



Aerodyne Group

Advancing Humanity Through Drone Intelligence

What do we do across the globe?



GEOSPATIAL

Geospatial and GIS solutions



INFRASTRUCTURE

Critical Infrastructure Assets Management



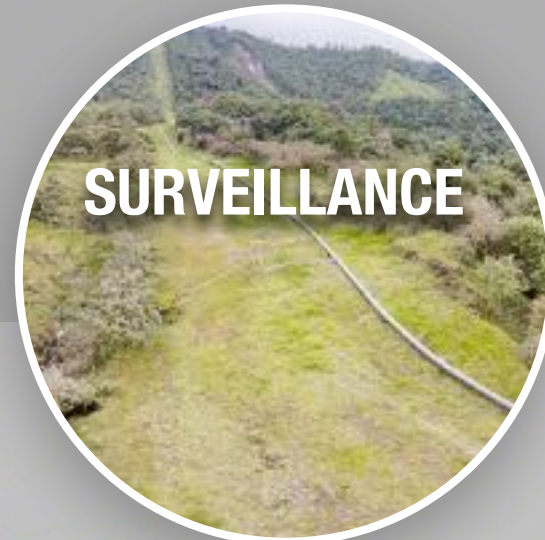
CONSTRUCTIONS

Manage Construction Projects efficiently



AGRICULTURE

Operating large plantations effectively



SURVEILLANCE

Security and Surveillance Management



ENGINEERING



EMERGENCY



INSURANCE



MINING



NATURAL RESOURCES



ENVIRONMENT



R&D



DELIVERY & TRANSPORT



DISASTER RELIEF

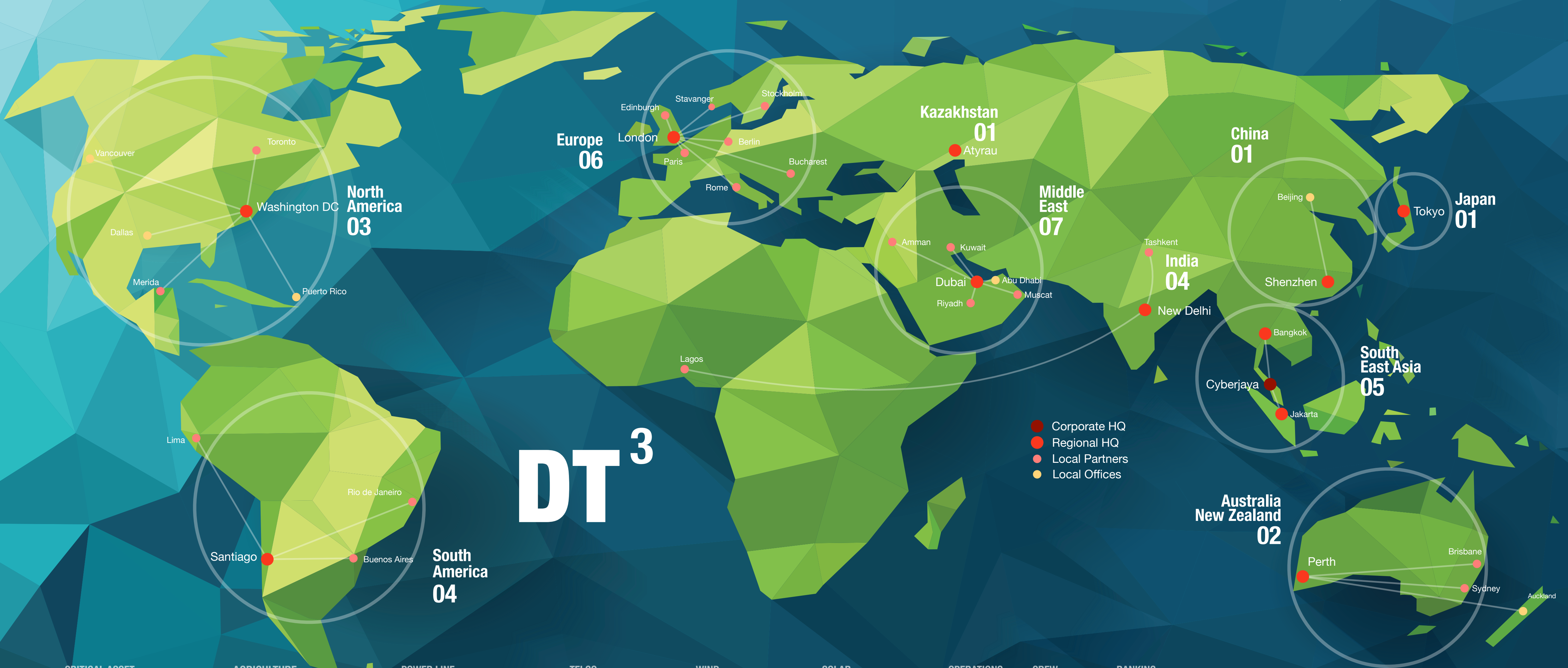


MARITIME



OIL AND GAS

Aerodyne and Malaysian Talent Across the Globe



DT³

CRITICAL ASSET	AGRICULTURE	POWER LINE	TELCO	WIND	SOLAR	OPERATIONS	CREW	RANKING
560,000	265,000	600,000	9,000	7,300	7,000	35	900	1st
ASSETS INSPECTED AS OF DEC 2021	HECTARES AS OF DEC 2021	TOWERS/POLES INSPECTED AS OF DEC 2021	TOWERS INSPECTED AS OF DEC 2021	WTG INSPECTED AS OF DEC 2021	MW INSPECTED AS OF DEC 2021	COUNTRIES GLOBALLY	AERORANGERS GLOBALLY	GLOBALLY IN 2021

DT1 Drone Technology



DT2 Data Technology

Built by Malaysian Talent | Technology Exported to the World



Petrochemical Refinery

Cyberjaya, Malaysia

Weekly Tasks

362

Drilling Operation	145	53%
Expansions Routine	145	5%
Enhancement	145	14%
Wall Fans Placement	145	8%
Installing Flashing	145	21%

