



PUDU ROBOTICS



Global Leading Robotics Company

Content

- PuduCompany Profile
- Product & Service Introduction
- Use Case Study
- Sales SOP

Company Profile

- Company Introduction
- Pudu Key partner in worldwide&SG
- Media Coverage
- Pudu technology Advantage

Pudu Robotics

Shenzhen-based and founded in 2016, Pudu Robotics is a world-leading tech-focused enterprise dedicated to the design, R&D, production and sales of commercial service robots on a mission to use robots to improve the efficiency of human production and living.

Since its inception, Pudu Robotics has heavily invested in R&D, obtained multiple awards such as Red Dot and applied hundreds of core patents to lead the development of the robotics category and provide high technology products that would appeal to targeted markets. Pudu Robotics has been rapidly growing in recent years to become a “leader” in the global markets with coverage of over 60 countries worldwide. The robots are widely applied in restaurants, hospitals, schools, office buildings, government halls, subway stations, waiting rooms, etc.

Milestone

2016



Jan.: Shenzhen-based
Founded in 2016

2017



Mar.: Released First Delivery Product – PuduBot
July: Won Red Dot Award – The Best of the Best

2018



June: Series A Financing: Raised \$8 Million
Nov.: Approved as a National High-tech Corporate

2019



June: Global Strategic Cooperation – Haidilao Hotpot
Sep.: Strategic Cooperation – Xiabu Xiabu
Dec.: Released Multi-featured Products – BellaBot & HolaBot

2020



Jan.: Awarded CES Technology Innovation Award
Feb.: Contributed to Hundreds of Hospitals during COVID-19 Outbreak
July: Series B Financing: Raised over \$15 Million by Meituan
Aug.: Series B+ Financing: Raised \$15 Million by Sequoia China Investment Management LLP
Dec.: Launched Disinfection Robot – Puduactor 2

2021



Mar.: Sub-branch R&D Center Set-up
Mar.: Launched New Products - KettyBot & FlashBot
May: Series C1 Financing: Raised \$78 Million by Tencent, Meituan and Sequoia China Investment Management LLP
Sep.: Strategic Cooperation - Panasonic
Sep.: Series C2 Financing: Raised \$77 Million by Meituan, Greater Bay Area Homeland Investments Limited, Shenzhen Investment Holdings Co., Ltd., Sequoia China Investment Management LLP
Oct.: Won G-mark – Good Design Award

2022



May: Released New Delivery Product - SwiftBot
June: Released New Cleaning Product - PUDU CC1

Certificate

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



Patent

Pudu Robotics has applied for hundreds of 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.

Sales Network

Pudu Robotics is exploring the global markets rapidly and currently with the coverage of over 60 countries and 600 cities worldwide. We are on the way to explore and deliver more to the future!



Cooperation



Key Partners in Singapore

80+
Brands

100+
Stores



Core Tech

About Us



PUDU SLAM



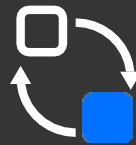
3D PERCEPTION & AVOIDANCE



PUDU SCHEDULER



PUDU OS



MULTI-MODAL INTERACTION



PUDU CLOUD

Hardware Advantage



Linkage Suspension

- Shock-absorbing design: easy to overcome obstacles
- Advanced servo motor drive and control algorithm: enable the robot to deliver liquid like soup and drink
- Newly strengthened motion control highly improved Kinesthetic Intelligence



Lidar

- Life time: 50000 Hours
- Measurable frequency: 10000-18000Hz
- Scanning frequency: 5-12Hz
- Measurable radius: 0.12-25m
- Tailor-made to support strong sunlight
- Scanning angle: 360°
- Angle resolution ratio: 0.12-0.16°
- Overall dimension: $\Phi 72 \times 41$ mm



Intel RGB-D Sensor

- INTEL® REALSENSE™ Technology enables robot to turn in any angle
- Stop immediately when confronting obstacles
- Go directly after turning

Product & Service Introduction

- PuduProduct Matrix
- Competitor Analysis
- Customization Service
- After Service

Product



Delivery Robot

PuduBot
Intelligent Delivery Robot



Delivery Robot

BellaBot
Premium Delivery Robot



Delivery Robot

PUDU HolaBot
Pager & Notifications Delivery Robot



Delivery Robot

KettyBot
Flexible Multitasker



Delivery Robot

SwiftBot
Versatile Delivery Robot



Delivery Robot

FlashBot
Building Delivery Robot



Cleaning Robot

PUDU CC1
Intelligent Commercial Cleaning Robot



Cleaning Tool

PUDU SH1
Commercial Floor Scrubber



Disinfection Robot

Puductor 2
Disinfection Robot

Product



PuduBot

Intelligent Delivery Robot

- Large capacity with 7-layer adjustable tray
- 6 delivery modes for different purposes
- Deliver safely with built-in 3D obstacle avoidance sensor
- Deliver steady with auto-independent linkage suspension

Delivery Mode

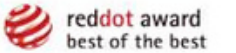
Cruise Mode

Return Mode

Birthday Mode

Direct Delivery

Special Mode



Feature

Product



Practical

Large capacity, fast movement and easy use with efficiency



Affordable

Only \$5 cost per day



Secure

Not run into others and no spillout



Easy

Require no extra maintenance except charging



Durable

73,000km durability test



Service

7*24 support at hundreds of outlets nationwide

BellaBot

Premium Delivery Robot

- Large capacity with 4-layer induction tray
- Interact with the robot by touching
- Replace battery anytime
- Easy to navigate without markers

Delivery
Mode

Cruise
Mode

Dish Return
Mode

Birthday
Mode

Direct Delivery

Escort Mode



Feature

Product



Dual SLAM Navigation Technology

Support both Marker Positioning and Laser Positioning



Interactive LED

Intelligent light interaction technology



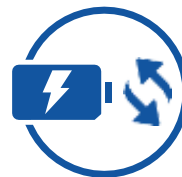
VividExpressions

Cat-like expressions and features



Touch Interaction

Respond differently to different touch



Exchangeable Battery

Enables working in 7x24hours



SensorTray

Real-time delivery situation



3D Obstacle Avoidance Sensors

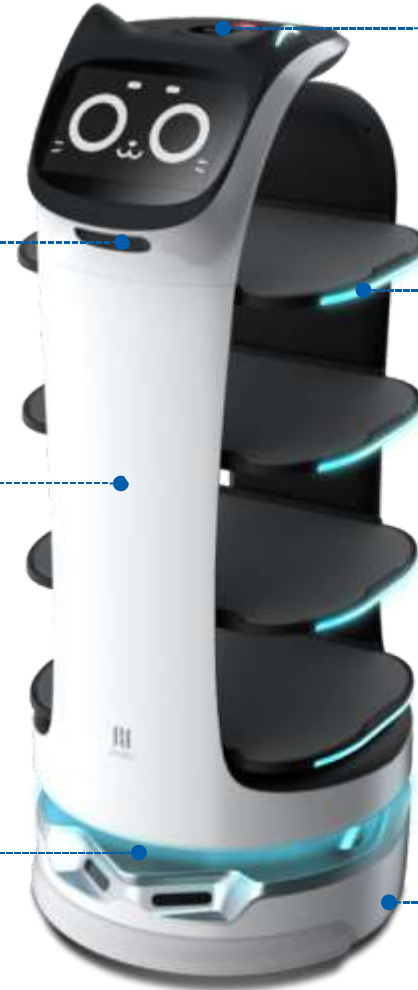
Comprised of the RGBD camera on BellaBot's neck and two sets of cameras on its chassis, which provide BellaBot with full-dimensional perception

ABS Industrial Plastic/Aviation-Grade Aluminum Alloy

Structurally stable, oxidation-resistant, and corrosion-resistant

All-New Lidar

Customized lidar with more accurate detection



Visual Camera Positioning

The infrared camera on top of BellaBot provides real-time positioning in order to create a complete visual positioning solution

Infrared Induction Tray

An original new induction tray which intelligently perceives the tray's load, and ensures higher efficiency of distribution

All-New Independent Suspension

Auto-level independent linkage suspension system with high effectiveness to avoid bumps

Product Specification

| | |
|----------------------|-------------------------------------------------------------------|
| MachineDimension | 565*537*1290mm |
| MachineWeight | 59kg |
| Battery Capacity | 25.6Ah |
| Release Battery | The battery can be removed and replaced to ensure continuous work |
| Battery Life | 12-24h (Replaceable Battery) |
| Location Positioning | Support both Marker Positioning and Laser Positioning |
| Charging Time | 4.5h |
| Cruise Speed | 0.5-1.2 m/s(Adjustable) |
| Load Capacity | 10kg/tray |
| MachineMaterial | ABS/Aviation-grade aluminumalloy |



