



Industry Solution

Retail Electronic Market Industry

www.eclinepos.com

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01

Industry Overview

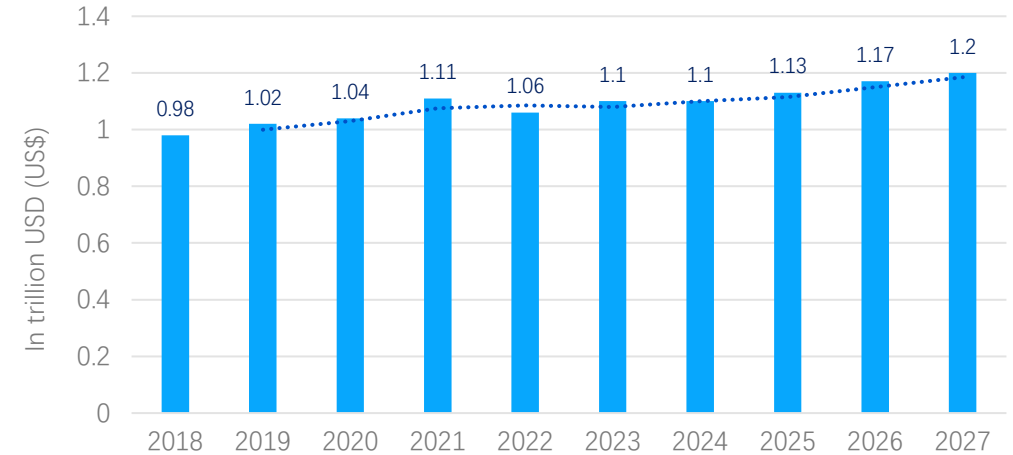
Growing market size

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

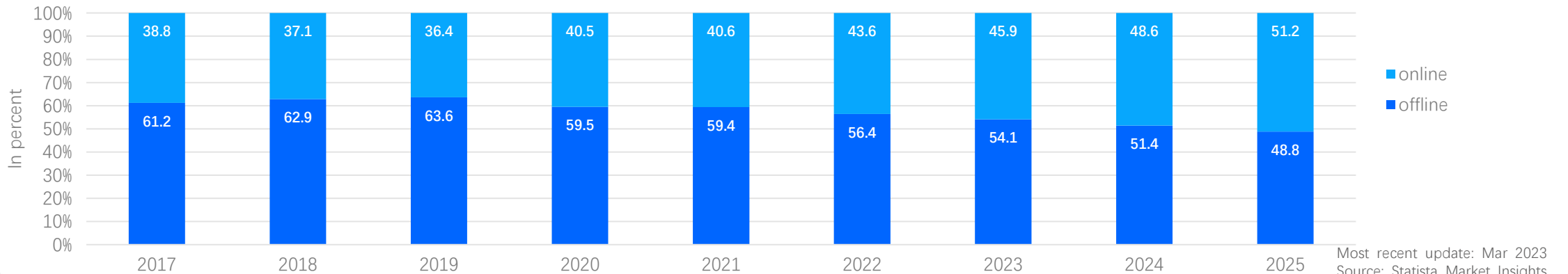
Revenue in the Consumer Electronics market amounts to US\$1,100.00bn in 2023. The market is expected to grow annually by 2.32% (CAGR 2023-2028).

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

Electronics marketing size (worldwide)



Sales channels revenue share rate



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

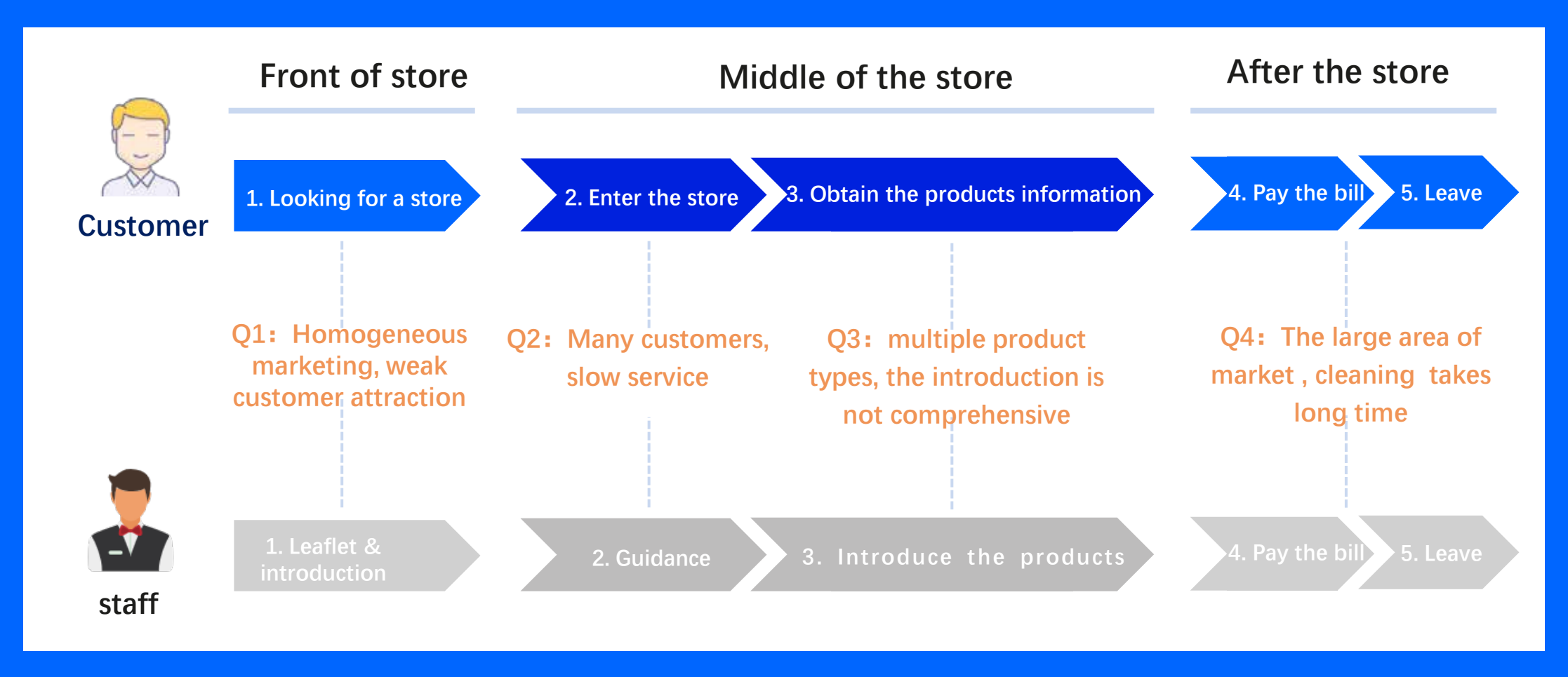
- Take care of mental health
- Reduce the workload during peak time



