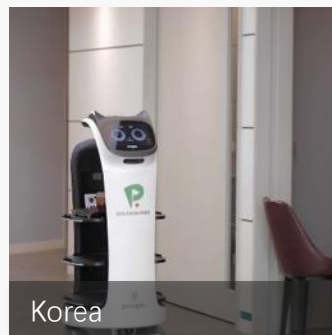The market share in the full range of commercial service robots is No.1

Market Share of the Overseas Catering Industry

>80%

Overseas catering industry's market share > 80%
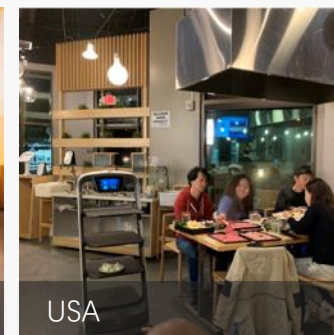
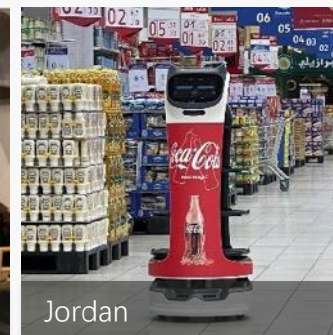* Relevant statistics as of December 2022
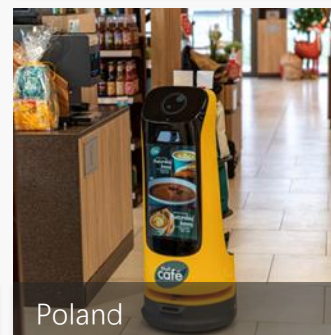

Korea

Australia

USA

Jordan

Switzerland

Poland

China-Shenzhen

China-Xiamen

Malaysia

Japan
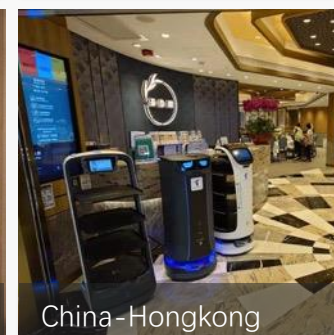
China-Hongkong

China-Taiwan

PUDU

2023
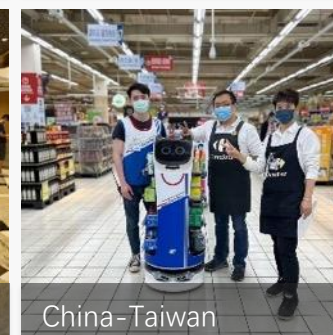
Horner and Certification

Certificate & Patent

All of existing products have passed the multi-certification that match the targeting markets.

Pudu Robotics has applied for about 1300* core patents, of which invention patents are over 60%, involving positioning, navigation, motion control, human-computer interaction, robotics arm, servo motor, computer vision, cloud platform and other technical fields.

