





Problems



2012-2016 Hiking Trapped, Missing & Lost of Direction

A circular inset image showing a blurry, out-of-focus photograph of a hiker wearing a red jacket and a white helmet, walking through a misty or foggy environment. To the right of this image is a solid orange rectangular box containing the following text.

**70% lost of
direction
= 840 people**

1200 rescues

Rescue Team



Civil Aid Service

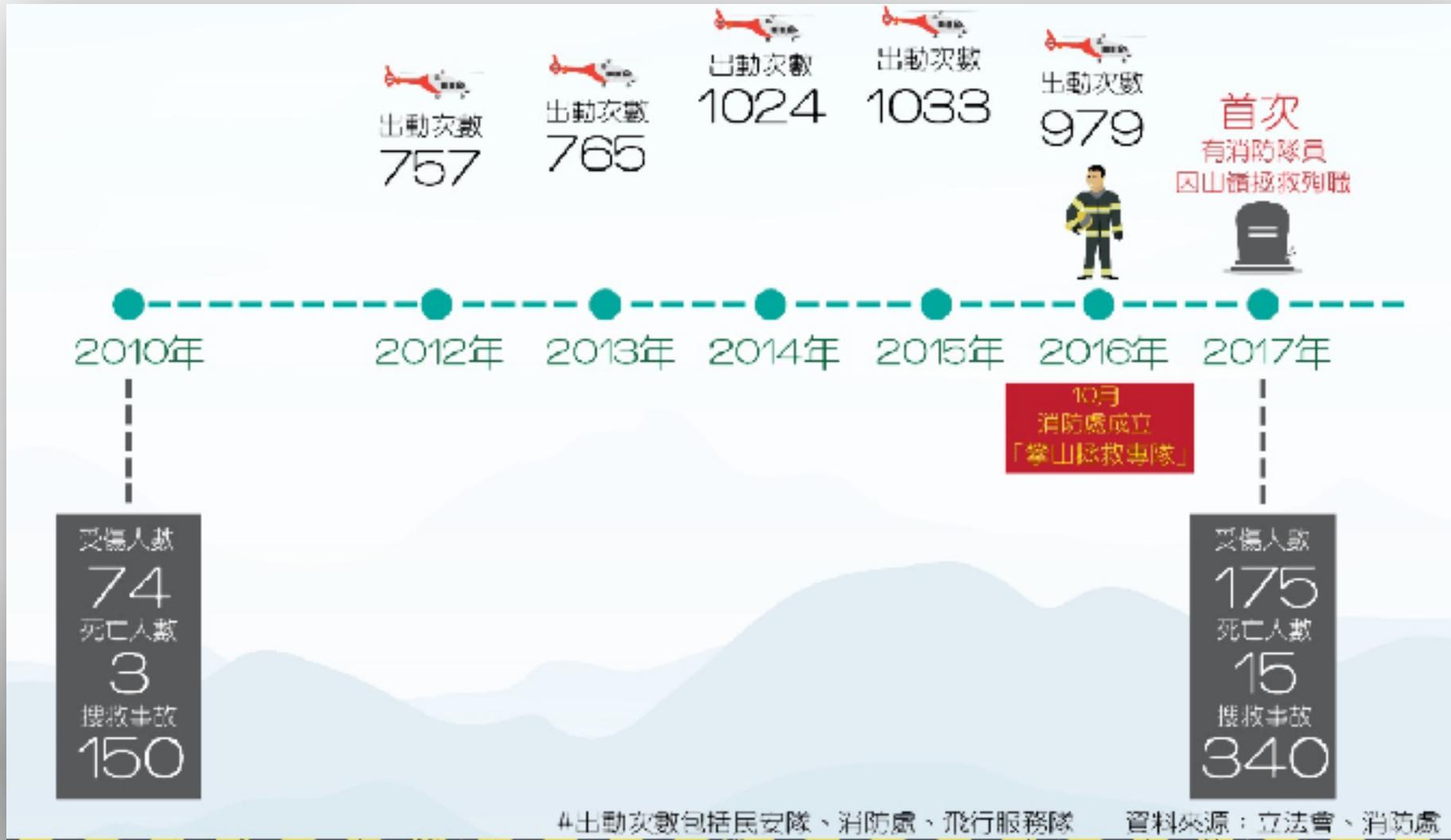


Hong Kong Fire Services Department



Mountain Search and Rescue Team

Increasing Number of Rescue



Problem – Calling for Help



- **Cannot tell the accurate location**
- **No cellular network for rescue call**
- **Ran out of battery**



