

Scenario Solution

Retail Electronic Market

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PUDU



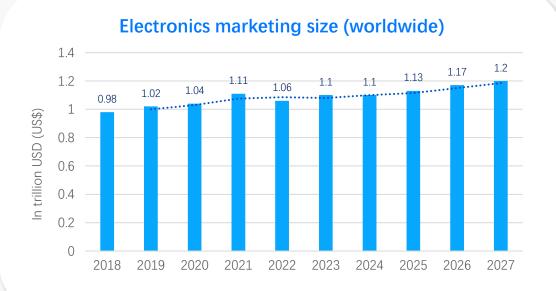
01 Scenario Solutions

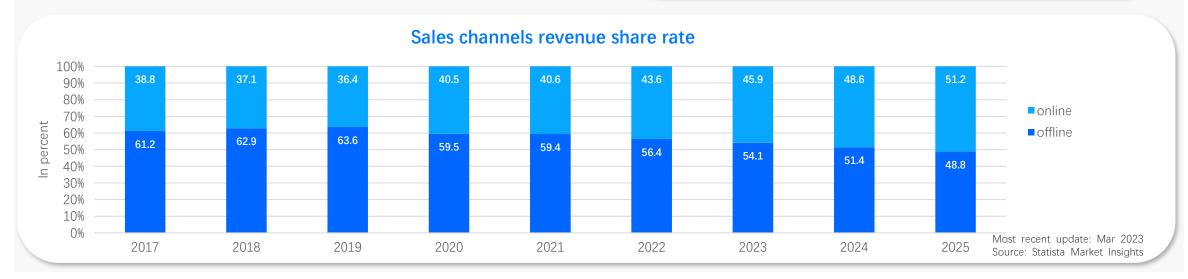
Growing market size

Offline revenue rate has decreased about 10% (53.62 Billion) in the past 5 years.

Revenue in the Consumer Electronics market amounts to US\$1,100.00bn in 2023. The market is expected to grow annually by 2.32% (CAGR 2023-2028).

In the consumer electronics market, the revenue share rate of offline will decreased to 54.1% in 2023 compared with 61.2% in 2017.







Current situation of Retail electronic market

Sales and profits shrink

- Affected by the pandemic deeply & Onslaught by e-commerce Some chains have to close stores because consumers go out to shop less.
- Serious homogeneity of competing chains Electronic chains have same products & similar sales mode, so price and service differentiation decided chains profits.
- Decline in customer satisfaction

Low service quality & the service level is not even which leads to the decline of the intention to purchase the second time.





















Requirements analysis

Building "Technology" image, Upgrading consumption mode

Electronics stores have faced negative impact in the context of Covid-19 as a result of long store closures and continue to face significant challenges. such as: the rise of e-commerce, the saturation of the smartphone market, multiple brands competition, the rise of the second-hand market and the trend of consumption upgrading.

