

ROBOTIC BALL PETRONUS

Group 12

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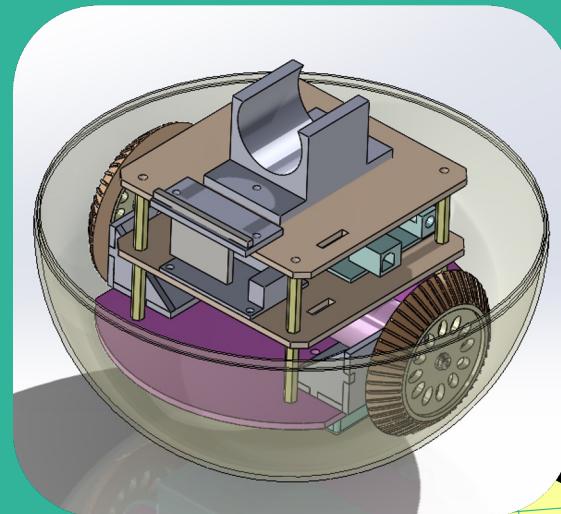
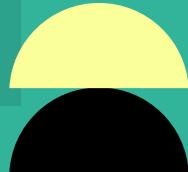


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01

Target Customer

Pet Owners in HK

- ❑ Busy pet owners with long working hours
 - unable to monitor safety of pets
 - seeking an assistive tool for entertaining & engaging with pets
- ❑ Tech-savvy pet owners





02

Customer NEEDS

MARKET SIZE

HK: 250,000 households (9.4%) keeping an estimated total of over 405,000 cats and dogs.

Global: pet care robots market generated \$1.41 billion in 2021 and is expected to garner \$3.65 billion by 2030.

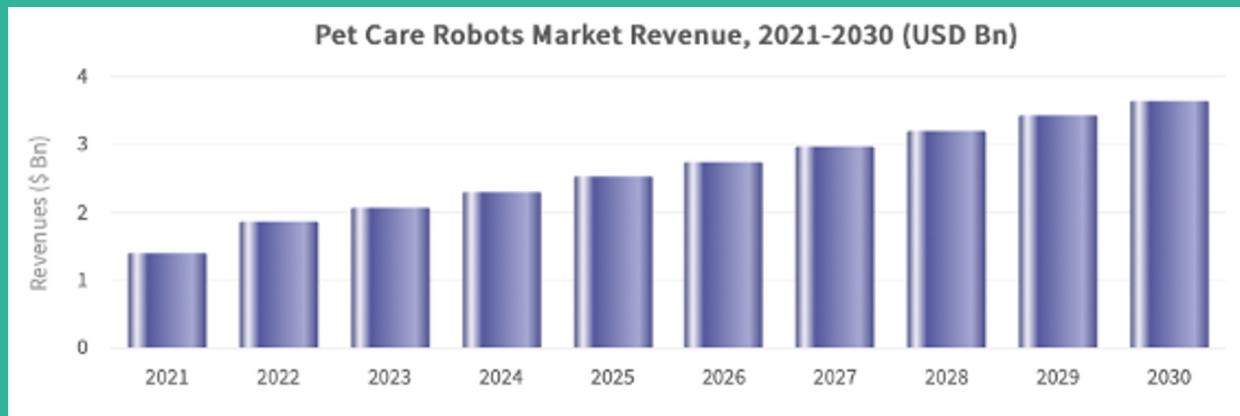


Figure by **Next Move Strategic Consulting**



Customer Needs



Real-time monitoring



Remote control



Catching pet's attention



Simple to use



03

Competitive Advantages



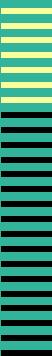
WHY US?