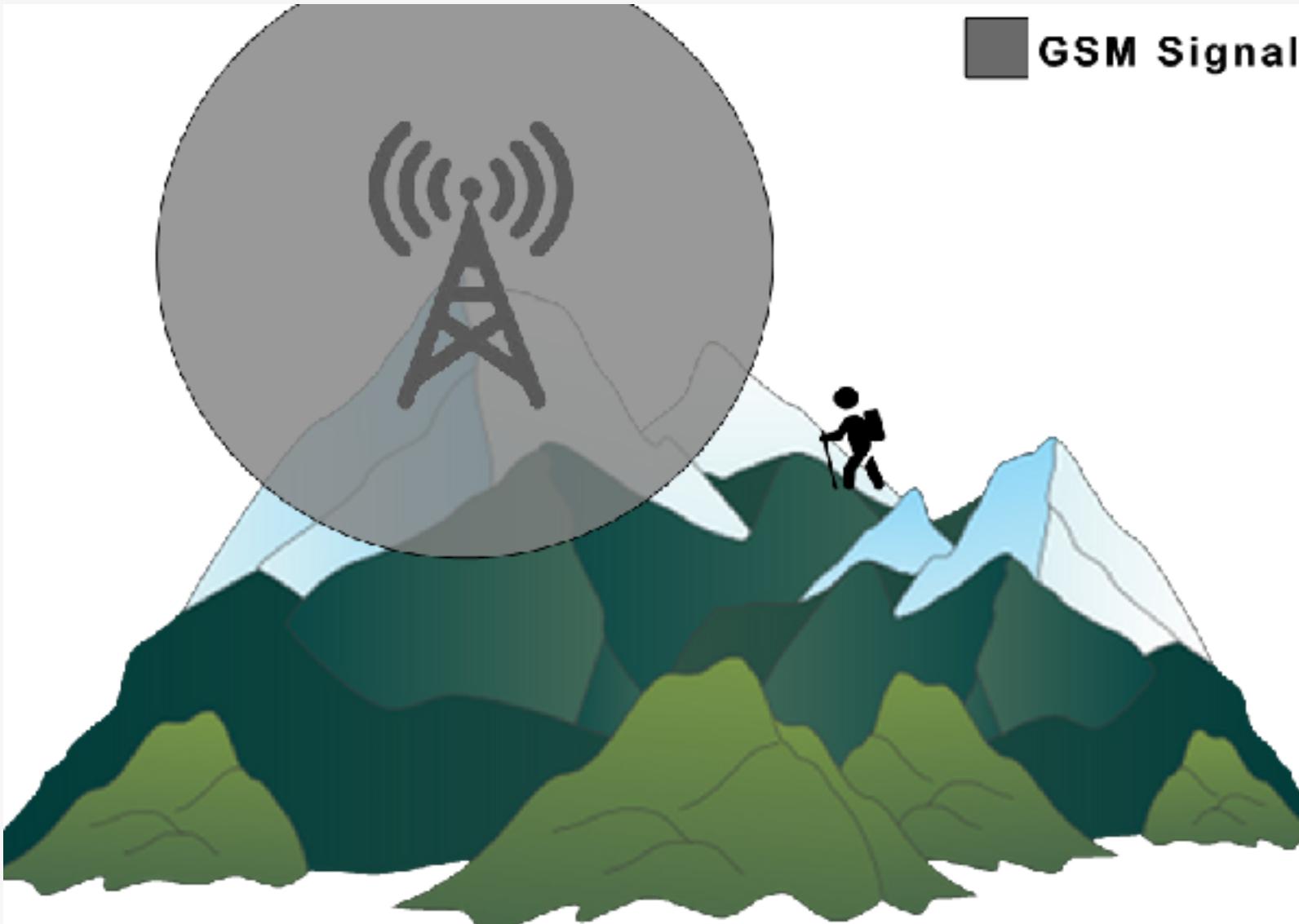
Existing Products



- Require cellular network to share GPS location
- Short battery life
- Easy to break (phone)