Improve the influence of offline stores

- Brand influence
- Brand image
- Easy to remember

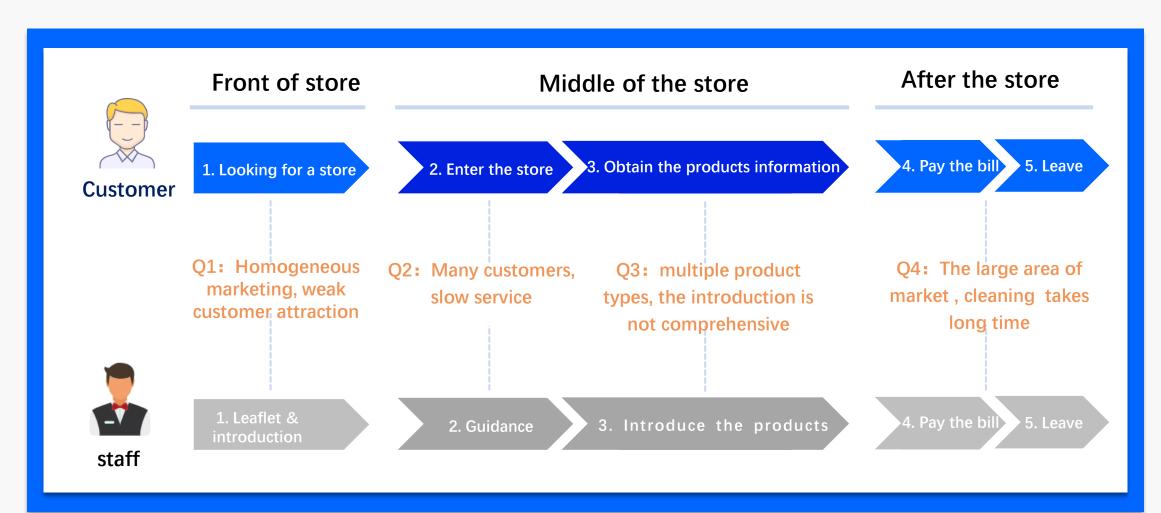
Enhance competitiveness

- Reduce task cost
- More attractive
- More efficiency

Reduce the employee turnover

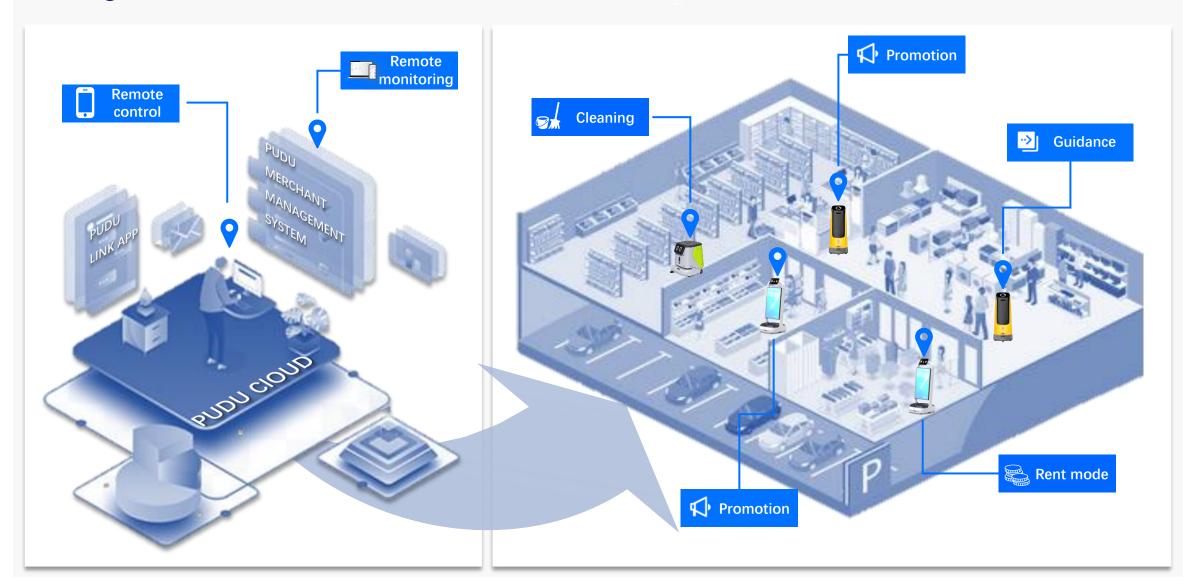
- Take care of mental health
- Reduce the workload during peak time

Experience Process





Intelligent end-to-end Business Process





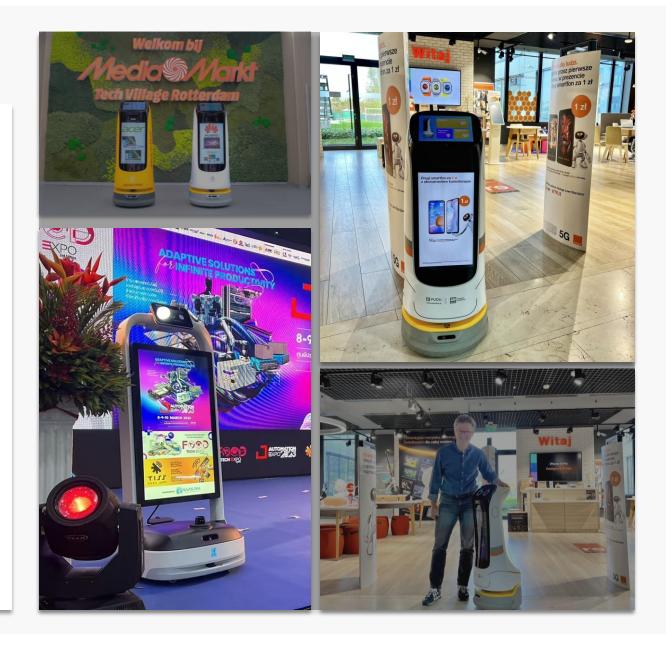
Front of store: Promotion

Brand new store marketing

Large mobile advertising screens provide stores with a wider range,

more high-frequency,
more eye-catching,
more accurate marketing,

so that the store's brand, preferential activities, specialty goods and other products touch more customers, activity conversion rate is further improved.



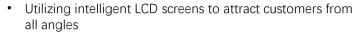
Front of store: Promotion

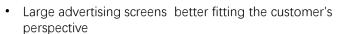
Enhancing Consumer Experience Differentiation and Promoting Customer Flow Conversion Quickly

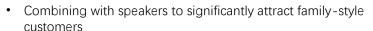
With more eye-catching and novel ways of attracting customers, smarter and more thoughtful advertisement, and more convenient product access, customers can enjoy a completely new store experience, which quickly enhances the store's differentiation and competitiveness, and leads to faster customer flow conversion.

Ketty 18.5" Ads screen, variety promotion

Promotion more accuracy







- Supporting multiple scenarios, allowing for customizable media size and content
- Supporting various types of media, such as audio, video, images, and links

Weight	38KG
Charging time	4.5H (support self-charging)
Battery life	> 8H
Speed	0.5-1.2m/s

PUDU2 32" Capacitive touch advertising screen

The interaction is diversified



- Seamlessly integrated mobile robots with advertising screens
- Display a variety of videos and showcase promotional content in real time.
- Indoor mobile advertising machine can bring message directly to target audience
- Product promotion, brand promotion, and marketing display, easily achieve marketing objectives