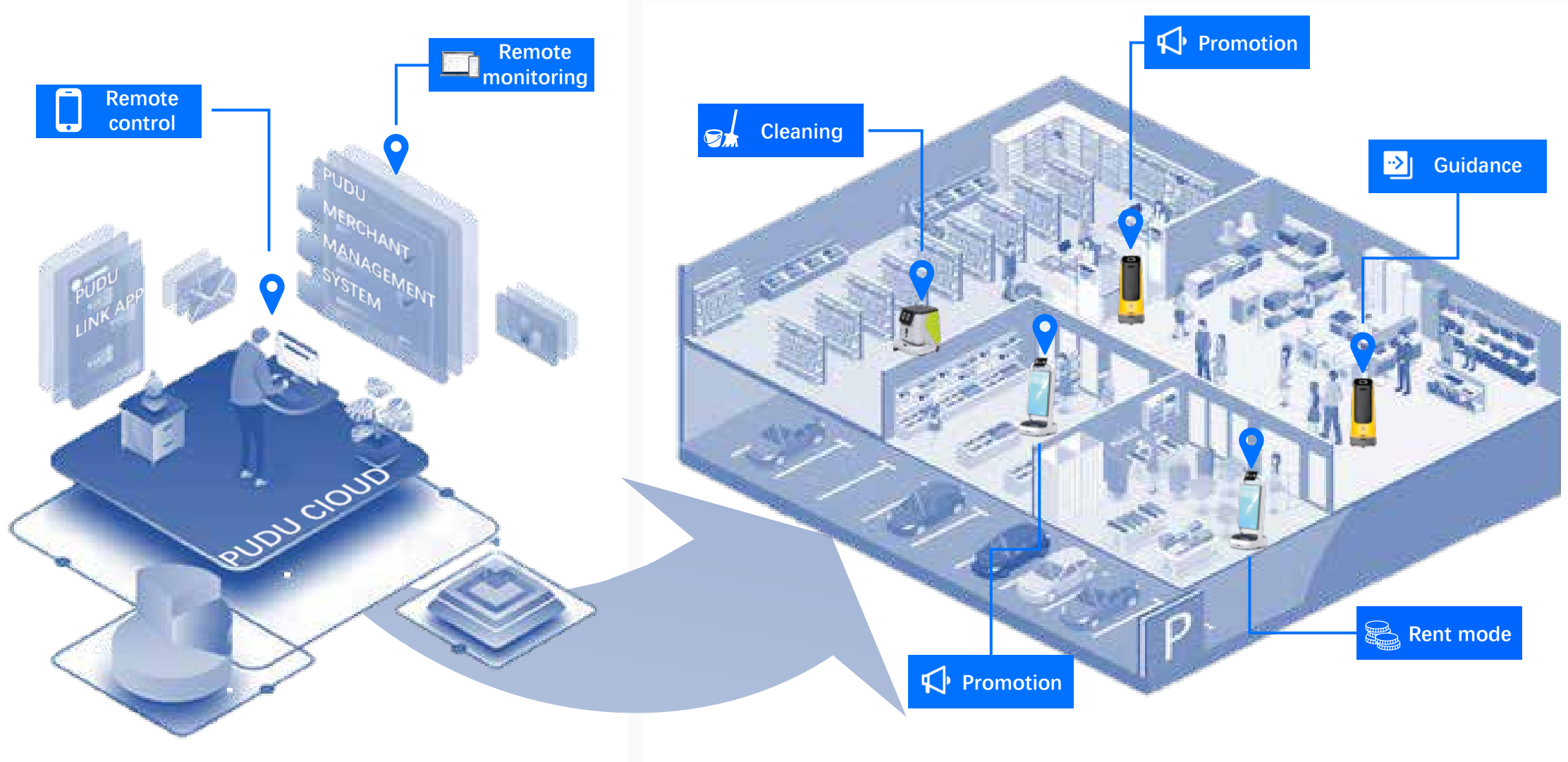
02

Scenario Solutions

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



- Utilizing intelligent LCD screens to attract customers from all angles
- Large advertising screens better fitting the customer's perspective
- Combining with speakers to significantly attract family-style customers
- 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

Weight	39KG (PUDU2) +13KG (AD Screen)
Charging time	8H
DPI	1920*1080
AD Screen power supply	Via robot charging port

Front of store : Mobility advertising value

	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

* Data only for reference, sourced from China, statistics as of May 2023

Middle of store : Guide to purpose store

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



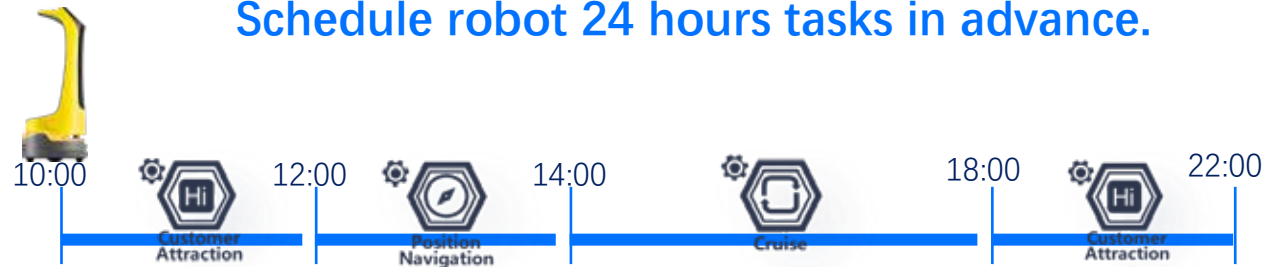
Quickly & Efficiently

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

Schedule robot 24 hours tasks in advance.



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 .

7*24 hours non-stop work



With the automatic charging station, the robot can work continuously for 7 * 24 hours

Precise advertising based on location



Robot Task Settings on Pudu Merchant platform

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



Video URL: <https://www.youtube.com/watch?v=K34nPERi3Qk>

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



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




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.




12000pa Strong Suction Power
Avoiding secondary pollution and delivering a great cleaning result.



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



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.




Easily Transport to multiple locations
Its exceptional maneuverability and portability make it ideal for mobility cleaning.



Quick disassembly Easy maintenance
Solution & recovery water tank, battery, brushes, squeegee



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



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

14: 00-16: 00
Warehouse

- ✓ Scrubbing hard floor once a week

16: 00-18: 00
Office area

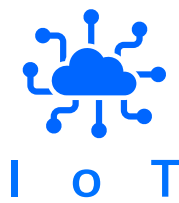
- ✓ Scrubbing hard floor once a day

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.