Total generated energy

12,939 kWh ▼ 8% 84%

Solar Energy

Asset health status

94% Normal Malfunction

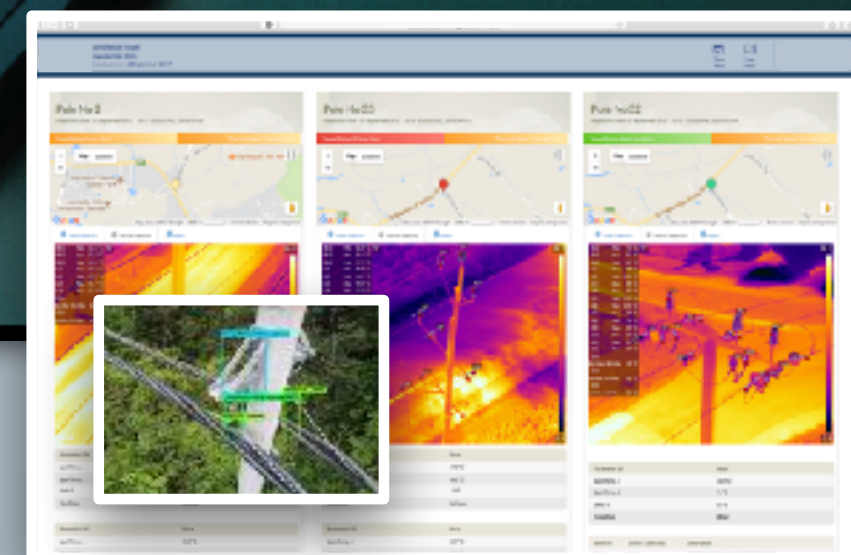
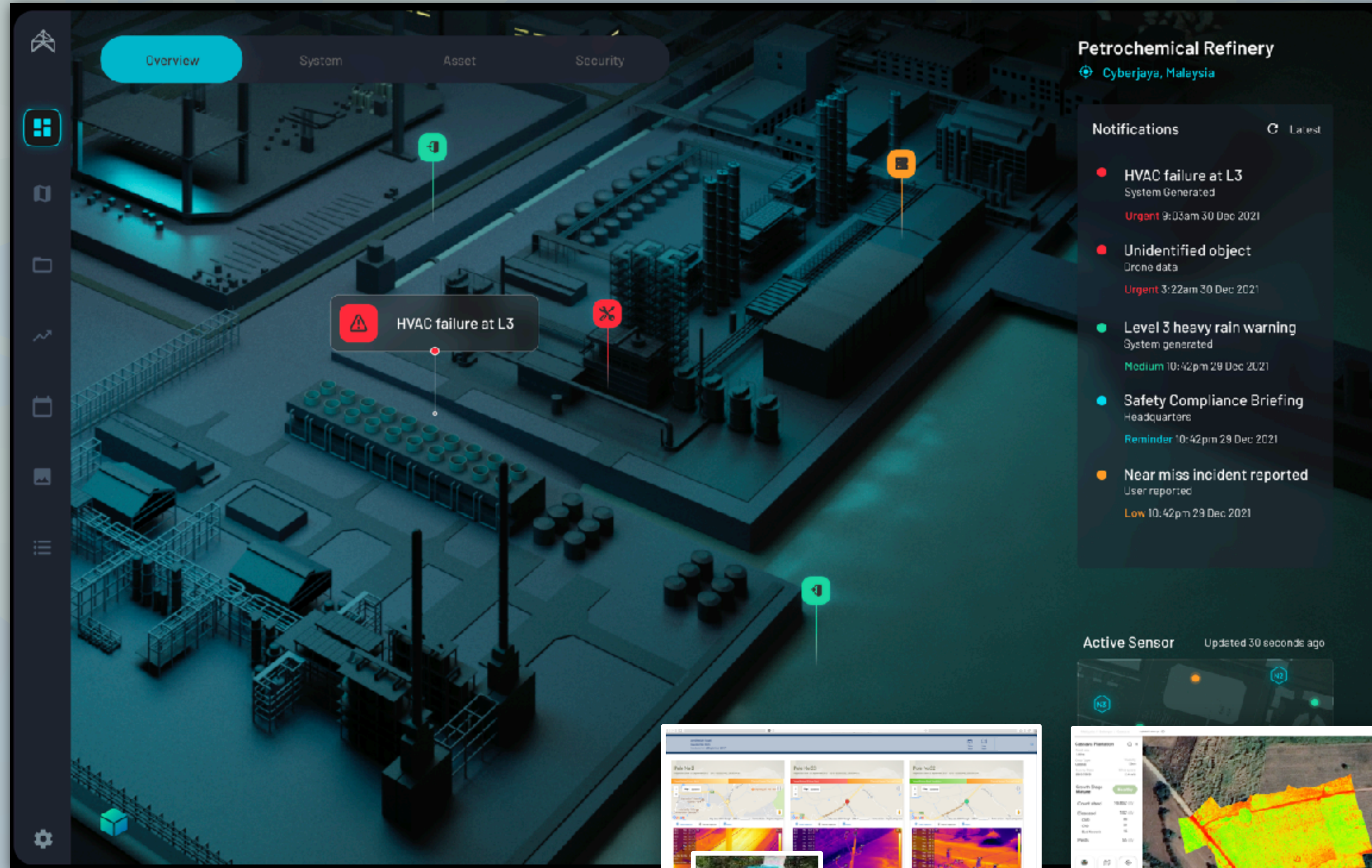
325 21

Active 245 Inactive 125

Staff Productivity

80 Hours 72 Hours

Time Planned Actual Hours



DT3 Digital Transformation

01



POWER GRID

- ▶ **30%** cost savings
- ▶ **400%** time savings in project duration

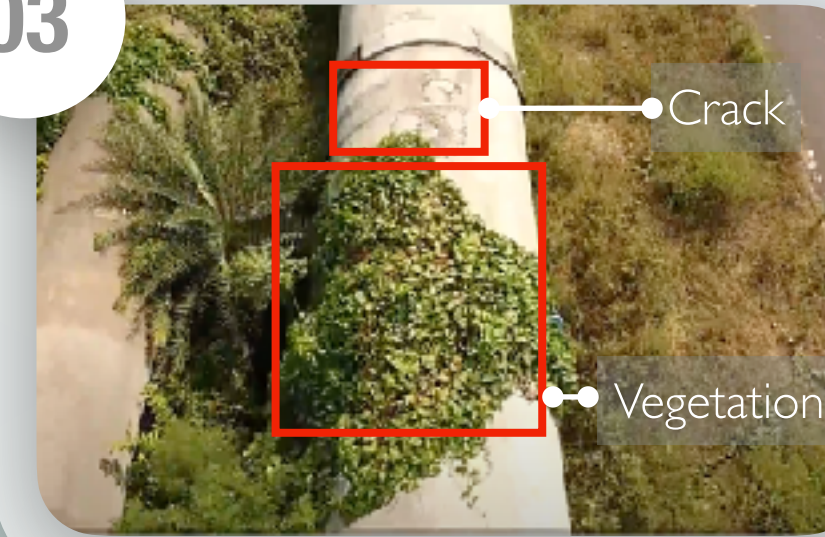
02



CELL TOWER

- ▶ **20%** cost savings
- ▶ **500%** process acceleration

03



OIL & GAS

- ▶ **27%** increase in uptime and reliability
- ▶ **30%** cost savings in project equipment