Bellabotwork flow in Restaurant

Product



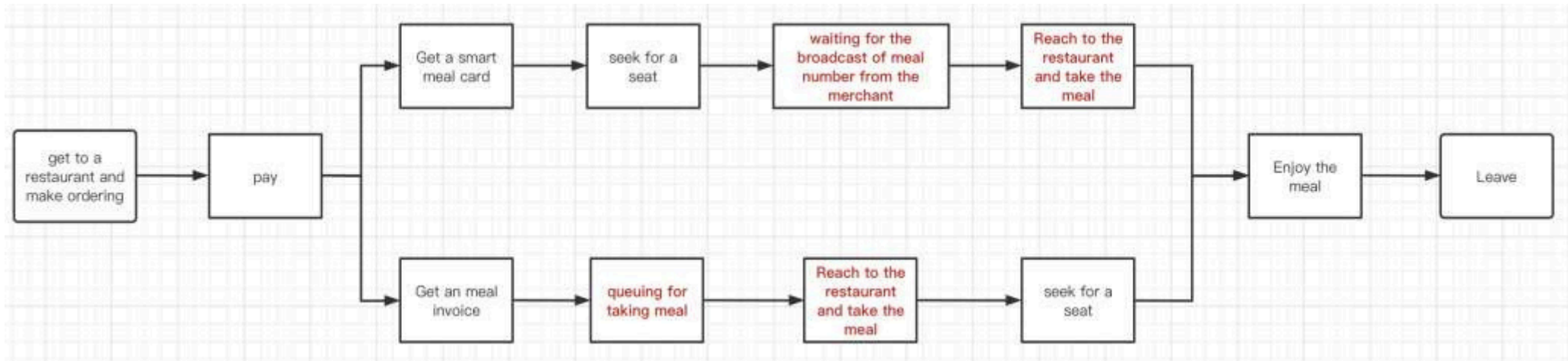
Bellabot Food court & QSR Solution

Product

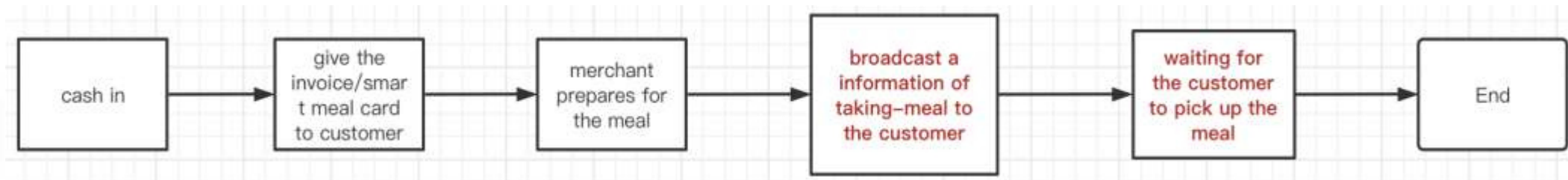
Now Poor Experience



Customer



Store attendant

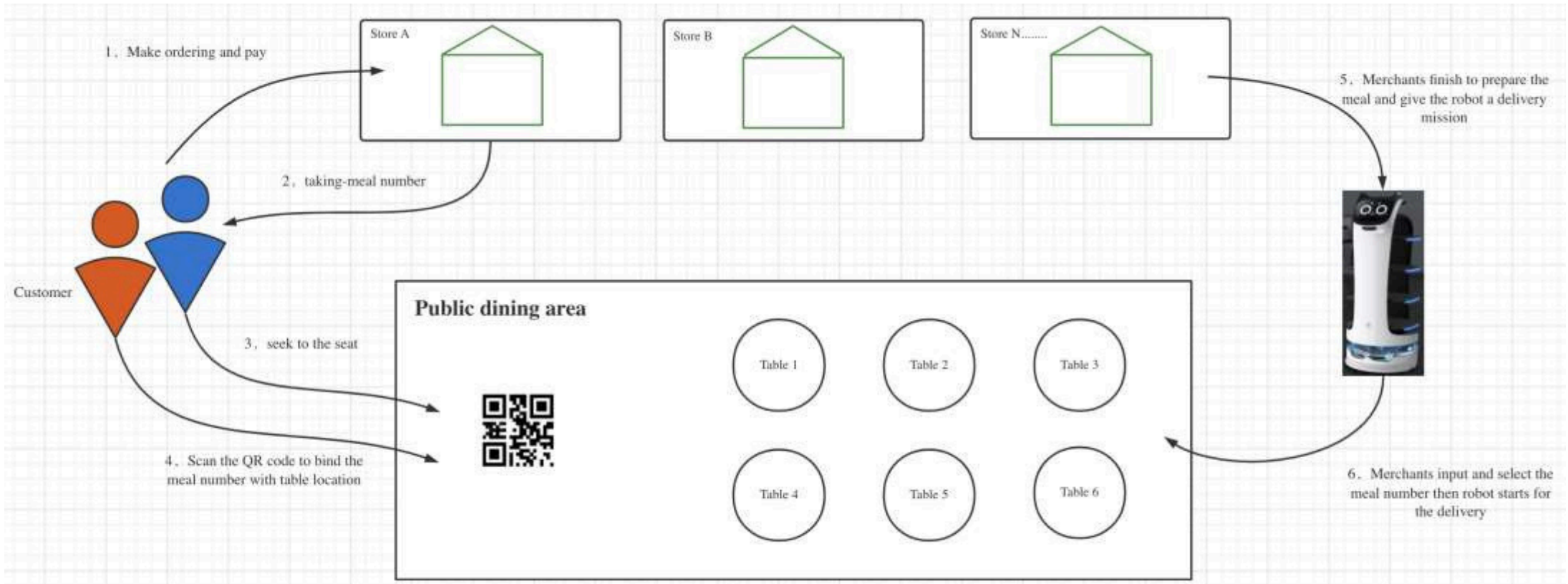


Bellabot Food court & FFF Solution

Product

FEATURES:

- Take into account the flexibility of the waiter and the efficiency of the robot
- Improve the customer's meal service experience
- Reduce the work pressure for the waiter



HolaBot

Pager & Notifications Delivery Robot

- Greatly improve plates collection efficiency
- Large load capacity up to 60kg
- Easily controlled by a smart watch
- Contactless and safe delivery



Feature

Product



Large Load Bearing

60kg large load capacity



Pager Function

Order in flexible position



Air Motion

Simply wave hand to tell the robot to leave



Voice Recognition

Omnidirectional six-mic array to locate sound source in realtime



Autonomous Navigation Planning

After the destination is set, the robot can plan an appropriate path by itself



IPX5

IPX5 waterproof inner cabin

3D Obstacle Avoidance Sensor

The RGBD camera at the neck part makes 3D obstacle avoidance acute

All-aluminum Body

Aviation-grade aluminum alloy that is structurally stable, antioxidant and corrosion resistant

Brand New Laser Radar

Customized laser radar with better detection accuracy



Visual Camera Positioning

Top infrared camera for real-time positioning, set up the complete visual positioning solution

60KG Large Carrying Capacity

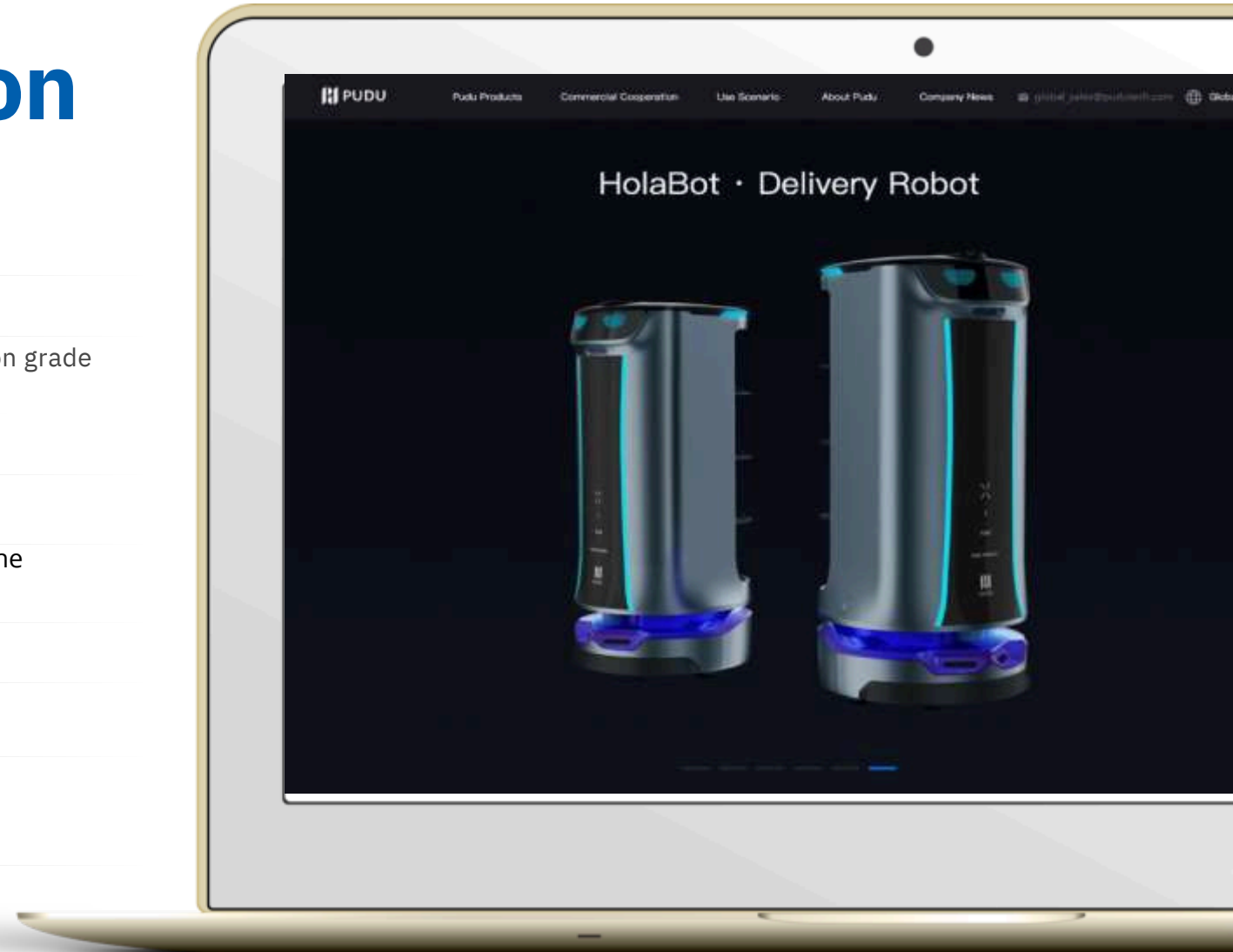
4 tier loading zone, with adjustable trays level

Auto-level Independent Linkage Suspension

Auto-level independent linkage suspension easily dealing with various of dump on the road