Existing Products – Pain Point

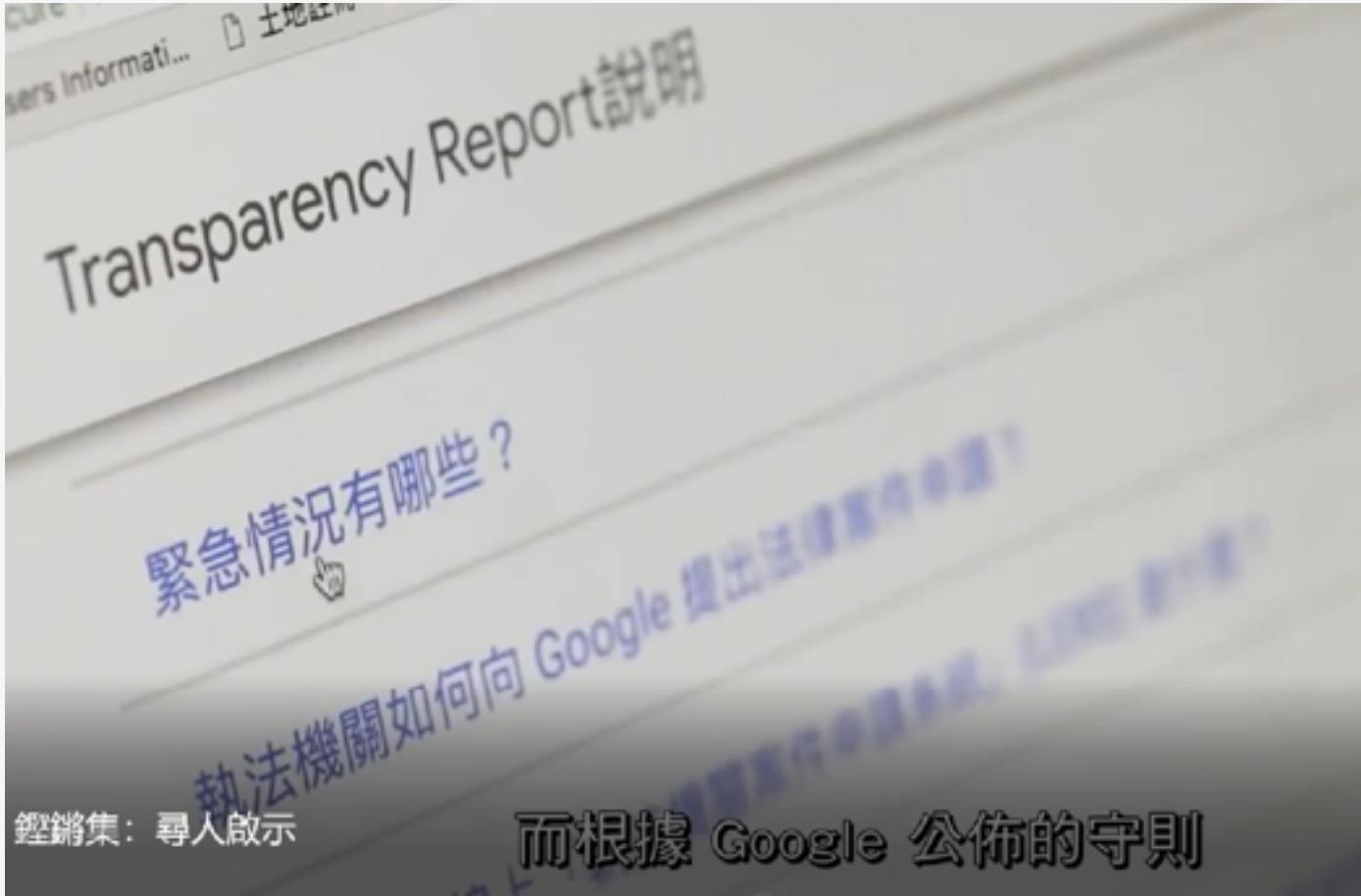


GSM Signal

- Out of GSM coverage
- Not able to share GPS location to rescuer

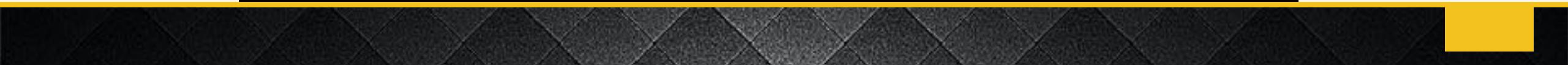
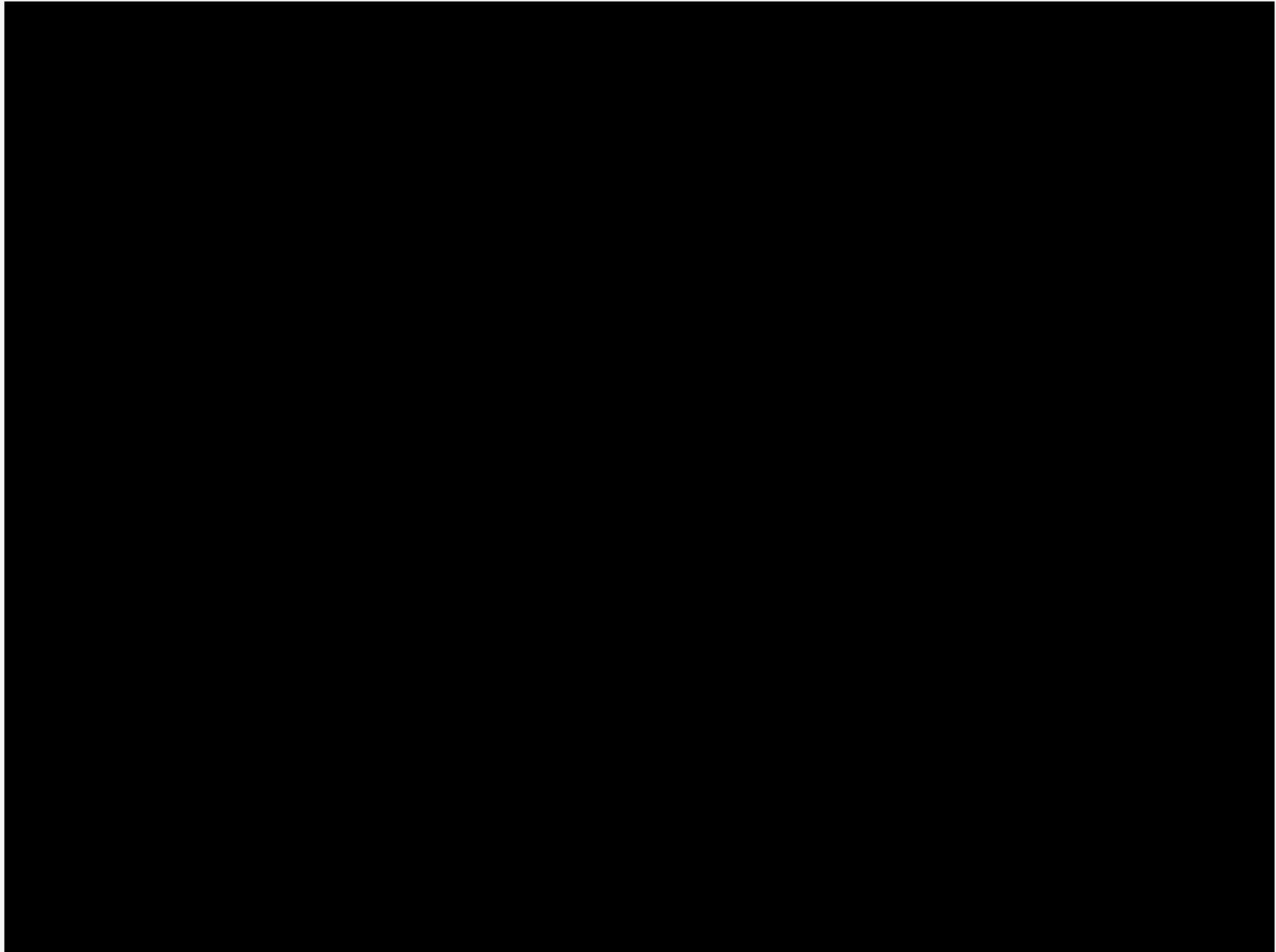


Existing Case - Paragliding Patrick



Pain Point

- Rely on cellular signal
- Search area is large
- Location information is not easy to be accessed by rescue team
- Location information need expertise to interpret
- Radio device is not used