39KG (PUDU2) +13KG (AD Screen)		
8H		
1920*1080		
Via robot charging port		



Front of store: Mobility advertising value

	Mobile advertising screen robot	Traditional fixed advertising screen	82	Number of human- robot interactions per robot per day
Attractive ability	Make a profound impact through mobile+technology	Mainly graphic and lacking creativity, easy to forget	OL.	
Easy Use	easy edition of Ads on merchant management platform	Manual replacement requires manual participation, which is time& labor consuming	2.85	Average daily running distance 2.85km per robot
Coverage	Supports mobility, with no fixed coverage limits	The general coverage area is within the range of 0-5m	2.03	
Product cost	Only one-time purchase cost	Cost increases linearly with update frequency	1000	recognizes 550 people on a daily basis, and over 1000 people are covered by weekend advertisements per robot
Effective contact cost	1.11CNY/person	1.80CNY/person	1000	
Promotion commission	0	Typically around 2% of gross profit margin	22375	Exposure area of mobile advertising is over 22375m2 per robot per day
Comprehensive operating costs	1000CNY /Mon	5000CNY /Mon	22313	

PS :data analysis based on China market



Middle of store : Guide to purpose store

Know what you want → Guide to wherever you want, one-stop precision shopping





Quickly & Efficiently

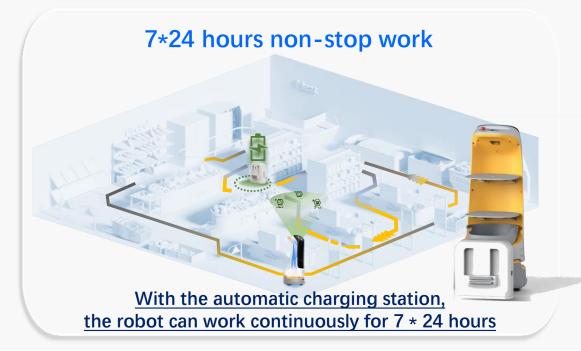
Solve traditional time issue for customer Improve customers shopping in-store experience

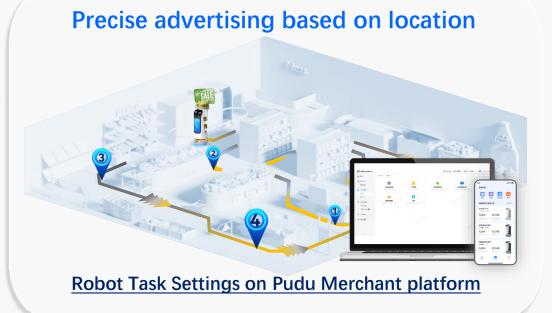
By searching words or clicking pictures, customers can easily get the information ,and may look for the items with the location they need, then KettyBot will guide them to wherever they want.

Middle of store: 7*24 hours time schedule Precise advertising

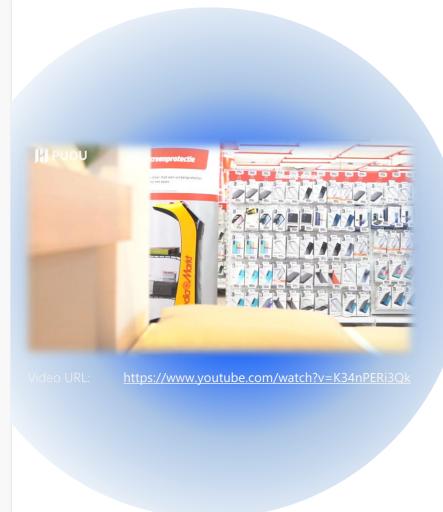


The robot will automatically switch operating modes & display mobile ads according to demands of different time periods and position in the operation of malls, which extending marketing reach to every corner Play designated advertisements at different points to make the brand more influential .





Middle of store: Diversified robot skin, Suitable for all modes



Abundant accessories, multiple choices

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



Top tray - sample presentation



Tray flap - safer delivery



Rear housing unit

After the store: High cleaning quality environment more charming

Clean stores improved customer flow

Optimized shopping experience

Customer prefer to go a neat, clean and bright store than the mess one. Cause they thought a clean store would give them a wonderful shopping experience, more focus on their demands carefully, which has been used during cleaning.



After the store: Cleaning robots help cleaners to finish clean tasks quickly

Electronic market have a wide area, the area to be cleaned is relatively narrow, and the flow of people is large, so it is necessary to clean at all times to ensure that there is no dust and no stains, if you use manual, only one or two cleaning workers must be too late to clean.



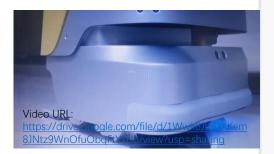












The use of cleaning robots is different, cleaning robots can help multiple workers with scrubbing, sweeping, vacuuming, mopping, automatically recharging, automatically adding or draining water with a digital platform to manage ... the cleaning efficiency per hour is dozens of times that of a worker.

After the store: Cleaning robots help cleaners to finish clean tasks quickly



PUDU CC1

Scumming & Sweeping & Vacuuming & Mopping 4 in 1 Suitable for wide ground

- Hard floor (such as tile, pvc floor, etc.)
- Short wool carpet
- Hard floor (e.g. marble floor)



Multi-Machine Intelligent Scheduling

Systematic operation of robots in office buildings and residences



Suit Various Floor Types

Suitable for both hard floors and soft carpets



Digital Cleaning

Cleaning results are clearly visible in the automatically generated reports



Fit Corners Perfectly

Versatile Cleaning

roller brush, squeegee, and

5h Continuous

Extra-long run-time for

Scrubbing

cleaning

Modular Component Design

Accessories such as side brush,

mopping sweeper can be loaded

and unloaded within 1 minute)

Cleans every corner



Auto Recharging & Automatic Water Addition & Drainage

No manual intervention worry-free and labor-saving



PUDU SH1

Vacuuming & Brushing & Watering 3 in one

Suitable for wide ground

- Hard floor (such as tile, pvc floor, etc.)
- Hard floor (e.g. marble floor)



350rpm Brush Speed 22kg Brush Pressure

Accelerates the elimination of tough stains, leaving the floor sparkling clean.



