MERAQUE

Corporate Profile
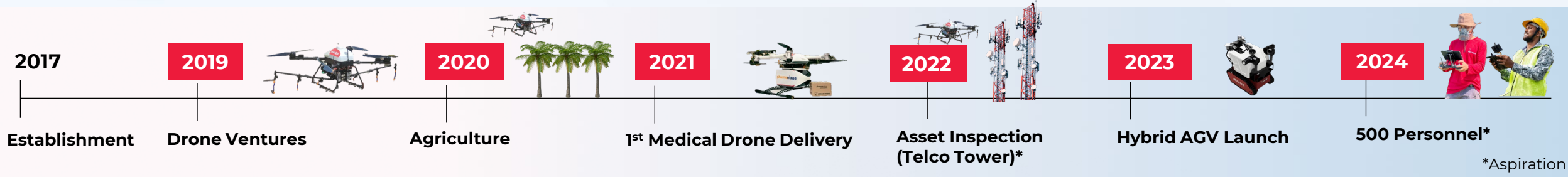
Meraque Services Sdn Bhd

About Us

Meraque is the leading provider of game-changing solution for the operation and maintenance of critical capital assets using drone-powered solutions

Our proprietary solutions enable our clients to unlock immense saving and reimagine their business operation and performance

Since the establishment of MERAQUE in 2017, approximately 120,000 flight hours has been clocked to date

MERAQUE

Timeline

2017	2019	2020	2021	2022	2023	2024
Establishment	Drone Ventures	Agriculture	1st Medical Drone Delivery	Asset Inspection (Telco Tower)*	Hybrid AGV Launch	500 Personnel*

*Aspiration

AGRICULTURE

1ST HYBRID SPRAYING DRONE in Malaysia. With 100% accuracy seedling spraying, Operating nationwide.

110,000 HECTARES Hectares of tree counting & mapping in palm oil estates

96,000 FLIGHT HOURS of Drone-Solutions in Agriculture

RM1.1 Mil SAVED by clients in fertilizer purchased

DELIVERY

1st HYBRID AGV Launch of Autonomous Ground Vehicle on Q3, 2022

140KM DELIVERY Drone delivery flights completed

TECH

3x LONGER FLIGHT TIME Compared to any battery drone

BUILDING

20,000 FLIGHT HOURS in the construction industry

TALENT

120 TRAINED PILOTS Participants trained & counting for Agriculture's Drone Pilots

TELCO

NEW

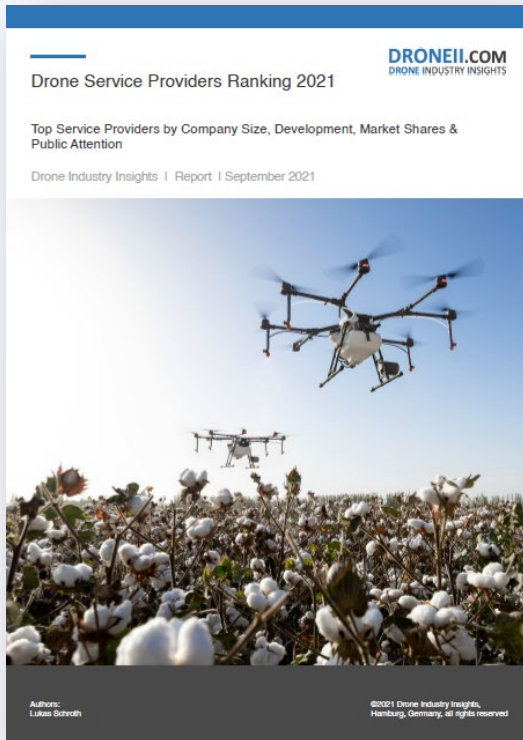**40,000 TELCO TOWERS** To be inspected all over SEA

AGRICULTURE PARTNERS
Sime Darby Plantation, B Plantations, FGV, ACHI JAYA

OTHER PARTNERS
MRCB, eco, FELCRA Berhad, POS, pharmaniaga

GLOBAL PARTNERS
eHANG, MMC, vHive, Drone XYZ

SUPPORTED BY
MTDC MALAYSIAN TECHNOLOGY DEVELOPMENT CORPORATION, CAAM, JUPEM, MDEC, midf, MDV, KEMENTERIAN SAINS, TEKNOLOGI DAN INOVASI, MPOB, SIRIM, MCMC, SME CORP MALAYSIA, AGRO BANK