04



WIND TURBINES

- ▶ **35%** operations cost savings
- ▶ **50%** cost saving in defect marking & categorisation

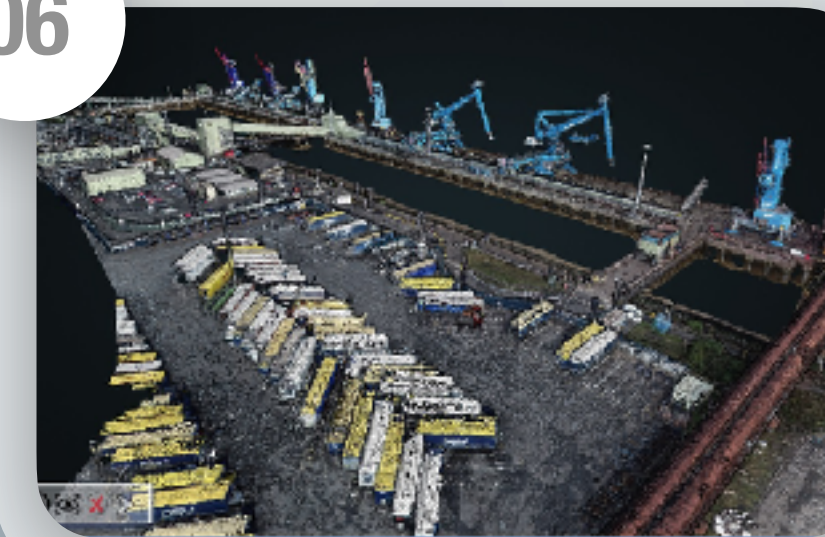
05



SOLAR FARMS

- ▶ **97%** faster than conventional method
- ▶ **\$1,254** average cost savings per MW

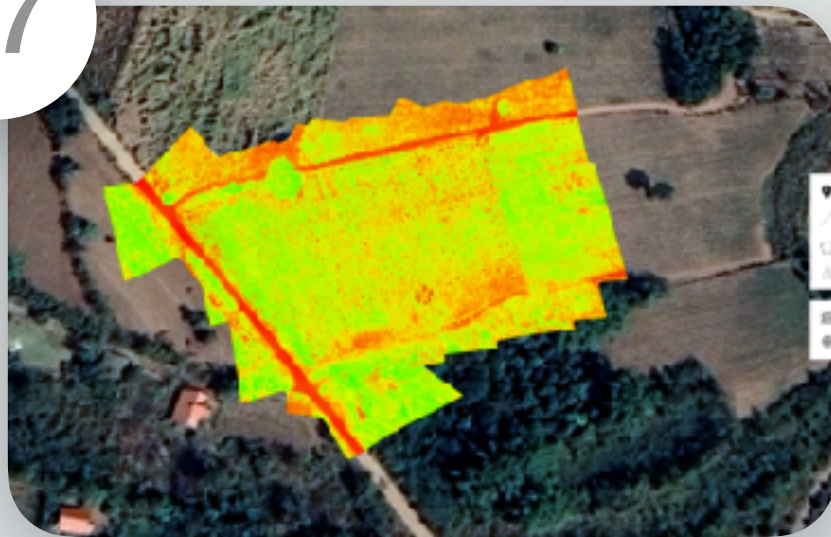
06



PORTS

- ▶ **25%** proven cost savings
- ▶ **55%** less time compared to traditional method

07



AGRICULTURE

- ▶ **500%** operations cost savings
- ▶ **67%** increase in crop yields

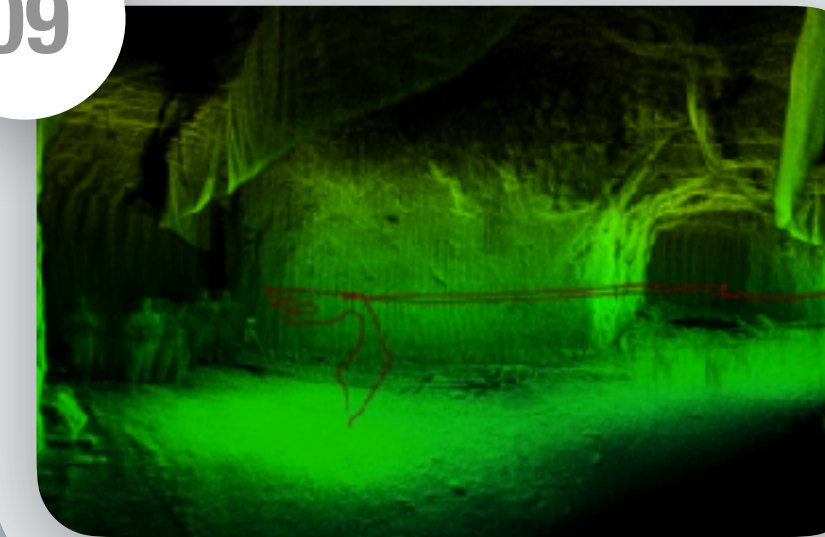
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INFRASTRUCTURE

- ▶ **75%** proven cost savings
- ▶ **3D** Superior 3D modelling and digital twin of assets

09



MINING

- ▶ **30X** faster speed of inspection
- ▶ **3D** Superior 3D modelling of mines



advancing humanity through
drone intelligence

Building and Growing Malaysian Talent

Izham Zakaria
Vice President,
Public Sector & Training
Aerodyne Group

Recent Challenges in Building MY Talent

Challenges

WHY



01

Fast Pace Technology

1. Tech is advancing so fast especially in niche industry areas.
2. Investments in technology and equipment become obsolete in 18 to 24 months.