Power-assist System

The self-propelled design drives the SH1 forward, making floor cleaning effortless.



Easily Transport to multiple locations

Its exceptional maneuverability and portability make it ideal for mobility cleaning.



Light Strips Detection

The LED light strips highlight stains hidden in dark areas like wall corners and spaces under the table.



12000pa Strong **Suction Power**

Avoiding secondary pollution and delivering a great cleaning result.



Single-handed Control

The SH1 can be easily controlled with one or both hand, providing ergonomics and a light weight feel to your arms during use.



Quick disassembly Easy maintenance

Solution & recovery water tank, battery, brushes, squeegee



Fit Corners Perfectly

It can clean the tight path of 44cm width and a low space of less than 10cm height



After the store: 7*24h Automate cleaning tasks Man-robot cooperation, More efficiency



7: 00-8: 00 Entrance

- ✓ Sweeping
- ✓ Vacuuming
- ✓ Mopping hard floor

8: 00-10: 00 Corridors

- ✓ Sweeping
- ✓ Vacuuming carpets
- ✓ Mopping hard floor

10: 00-13: 00 Auto-charge & Add water automatically

13: 00 & 20: 00 Repeat morning clean task

- ✓ Sweeping
- ✓ Mopping hard floor

23: 00 Auto-charge & Add water automatically



8: 00-10: 00 Office area

✓ Scrubbing hard floor once a day

14: 00-16: 00 Warehouse

✓ Scrubbing hard floor once a week

16: 00-18: 00 Office area

✓ Scrubbing hard floor once a day

20: 00-22: 00 Toilet

✓ Brushing hard floor twice a day



Cleaning: Automated crossing-floors cleaning



An intelligent IoT system makes it easy to connect **elevators**, **turnstiles**, **entrance guards**, **etc.**, enabling automatic elevator and entrance guard access, auto-calling of elevators, crossing-floors cleaning and autonomous return trips.

Solve crossing-floors cleaning issues, combine with charge station and work station, Realize 24H fully unmanned operation, and greatly improve the utilization rate of robots in shopping mall scenes, maximize the efficiency of cleaning robots.

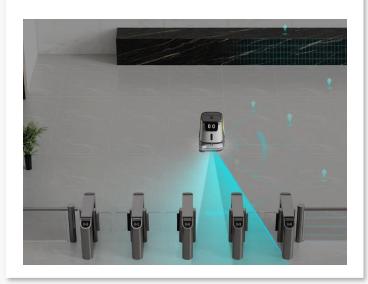
Elevator



Entrance guard



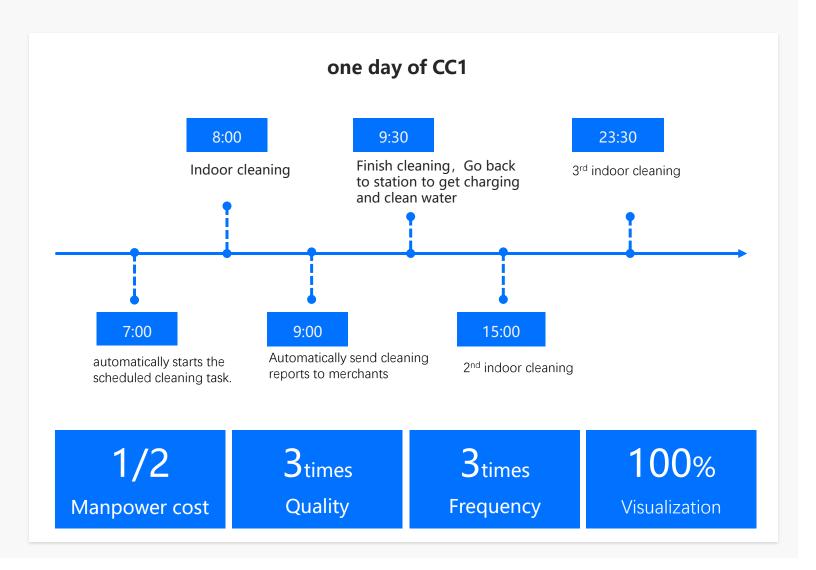
Turnstile



Cleaning: 7*24 hours task schedule, fully automatic



- Save manpower, time, money
- One machine, multiple cleaning modes, suitable for multiple scenarios.
- 24-hour operation, fully automatic
- Simple, user-friendly, reliable, and stable
- Oheck the machine status at any time
- Presentation of cleaning reports



Cleaning: Automated crossing-floors cleaning

Digital Platform

Real-time synchronization of cleaning data, display of cleaning duration, area, etc., self-generated cleaning reports, and clear cleaning results





Marketing activities

Deep participate in all kinds of marketing activities



Lucky draw mode

When the electronics stores holds various activities, BellaBot can provide a lucky draw mode, and customers can deeply participate in the activity through touch interaction with BellaBot, which will increase the attraction and fun of the activity.