Global Ranking & Recognition

MERAQUE
MERAQUE

Meraque is one of the leading drone service providers in the world with recognition locally and internationally

MERAQUE | **DRONEII.COM** DRONE INDUSTRY INSIGHTS

DRONEII.COM DRONE INDUSTRY INSIGHTS

Drone Service Providers Ranking 2021

Top Service Providers by Company Size, Development, Market Shares & Public Attention

Drone Industry Insights | Report | September 2021

Authors:
Lukas Schroth

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2022

TOP 20
2 MALAYSIAN COMPANIES

Innovative Technology of The Year
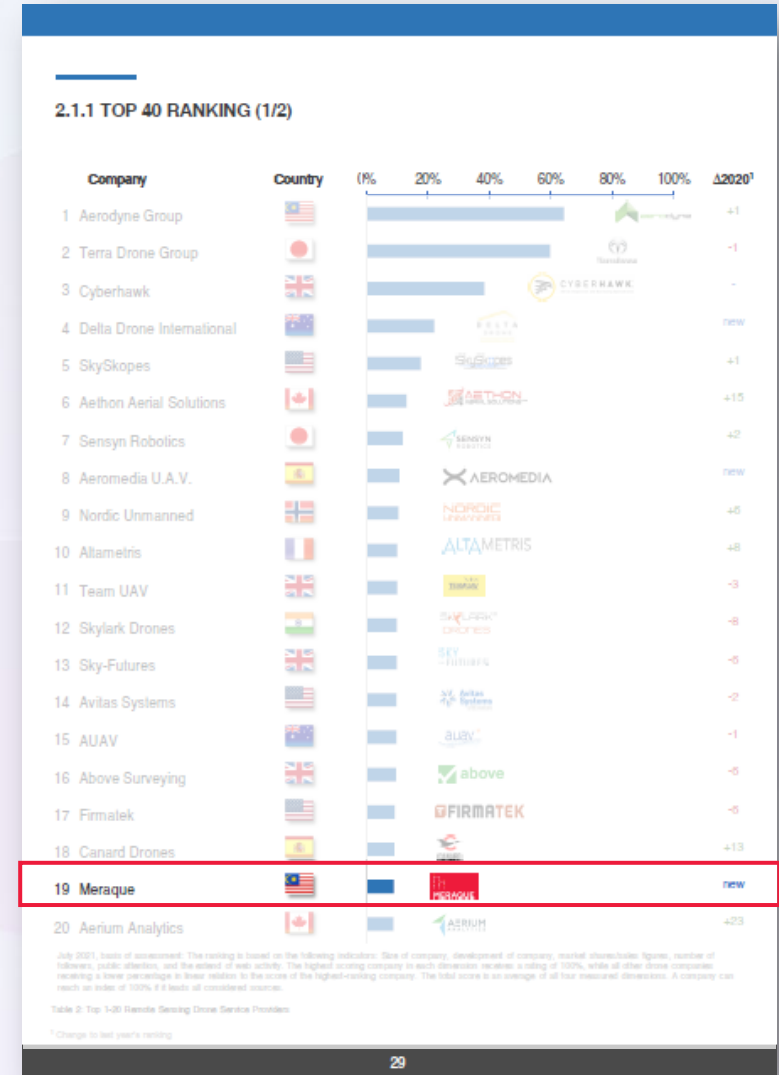*Malaysia International Agricommodity Award*

2021

TOP 40
4 MALAYSIAN COMPANIES

Best Pivot Growth Company
Top In Tech Innovation Award

UAV Innovator Rising Award
KILAT Transport Excellence Award

The Star Outstanding Business Award
Best Use of Technology (Finalist)

2.1.1 TOP 40 RANKING (1/2)

	Company	Country	(1%	20%	40%	60%	80%	100%	Δ2020
1	Aerodyne Group								+1
2	Terra Drone Group								-1
3	Cyberhawk								-
4	Delta Drone International								new
5	SkySkopes								+1
6	Aethon Aerial Solutions								+15
7	Sensyn Robotics								-
8	Aeromedia U.A.V.								new
9	Nordic Unmanned								+6
10	Altametris								+8
11	Team UAV								-
12	Skylark Drones								-
13	Sky-Futures								-6
14	Avitas Systems								-
15	AUAV								+1
16	Above Surveying								-
17	Firmatek								-5
18	Canard Drones								+13
19	Meraque								new
20	Aerium Analytics								+23

July 2021, basis of assessment: The ranking is based on the following indicators: Size of company, development of company, market shareholder figures, number of followers, public attention, and the extent of web activity. The highest scoring company in each dimension receives a rating of 100%, while all other drone companies receive a lower percentage in lower relation to the score of the highest-ranking company. The total score is an average of all listings. A company can reach an index of 100% if it leads all considered sources.