Product Specification

| | |
|-----------------------------|---------------------------------------------------------------------------|
| MachineDimension | 542×534×1226mm |
| MachineWeight | 55kg |
| MachineMaterial | ABS engineering plastics/ Aviation grade aluminium alloy |
| ChargingTime | 4.5h |
| Battery Life | 10-24h (ReplaceableBattery) |
| Battery Capacity | 25.6Ah (Safe levels of current in the human body) |
| CruiseSpeed | 0.5-1.2 m/s(Adjustable) |
| LoadCapacity | Max60kg |
| Capacity of Single LoadArea | Flat surface: 15kg/tray Obstacle crossing height of5mm: 10 kg/layer |



KettyBot

Flexible Multitasker

- Pass freely with 55cm left
- A walking AD display with 18.5"screen
- Easy to navigate without markers
- Work continuously for 8hours

| | | | | | |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <p>迎宾揽客</p> <p>葫芦化身迎宾服务员，主动揽客拉新，迎宾领位，缓解高峰期人手不足的痛点。</p> |  | <p>多桌配送</p> <p>一次配送，满足多桌，精理翘位，自主最优路径，让送餐变得多快好省。</p> |  | <p>巡航模式</p> <p>装载免费零食、饮料等在特定区域巡航，通过语音给提供客人服务信息及推广优惠</p> |  |
|  | <p>回盘模式</p> <p>回盘模式下小葫芦支持多桌回盘和巡航回盘，并自动返回洗碗间，助力门店快速翻台。</p> |  | <p>餐中服务</p> <p>顾客也能掌控葫芦，只需扫描桌面二维码即可呼叫葫芦前来服务。</p> |  | <p>生日配送</p> <p>葫芦可以为指定餐桌送上生日祝福和生日蛋糕，在机器屏幕上呈现特定的UI界面，并且播放歌曲等。</p> |





3D Obstacle Avoidance Sensor

Two sets of RGBD cameras on the neck and the chassis form a 3D obstacle avoidance

Visual Camera

The infrared camera on top of KettyBot provides real-time V-SLAM positioning and navigation

18.5" Large AdScreen

In-store marketing with a large ad display

Multi-functional Compartment

Two trays and a collecting box cooperate with each other to meet a variety of usage scenarios

Laser Slam

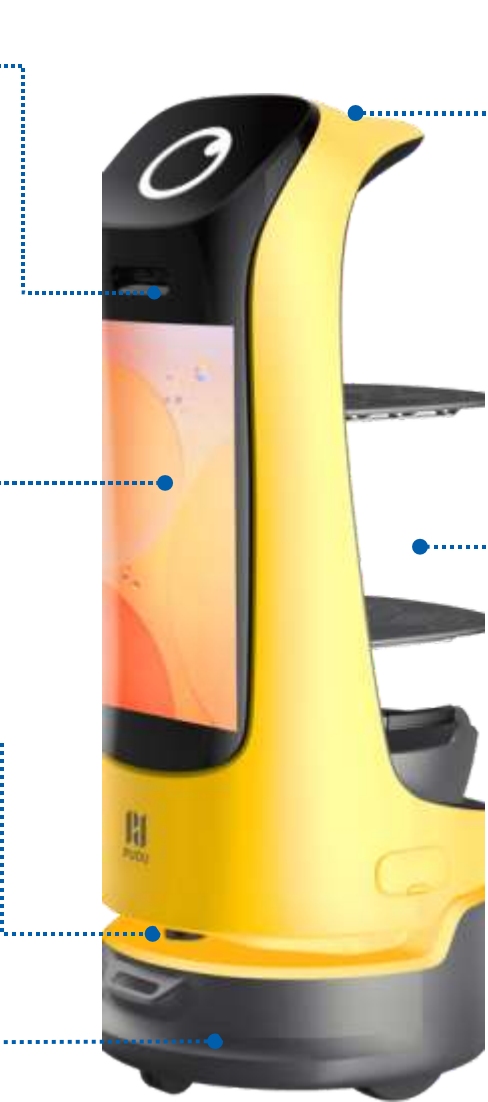
Laser slam and visual slam dual solution

The Removable RearCover

KettyBot features two forms enabled by the removable trays and rear cover

Independent Suspension

Auto-level independent linkage suspension system with high-efficiency on bump avoidance



Feature

Product



Superior Mobility



Customized Advertisement



Customer Attraction



Greeting & Escorting



AI Voice Interaction



Multiple Delivery Modes



Automatic Charging



Automatic Task Setting



呼叫服务员
(coming soon)

NEW

Suggested solution for Resaturarant



Kettybot Accessories

Product

托盘格挡
配送物品更安心

菜罩
封闭配送更卫生

KT 置物架
产品展示更鲜艳

防洒杯托
杯装饮料不倾洒

可乐杯托
瓶装饮料不倾倒

Rich selection of accessories to meet the needs of more subdivided scenes



Suggested solution for Retail

Product



SwiftBot

Versatile Delivery Robot

- Excellent performance in highly dynamic and complex environment
- Initiatively detect passer-by and give way to pedestrian
- Industry-first laser projection interaction of delivery robot
- Automatic electric door to secure hygiene, safety and privacy
- Support Pudu Pager and remote calling
- Excel in IoT capability and function expandability





Omnidirectional Perception Capability

Comprehensive utilization of sensing technology to secure safe deliveries

Innovative Projection Interaction

One step door control
Real time path projection
Machine status indicators
Pattern interaction in special modes

Electric Gull-wing Door

Secure safety, preserve privacy



Extendibility

Type-C/4G/LORA/Wi-Fi compatible

Initiative Make-way for Pedestrian

Improving efficiency and performance in rush hour

Mission at-1-call

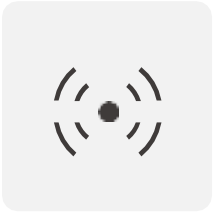
Support PUDU Pager and PUDU Link

Automatic Charging

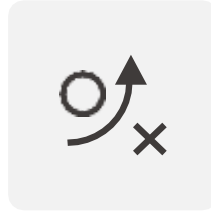
Intelligent Auto-charging for all-day-long service

Feature

Product



Omnidirectional
Perception Capability



Initiative Make-way
for Pedestrian



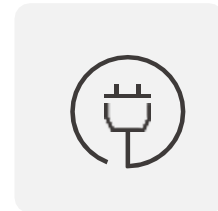
Innovative Projection
Interaction



Multiple Interaction
Modes



Multiple Serving
Modes



Automatic
Charging



IoT Functionality



Mission at-1-call



Cup Holder

Product Specification

| | |
|-----------------------------|-----------------------------------------------------|
| MachineDimension | 488*593*1281mm |
| MachineWeight | 59kg/49kg |
| MaximumLoads | 35kg |
| Trays | Size:433*502mm Default3*trays Maximum 5*trays |
| Battery Life | permachine 10h-24h |
| Charging Time | 4.5h |
| Path Clearance | Min80cm |
| Cruise Speed | 0.5-1.2m/s |
| Obstacle Negotiation Height | 2cm |
| Climbing Angle | 5° |
| Door-opening Method | Automatic |
| Positioning Method | Marker & Laser |
| Dispatching | Max 20Robots |
| Charging | Wire orAutomatic |
| Obstacle DetectionAngle | Front260° Back 180° |



Flash Bot

Building Delivery Robot

- Call and take elevator automatically
- Greeting and check-in guidance
- Room delivery with adjustable compartment
- Automatic charging



RGBD Depth Camera

One RGBD camera on the neck for 3D obstacle avoidance

Laser SLAM

Laser slam and visual slam dual solution

2*RGBD Cameras

Two sets of RGBD cameras make positioning and navigation more accurately

Charging Connector

Charge itself automatically after instruction



10.1" TouchScreen

Receive information and interact with the robot via the screen

Gull WingDoor

Look uniquely with special door design

Indicator Light

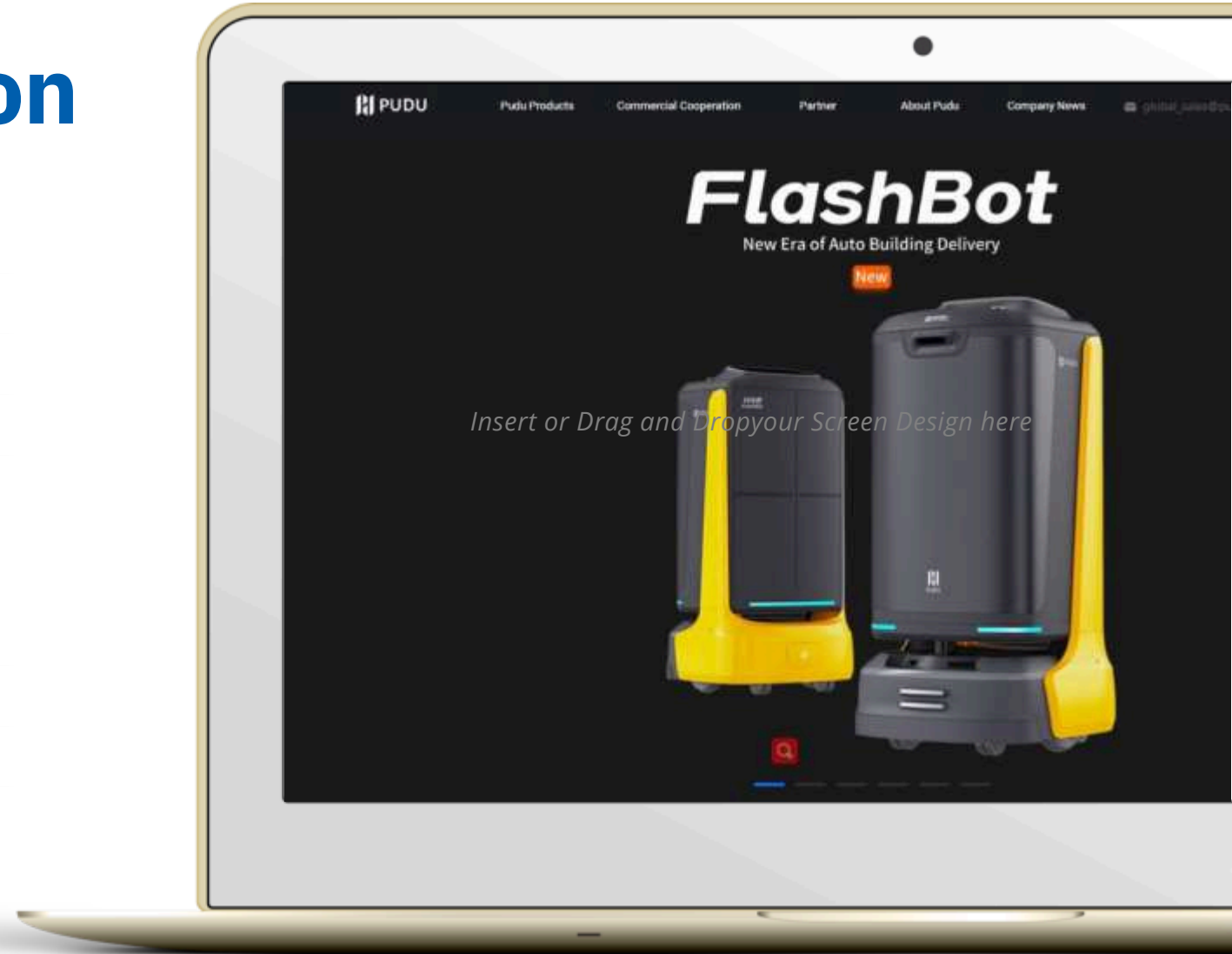
Front and rear indicator lights bring more sense of modern technology, lighting in a dark environment