Sales Activities



Festival Activities



Entertainment Activity



Special scenario: Development a new profits mode

Robots rent mode bring shopping malls more revenue





300\$



30%

Recommend average rent price per month

Increase 30% customer flow compared with traditional promotion modes



02 Successful Cases

Value Summary

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

Lower training and management costs

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

Manpower shortage is no longer a problem

Multiple mode can well assist stores in completing tasks such as the latest promotion , which will free up human workers from introduce so many things.

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.

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

Unified management & IoT platform

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





Media Markt is part of the Metro Group

Location: Rotterdam, Tech village, Netherlands

Industry: Consume electronics.

Business hours: 10:00-22:00.

Consumer electronics retailer: NO.1

Rank of lighthouse store in Europe: NO.2

Stores: 1, 000+

Corridors : < 2 meters

Floors:

Workers: 30+

Size : 5,300 sqm

Settled brands:
Over 30

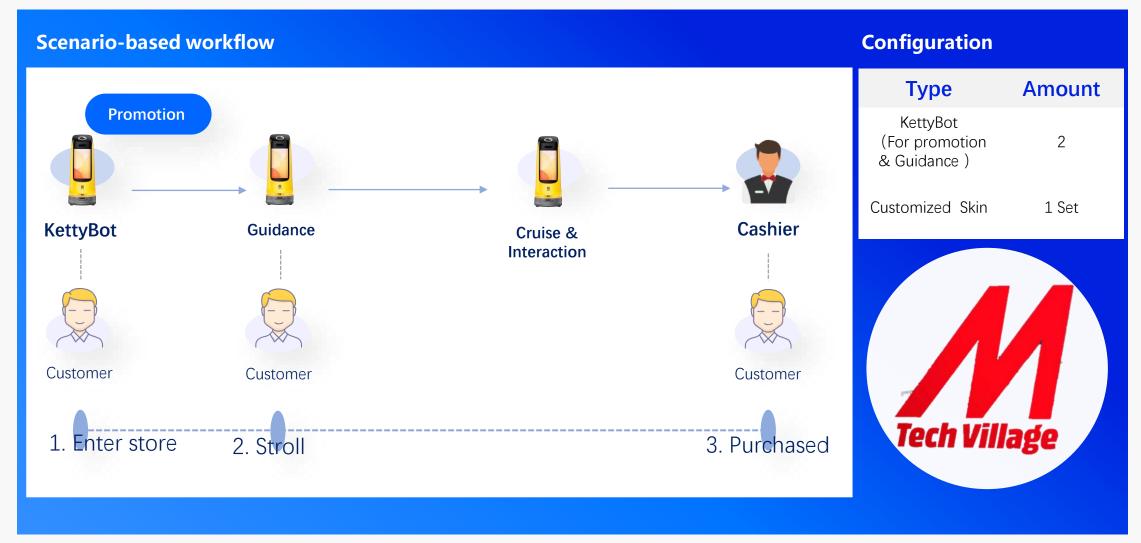
se O.2



Video URL: <u>htt</u>

https://www.youtube.com/watch?v=K34nPERi3Qk

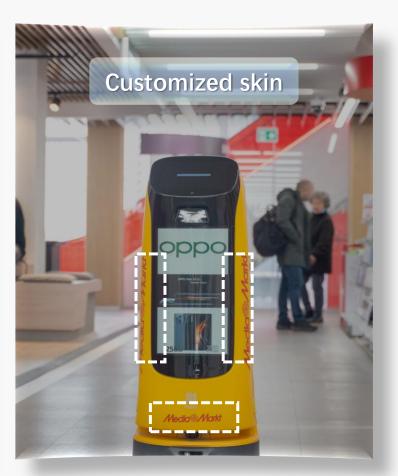
^{*} Relevant statistics as of December 2022

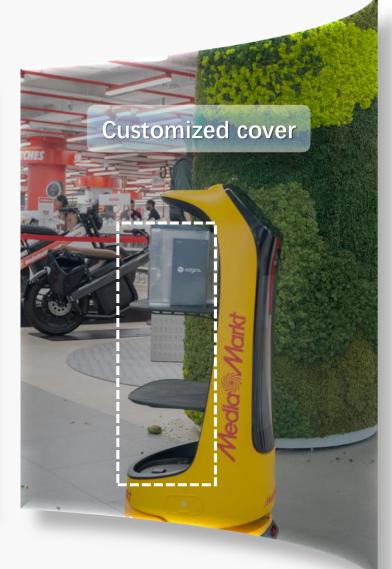


^{*} Relevant statistics as of December 2022









During 2022/9-2022-11

- ✓ Run 381.35 hours
- ✓ Run **139.56 KM**
- ✓ Played 249898 ads
- ✓ Ads played 353.48 hours
- ✓ Navigated **4792 times**

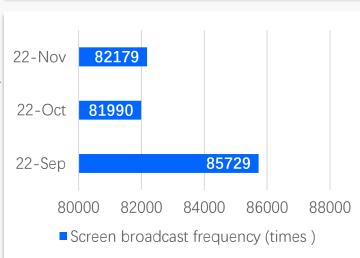
Staff care

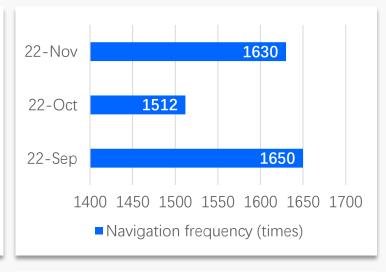
- 7*24h continue working of robots make staffs' job easier;
- Reduce staffs worklord during peak hours .