Table 2: Top 1-20 Remote Sensing Drone Service Providers

[1] Change to last year's ranking

29

Creating value from drone technology and powerful software solution

MERAQUE

Merak-Agri
Equipping modern farmers with limitless data and automation tool to reimagine farming for various crops - palm, coconut, corn, etc
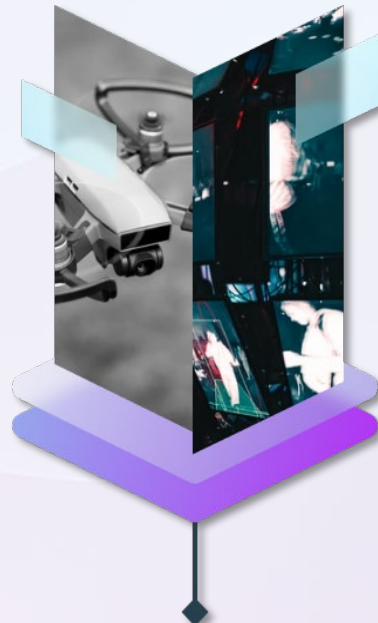
Merak-Inspect
AI-based inspection of capital assets including telco towers, bridges, roads, solar panel, buildings, etc

Merak-Academy
Our R&D and training arm continuously producing talents and new technology for the industry

Merak-Sky Eye
Advanced field-proven solutions for asset security & surveillance

Merak-Showcase
Custom built and fitted drone fleet with intelligent control systems, adding flairs to any event.

01
NURTURING TALENTS, HUMAN CAPITAL
Our combined experiences of over 50 years, a thorough understanding of the technologies that are relevant to today's technology-driven industry and our commitment to mentoring and grooming top talent are recipes for our success

02
ADVOCATE TECHNOVATION
We look at technology as a driver of success while our people and culture fuel our innovation.

03
GLOBAL BEST PRACTICES, ALWAYS
Benchmarking your business to global standards and practices

04
LONG-TERM VALUE CREATION
Creating value with your future in mind, always.

Data Science & Analytics | Augmented Reality (AR) | Artificial Intelligence (AI) | Robotic Process Automation (RPA) | App Development | Cyber Security | Internet of Things (IOT) | Machine Learning | Big Data | Agile Methodology | Smart Sensors | Blockchain | UI/UX

Our Technology Stacks

DATA ACQUISITION

Our solutions provide high quality data acquisition. Our systems are highly accurate and limit errors, which creates value for customers through more actionable data.

AGV (In House RND)	LiDAR	Satellite
Hybrid Drone (In House RND)	Unmanned Drone	Boat
Drone Swarming	GPS	UAV
Drone Delivery	Laser	
Cameras	Phone	

DATA PROCESSING

We analyze your data, looking for trends and patterns. We glean actionable results from the big data you have collected, so you can see what's been happening inside your business.
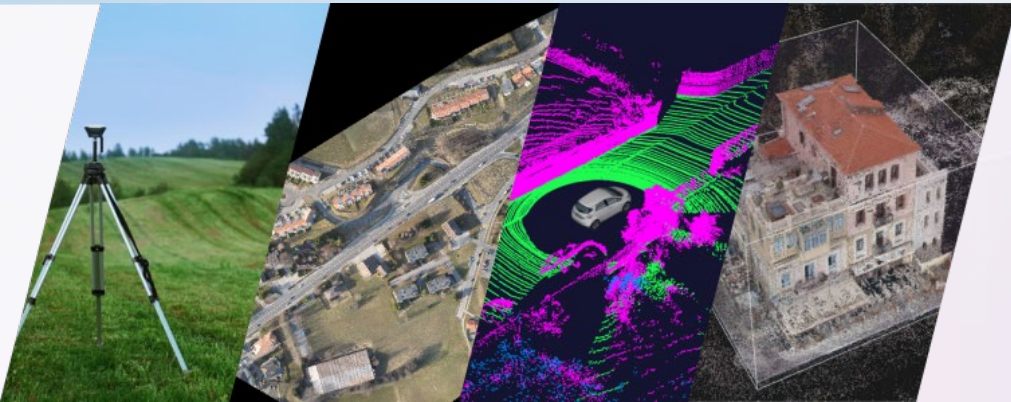
Visual Imagery	Digital Terrain Model
Thermal Imagery	Topography Map
3D Augmented Reality	3D Reality Mesh
2D Orthomosaic	3D Point Cloud
Digital Surface Model	Digitalization