Power
Long battery life
Solar Charging

Our Solutions

TrackPack



Cellular Network



Long Range & Off Grid
Data Broadcast



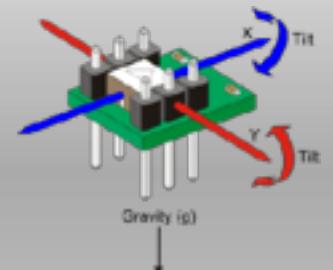
GPS Tracking



Solar Charging

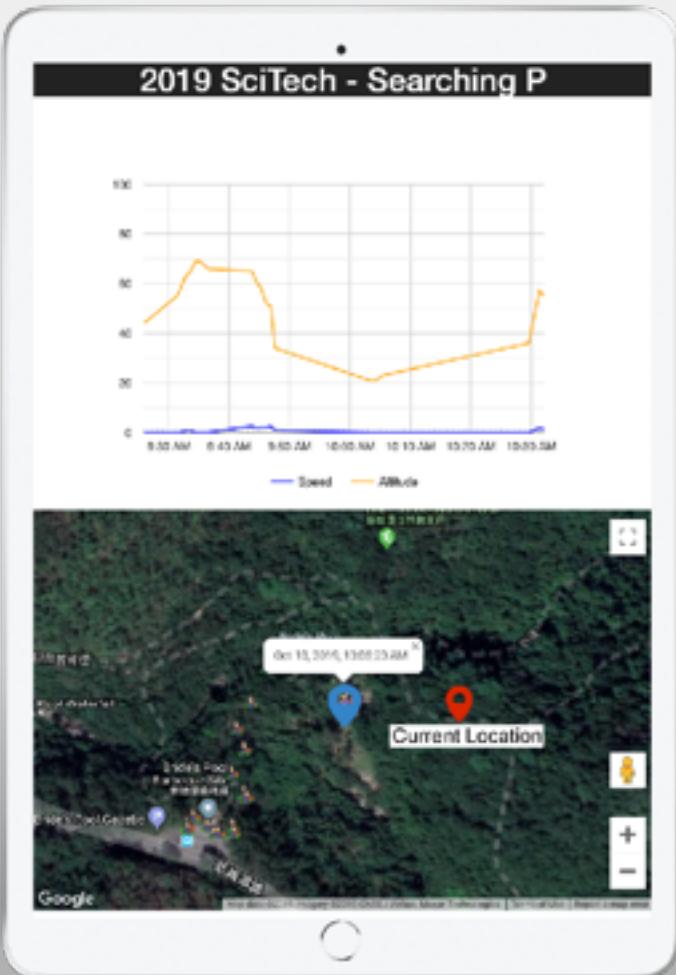


Motion Tracking

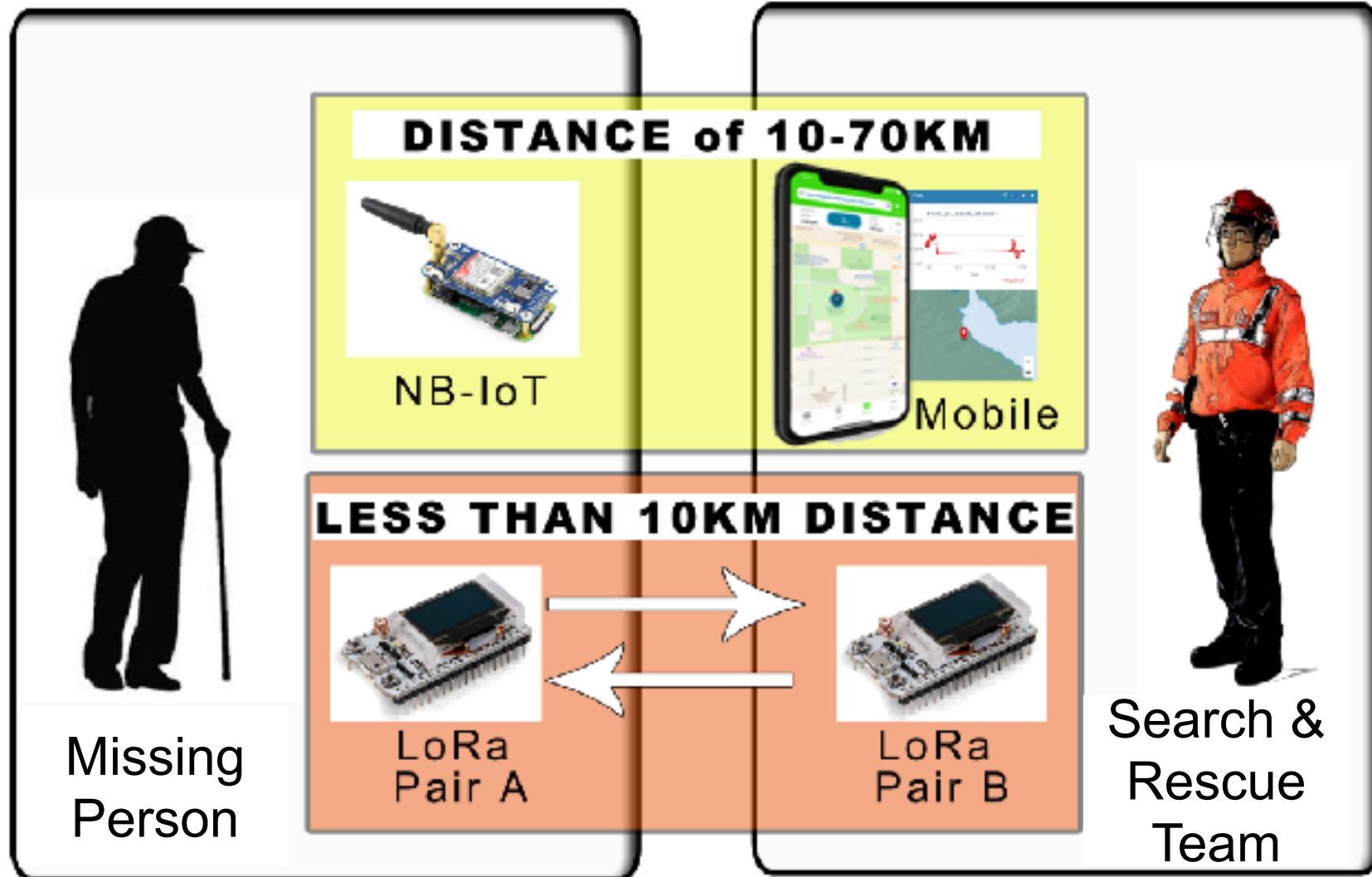


Our Solutions

TrackPack - Mobile App & LoRa receiver



MODEL



Our Solutions – Sample Case - Within NB-IoT Coverage

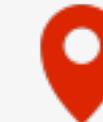


 NB-IoT

 LoRa



Last known location



Current Location



Our Solutions – Sample Case: Out of NB-IoT Coverage

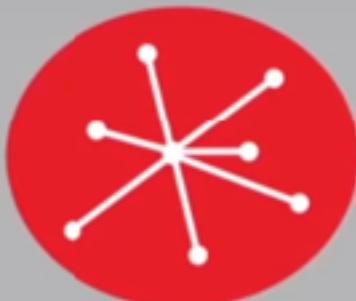


-  NB-IoT
-  LoRa
-  Last known location
-  Current Location



1

Cellular Network



High Density

Support many devices



Low Cost

Parts < HKD\$50
Reliable, Stable



Long Battery Life

Up to days



Extreme Coverage

100 times coverage of GPRS



Upgrade

Global Technology standard (3GPP)