Six-wheel Independent Suspension

Auto-level independent linkage suspension system with high-efficiency on bump avoidance

Product Specification

| | |
|------------------|--------------------------------------------------|
| MachineDimension | 539*515*1050m |
| MachineWeight | m 55kg |
| LoadCapacity | 15 kg/layer, Max30kg |
| MachineMaterial | ABS/Aviation-grade aluminumalloy |
| CompartmentSpace | 2-4 compartments (Adjustable) |
| | 219*410*286mm (Single) 438*410*286mm (Double) |
| ChargingTime | 4.5h |
| BatteryLife | 12h |
| ChargingMode | Automatic Charging |
| CruiseSpeed | 0.5~1.5 m/s(Adjustable) |



Feature



Auto Building Delivery Service

Automatic, contactless delivery of customer-ordered items and takeaways across floors.



Greeting and Escorting

Check-in guidance is provided based on optimal path planning and voice announcements.



Auto Elevator Taking

Powered by IoT technology, FlashBot calls and takes the elevator automatically for delivery across floors.



Auto Charging

FlashBot charges itself automatically when its battery is running out.



AI Voice Interaction

Smart robot control is possible with a variety of voice commands. Operation is now easier than ever.



Arrival Notification

FlashBot provides arrival notifications by phone calls and sends a pickup code for customers to pick up the deliveries.

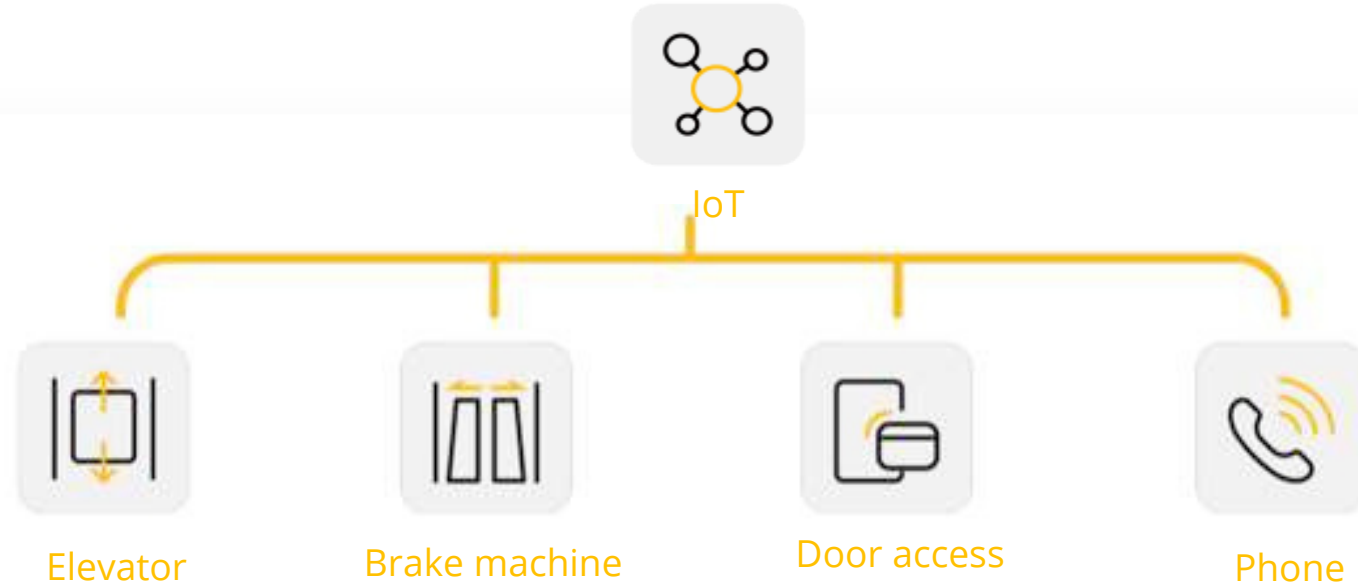
FlashBot• Building Delivery Expert

- IoT technology



- Safe and efficient
- Advanced digital management

What makes FlashBota building delivery expert?



Flashbotis coordinated with elevator, gate, access control and other communications in the building, and can automatically control the gate, pass through the gate, take the elevator, and independently complete cross-floor distribution tasks

Upgraded Auto-Level Suspension



The newly upgraded auto-level **6-wheel** independent linkage suspension can adjust the damping based on different floor conditions, so that the robot can always remain in the optimal stable state.

Surmount obstacles of **2 cm** high and gaps of **3.5 cm** wide, offering **50%** higher operating stability.

3D Obstacle Avoidance



3 RGBD cameras & customized lidar empower FlashBot with sensitive perception to detect obstacles as low as **3 cm** and suspended obstacles at a height of **70 cm** from the floor, making it ideal for dynamic environments with many obstacles.

70 CM Superior Passability



With a minimum clearance of **70 cm**, FlashBot can navigate through the passages in **99.9%** of building scenarios.

Product Advantages

Product



Modular Adjustable Compartment

The multi-functional compartment maximizes space utilization, enabling FlashBotto perform multiple tasks with a single tap.



UV Sterile Compartment

The compartment features a UV germicidal lamp that offers a sterilization rate of up to 99.9%.

Product Advantages



Laser Positioning and Navigation Tech.

FlashBot adopts Laser SLAM which supports unlimited heights and does not require location code stickers. It supports multiple starting points and simple to deploy.