02

Softskills & Aptitude Gap

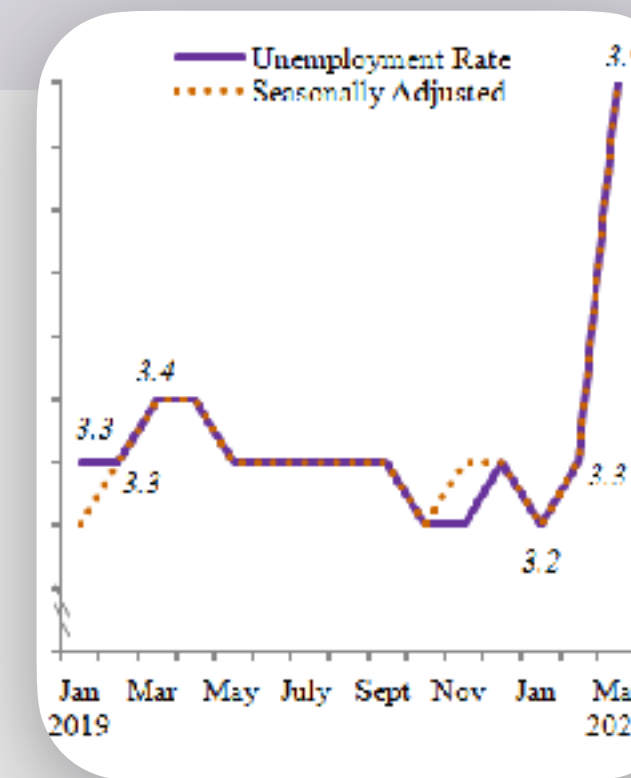
1. Critical thinking and problem solving competencies.
2. Most important is ATTITUDE towards the skills gap.
3. CGPA - How do we differentiate memoriser vs actual problem solver or performer?



03

Industry Demand

1. Tech graduates are not meeting industry needs (industry say)
2. Industry doesn't have the requirements for high paying job
3. Industry still stuck at lower supply chain - low wage business model



04

High Unemployment

1. Fresh graduate market saturation vs actual job / market demand.
2. Complicates industry talent recruitment.



05

Financial Debt

1. Students are burdened with academic financial debt and unemployment upon graduation
2. This drives into employers market and leads to lower wages for fresh graduates

Jabatan Perangkaan
Malaysia 2019
untuk WEF

72.1% 5.8%

Sampai SPM
sahaja

Tak pernah
bersekolah

What did we do about it?

work within
an ecosystem
of reliable partners

culture, values and
**work-life
integration**

screen for best talents
young, energetic, hungry for
success, knowledge is a must,
attitude is key

1V99A
1% Vision,
99% Alignment



**Align teams and individuals
to the Aerodyne Way**

THE AERODYNE WAY

It's our DNA

Encoded in our Insignia are our core values, key solutions and our 16 world class capabilities.

In a world full of chaos and imperfections, we aspire to push the limit by continuously improving by the power of tiny gains **(1% daily as represented by the 1° slant at 03).**

The Insignia contains 9 intersections comprising 5 Core Values and 4 solutions, and the **16 lines reflecting our World Class capabilities.**