ANALYSIS

Our software and services make data analysis a core part of your business. We help you turn insights into decisions at a speed never before possible.

PASS (In House Dev)	Milestone Report
Slope Analysis	Geospatial Data
Road Analysis	Flood Analysis
Bridge Analysis	Asset Categorization
Tree Counter (AI)	Big Data
Anomalies Detection (AI)	

Our Technology Stacks

Multi-Functional	Spraying	Fogging	Powerline Stringing	Surveillance		Inspection / Photo / Video	Training
A6 Plus	MCA-6 Standard Liquid Spraying Drone	MCA-6 Fog Spraying Drone	Stringing Drone Spider/X6 Plus	Hydrocell	B900	Phantom 4 Pro & Inspire 2	MQ600

Features and accessories

A6 Plus

6x Weight capacity

20% Cost saving

3x Longer distance

40x Zoom capacity

5x Longer hours

6x Weight capacity

4G Covered Operation Range

150min Flight time

30km Range

Hydrocell

Fully Autonomous Industrial UAS/Drone
- Flying up to 20 km at the time
- Highly reliable structure & system
- Widest range of industrial application

Power Line Stringing
- Power line installation & solutions
- Power line stringing application
- Provides the power line inspection

High Resolution Camera
- Capability of 40x zoom Day & Night Vision

Megaphone Speaker
- Loud & clear sound for distance of 50 Meter

Hydrogen Cell
- Long endurance up to 2.5 hours
- Environmental friendly & pollution free
- Strong & Sustainable in any pressure environment condition
- Heavy payload capacity up to 2 kg

Heavy Duty Payload
- Capability of payload up to maximum 7 kg at the time
- Stable carries of multiple various accessories

Thermal Camera
- Temperature/ Heat detection

Search & Spot Light
- Bright to focus object for night vision

Our Technology Stacks

Replanting & Nursery
Spraying Hybrid Drone

HYBRID	1.5	6
Solutions	Hectares per day	Multiple nozzles
4	45	16L
Motors set-up	Minutes flight hours	Smart liquid tank

Immature Palms
Spot Spraying Hybrid Drone

HYBRID	4	Autonomous
Solutions	Motors set-up	Flight
RTK	45	16L
High accuracy navigation	Minutes flight hours	Smart liquid tank

Matured Palms
Autonomous Ground Vehicle (AGV)

AI	100L	0.7M	1.2M
Mobility control	Smart liquid tank	Min turning diameters	Per Sc standard operation speed
4G	12M	4WD	Autonomous
Real time transmission	Maximum spray width	Superior off-road performance	Driving
RTK	4.8L	Brake	150KG
High accuracy navigation	Per min rated flow (dual pump)	Electronic parking brake system	Load capacity

IoT Smart Sensor

10km	Sensor	LoRa
Signal Booster of coverage 10km x 10km	Sensor in the polybag	LoRaWAN Gateway in the office

PASS Precision Agriculture System Solution
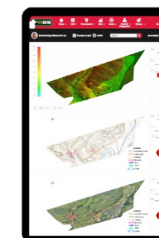
Digital Elevation Mode (DEM)
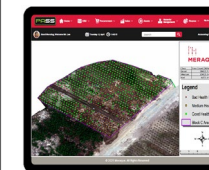
Multispectral Health Tree Identification
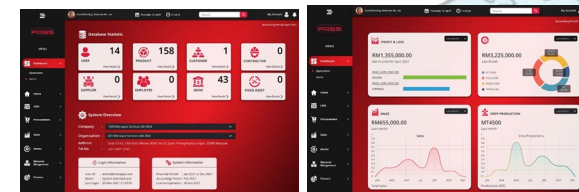
integrates precision farming devices, agricultural IoT, AI to build scientific crop model, digitalize farming logs, and achieve in-season crop growth objectives.