Multiple Robot Cooperation

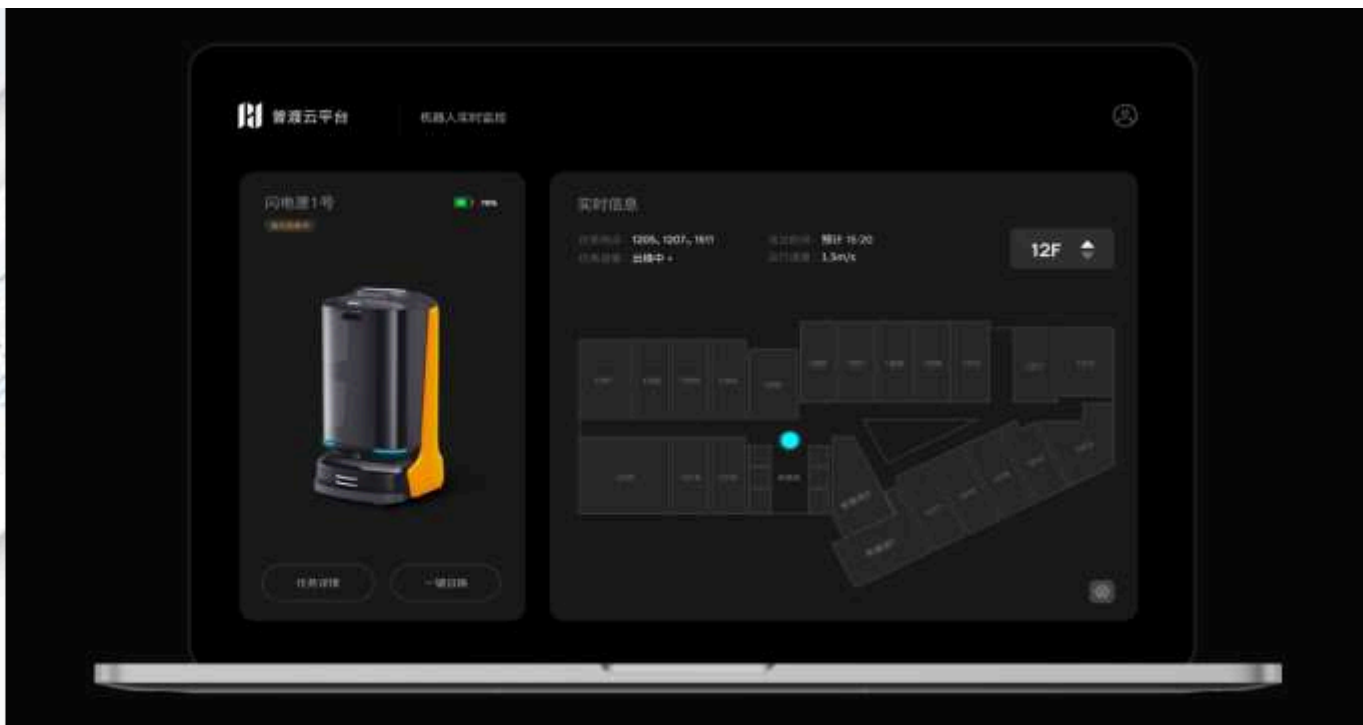
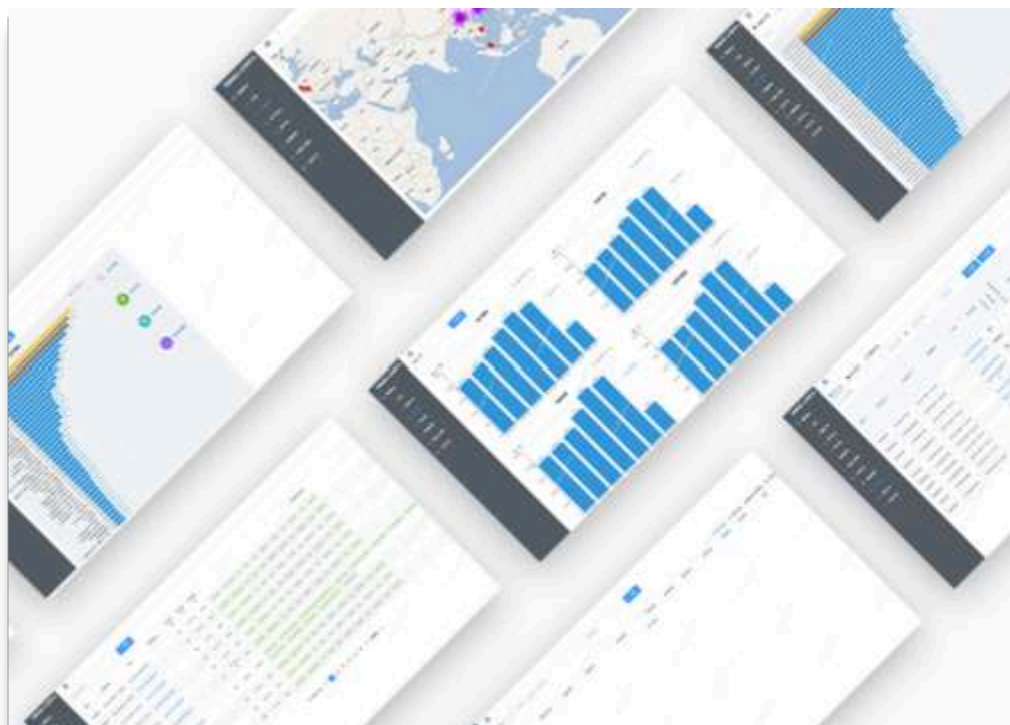
Powerful ad hoc network allows FlashBotto adapt flexibly to dynamic environments and schedule more than 20 robots to work together.

Product Advantages

Product

Digital Hotel Transformation

PUDU CLOUD platform uploads the operating status and data of each robot in store 24*7, collects business data in real-time, generates data reports automatically, monitors the operation of robots, and upgrades the robot software remotely, driving the digital transformation of hotels.



Operation Process

Product

Staff



Received demand from customer



Call robot



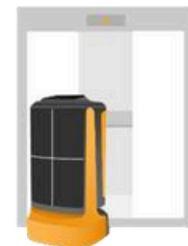
Placing items



Robot



Sending arrival notification

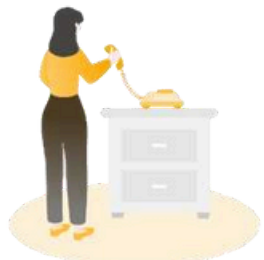


Auto elevator taking



Auto delivery

Customer



Receiving code



Picking up



Returning

Product Values · Manager

Product

Manager

Optimized Staffing and Reduced Costs



- Robot-human collaboration frees the staff from the repetitive and tedious work, optimizing the staffing for each position and bringing significant cost savings.

Enhanced Competitiveness with Differentiation



- Digital management and remote real-time monitoring allow for optimized accommodation services.
- Innovative services differentiate the brand from traditional hotels.
- The new OTA encourages customers to promote the hotel, which helps attract more potential customers.

Improved Accommodation Service Quality



- 24*7 contactless delivery and quick response to customer needs at any time create an excellent and safe customer experience.
- FlashBot frees the staff from the repetitive and tedious work, allowing them to focus more of their time and efforts on serving customers better.

Supplies Allocation Adapted to Customer Needs



- The allocation of supplies can be optimized based on the automatically generated report of supplies delivered. This helps prevent waste and enables a cost-effective solution.

Staff



Reduced Workload and Pressure

- Repetitive and tedious work ↓
- Night shift requirements ↓
- Workload and pressure ↓



Improve Job Satisfaction

- A happier team translates to an elevated customer experience.
- High-quality service improves customer satisfaction.
- Reduction in customer complaints, in turn, enhances employee engagement.



Redefined Employee Values

- Staff feels valued when they are relieved from repetitive and strenuous tasks. Customers can be served in the best way possible.
- Staff can gain recognition from customers and their managers for their excellent performance, thus improving job satisfaction.

PUDU CC1

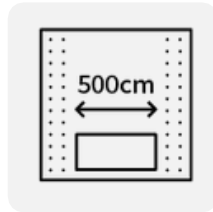
Intelligent Commercial Cleaning Robot

- Stable efficiency and higher quality of cleaning
- Lower recruitment, training and management costs
- Reduce employee injuries and absences
- Easily deal with custodial inspections with digital reports

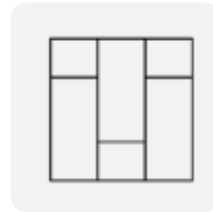




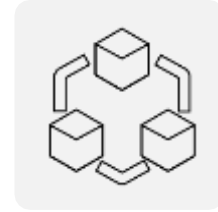
Four-in-one
Cleaning



500mm Wide Cleaning
Area



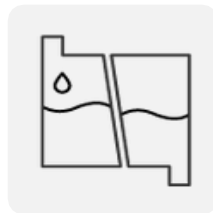
Suit Various Floor Types



Multi-machine
Intelligent Scheduling



Digital Cleaning



Automatic Water
Addition & Drainage



Automatic
Charging



Automatic Localization &
Navigation



Versatile Cleaning

Four-in-one cleaning robot
(Scrubbing, Sweeping, Vacuuming, Mopping)

Easy-to-install Workstation

Large water tank capacity
Automatic water addition/drainage

Multi-Machine Intelligent Scheduling

Systematic operation of robots in
office buildings and residences

Suit Various Floor Types

Suitable for both hard floor and soft carpets



Automatic Location & Navigation

Equipped with PUDU SLAM, perform tasks
more efficiently in complex environments

Extra-long Run-time for cleaning

4 hours fully charged, 5 hours battery life,
guarantee cleaning time and frequency

Digital Cleaning

Remote operation via APP,
automatic generation of cleaning reports

Product Specification

| | |
|--------------------|---------------------------------------------|
| MachineDimension | 663*568*682mm |
| MachineWeight | 60kg |
| SweepingWidth | 500mm |
| ScrubbingWidth | 400mm |
| Water TankCapacity | Clean Water Tank 15L Waste Water Tank17L |
| ChargingTime | <4h |
| Run-time | Max 9h |
| CleaningEfficiency | 700-1000m ² /h |
| CruiseSpeed | Max 1.2m/s |
| Local Interaction | 10.1-inch touchscreen |
| PositioningMethod | Visual + LaserPositioning |



Key features to be introduced while demo

1. Pudubot: Delivery, Birthday mode
2. Bellabot: Escorting, Delivery, Battery exchange, Tray sensing
3. Kettybot: Customer attraction, Escorting, Digital queue system
4. Holabot: Dish collection, Paging
5. Flashbot: Roomservice delivery, auto-charging, lift integration, turnstiles integration
6. CC1 : Automatic cleaning function, manual cleaning function
7. Puductor2 : Fast disinfection, Fixed point disinfection, Cruise disinfection

Customized Services

Create Your Exclusive BellaBot

Customized Appearance



Enhanced Promotion

- Go harmony with the vibe of the restaurant
- Greater brand and service exposure

3-day production

- Modular production (needs confirmation-design-launch) takes 3 days at the fastest