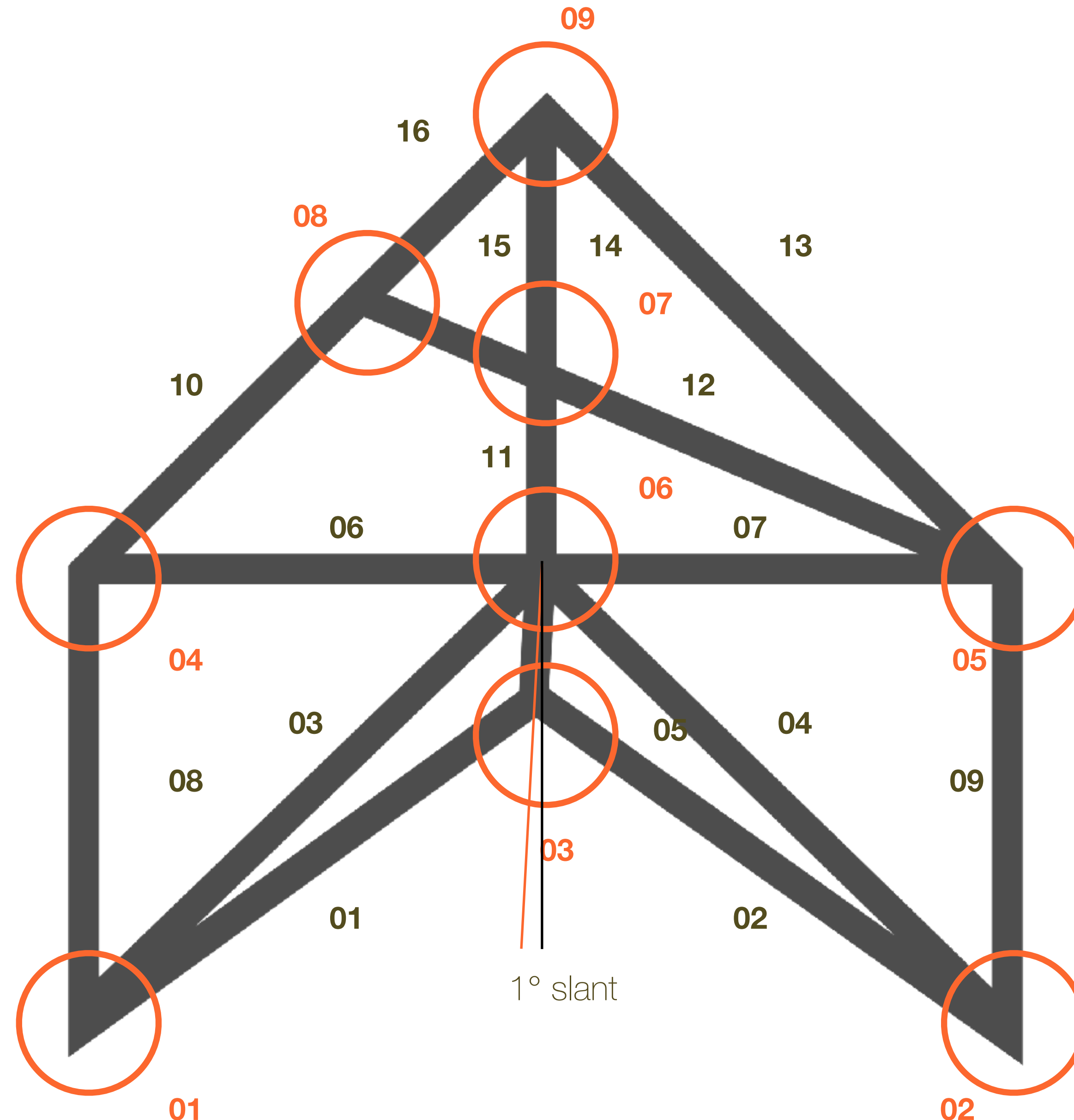
9 Intersections and 16 Lines

5 Core Values

1. Creating Trust
2. Delivering Value
3. Problem Solvers
4. Integrity
5. Balance

4 Solutions

6. AGRIMOR
7. FULCRUM
8. DRONOS
9. ARGENTAVIS



01


High Flexibility

02


High Dependability

03


Meet Requirements

04



High Productivity

05



Fast Delivery

- We are highly flexible in our conduct with our clients, colleagues and partners
 - We put our goals and objectives as a compass to steer us in making our operational decisions
- Each and every single one of us have a very high level of dependability
 - Everyone can depend on one another. Not just internally but externally too
- Quality is defined as meeting requirements
 - We relentlessly focused on the smallest details to create excellence in delivery
- We are efficient in our execution
 - High level of productivity is the hallmark of Aerorangers!
- Our deliveries are consistently quick. On-time, every time
 - We find ways to uphold this track record with professional project execution and time management




06



Meet Goals & Targets

07


Growing Capabilities

08


Internal Matching

09


Resource Matching

- We have evolving approaches that ensure we do the right thing in always meeting stakeholders goals and values
- Our capabilities are growing in-line with what our growth needs are
- We have sufficient internal resources to power our growth and strategic plans
- Our available resources matches with what the market needs

10


Continuous Improvements

11


Alert To Change

12


Easily Adapt To Change

- At Aerodyne, the only constant is change
 - We continuously strive for improvements
- We are alert to changing requirements in technology and the business environment
 - We reward and recognise innovation and creative problem-solving
- We are like a chameleon, able to adapt to the changing environment easily and effortlessly

Our World Class Strategy 16 Capabilities

13


Vision & Mission

14


No Fuss, No Drama, Just Deliver

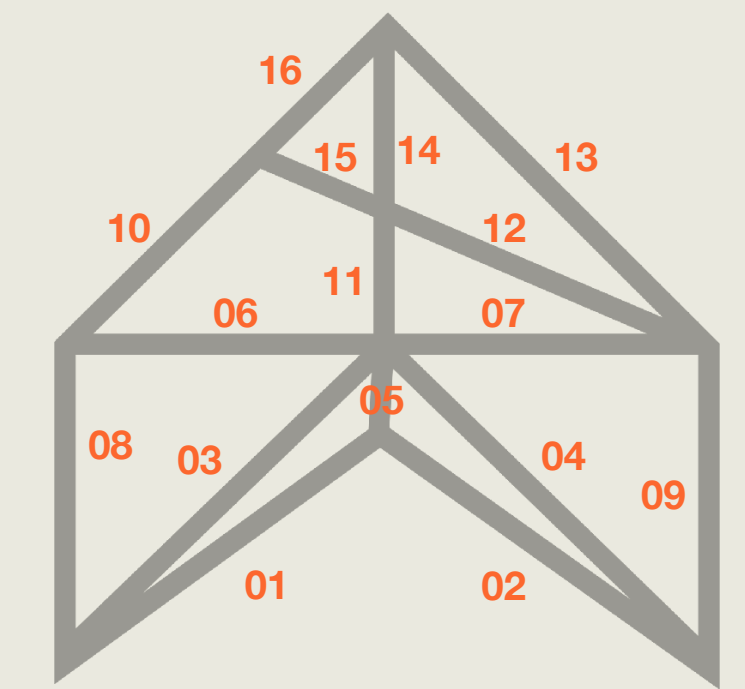
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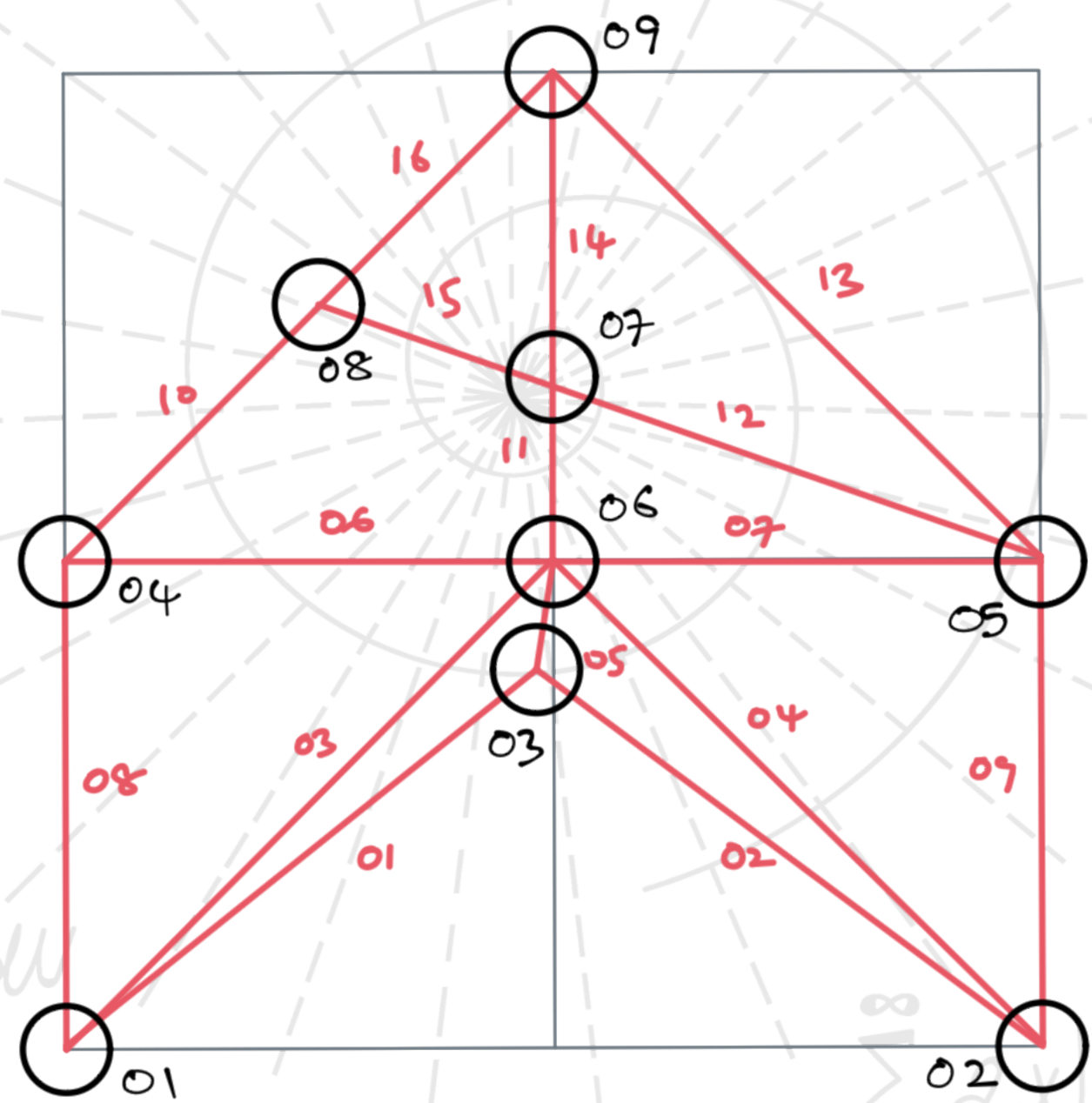