PROBLEMS

Rigid Execution
Rigid plan execution without possibility for last minute changes

Time Consuming
Monitoring of building, telecommunication assets, powerline and construction can be time consuming

Accuracy
Accuracy are low and not real time.

Coverage
Different parts of building or tower cannot be reach without sacrificing the time and energy

Reporting
Documentation and reporting can be a mess during the inspection process

MARKET UPDATES

GLOBAL GROWTH

2020
9.3 B

2021
10.7B

MALAYSIA GOVERNMENT

1,000,000 House
units to cater for homebuyers in the bottom 40% income bracket by the end of 2029

OUR SOLUTIONS

1st modular construction
Our drones provide aerial data of construction sites more efficiently than an army of surveyors. Efficient drone data delivers better plans, faster permits, less regulatory risk and more competitive bids. (1st modular construction)

Drone Stringing
Our Drone stringing capability temporarily creates an invisible barrier to off-limit areas while preventing unwanted drone from entering or hovering above. Ideal for hospitals, gov't facilities, construction sites, privacy zones, sensitive private spaces and more.
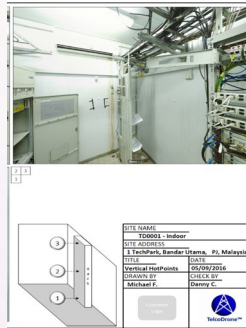
Indoor 360 view
What does 'off the shelf' mean for any indoor navigational product? It means that the solution should be flexible enough to work in many different environments without having to redesign or rebuild.
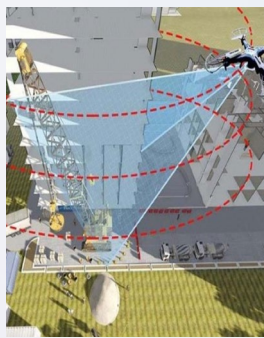
AI + Auto Report
Drone solutions are the future of aerial imaging for business. Big data, analytics, AI auto reporting are all changing the way businesses think about drone use.
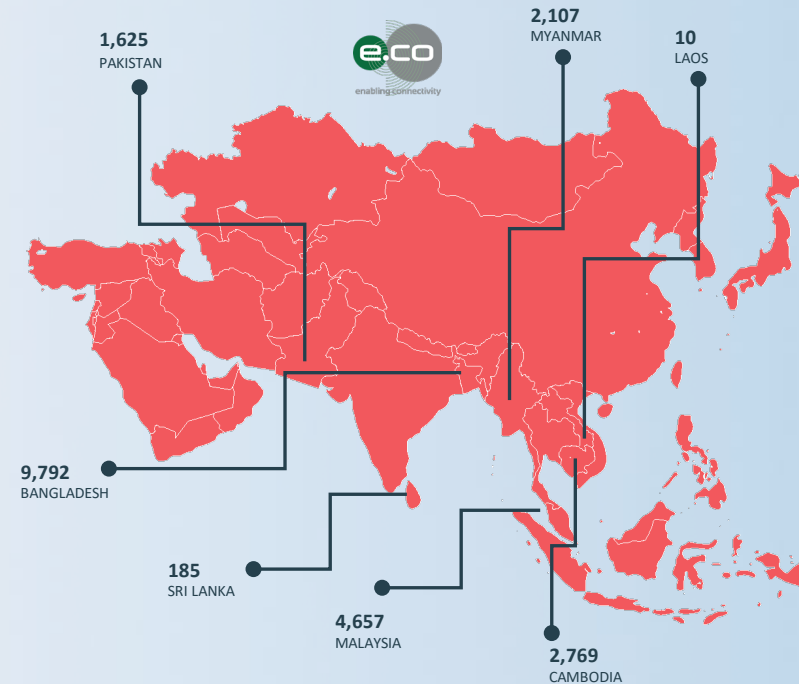
Digital Twin Capabilities
Digital twin are analyzed using algorithm and AI engine. AI automatically highlights and detects changes over time on a 3D tower