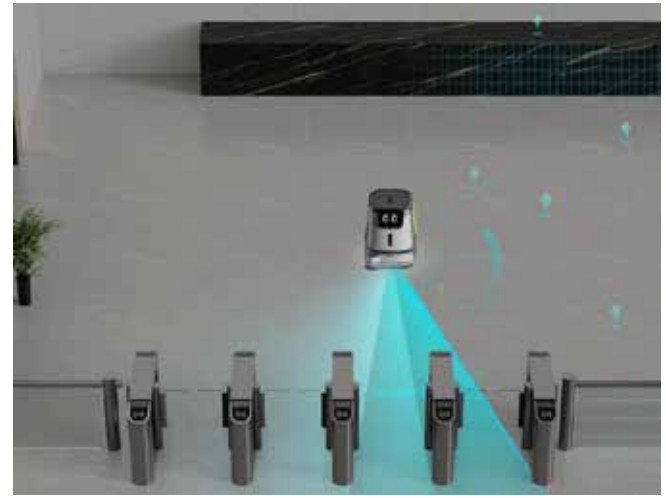
Elevator



Entrance guard



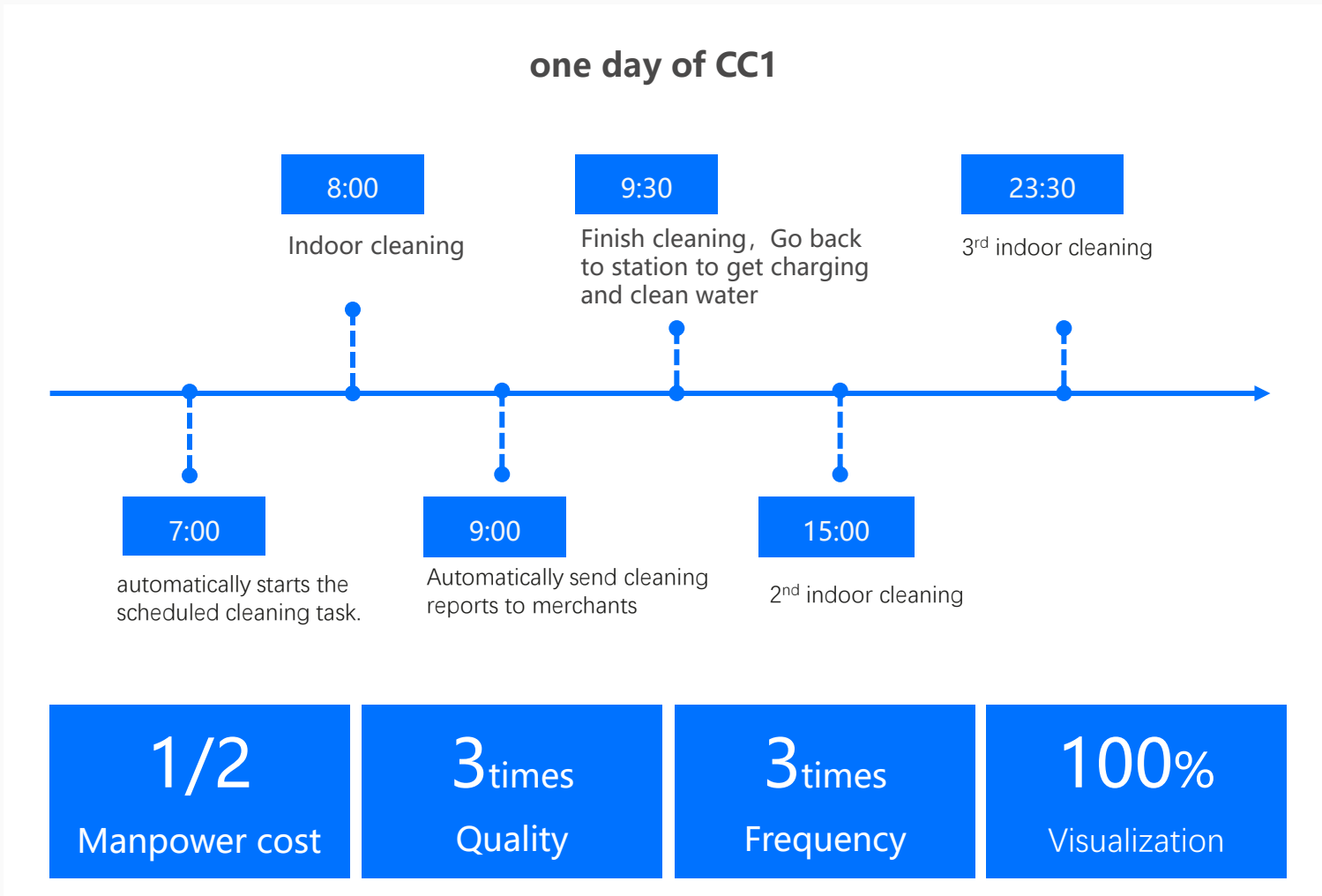
Turnstile



Cleaning : 7*24 hours task schedule , fully automatic



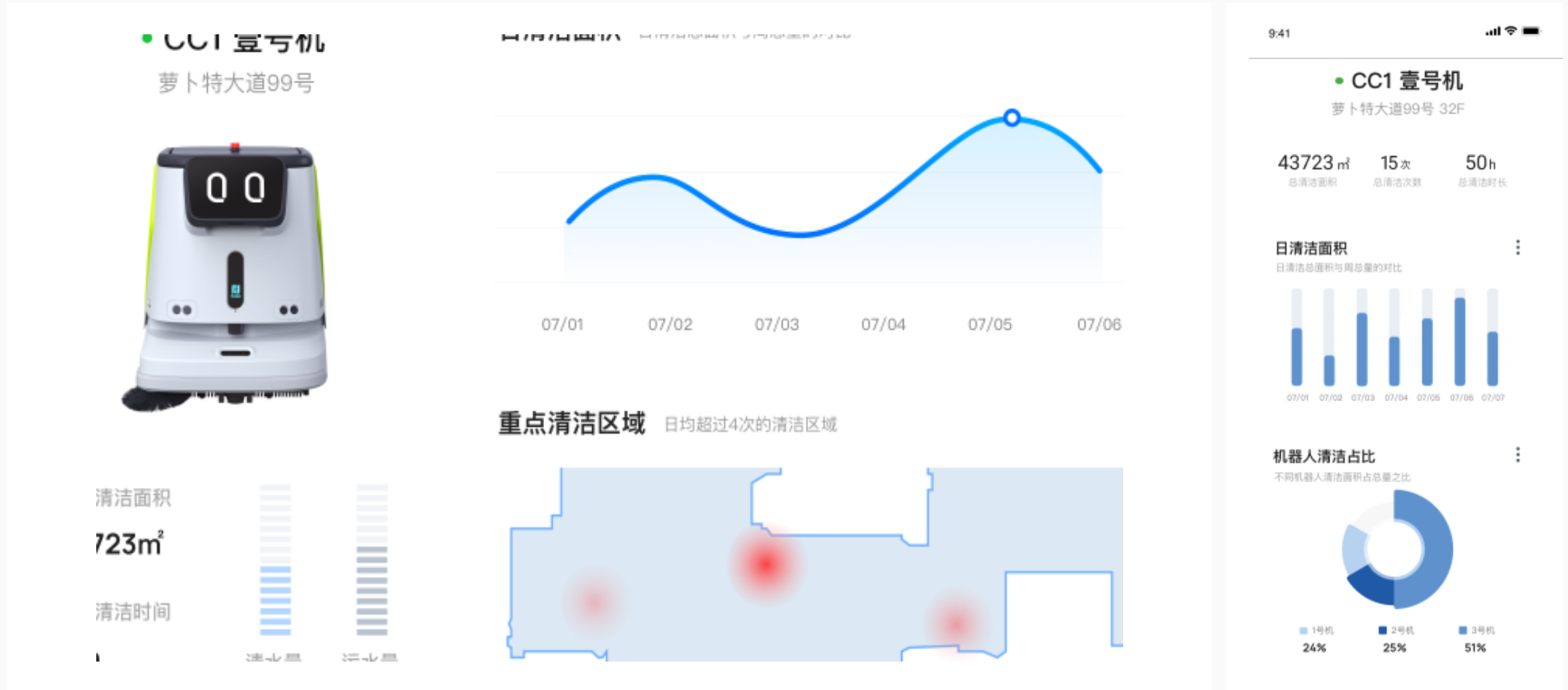
- ✓ Save manpower, time, money
- ✓ One machine, multiple cleaning modes, suitable for multiple scenarios.
- ✓ 24-hour operation, fully automatic
- ✓ Simple, user-friendly, reliable, and stable
- ✓ Check the machine status at any time
- ✓ Presentation of cleaning reports



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



Retail electronic store's management office centrally manages all robots





03

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.