* Relevant statistics as of December 2022

Operation Advantage

Global Multi-level Sales System

China：Multi-level Coverage

KA

Serve Top 100 clients in various fields

Distributor

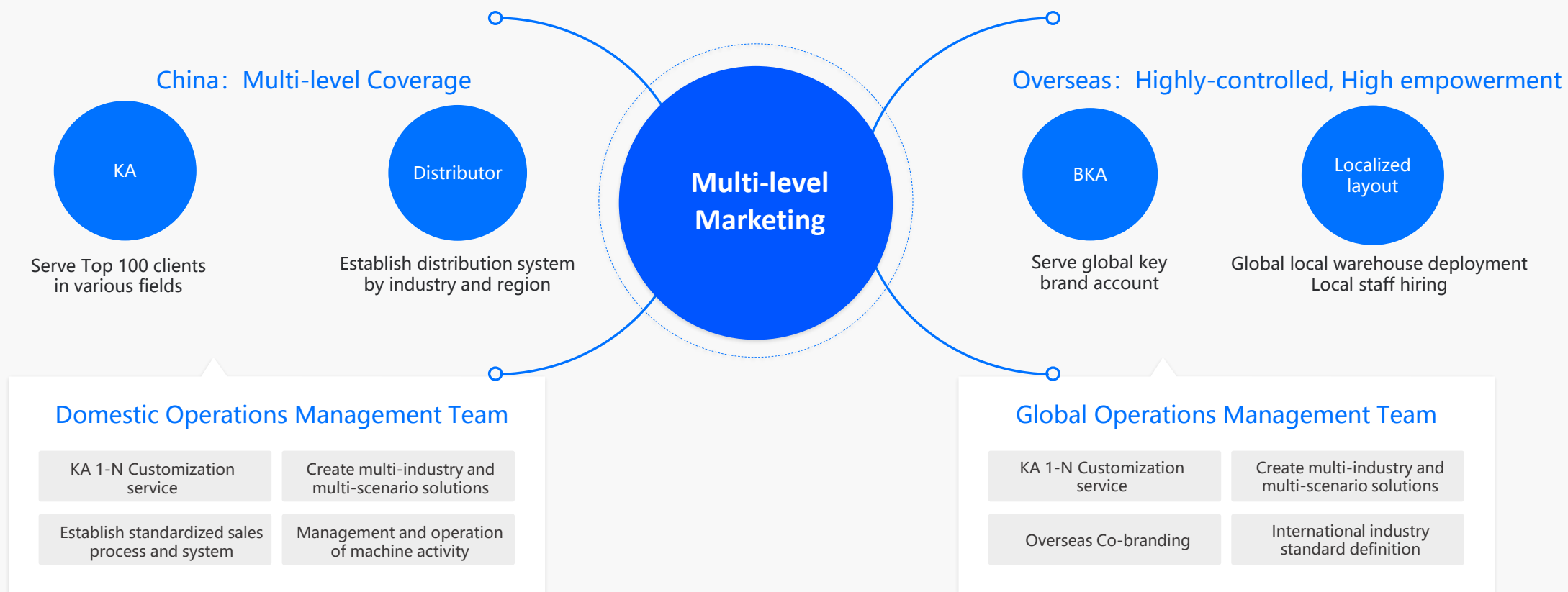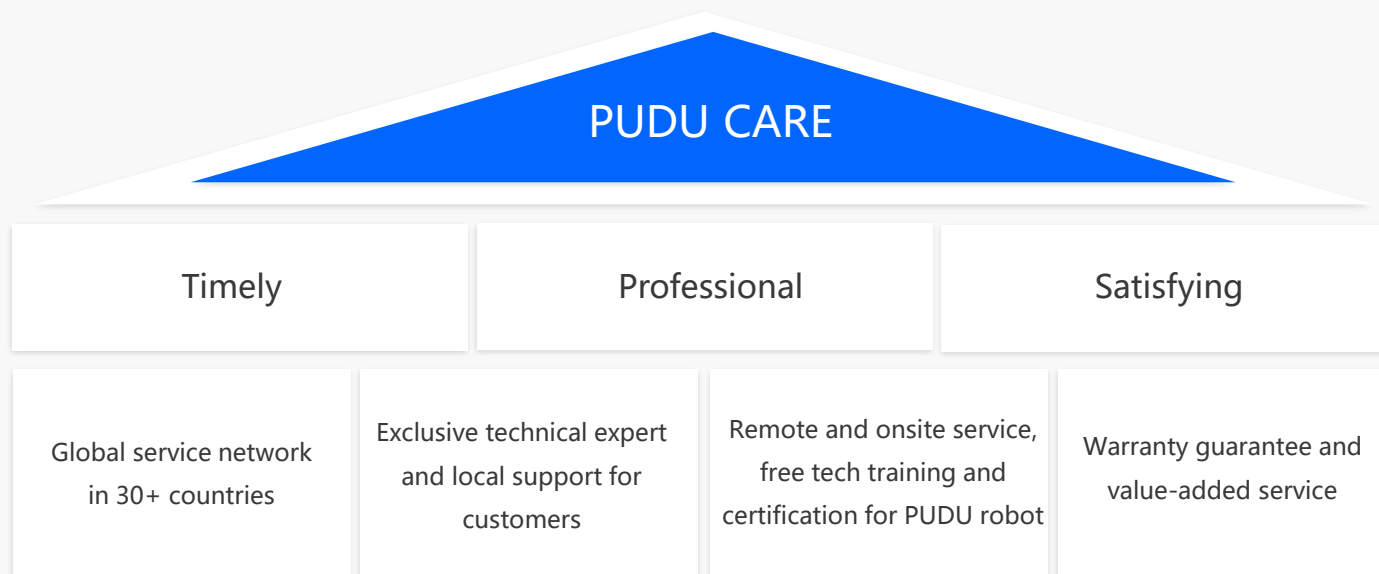Establish distribution system by industry and region

Multi-level Marketing

Overseas：Highly-controlled, High empowerment

BKA

Serve global key brand account

Localized layout

Global local warehouse deployment Local staff hiring

Domestic Operations Management Team

KA 1-N Customization service	Create multi-industry and multi-scenario solutions
Establish standardized sales process and system	Management and operation of machine activity

Global Operations Management Team

KA 1-N Customization service	Create multi-industry and multi-scenario solutions
Overseas Co-branding	International industry standard definition

PUDU

Operation Advantage

Offline Service:

- **1 Year Free Warranty**

- **7 × 24 Hours Service**

- **Local Service & Support**

PUDU CARE

Timely	Professional	Satisfying

Global service network in 30+ countries	Exclusive technical expert and local support for customers	Remote and onsite service, free tech training and certification for PUDU robot	Warranty guarantee and value-added service

Pudu Robotics has a thorough after-sales support system and humanized after-sales policy as well, whenever it is needed, we are going all out to offer service and reach your satisfaction.

PUDU

Thank you!

📞 +86 755-86952935

✉ Global_sales@pudutech.com

📍 5/F, Building 1A, Shenzhen International Inno Valley Phase 1, Dashi 1st
Road, Nanshan District, Shenzhen, China 518300