

HiilSE DRONE

Authoring the Era of
Sovereign Drone Intelligence

Corporate Founding Member of MDCoCI & KTDMB



A Civilizational Signal for Indigenous Intelligence

The Mission

To restore indigenous intelligence, activate sovereign manufacturing, and institutionalise Malaysia's leadership in AI drone innovation.

The Philosophy

HiiLSE is more than a corporation; it is a civilizational signal. Rooted in Tamil-origin mathematical frameworks, every R&D breakthrough and every drone deployed is a declaration of authorship and regional transformation.

The Shift

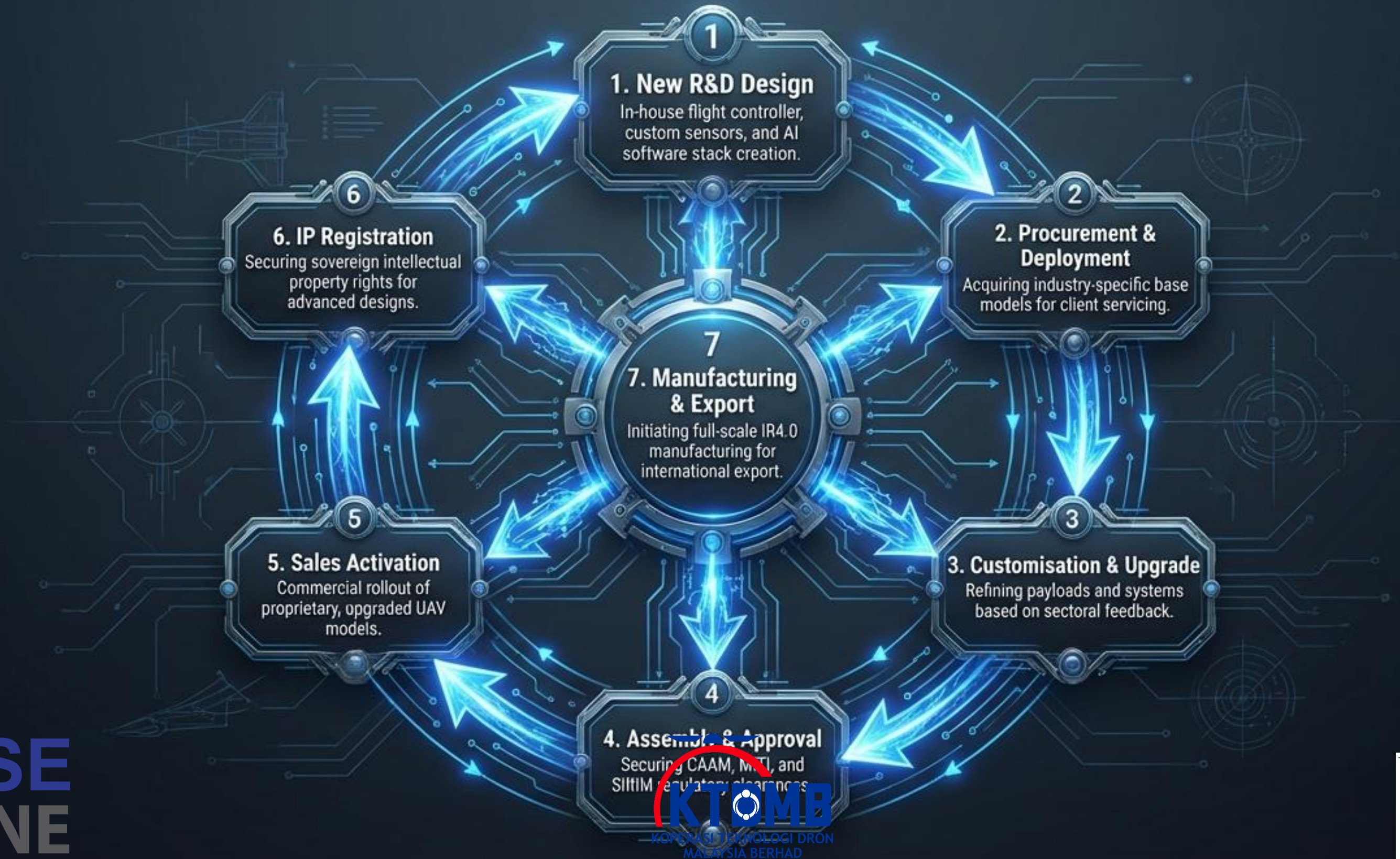
Moving the region from procurement dependency to intellectual property creation, establishing a full-spectrum ecosystem from raw R&D to sovereign deployment.

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DRONE

KTDMB
KOPERASI TEKNOLOGI DRON
MALAYSIA BERHAD

MALAYSIA DRONE
CHAMBER OF COMMERCE & INDUSTRY MDCOCI

The Sovereign Innovation Flywheel



Activating Regional Manufacturing Sovereignty



Industrial Scale

IR4.0 facilities spanning 29,000 sq ft at TF UTeM, delivering end-to-end UAV and UGV production.

Landmark Expansion

A highly publicised RM65 million strategic partnership with Garuda Aerospace to construct Southeast Asia's largest drone manufacturing plant, creating 3,000 technical jobs (As featured in BERNAMA and MIDA).