Successful Cases - Media markt



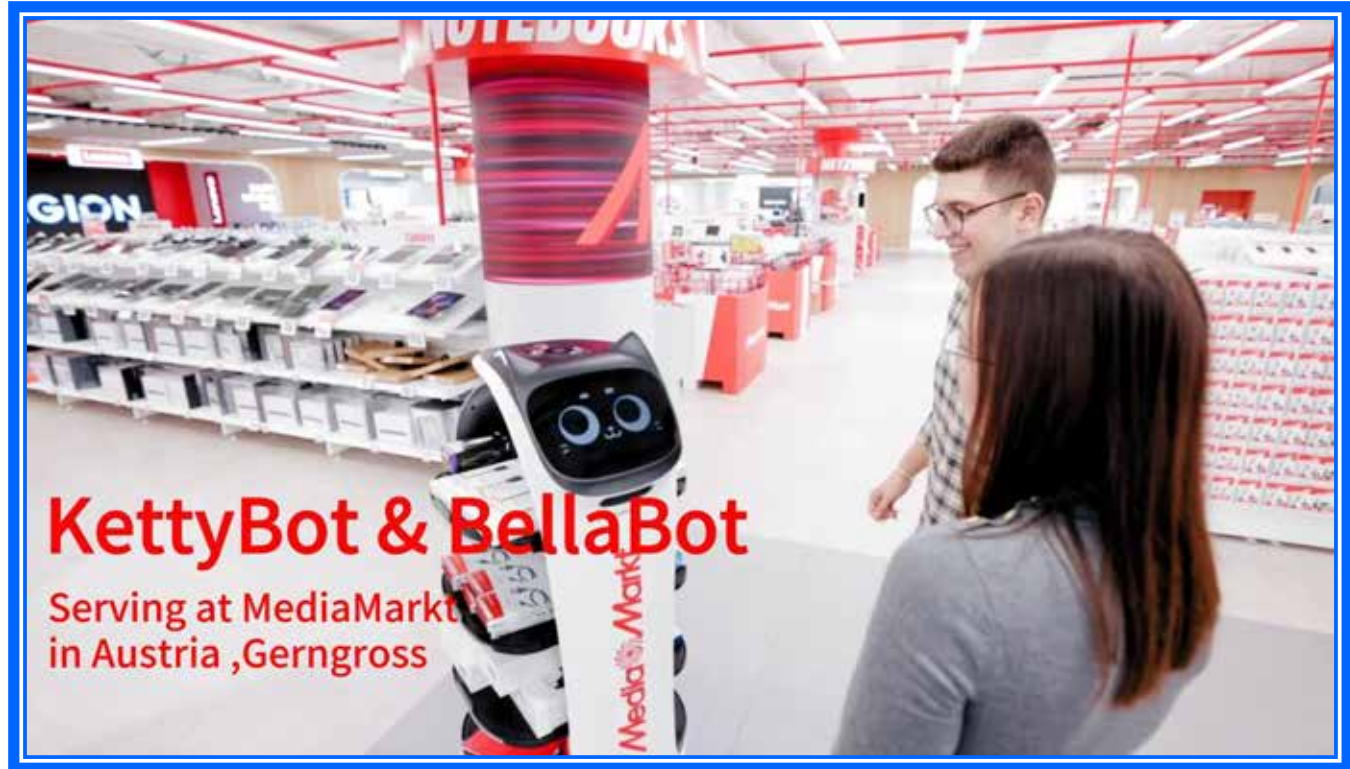
Location: Mariahilfer Straße 42-48, 1070 Wien, Austria

Industry: Consume electronics .

Business hours: 9:30-20:00.

Consumer electronics retailer : NO.1	First tech-village in Austria
Stores : 1, 000+	Corridors : < 2 meters
Floors : 2	Workers : 30+
Size : 53,820 sq ft 5,000+sqm	Settled brands : Over 30

* Relevant statistics as of May 2022



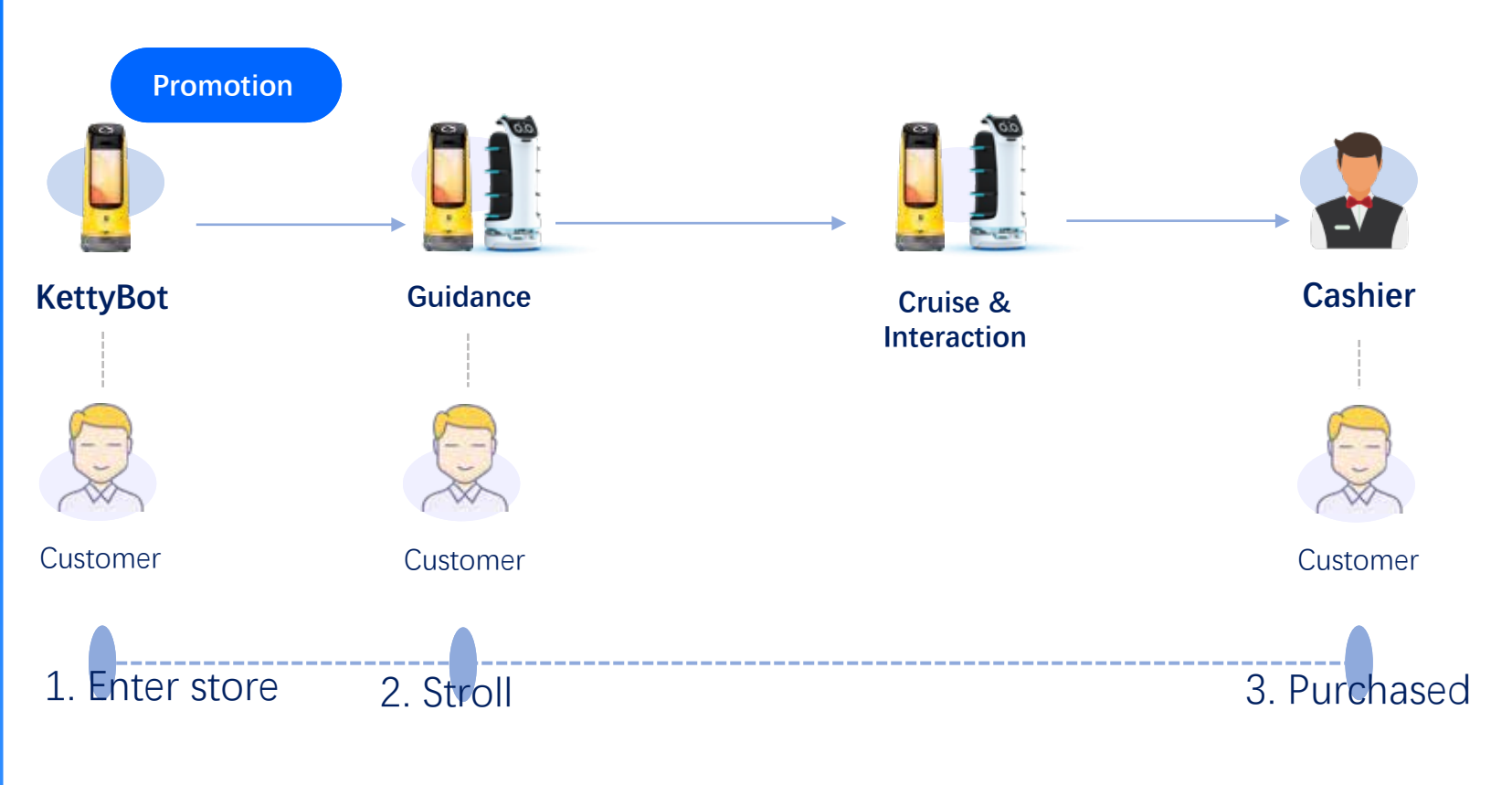
KettyBot & BellaBot

Serving at MediaMarkt in Austria ,Gerngross

URL: <https://drive.google.com/file/d/1yc-LUEBPfH-8qmwGZ03D4vRcDT3j1OB7/view?usp=sharing>