20,000+ Towers are available for inspection and our priority is to expedite for

1,625 PAKISTAN

2,107 MYANMAR

10 LAOS

9,792 BANGLADESH

185 SRI LANKA

4,657 MALAYSIA

2,769 CAMBODIA

Panasonic camera 20X zooming from 200 meter distance

LiDAR camera 3D scanning & modelling

Thermal camera Scanning detection of object & Temperature/heat detection

CLIENTS

MRCB · TM · PROLINTAS GROUP OF COMPANIES · e.co enabling connectivity

Merak-Agri

MERAQUE

PROBLEMS

Labors

High dependency of foreign labors

Tracebility

Lack of visibility in the transfer of goods

Low Productivity

Low crops growth due to imprecise spraying and slow rate of technology development and innovation

High Cost

Huge expenses in wages & production cost
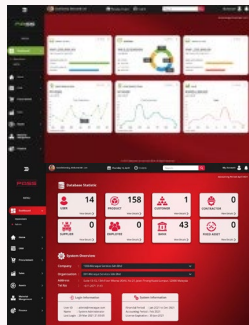
MARKET UPDATES

EXPECTING TO GROW

↑ **150 BIL**

Global Palm oil Market 2025
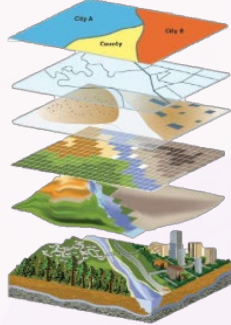
MALAYSIA ACCOUNTED FOR

25.8%

World's Palm Oil Production

34.3%

World's Palm Oil Exports

OUR SOLUTIONS

PASS

Performance Monitoring & Tracking with Dashboard, Digital Reporting & Analysis Result

Smart Tracker

Proper data management & IOT technology is key to keep the flow of physical goods and sustainable pal oil certs

OPPSS

Data collection contributes into information of result and measures of nutrient contain for analysis.
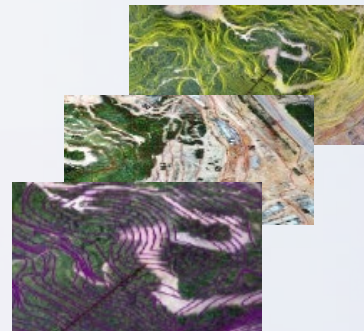
Digitised Precision Terracing

Performance Monitoring & Tracking with Dashboard, Digital Reporting & Analysis Result

Spraying Solution

Performance Monitoring & Tracking with Dashboard, Digital Reporting & Analysis Result

PASS System

integrates precision farming devices agricultural IoT, AI to build scientific crop model digitalize farming logs, and achieve in-season crop growth objectives

CLIENTS

Sime Darby

FGV

FELDA
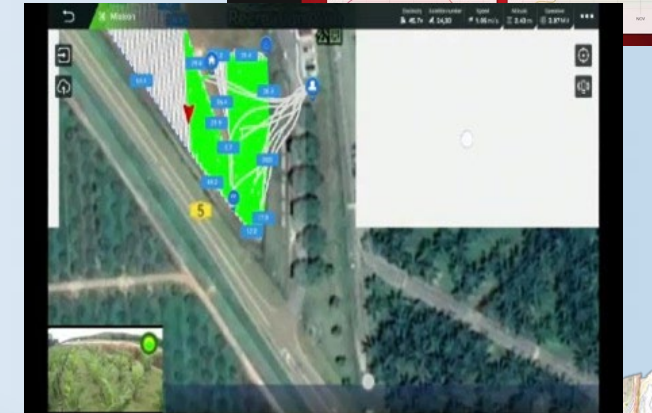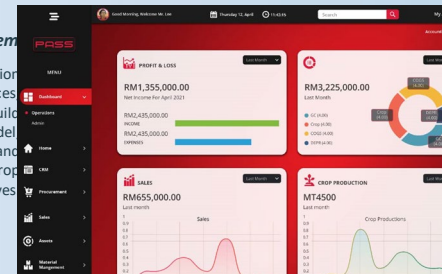
Malaysia 1st Hybrid Spraying Drone

Spot spraying hybrid drone

AGV

Merak Center Of Excellence

ACADEMY

Training

The program teaches professional, licensed operations of UAS

Skilled Youth

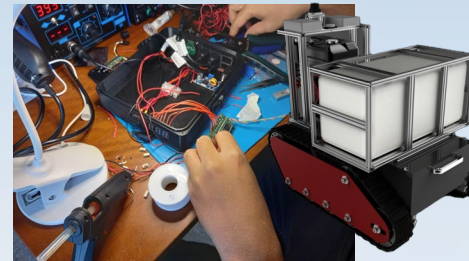Creating a certified talent pool to use drones commercially

Career

Enhancing employability talent pool to 10,000 job opportunity in Malaysia

Support

MERAQUE Scheme for Rakyat (MESRA)

MARKET UPDATES

RISK OF UNEMPLOYEMENT

42%

of Malaysian 's youth

YOUTH IN UAS

9500

Registered members in Malaysia Drone Community

RESEARCH CENTER

AGV

A specialized small autonomous ground vehicle capable for traversing over extreme terrain and obstacles such as rocks, tree stumps, and mud.