PETRONUS

Pet + Patronus = Your Pets' PETRONUS

*P: Perception
E: Environment
T: Teleoperation
R: Robotics*

*O: Operations
N: Navigation
U: Utility
S: System*



Functions

- ❑ Combination of entertaining toy and monitoring camera for pets

→ Competitors:
only consist of either one function

Location

- ❑ Company headquarter located in Hong Kong so easier for follow-up actions

→ Competitors:
Overseas companies

Technological Advancement

- ❑ Consist of AI/IoT technology

→ Competitors:
Without AI/IoT tech



04

Features and Functionality

Features

⋮
⋮
⋮

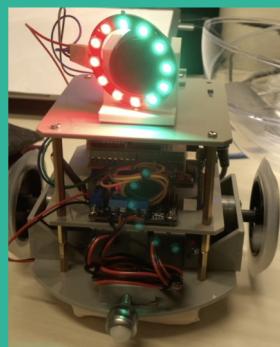
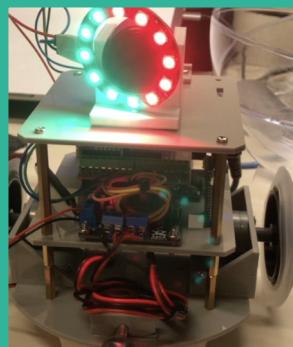
1. **Bluetooth**: Linking to mobile devices
2. **Mini camera**: Monitoring the real-time situation
3. **Music Player**: Playing music to the pets remotely through mobile devices
4. **LED lights**: entertaining with pets



Features

LED Lights

- Moving forward: green lights
- Moving backward: orange lights
- Turning left: left part displays green, right part displays red
- Turning right: left part displays red, right part displays green
- Spin: colorful lights
- Stop: red lights