Successful Cases - Media markt

Scenario-based workflow



Configuration

Type	Amount
KettyBot (For Promotion & Guidance)	2
BellaBot (For Guidance & Cruise)	1
Customized Skin	1 Set



* Relevant statistics as of May 2022

Successful Cases - Media markt

During 2022/9-2022-11

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

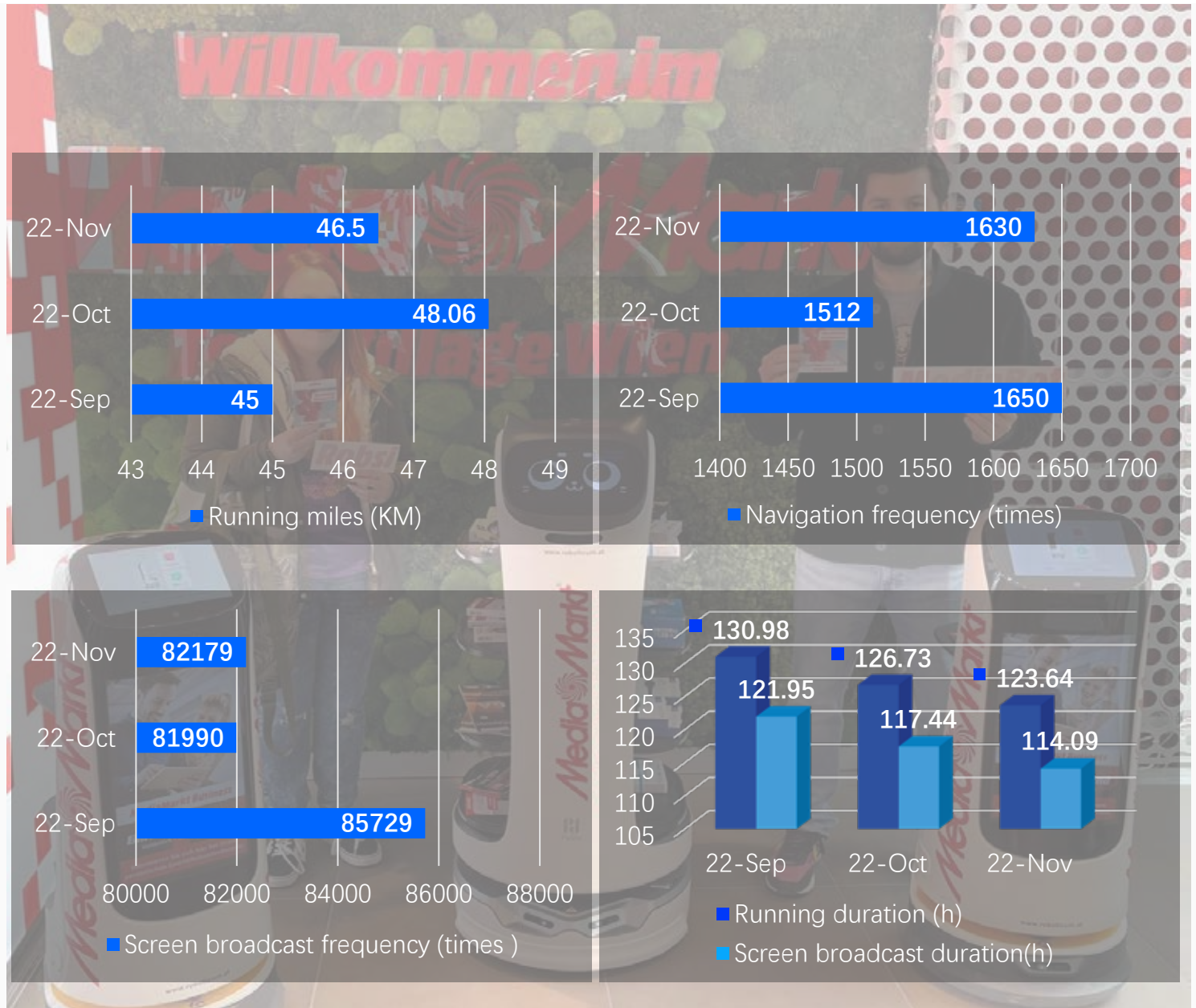
Staff care

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

Cooperation division of labor

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

* Relevant statistics as a forecast



Successful Cases - Media markt

PUDU robots has become a symbol of " Technology & Intelligent " in Media Markt. As the first tech-village store in Austria, PUDU robots assisted Gerngross reinforce this impression .

Human service



1 product
per man day

50% of the time
is spent on navigation

Working 8h
per day

905.2\$/month
Additional hourly wage
increases

2000 people
per day



Promotion

Service

Navigation

Costs

Passenger flow
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

* Relevant statistics as a forecast

Successful Cases - Carrefour



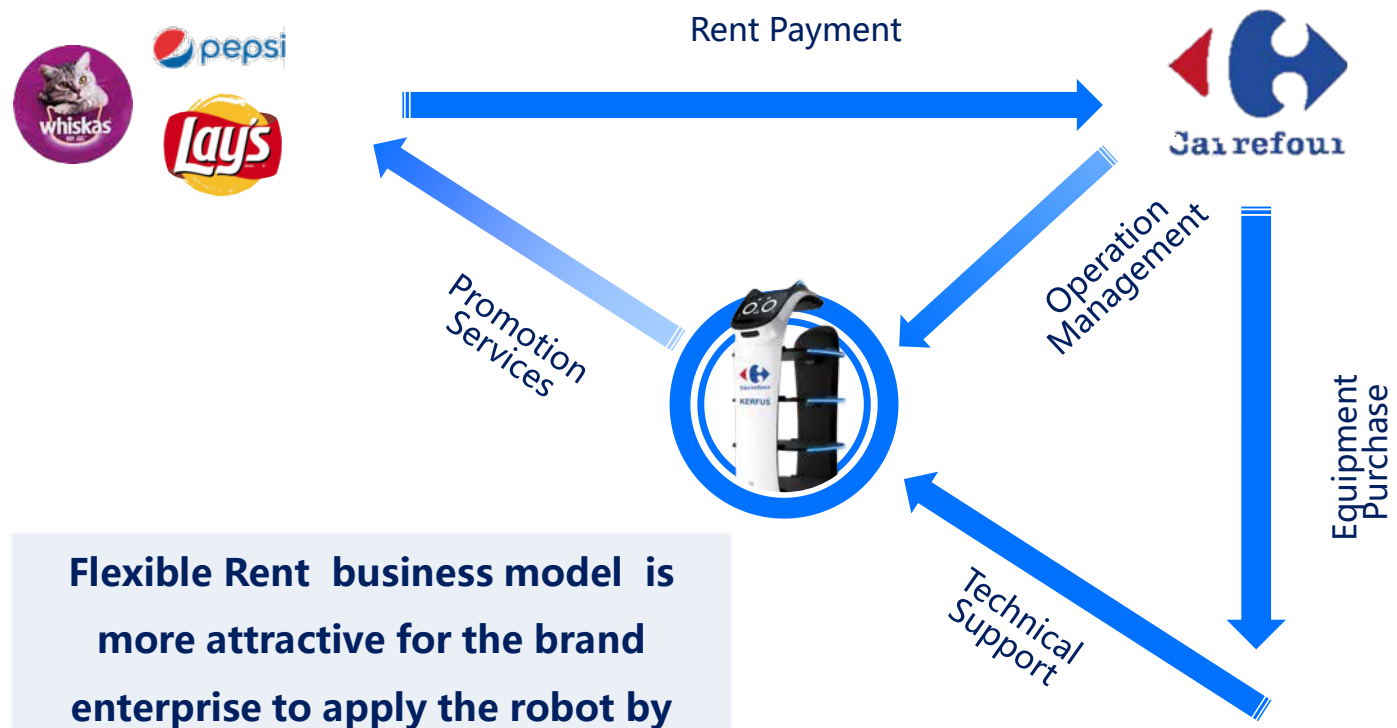
Pudu Robotics had successfully built up its partnership with Carrefour since 2022, which deployed BellaBot units, Pudu's smart delivery robot, at two of its retail stores in Warsaw, Poland at the first beginning.