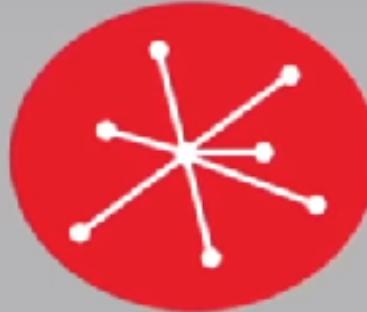
Long Range & Off Grid

2



Low Cost

License-free band
No Data Cost



Long Range

7 km in open area



Low Power Consumption

Last up to days



Off Grid

Peer-Peer



Low Hardware Cost

Low Cost Parts

Solutions - Trial Runs

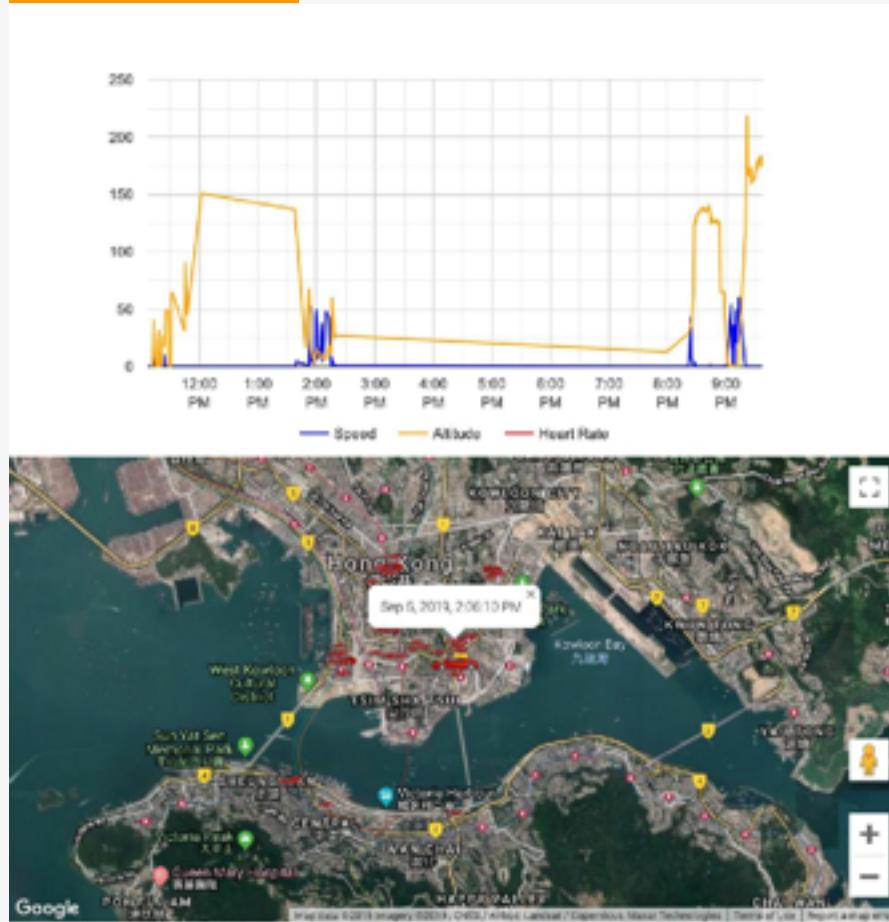
Trial Run 1



Solutions - Trial Runs

Trial Run 2

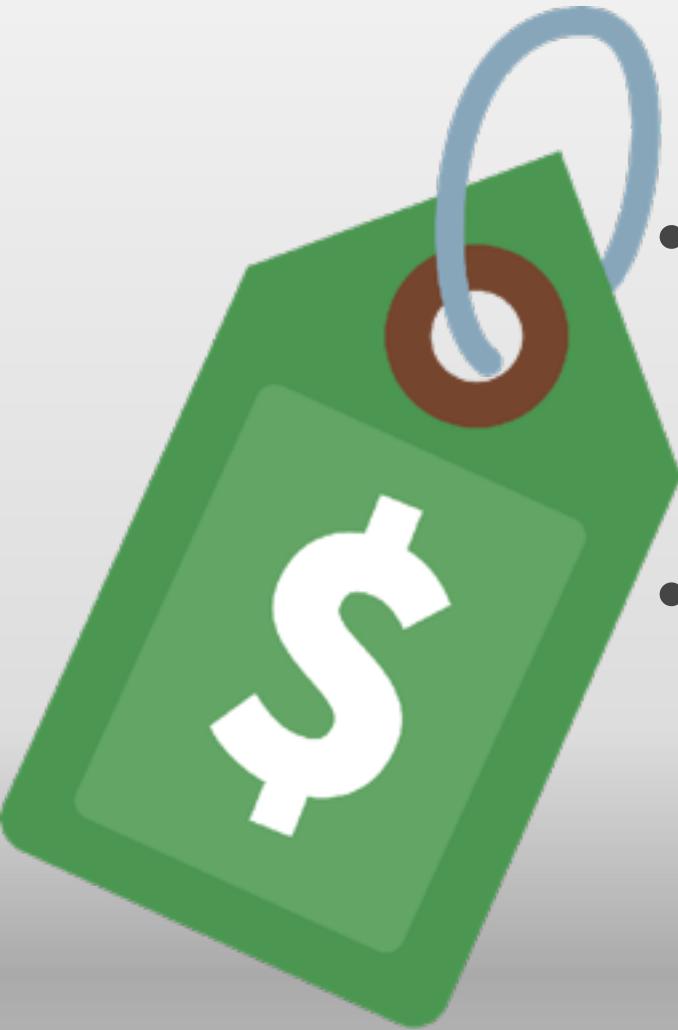
Drive around with car



Trial Run 3

Mountaineering Council (HK)
members





- **HKD 700**
Backpack with 2 year data subscription
- **HKD 20/month**
Data subscription after 2nd year