Features

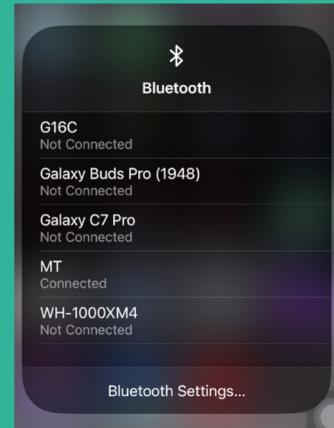
Camera

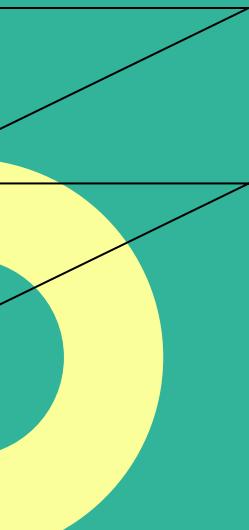
Car recorder configuration software



Music Player

Bluetooth Speaker





05

Cost & Profit



Cost & Profit

Electronic component cost: HKD 534

Mechanical component cost: HKD 120.5

Fix cost: HKD 100

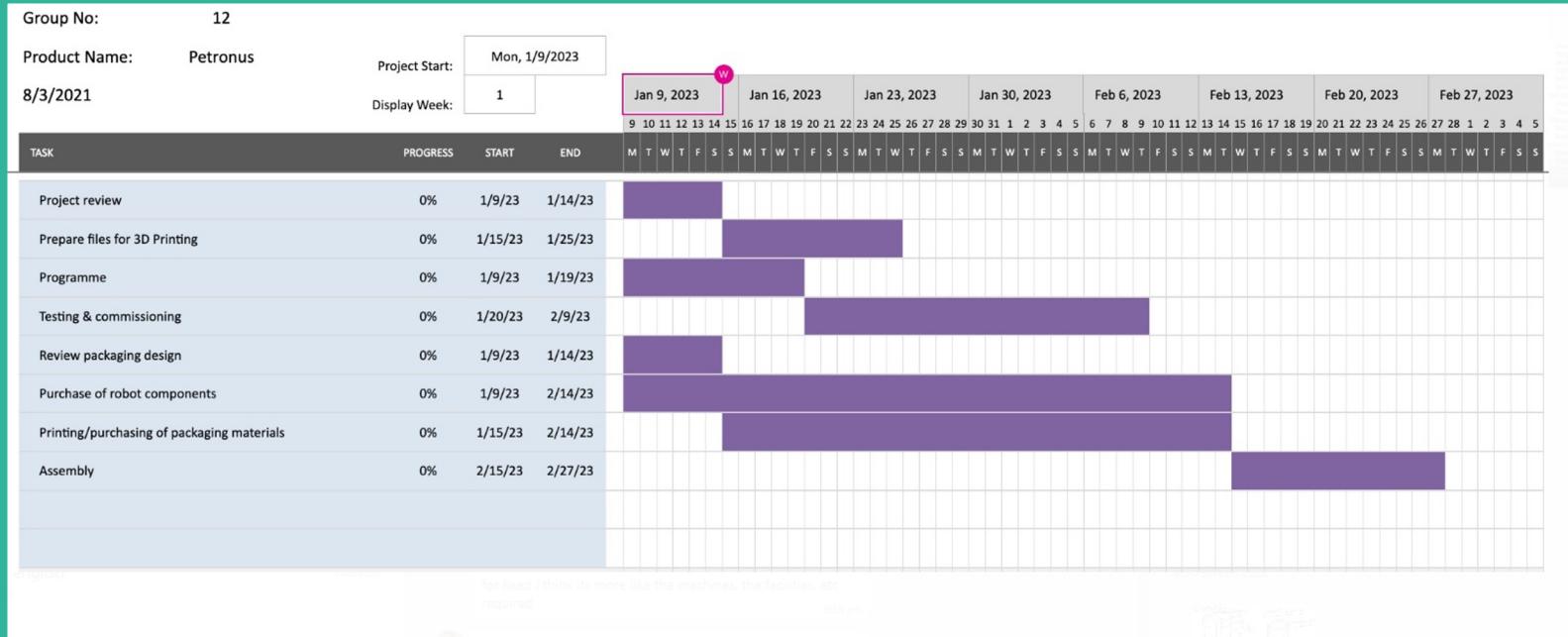
Total Cost: HKD 754.5

Price: HKD 1,199 per unit

Profit: HKD 444.5 per unit

Item	Description	Cost (HKD)
1	Arduino Uno	\$42.50
2	Screw Shield Board	\$10.00
3	Bluetooth Module (HC08)	\$28.00
4	18650 Rechargeable batteries	\$30.00
5	AA x4 Battery Holder	\$5.00
6	DC Power Cable	\$3.00
7	TB6612F Motor Driver	\$32.00
8	SS11 Main Switch	\$2.50
9	DC Motor x 2	\$50.00
10	Dupont Cable F-F, M-F and M-M	\$18.00
11	LED Lamp with wire	\$2.50
12	Camera	\$224.00
13	Bluetooth speaker	\$70.00
14	Color RGB LED ring	\$16.50