Customized Voice Pack



Cutegirls



Cuteboys

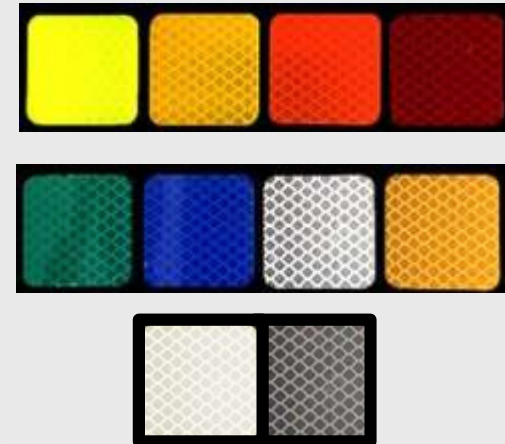


Sweetgirls



Active boys

Multicolor Marker



Notes: The colors are subject to the actual marker

Customized Services

Robot Skin Show Case



KFC PIERWSZY W POLSCE ROBOT
OSTARCZAJĄCY JEDZENIE -
PRAWDZAM JAK DZIAŁA



Customized Services

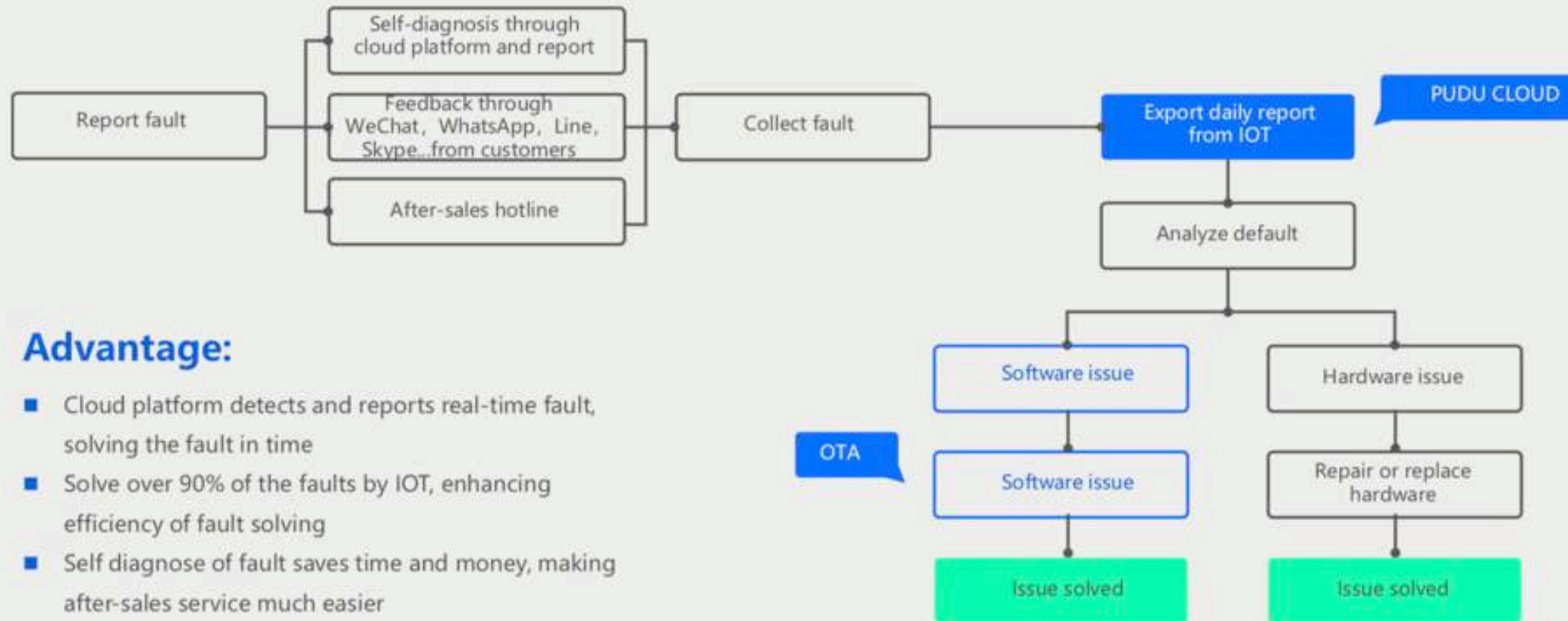
IOT Integration



Beeper calling

After Services

- Online Service: IoT (The Internet of things) solves more than 90% of technical problems



Advantage:

- Cloud platform detects and reports real-time fault, solving the fault in time
- Solve over 90% of the faults by IOT, enhancing efficiency of fault solving
- Self diagnose of fault saves time and money, making after-sales service much easier

PuduCloud Platform



PUDU Platform

- Upload delivery data in 7x24 hours, making digital management for restaurant much easier
- Connect all the robot with IoT and PUDU Platform, which allows to collect real-time data, monitor operation of robot, upgrade software remotely and solve over 95% fault remotely

Operation Data management

Customized ADs content

Customized trigger words

ADs playing at arrival

Running mileage
116.82 KM

Number of tasks
1,838 times

Number of tables
3,000 tables

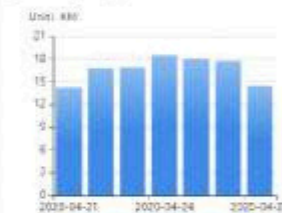
Number of trays
3,396 pieces

Task duration
90.74 s

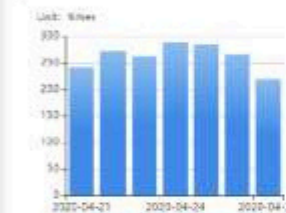
Average speed
0.73 m/s

Fault report
0 pieces

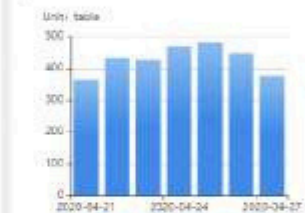
Running mileage



Number of tasks



Number of tables



Number of trays

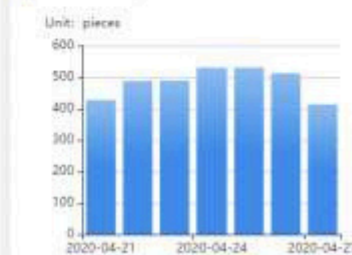
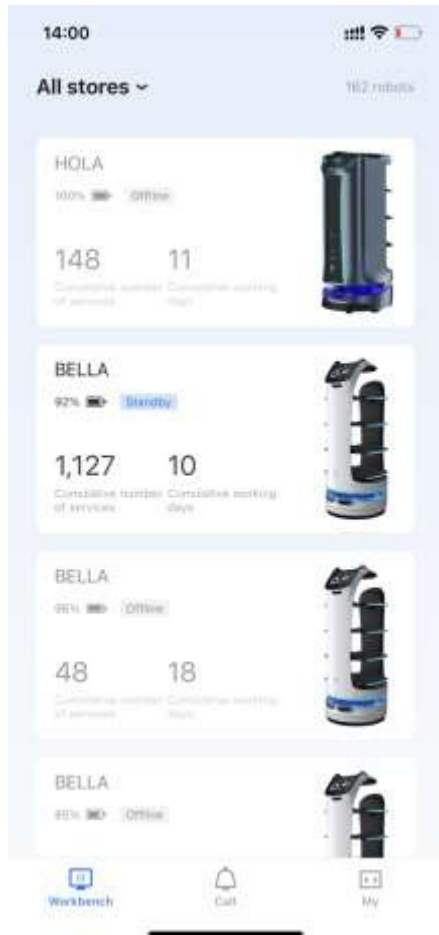