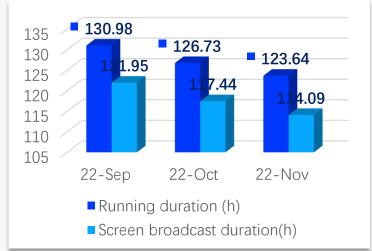
Cooperation division of labor

 staffs communicate with customer, kitty broadcast ads & navigation ,Everyone's characteristic makes the best use of it.











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 Additional hourly wage is spent on navigation per day per day increases Passenger flow Promotion Service Navigation Costs volume



Human & Robot service



No limit per man day

80% of the time is spent on communication Working 7*24h per day

275.25\$ Robot monthly cost 629.95\$ Cost saved

2500 people per day



Successful Cases - Carrefour



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 ...

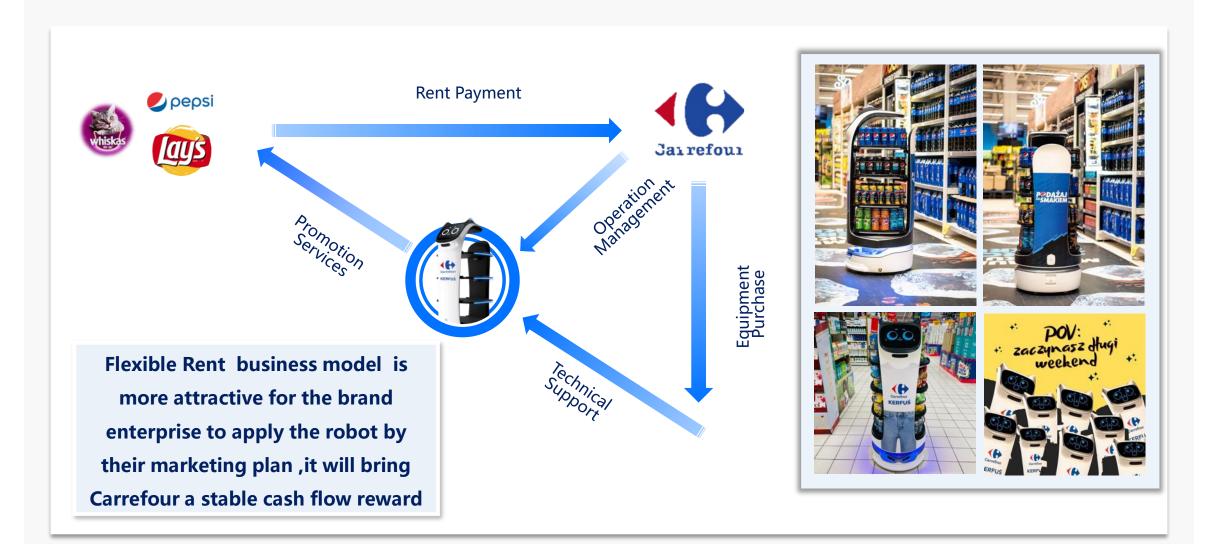




With the new name: KERFUS

Bellabot converted to a Carrefour New Star!

Successful Cases - Carrefour



Successful Cases - Carrefour



CarrefourPolska @CarrefourP... · 15分钟 · · · · Wspólnie z @PepsiCoPolska rozpoczęliśmy pilotażowy program promocyjny z użyciem nowoczesnych samojezdnych eRobotów #Kerfuś. 2 urządzenia sprzedające napoje #Pepsi oraz chipsy #Lays można już spotkać w sklepach #CarrefourPolska w C.H. #Arkadia i #GaleriaWileńska w Warszawie.