UAS / Drones

Phantom 4 pro	MCA-6 Fog Spraying Drone
Training Drone MQ600	MCA-6 Standard Liquid Spraying Drone
Simulator	A6 Plus
B900	
Stringing Drone Spider/X6 Plus	

Accessories

|	
20x zoom camera	Search light
Megaphone	Intelligent drop
Thermal camera	Low light camera

Software / Application

Pix4D

Airwave

Drondeploy

- Image processing
- Stitching / editing photography & videography
- Programming
- 3D Modelling
- Cropping
- Mapping

Hybrid Drone

It's the same size with everything that makes a drone fly, but flies like an airplane. It's lighter, smaller, more efficient and easier to transport. This is the next way to fly.
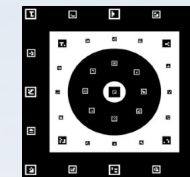
UAV Precision Landing

UAV Precision Landing is the only precision landing software that allows you to easily program any drone for safe, automatic, or user controlled precision landings. It comes with advanced animations and configuration options so you can calibrate your drone for all types of landings.

CLIENTS

Merak-Showcase

DELIVERY

Delivery Drones

Multiple UAS/Drones for deliveries

Drone Delivery Command Center

Real-time monitoring and central management of all drones connected to the platform.

Takeoff & Landing Pads / Airports

Land application, design, construction, etc. of takeoff & landing pads/airports for drone delivery.

Airspace Approval & Pilot Project

Apply for specialized airspace/flight paths or pilot programs or drone delivery.

Regulation Consultancy

Interpretation of existing laws/regulations. analysis of policy risks, legal compliance assurance

International Partnership

Sharing knowledge on R&D and drone delivery knowledge

DRONE SHOWCASES

High Impact

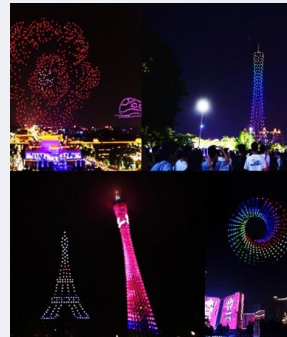Achieve high PR value through mass media coverage

Go Viral

Viewers of the formation in the surrounding area will share it across social platforms (Est. 1mil views)

Trendsetter

Lay claim to be the first in the country to deploy this gimmick. This milestone carries its own weight.

Branding

Position client to be innovative, revolutionary, vibrant and 'dare to be different'.

CLIENTS

axiata | M&CSAATCHI | POS MALAYSIA | pharmaniaga | MITEC | rtm | a

PROBLEMS

Huge Area
Securing and safety activities effectiveness is often limited to the area size. Larger area will led to increased financial impact.

Criminal Activities
Your assets and areas are often a target for individuals with malicious intent to profit from your suffering.

Time Consuming
Covering a large scale area to for security and safety reason is a time consuming affairs that often makes it a challenge to work effectively.

UAS Intrusion
Today, sensitive areas need to be more vigilant than ever in the increasing usage of UAS as a criminal means.

High Manpower
Large scale area and assets undoubtedly requires a high manpower count to ensure maximum protection and effectiveness.

OUR SOLUTIONS

UAS at Port Area
- Central monitoring by the Command
- Centre Real time data transfer Access to hard-reach areas
- To perform an announcement via attached speaker

UAS inspection
- Automating facility inspections with UAS. It is a quick and cost effective inspection method.
- It enables access to hard-to-reach areas by human

Delivery
In-house deliveries of documents, vital supplies and/or packages.

Security
- Physical guarding services
- Drone, CCTV monitoring & fencing
- Business continuity plan (BCP)
- HSE management
- Emergency response plan (ERP)

Flight Path 1

PEJABAT OPERASI CT2 NORTHPORT (M) BHD.