Faster, Better, Cheaper, Safer

16


Global Ready

- We have clarity on our Vision and we execute our Mission
 - Vision : Advancing humanity through drone intelligence
 - Mission : Delivering best-in-class DT3 solutions, on-time, every time
- We know what the stakeholders wants and we just get on with it
#nofussnodramajustdeliver
- We know what matters to our clients
 - We push ourselves to deliver solutions to improve efficiency, productivity and cost savings, with a commitment to safety
- Our people and technology are globally competitive
 - We aspire to be the technological trendsetter of our industry
 - We aim to build a best in class multi-disciplinary talent pool





drone tech
data tech
digital transformation

DTR
DTRT
SS
NFNDJD

continuous
improvements

$$\alpha = \frac{(dt^3 \times \omega c^4)^n}{P^3}$$

People Planet Profit

The Aerodyne Way

Aerodyne Campus

A 50,000 SQFT. FACILITY LOCATED IN CYBERJAYA
DEDICATED AS TRAINING CENTRE FOR RPTO



MRO Facility



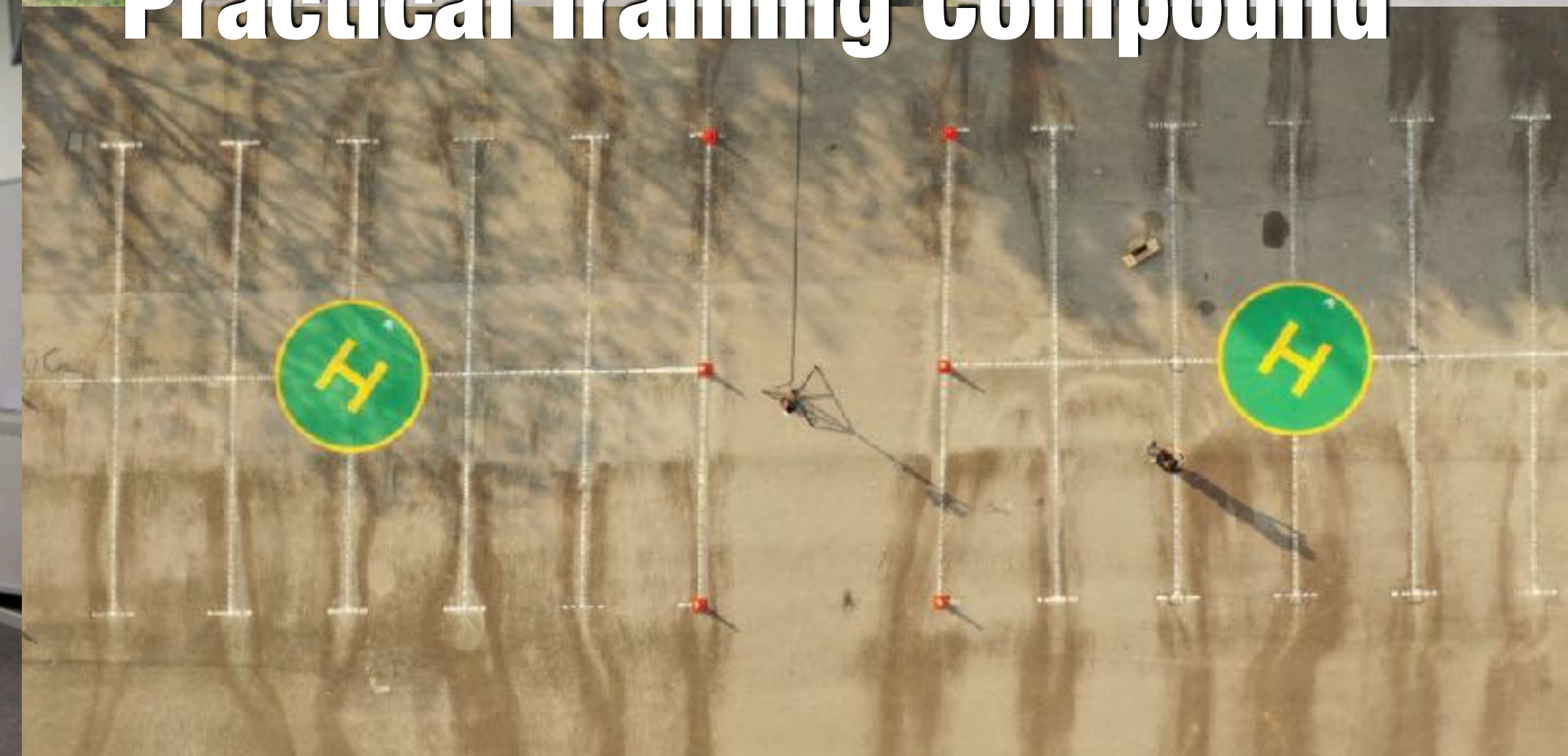
Flight Ops Room



Emergency Response Room



Practical Training Compound





Examination Hall



Training Classroom



Library / Study Room



Drone Simulator Area

Why Aerodyne?