03

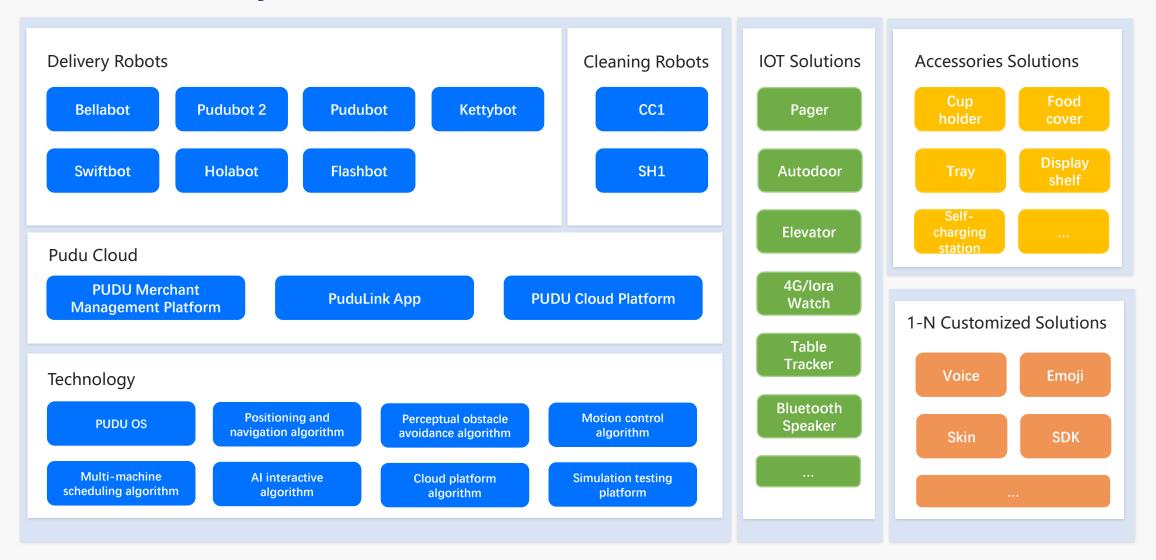
Product Family Matrix

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



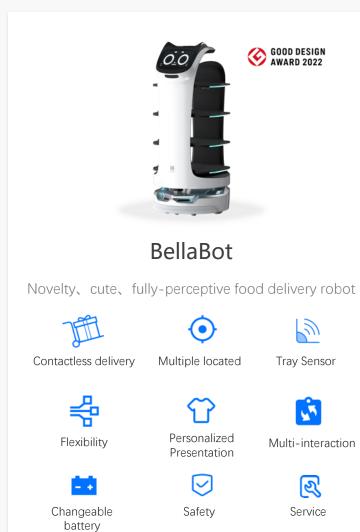


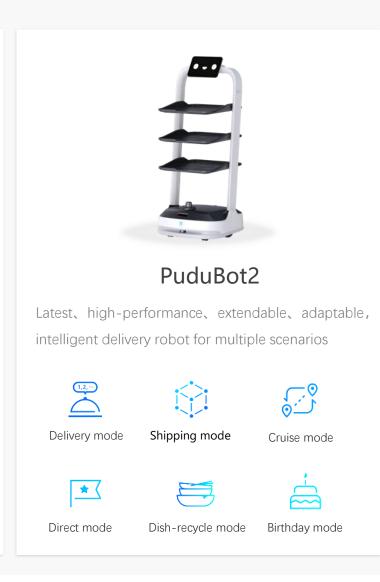
Product Family

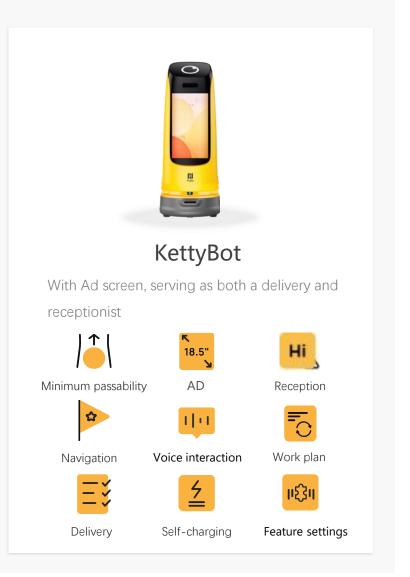




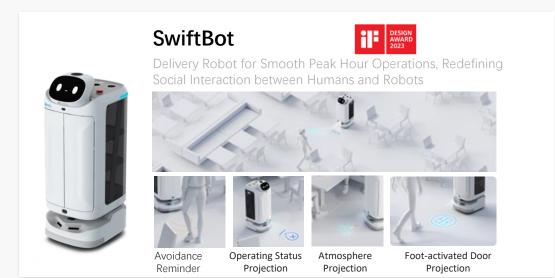
Delivery Robots







Delivery Robots





PuduBot



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







Scheduling

3D avoidance

Independent Suspension







Sun-resistant

HolaBot First Delivery Robot with Remote Call Notification Function for Multiple Delivery Scenarios medical waste recycle Dish-recycle



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



APP call





Independent cabin door

Customized disinfection time







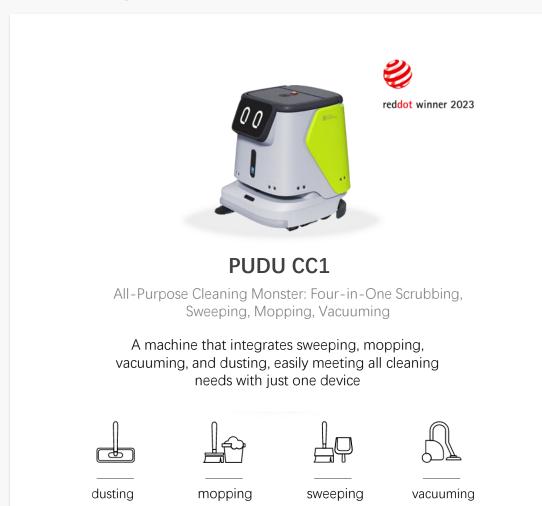


Take elevator

Auto-door

Arrival notification

Cleaning Robots





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 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

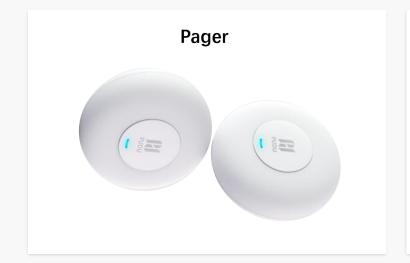


PuduLink App [iOS]

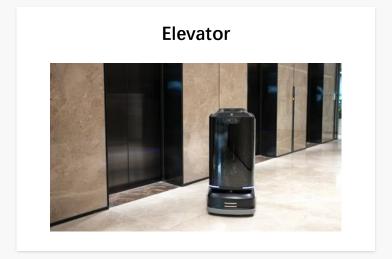


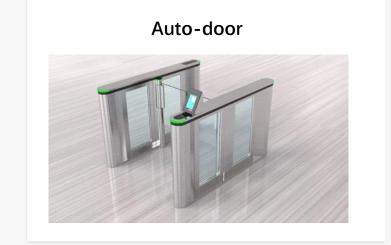
PuduLink App [Android]

IOT Solutions

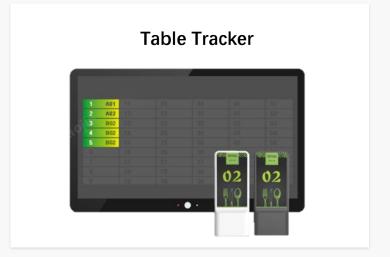












Accessories Solutions







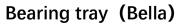














Cup holder (Bella)



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.