Sales & Marketing

Target customers

Outdoor sport

Sales Channels

Outdoor activities shop

Online shop

Open Water Swimming



Sailing



Hiking



Mountain Boarding



Abseiling



Hang Gliding



Paragliding



Positioning

More Connectivity Options

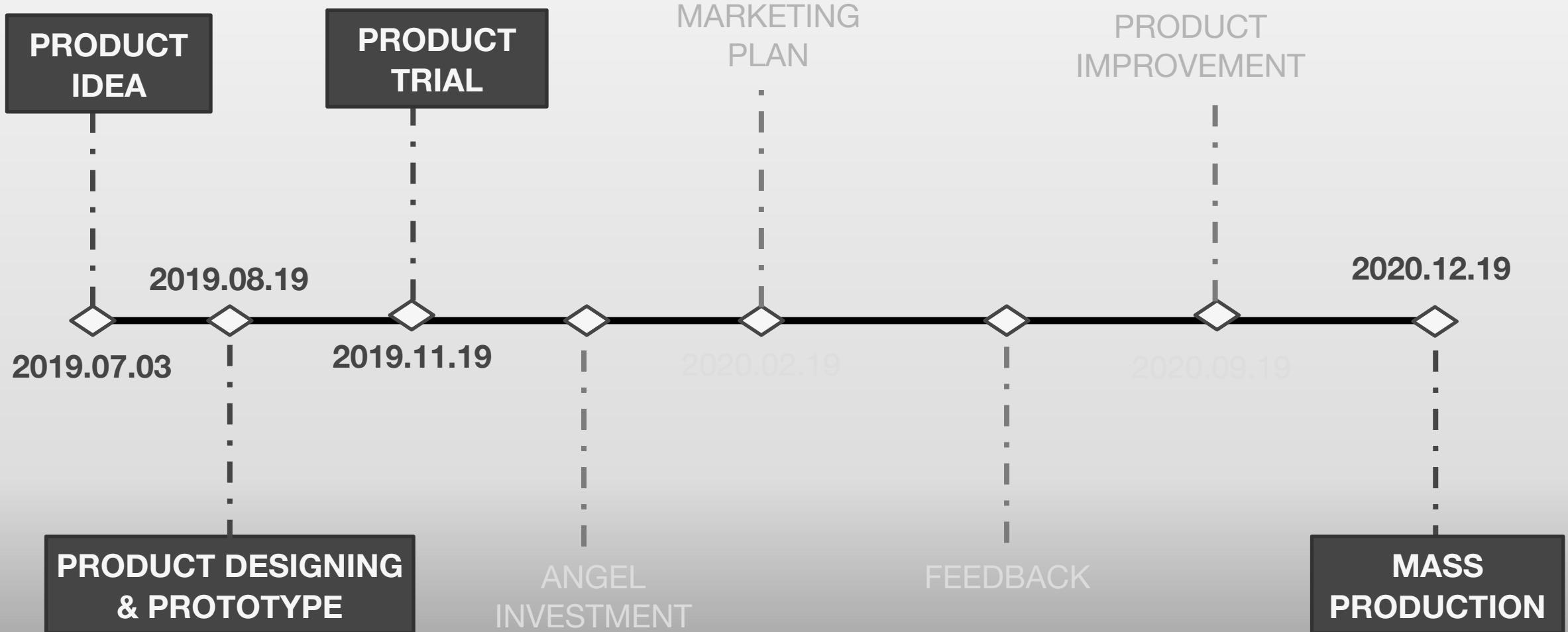
Short
Battery Life



Less Connectivity Options

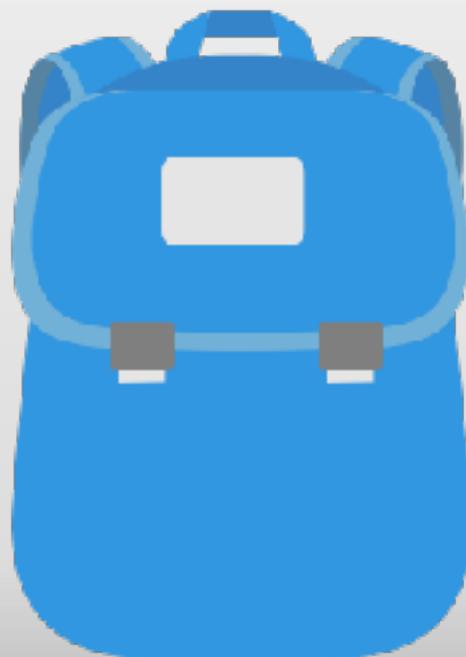
Long
Battery Life





Product Roadmap - All with NB-IoT and LoRa

TrackPack



TrackWatch

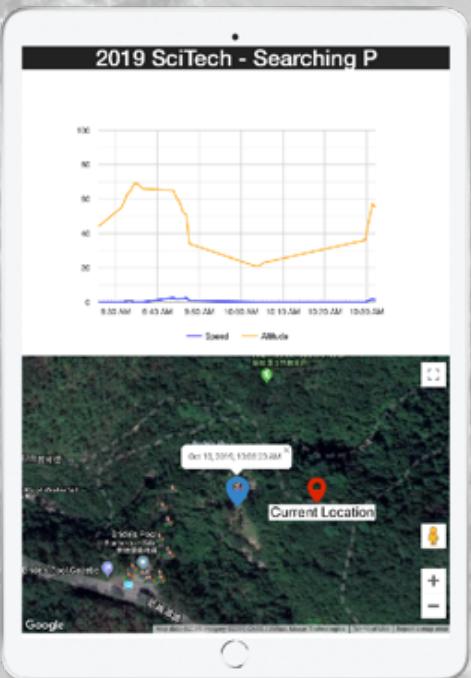


TrackPowerBank





SEARCHING P RESCUE DEVICE



Kitty Tang

Manufacturing
Game & Mobile App
Developer

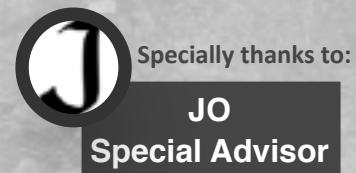


Thomas Chan

Electronic Engineer
App Developer



-Specially Dedicated this project to Patrick and his family -



Specially thanks to:

**JO
Special Advisor**

Experienced
Technical
Background
Hands-on



Thank you!