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



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



Successful Cases - Carrefour



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



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Pudu Robotics BellaBot Gain Popularity in Carrefour Stores in Poland, Fueling European Growth

NEWS PROVIDED BY SHENZHEN PUDU TECHNOLOGY CO.,LTD -- Nov 24, 2022, 09:51 ET

SHENZHEN, China, Nov. 24, 2022 /PRNewswire/ -- Pudu Robotics ("PUDU" or "the Company"), a leading commercial service robot manufacturer, has seen great success in its expansion in Poland with its BellaBot gaining popularity in the country through its collaboration with retailer Carrefour.

Carrefour has deployed BellaBot, PUDU's signature smart delivery robot, in two of its retail stores in Warsaw to deliver Pepsi beverages and chips since Sept. 26. The unique shopping experience has been well received by local consumers, so much so that the bot, dubbed "Kerfuś", has won over the hearts of many Polish shoppers.

In the wake of the growing popularity of Kerfuś, Carrefour announced in late October that roadshows and special fan meetings for Kerfuś will be organized in over 100 Carrefour stores across Poland.

The deployment of PUDU's smart delivery robots in Carrefour marks a step further in the Company's strategy to integrate technological innovation with the traditional retail industry. The move also reflects PUDU's ambition to boost interactions between robots and shoppers to entertain consumers while

Robotics24/7 The Robotics Applications Conference RAG-22

Supply Chain Manufacturing Applications Technologies Resources

RIOS INCREASE PRODUCTIVITY REDUCE OPERATING COSTS

Robotics 24/7 > Topics > Mobile Robots > Services

Carrefour Deploys Pudu Robotics BellaBot at Poland Retail Stores

Pudu Robotics said the robot's cute design has made it popular online.

By Robotics 24/7 Staff · November 28, 2022 · in f

Pudu Robotics is celebrating the success of its partnership with supermarket retailer Carrefour, which recently deployed BellaBot units, Pudu's smart delivery robot, at two of its retail stores in Warsaw, Poland.

The service shelf robot, also known as Kerfuś, is being used to promote and deliver Pepsi products. Pudu noted customers have enjoyed interacting with the robot and have posted about their experiences with it on social media.

Memeing a robot

"Through the collaboration between Carrefour and Pepsi, Kerfuś has become a source of popular memes on social media, particularly on Twitter, where Kerfuś fans have been actively engaged in discussions on the bot's adorable design and smart delivery features," the company said. "Such widespread social media responses and recognitions have successfully accelerated the product sales of PUDU's partners."

Shenzhen, China-based Pudu said it is organizing more than 100 "special fan meetups" at Carrefour stores across Poland to showcase the BellaBot in action.

"The deployment of PUDU smart delivery robots in Carrefour marks a step further in the Company's strategy to integrate technological innovation with

The BellaBot features a screen that emotes.

RIOS INCREASE PRODUCTIVITY REDUCE OPERATING COSTS



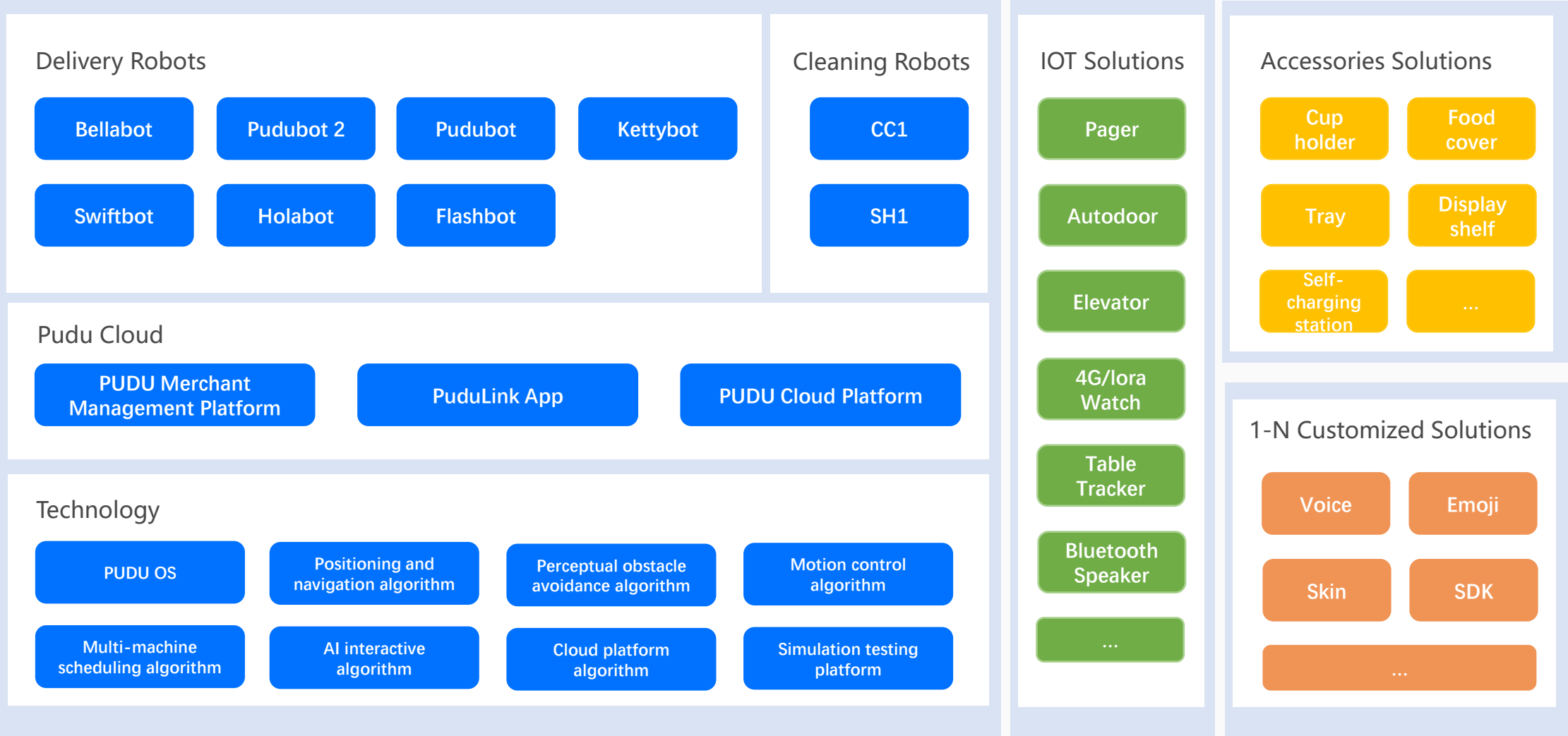
04

Product Family Matrix

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



Product Family



Delivery Robots



GOOD DESIGN
AWARD 2022

BellaBot

Novelty, cute, fully-perceptive food delivery robot



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



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



Avoidance Reminder Operating Status Projection Atmosphere Projection Foot-activated Door Projection