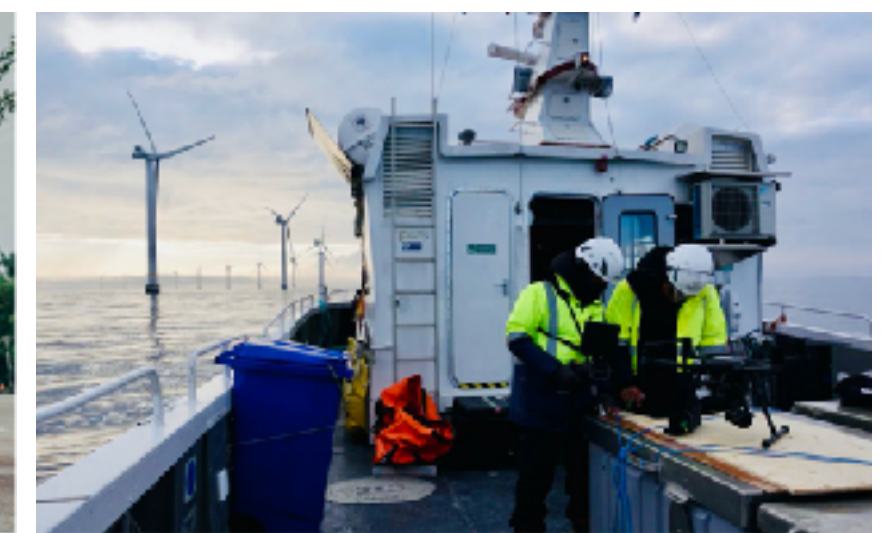
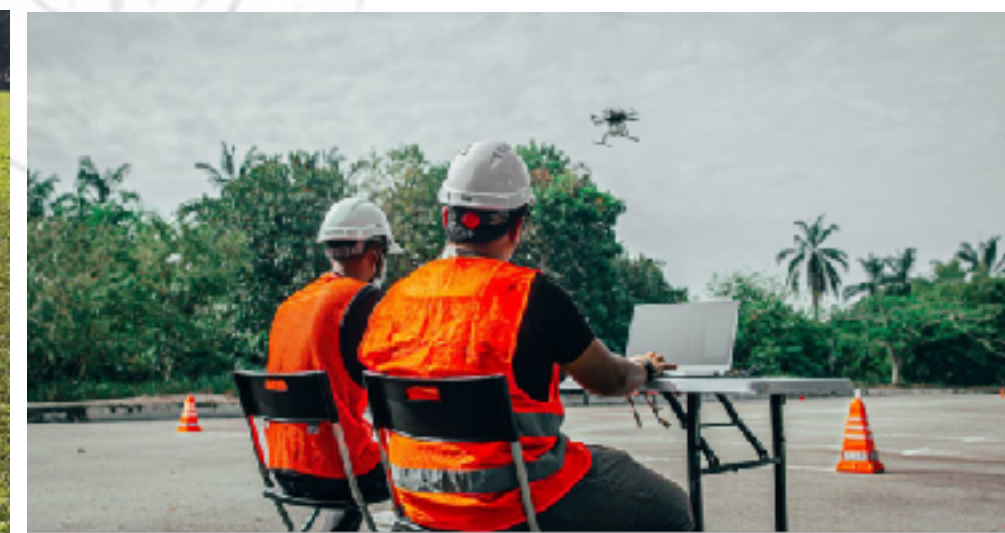


Our Company

- ▶ Excellent track record in DT3 - Drone Technology, Data Technology & Digital Transformation
- ▶ Ranked 1st in 2021 World's Best Drone Service Provider - Drone Industry Insights (DII)

Our People

- ▶ Instructor track record of up to 1000 flight hours without LTI
- ▶ Professionally trained drone pilots
- ▶ Sharing experience in high value industries



DT3 Training Pathway



Safely fly drone and master the basic movements instructed by certified and professional trainers.
Basic requirements to operate a drone: regulations, safety, theory and practical module.
Participants will receive Certificate of Completion after completing the course.

Level 1 - Basic Drone Course

Duration : 5 days

New Pilot/Experienced Pilot

Modules :

1. UAS Air Law & Regulations
2. UAS/Airspace
3. Aviation Safety & Airmanship
4. Human Perf. Limitation
5. Meteorology
6. Navigation
7. UAS Gen. Knowledge
8. Operation Manual
9. Introduction to Mavic 2 Pro
10. Operational Procedure

Level 2 - Agriculture Drone Operation

Duration : 5 days

Prerequisite is Level 1 / Other Basic Course

Modules :

1. Introduction to Agriculture Drone
2. Safety and Procedure
3. Aviation Safety and Airmanship
4. Introduction to Agras T16 and T20
5. Pesticide Handling
6. 2 - 5 Hours of Flying Exercise

Level 2 - Surveillance & Mapping Operation

Duration : 5 days

Prerequisite is Level 1 / Other Basic Course

Modules :

1. Aerial Surveillance & Mapping Overview
2. Types of Photogrammetry
3. 2D & 3D Mapping
4. Flight/Mission Planning
5. 2 - 5 Hours of Flying Exercise
6. 2D / 3D using Pix4D

Level 2 - Asset Inspection Drone Operation

Duration : 5 days

Prerequisite is Level 1 / Other Basic Course

Modules :

1. Introduction to Telco Tower Inspection
2. Cell Tower Audit Finding
3. Introduction to Grid Asset Inspection
4. Grid Asset Audit Finding
5. Introduction to Matrice 200 & 300
6. 2 - 5 Hours of Flying Exercise

REMARKS:

Subject to customisation based on actual client needs



MPOB



NAVY



GENTING



PAHANG SKILLS



KISMEC



FELDA



Aerodyne Artificial-Intelligence Program



Artificial Intelligence and Data Science

Duration : 7 days

Modules :

1. Introduction to Artificial Intelligence
2. Coding with Python
3. Data Structures & Algorithms
4. Introduction to Data Science
5. Mathematical & Statistical Skills
6. Algorithms used in ML
7. Data Preprocessing and Analysis
8. Machine learning Model Training
9. Data Visualization

Big Data Analytics

Duration : 7 days

Modules :

1. Introduction to Big Data Analytics
2. Big Data Platforms and Data Storage
3. Big Data Algorithms and Framework
4. Real-time streaming and Batch Processing
5. Basic Cloud Computing
6. Data Visualization

Cloud Computing

Duration : 6 days

Modules :

1. Introduction to Cloud Computing with AWS
2. Cloud Computing Concepts (IaaS)
3. Setup and Configuration
4. Storage and Elastic Search
5. Virtualization and Virtual Machine
6. Containers and Kubernetes
7. Cloud Native and Serverless
8. Basic DevOps and Automation
9. Application Modernization
10. Cloud Security

Front-End Development

Duration : 8 days

Modules :

1. Introduction to Front-End Development
2. Concepts of Data Structure and Coding with CLI and Node.js
3. Creating Instances and model overview
4. Setup and Configuration for Vue.js and Angular
5. Working with Form
6. Application Programming Interfaces (API)
7. Concepts and applications in Routing
8. Application Development Projects