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

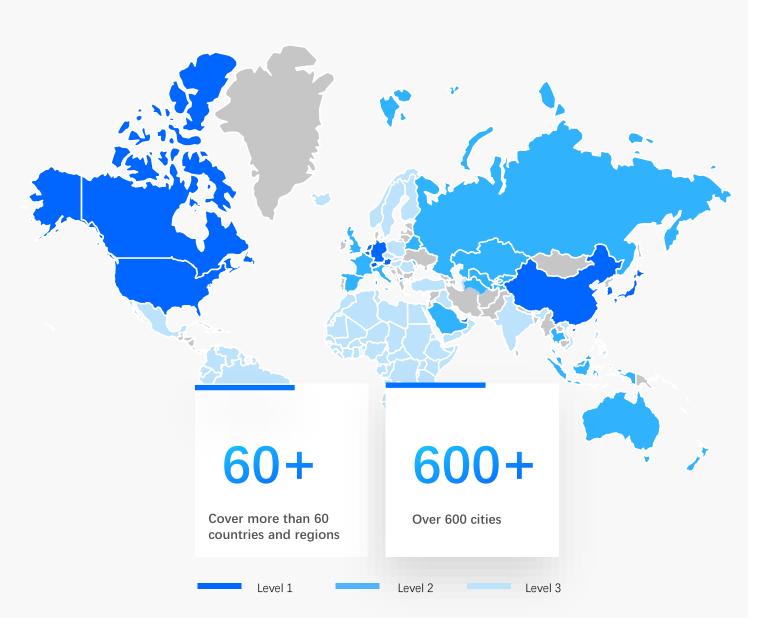


Scale Advantage

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



Scale Advantage

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

The world largest commercial service robot manufacturer

























Horner and Certification

Certificate & Patent

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















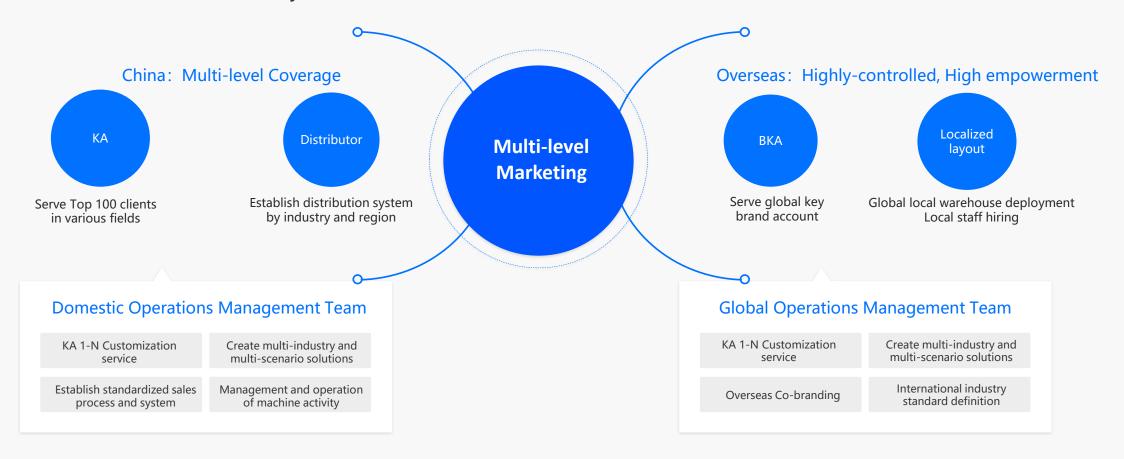
Pudu Robotics has applied for about 1300* core patents, of which invention patents are over 60%, involving positioning, navigation, motion control, human-computer interaction, robotics arm, servo motor, computer vision, cloud platform and other technical fields.





Operation Advantage

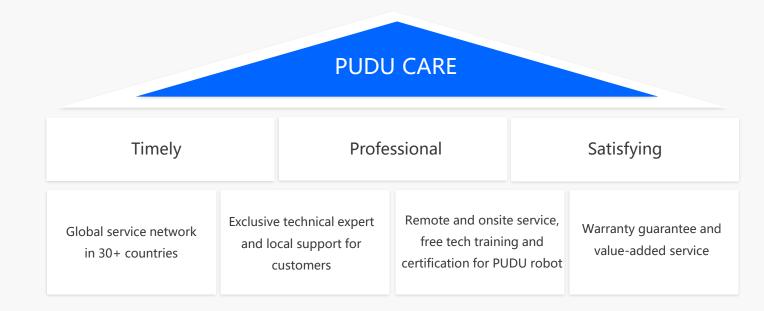
Global Multi-level Sales System



Operation Advantage

Offline Service:

- 1 Year Free Warranty
- 7 × 24 Hours Service
- Local Service & Support



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.



Thank you!



Global_sales@pudutech.com

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