PuduBot



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

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



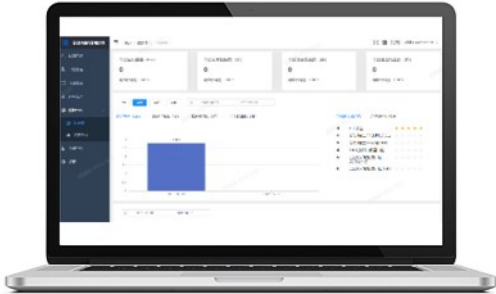
PUDU SH1

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 Cloud



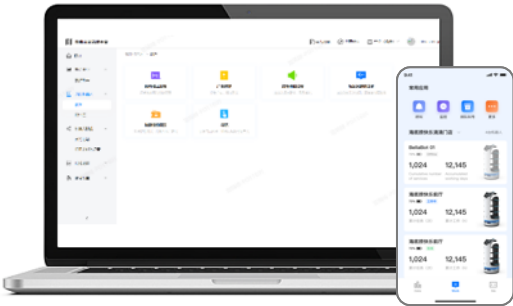
PUDU Cloud Platform

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://business.pudutech.com>
- 2) Germany Group: <https://businessg.pudutech.com>
- 3) China Group: <https://business.pudutech.com>



PuduLink App [iOS]



PuduLink App [Android]

IOT Solutions

Pager



4G/Lora Watch



Elevator



Auto-door



Bluetooth Speaker



Table Tracker



Accessories Solutions

Ketty's Accessories



Bearing tray (Bella)



Enclosed Protective Cover



Cup holder (Bella)



1-N Customized Solutions

android 

PUDU OS



Robot SDK



Skin



Customized Emoji



Customized Voice

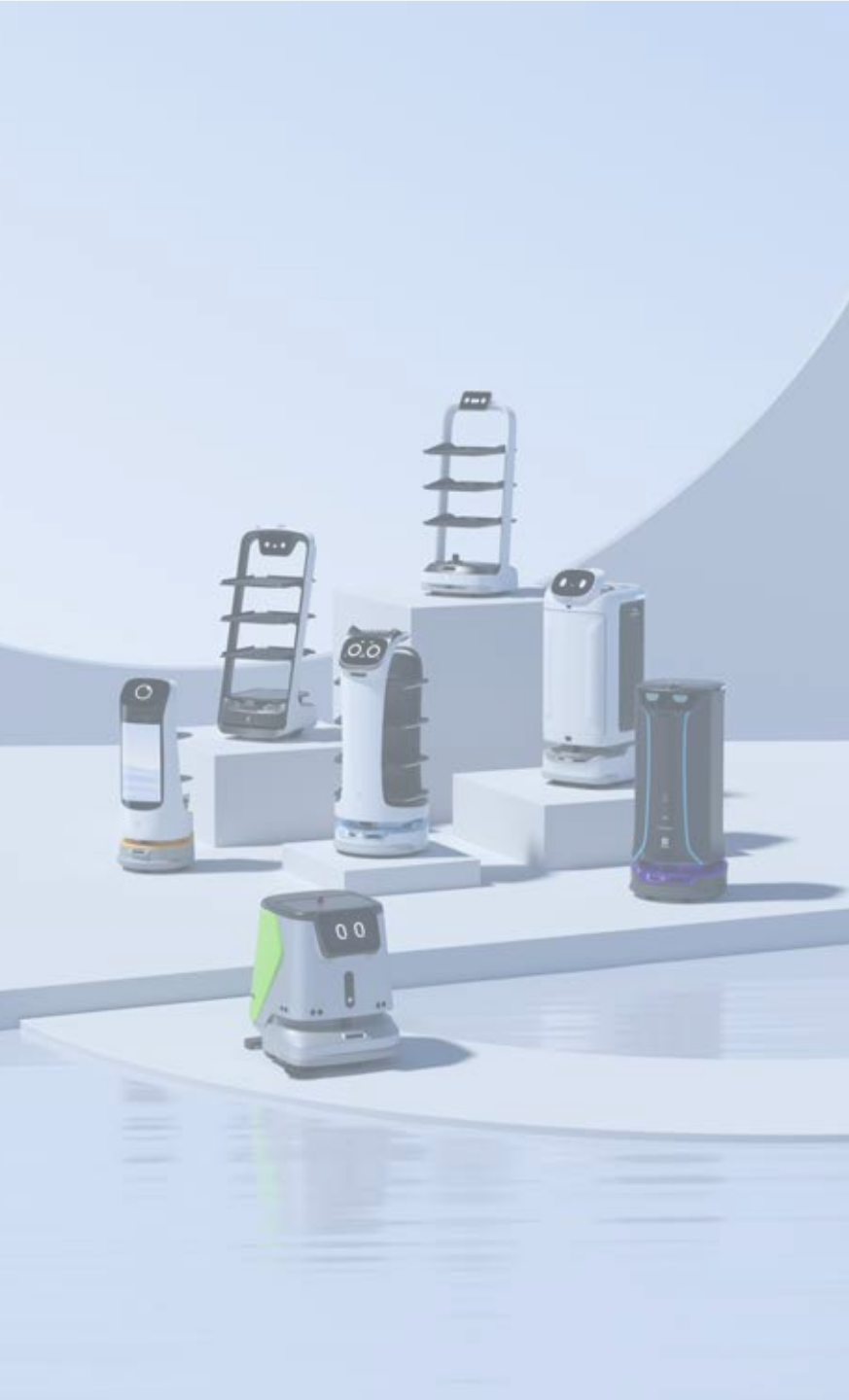


Customized Software



Combined with 3rd party hardware

More options to come soon



05

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 60,000 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 May 2023