PHP & MySQL

Duration : 5 days

Modules :

1. Introduction to Model View Controller
2. Setup and Configuration
3. Basic PHP
4. Basic MySQL
5. Working with CRUD
6. Integration with Javascript and CSS
7. Application Development Projects

HTML, Javascript and CSS

Duration : 5 days

Modules :

1. Introduction to Web Application Development
2. Setup and Configuration
3. Basic HTML
4. Basic CSS
5. Development CRUD application
6. Application Development Projects

Python Programming

Duration : 5 days

Modules :

1. Introduction to Python
2. Basic Python
3. Setup and Configuration
4. Data Structure
5. Libraries for Machine Learning
6. Application Development Projects

Cyber Security

Duration : 5 days

Modules :

1. Introduction to Cyber Security
2. Threat Actors, Attack, and Mitigation
3. Security Policies and Procedures
4. Secure Architecture
5. Network Security Controls
6. Security Testing
7. Information Security Government
8. Digital Forensic
9. Disaster Recovery

Create Expert Generalist who can connect the dots

Our Internal Development Framework

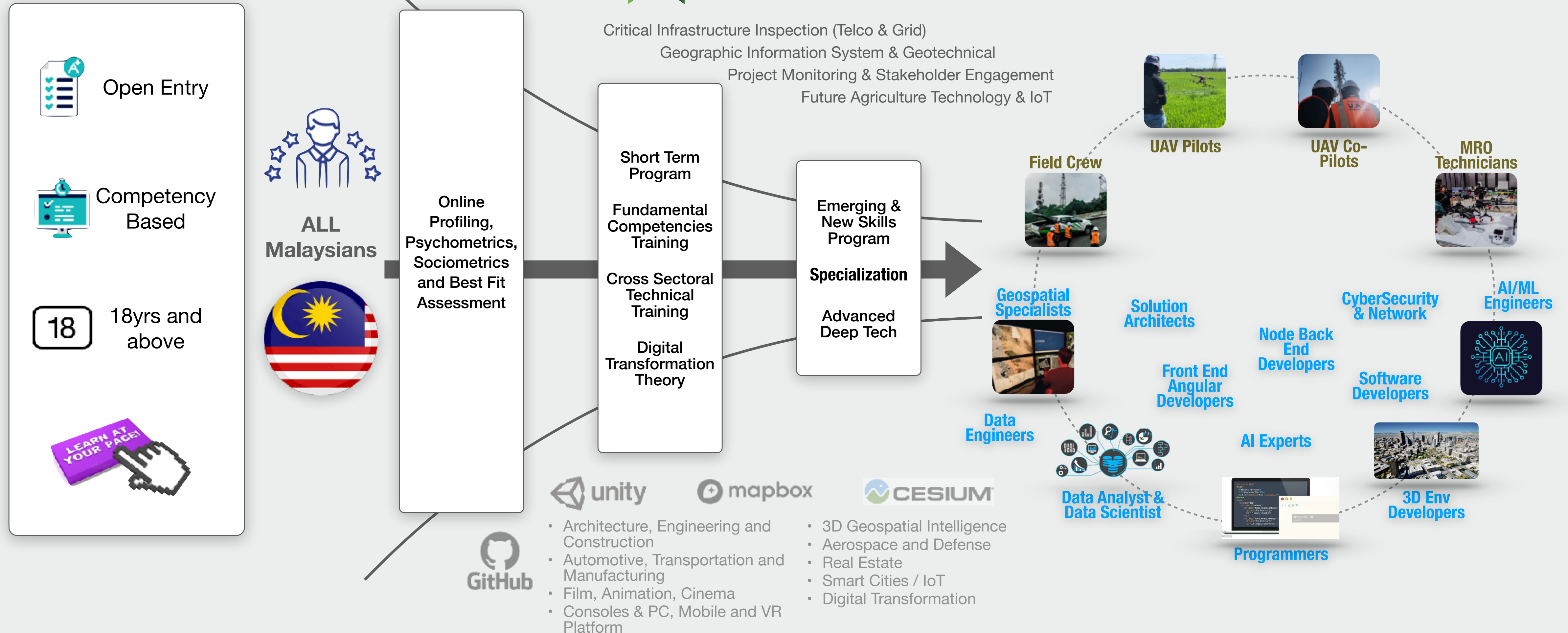



Industry Placement

On Job Training & Assessment

New Job Creation

Fueling Future Innovations with Expert Generalist



- 
- A hand from the left side of the frame points its index finger towards a complex, glowing digital network structure. The network consists of numerous white nodes connected by thin white lines, creating a web-like pattern. A bright orange and yellow light source is positioned at the point where the finger points, creating a lens flare effect that illuminates the surrounding network nodes. The background is a dark blue gradient.
1. 70% of all DT fail to achieve goals
 2. 1.3 Trillion spent in 2018, 900b wasted

Tabrizi, Lam, Girard, Irvin 2019 <<https://hbr.org/2019/03/digital-transformation-is-not-about-technology>>

Harvard Business Review - March 2019

Do the Right Things and Do Things Right

initiate and drive change at

Policy Level



Building and Growing Talent

requires supply and demand - a complete supporting ecosystem driving individuals towards their fullest potential

1. Technology as a global enabler.
2. **Create Jobs.** Support local startups and tech companies.
3. Policy for **selective FDI**s. Focus on those which create quality jobs.
4. Diversify Economic Complexity Index (**ECI**) which will eventually create more jobs.
5. Change (and commitment) in government policies - benchmarking S.Korea, Taiwan, Turkey
 - a. Localisation of technology, push for domestic solution.
 - b. Strengthen supply chain - higher value activities create high value jobs.



recommendations

MAKING THAT LEAP

1

Work together in an integrated ecosystem

- i) Talent development is not just the responsibility of MoE / MoHE
- ii) Both institutions and industry plays an important role to the ecosystem

2

Supplying quality talent - Creating quality demand

- i) Quality FDI - non labor oriented investments
- ii) Quality over quantity - graduates, employment opportunities

3

Strengthen policy to source local solutions, prioritise Malaysian products and tech

- i) Strong execution of an internal development policy that prioritise local solutions and supports local supply chain
- ii) Adoption of a Stratified Investment Model between industry, institutions and government to harness the full socioeconomic potential of the triple helix model of innovation.

Thank You



aerodyne

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Drones | IoT | Sensors | Ai | Big Data Analytics | Turnkey Application