Product Timeframe





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Promotion Strategy



Pet Events and Trade Shows



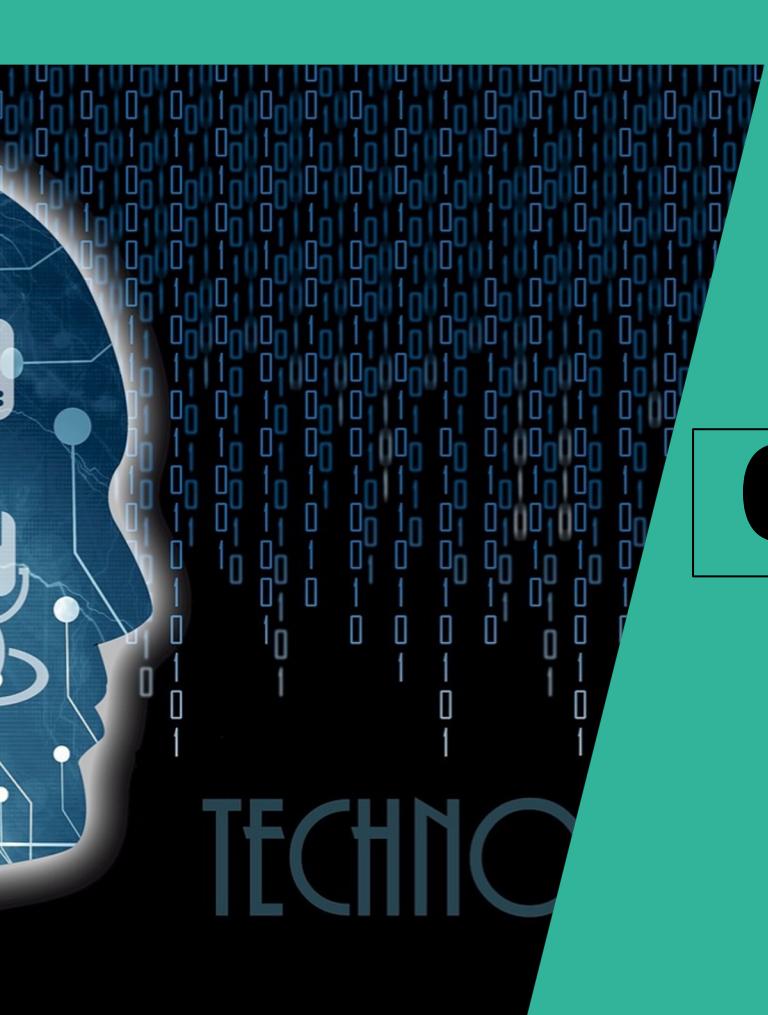
Influencer Marketing



Social Media Marketing



Referral Program

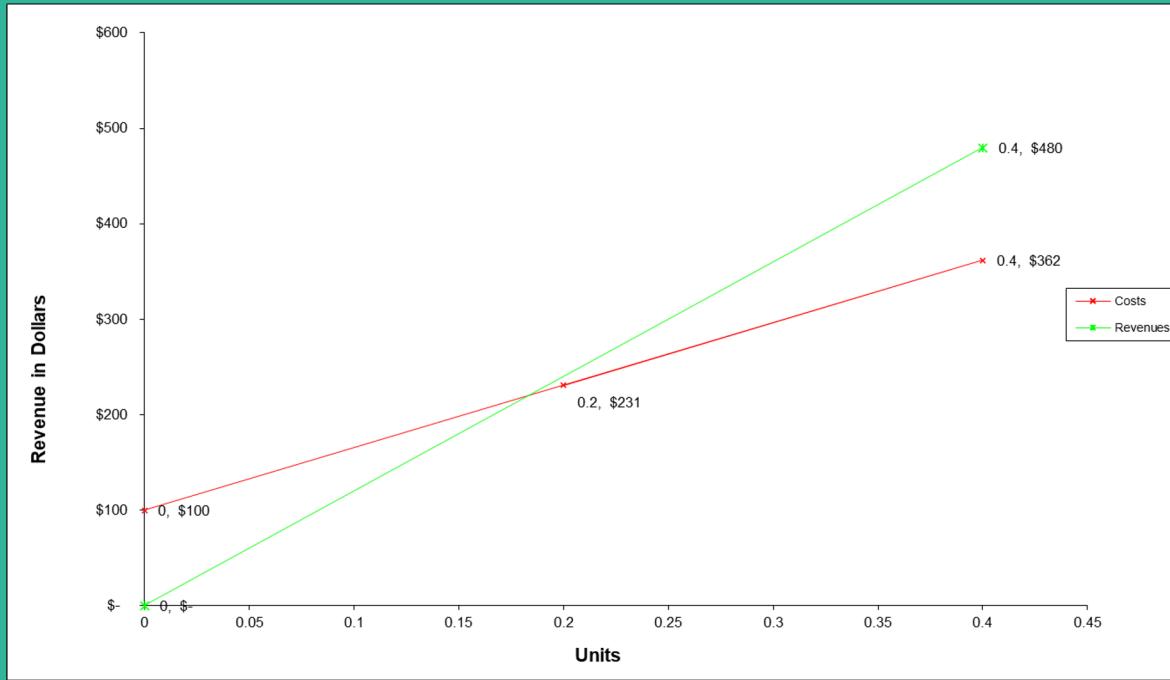


07

Technology Evaluation

Break-even quantity

- Break-even point price: HKD 654.5
- Break-even point quantity: 75,000 units



Manufacturing processes

- Using Laser cut for plates and packing box
- Making two wheels by moulding
- Buying components like camera, speaker, battery box, Arduino board
- Assembly all the parts with 3mm screws and hexagon spacer

Distribution channel

- Type: Direct distribution channel
- Sell in electrical appliance shops (Fortress, Broadway)
- Available in pet stores
- Variety of online shops (Shopify, Amazon, Wagz Inc., Furbo)
- Pop-up stores
- Pet exhibitions





08

Optimal Logistic Path

Logistics Arrangement

- Type: Sea transport
- Quantity of product: 75,000 units
- Total shipping weight: 150 tons
- No. of container: 40'HQ standard container x 6
- Shipping company: COSCO Shipping Line Company
- Overall shipping fee: \$23,880
- Departure: CNHMN – Port of Humen
- Destination: Hong Kong



humen(虎门,东莞) → HONGKONG(中国香港·香港)