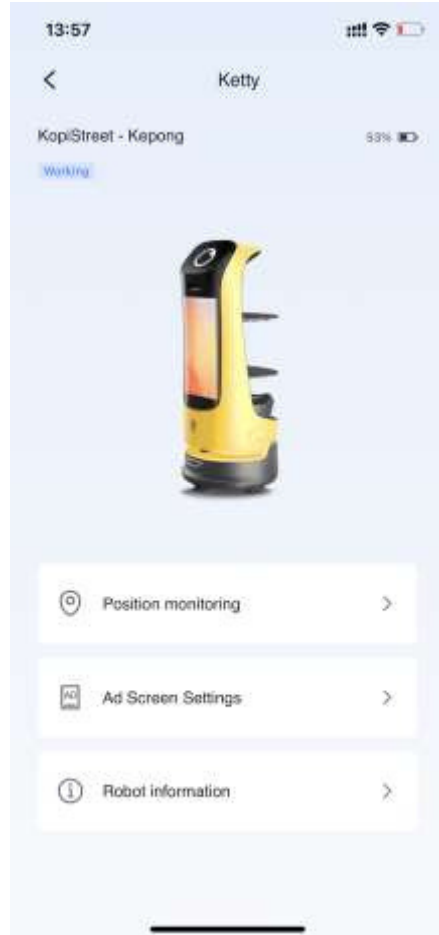
Table number times



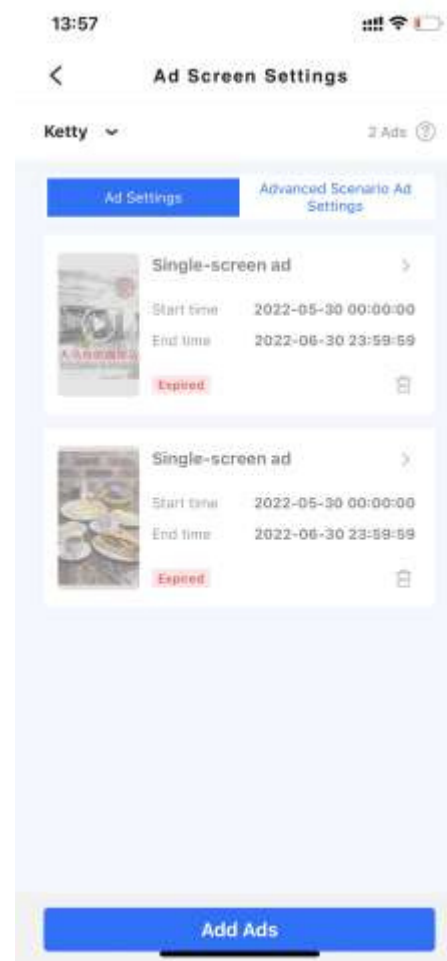
PuduLink App



All robot management control in your phone



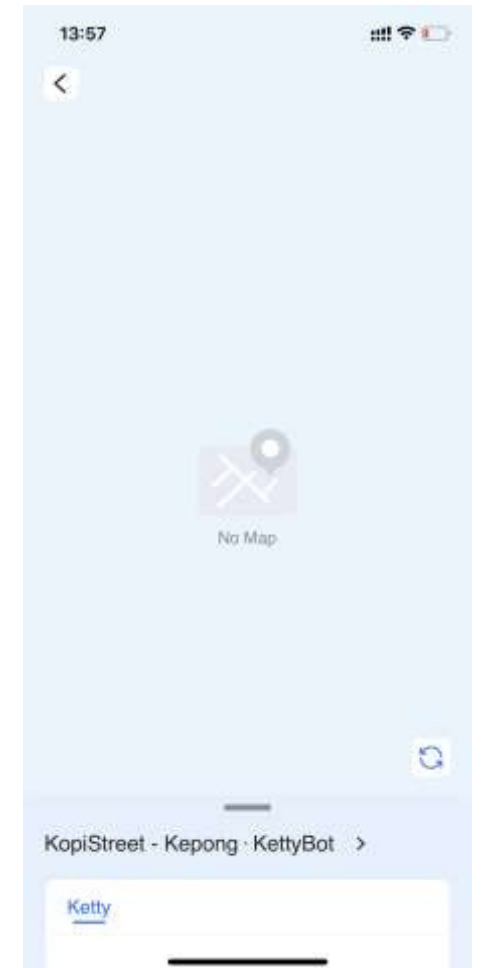
Easy to set Ads



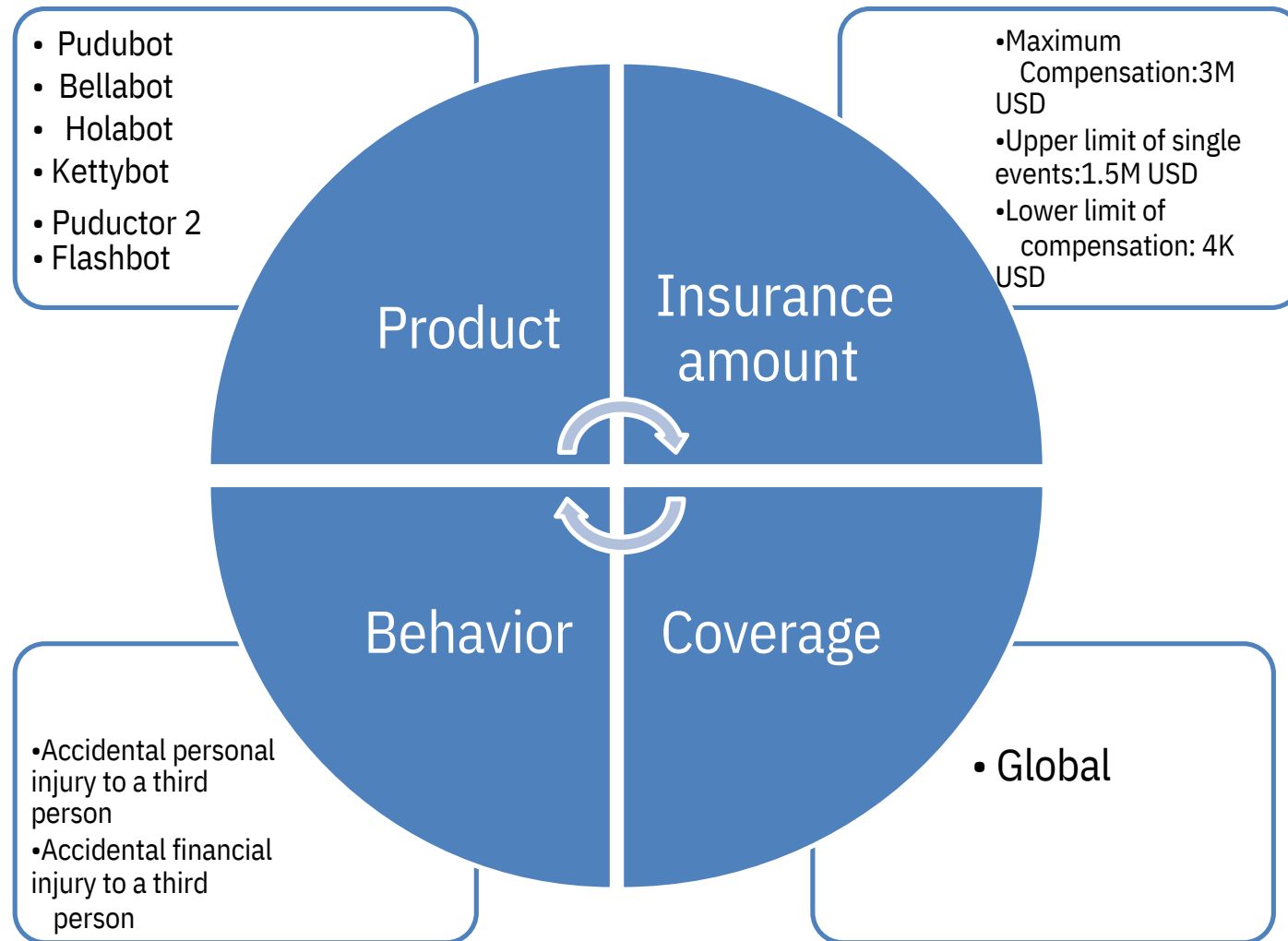
Robot Pagering



Position Monitoring



PuduLiability Insurance



Download link:

<https://mega.nz/file/hf4HSQJC#DNgpUd3ubKxyyAmf0txZ3oFTYpKnRVVBqFZW5hL8uxw>

Case Study

- Pudubot@Haidilao
- Bellabot@Johnny'sRestaurant
- Kettybot xMengniu
- Kettybot@Media Market