Northport (Malays

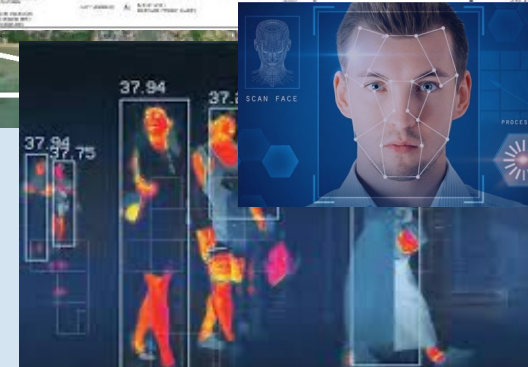Tanjung Harapan

CLIENTS

NORTHPORT

Search light   20x zoom camera   Megaphone   Thermal camera   Low light camera

MERAQUE has over 96,000 flight hours with over RM1.1 million savings recorded to date for the agriculture sector

MERAQUE

AGRICULTURE

110,000
Hectares of tree counting & mapping in palm oil estates

96,000
Flight hours in Agriculture Drone-based solutions

RM1.1 MIL
& Counting Saving to Clients of the Fertilizer Purchased

1st Hybrid Drone Spraying
With 3X longer flight time, 100% accuracy

Nationwide Nursery
Nursery spraying for Malaysia

With MERAQUE drone delivery solution, we can reduce delivery travel time effectively

DRONE DELIVERY

4.10 km
3.50 mins

HELIPORT, MARINA ISLAND JETTY COMPLEX
4.2121551, 100.6037074

KLINIK KESIHATAN PULAU PANGKOR
4.21249, 100.57113

PHARMANIAGA CASE STUDY

87%

Time saving for Pharmaniaga.
Across the sea, saving **23 minutes travel time**

With MERAQUE, monitoring of construction projects progress would be seamless, saving time and money for construction companies

MERAQUE

CONSTRUCTION

MRCB

Progress video of 1st Modular Construction in Malaysia by MRCB

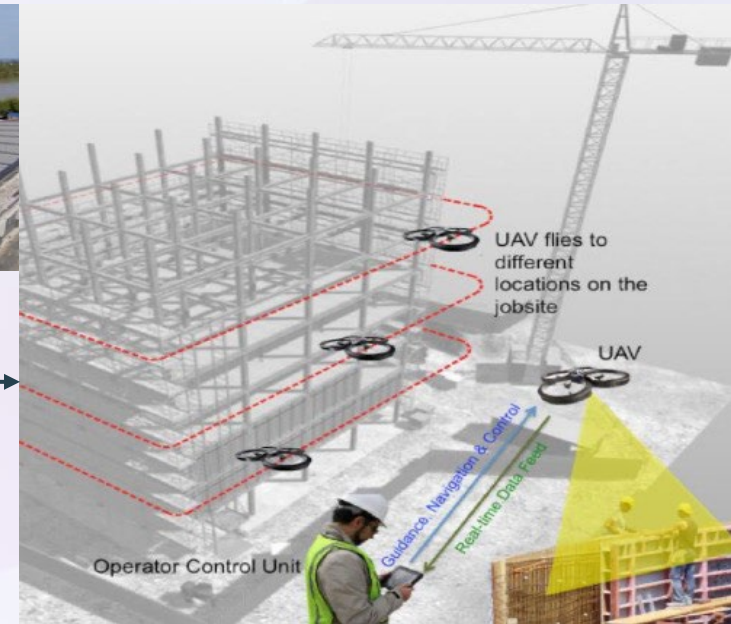**PRE-CONSTRUCTION**   **DURING CONSTRUCTION**   **POST CONSTRUCTION**

Saves money, time

Drones are less expensive and can process much faster than traditional solutions

Reduce risk and providing utility

Drones have lower risk on the site and providing unparallel utility and benefit

UAV flies to different locations on the jobsite

UAV

Operator Control Unit

Guidance, Navigation & Control

Real-time Data Feed

In MERAQUE, we believed that people is our greatest asset and hence, we invest heavily on grooming talents through our Center of Excellence

CENTER OF EXCELLENCE

120
Participants trained & counting for agriculture's drone pilot

Appointed Panel
MERAQUE is an appointed panel for Skill Development for Drone Management (Phase 2 & 3) under National Occupational Skills Standards (NOSS)

MERAQUE

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Meraque MY

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