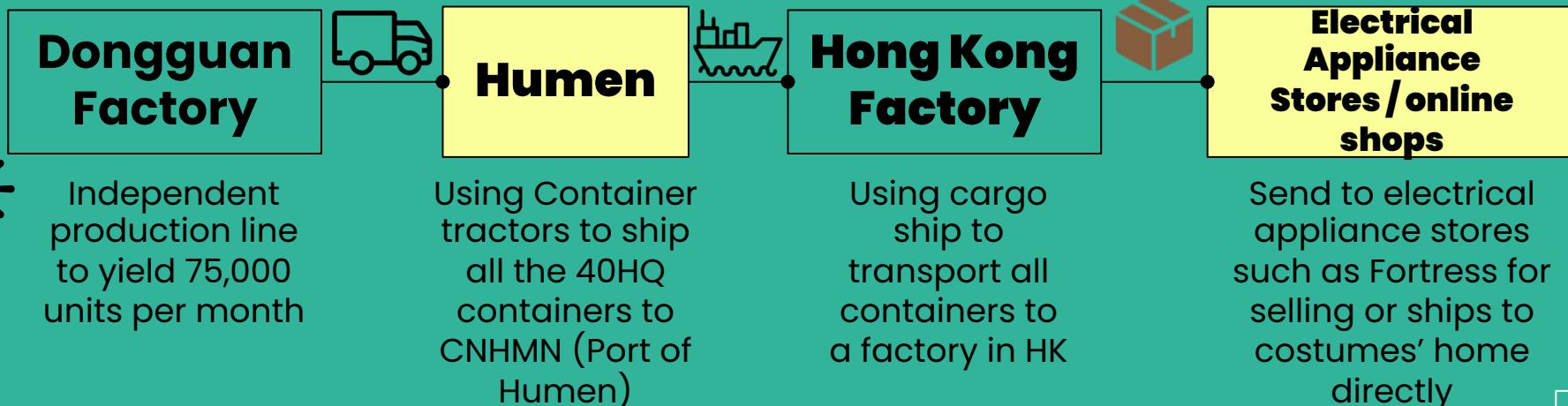
20GP	\$2790	40GP	\$3980
40HC	\$3980	45HC	\$

新公司 中转港 舱位/开航 航程 有效期
COSCO DRR 6/7 1天 2023-02-15-2023-03-31
运价备注:





Shipping path



REFERENCE

- [1] GlobeNewswire. (Mar, 2022). Available: <https://www.globenewswire.com/en/news-release/2022/03/24/2409234/28124/en/The-Worldwide-Pet-Care-Robotic-Industry-is-Expected-to-Reach-3-65-Billion-by-2030.html>
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- [3] GlobeNewswire. (Jul, 2022). Available: <https://www.nextmsc.com/report/pet-care-robotic-market>
- [4] News Details. (2022, April 26). Pets in Hong Kong and China: A Booming Market. Your Partner in the Greater Bay Area. <https://hongkong.ahk.de/news/news-details/pets-in-hong-kong-and-china-a-booming-market>



THANKS!

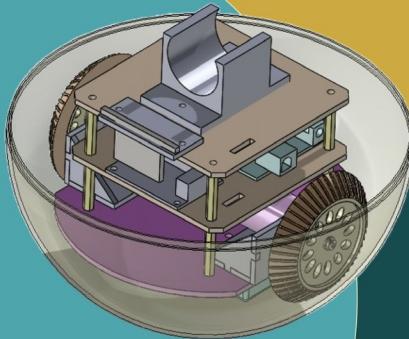
Contact Us:



Visit us on Github to get a quick overview of our updates

Petronus

Mar.
04.
2023



ROBOTIC
Mini Camera
Bluetooth
Speaker
Infrared light
GAME BALL

Robotic ball

MORE INFORMATION:
@PETRONUS
PETRONUSRROBOTBALL.COM

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Petronus

B M I S

luetooth Link mobile
device via an app

ini
Camera Remote monitor
pet's real-time situation

nfrared Light entertain
pets with moving light

peaker
Remote command/Play music

Robotic ball

MORE INFORMATION:
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APPENDIX Posters

APPENDIX

Demo Video