Case Studies



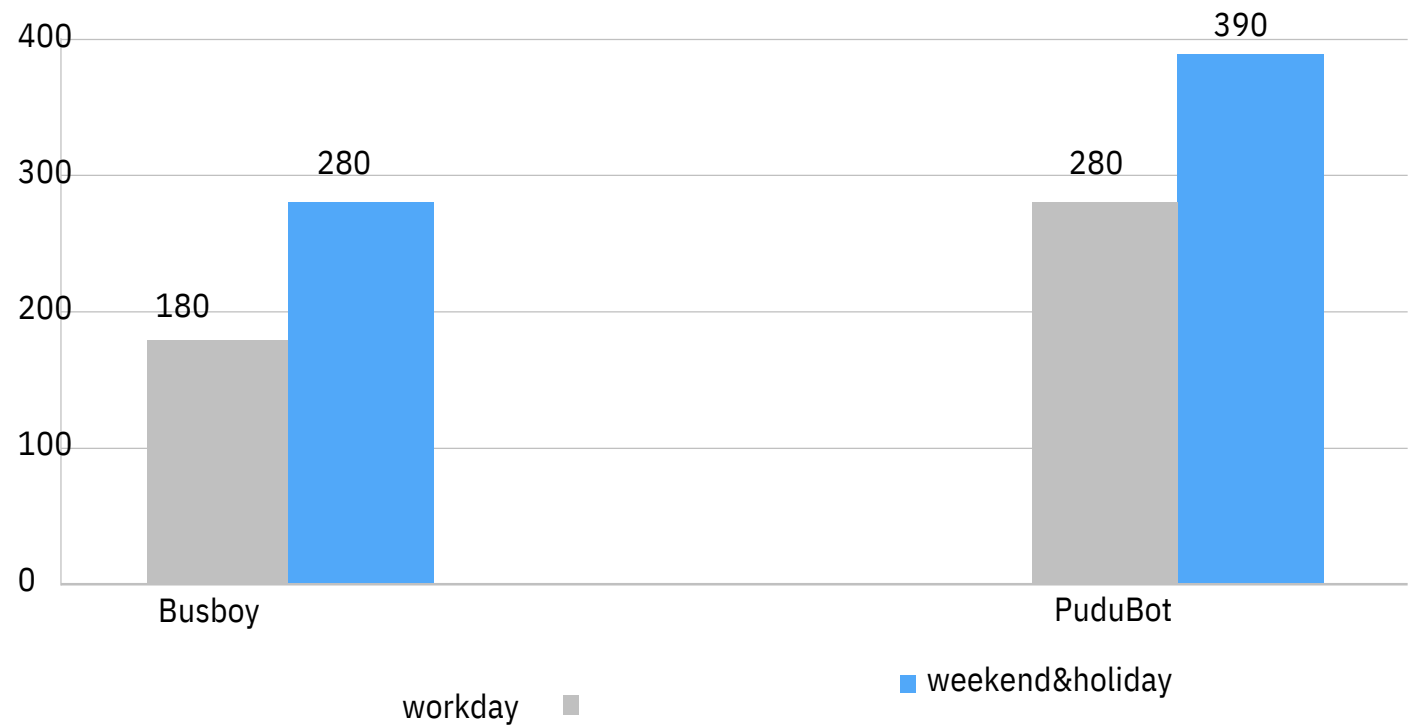
Haidilao Hotpot in Beijing

Shop area: 1800m²

Model: 2*Pudubot

Table Qty: 90

Comparison of average daily delivery tray number



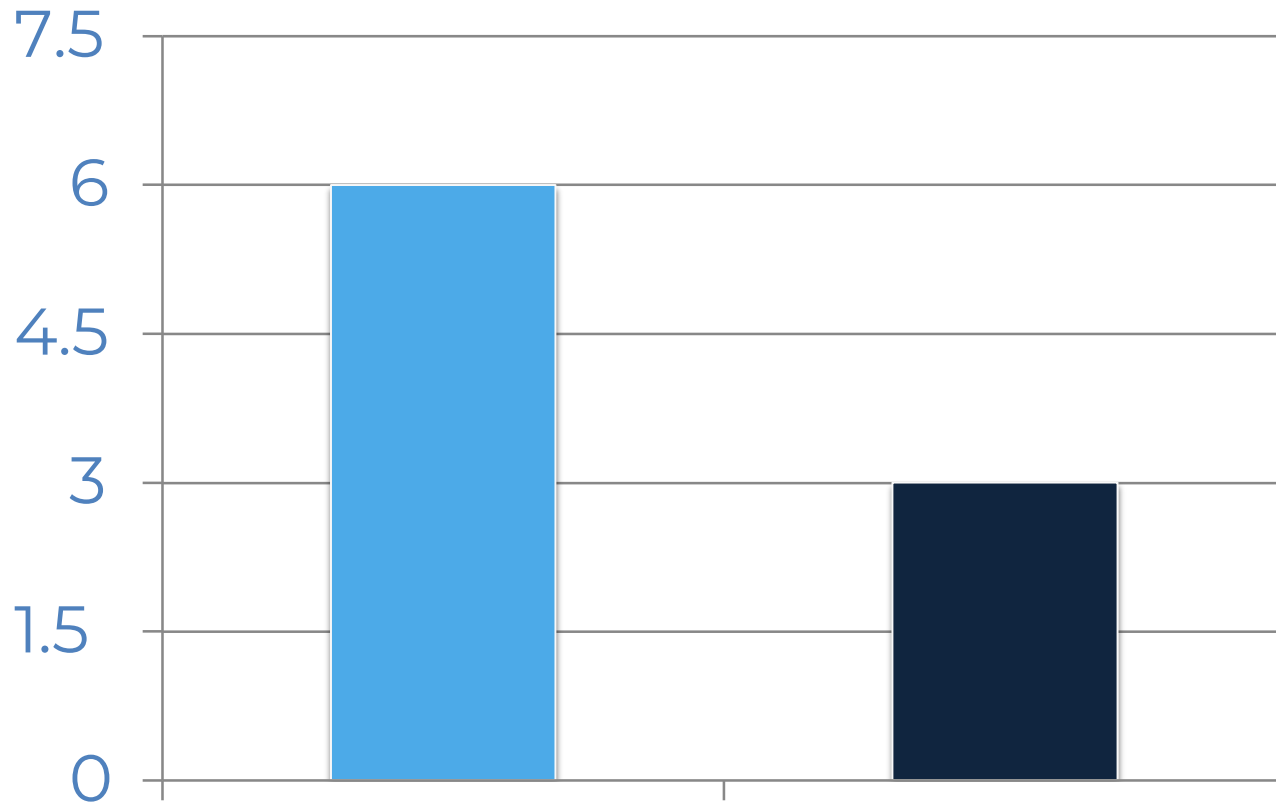
Case Studies

Working Efficiency Comparison

| Busboy | | | Pudubot | |
|---------------------------------------|------------|-----------------------------|---------------------------------------|------------|
| Delivery way | 2 try/time | about 1.5 Times ← | Delivery way | 4 try/time |
| Working day (tray/day) | 180+ | | Working day (tray/day) | 280+ |
| <u>Weekend&holiday</u> (Tray/day) | 280+ | | <u>Weekend&holiday</u> (Tray/day) | 390+ |

Case Studies

Manpower Optimization Summary



After the introduction of robots,
comparison of food delivery manpower

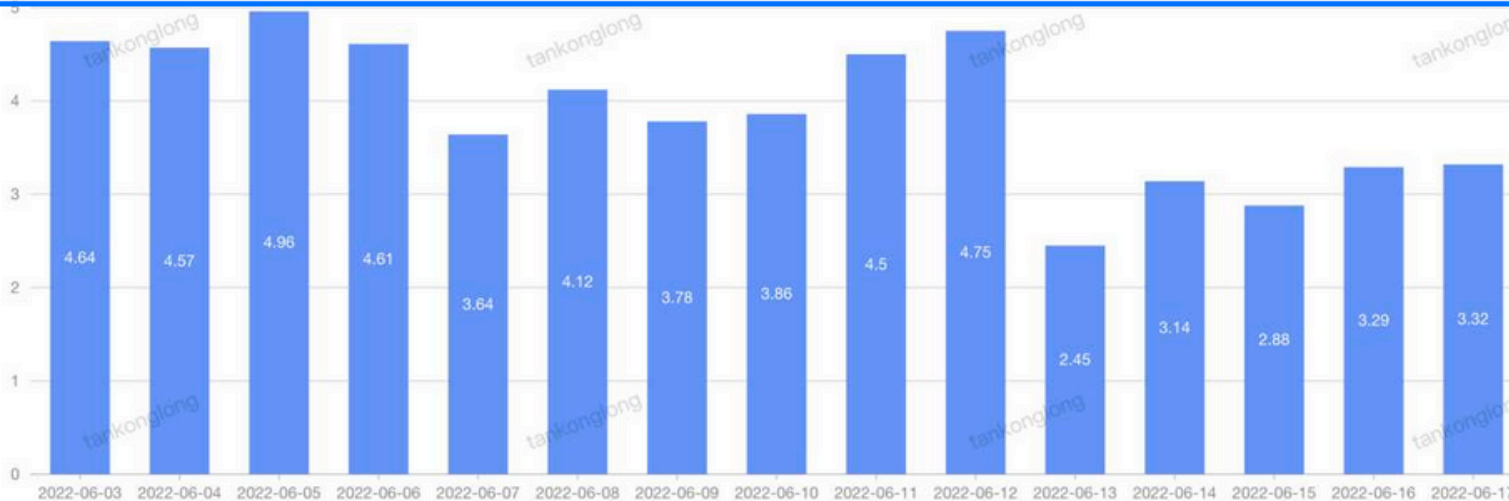
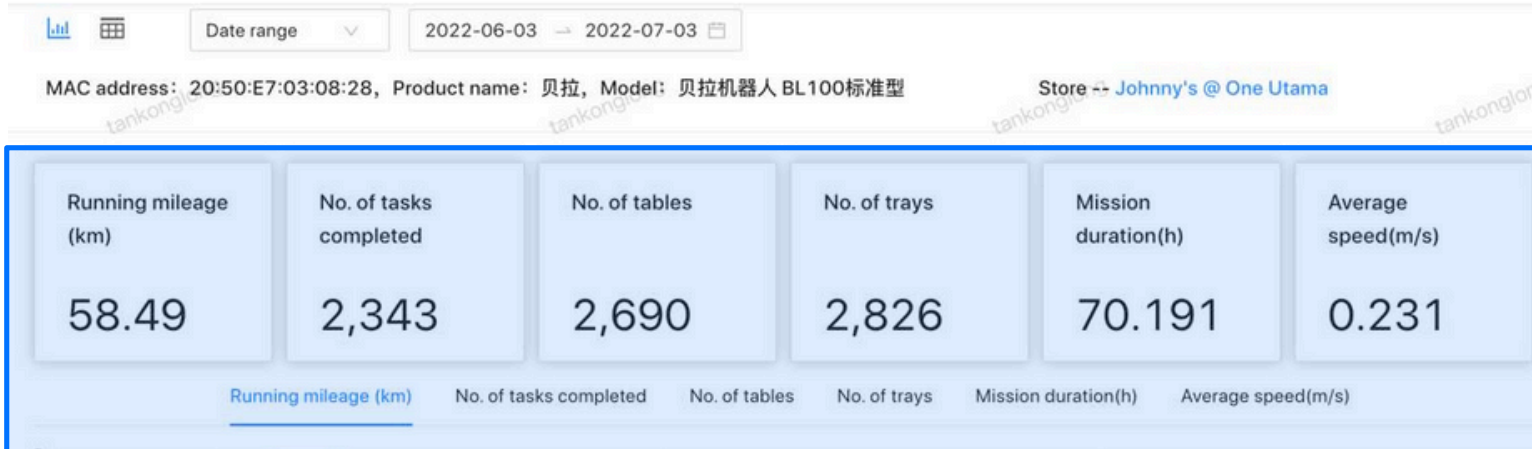
Within 2 months of robot operation
Food delivery manpower reduced by **50%**

Before: 6 busboy
Now: 2 sets of Pudubot+3 busboy(4 when busy)

Case Studies



Johnny's @ One Utama, 3rd Jun– 3rd Jul 2022



Johnny's Restaurants
Cuisine: Thai
No. of outlets: 48
Country: Malaysia

Main Issues:

1. High turnover rate
2. Manpower shortage

Solutions:
4 BellaBot

Case Studies

Johnny's @ One Utama, 3rd Jun– 3rd Jul 2022

| Running mileage (km) | No. of tasks completed | No. of tables | No. of trays | Mission duration(h) | Average speed(m/s) |
|----------------------|------------------------|---------------|--------------|---------------------|--------------------|
| 58.49 | 2,343 | 2,690 | 2,826 | 70.191 | 0.231 |

| | Average / day |
|------------------|---------------|
| Running Mileage | 3.6km |
| No. of Tables | 215 tables |
| Mission duration | 5.16 hours |

| 215 tables a day | |
|---------------------------------------------------------------------------------------------------|----------------------------------------|
| Employees | BellaBot |
| 2-3 employees | 2 units |
| 3 year Cost: SGD 2500 x 36 = SG 90000 <i>(including EPF, Socso, EIS, etc)</i> | 3 year cost: SG 45000 |

Case Studies



Introduction of Mengniu

China Mengniu Dairy Company Limited and its subsidiaries mainly manufacture and distribute quality dairy products in China. It is one of the leading dairy product manufacturers in China, with MENGNIU as its core brand. Mengniu offers diversified products including liquid milk products, ice cream, milk formula and cheese.

Machine Function

- Advertising & Guiding
- KettyBotwalks around the set area to attract & interact with visitors
- Dealer conference, large-scale exhibition on-site assistance

Case Studies



Product value calculation

Robot operation data (per day):

Mileage:2.6 kilometers

Running time: >4 hours

Customer approached:>2000 (Promotor:200)

Interaction duration:>1.2 hours

Interaction times:>140 times.

Compared with the traditional marketing model, Kettybotbroadcast advertising can strengthen consumer cognition, expand the brand influence;

The new marketing model can be more accepted as young people and children,whichcan also drive parents to consume;



Wider advertising range
more people approached

Introduction of Media Markt

Founded in 1979, Media Markt is a German multinational chain of stores selling consumer electronics, with more than 1,000 stores across and a sale of 21 billion euros in 2020.

Scenario

The store is very spacious with wide ranges of products. Media Markt expects KettyBot to support product search and navigation while attracting customers in the store.

Machine Function

- Advertising & Guiding
- Mobile shelves

Work Flow

- 1.KettyBot walks around & play ads
- 2.Consumers click the product on KettyBot'sscreen
- 3.KettyBot leads consumers to product shelf





T H A N K S



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