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



THINKING IN THE LIGHT OF FIRST PRINCIPLES



BE ENTERPRISING & ACCOUNTABLE



PURSUING FOR THE ULTIMATE



MOVING FAST



BE OPEN-UP



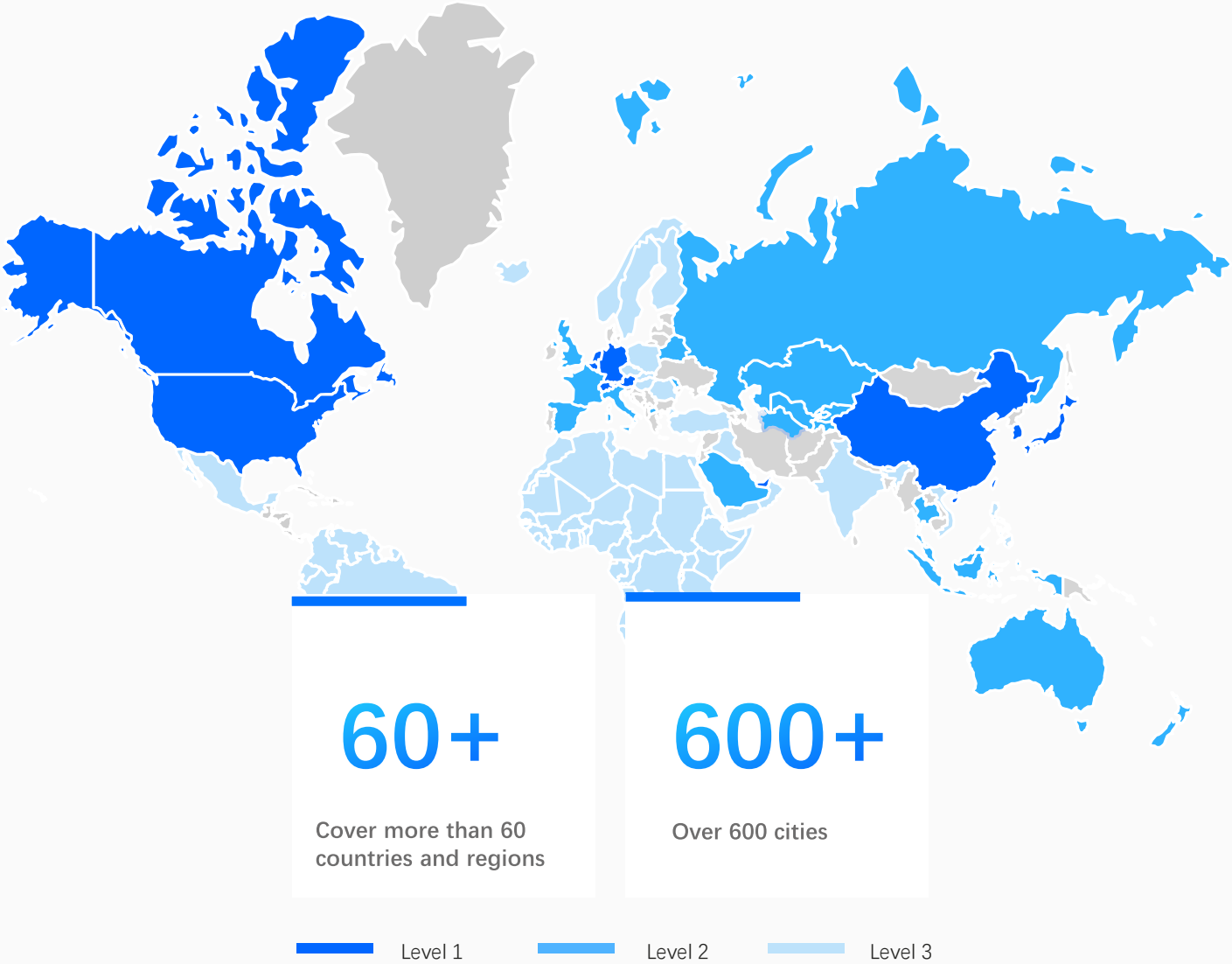
EMBRACING CHANGE

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 May 2023



Scale Advantage

The world largest commercial service robot manufacturer

Total Sales Quantity

60,000+

60,000+ * units have been sold worldwide

Market Share in All Scenarios

TOP1

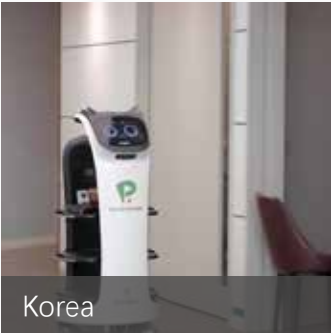
The market share in the full range of commercial service robots is No.1

Market Share of the Overseas Catering Industry

>80%

Overseas catering industry's market share > 80%

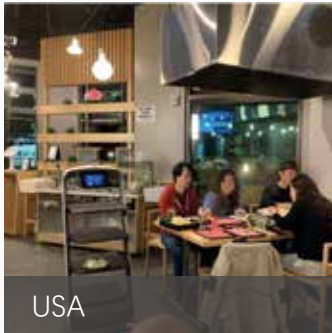
* Relevant statistics as of May 2023



Korea



Australia



USA



Jordan



Switzerland



Poland



China-Shenzhen



China-Xiamen



Malaysia



Japan



China-Hongkong



China-Taiwan

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 May 2023



Operation Advantage

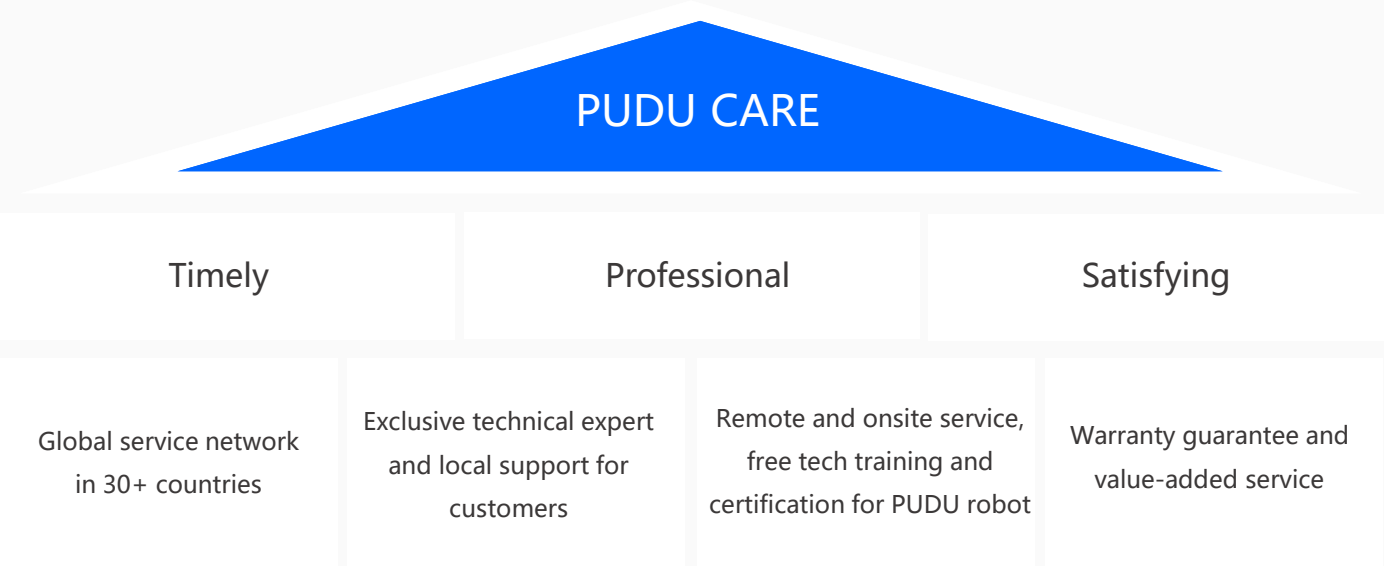
Global Multi-level Sales System



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!

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