Institutional Interfaces

Over 15 active government compliances and departmental integrations, bridging CAAM, SIRIM, and HRDCorp.

Commercial Footprint

Actively serving 58 multinational corporations (MNCs) and over 100 enterprise clients with sovereign drone solutions.

The MDCoCI Drone Restoration Authority



Damaged/Obsolete Fleet



Flight-Ready / AI-Upgraded

The Standard

The Malaysia Drone Chamber of Commerce & Industry (MDCoCI) restoration ecosystem surpasses original OEM benchmarks.

Multi-Brand Mastery

Complete component-level diagnostics and upgrades for global tactical, enterprise, and consumer brands (including Lockheed Martin, Freefly, DJI, Autel, and Skydio).

Component-Level Upgrades

- **Flight Controllers:** Custom firmware flashing and sensor calibration.
- **Gimbals & Payloads:** Thermal, LiDAR, and multispectral integration.
- **Connectivity:** Antenna tuning, RF optimization, and signal tracing.

The Result

Absorbing damaged fleets across the Global South and relaunching them with enhanced intelligence and sovereign flight-ready certification.

Military-Grade Competence Against Global Benchmarks

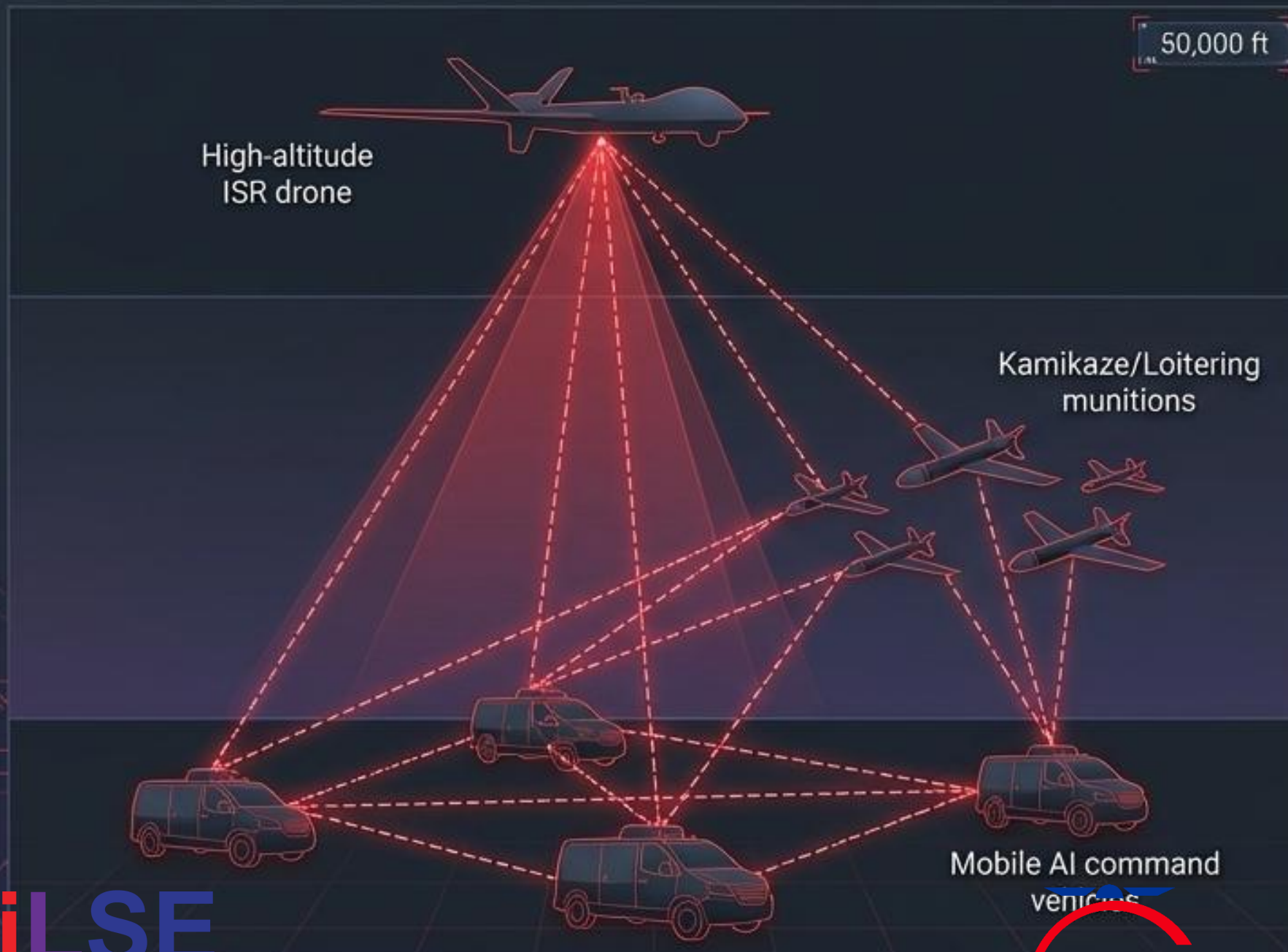
Tactical Defence Drone (In-House Composite)

- **Endurance:** 12 to 72 hours continuous flight.
- **Operational Range:** 100 km radius.
- **Max Payload:** 15 to 45 kg (Customisable tactical modules).
- **MTOW:** 165 kg.
- **Mission Profile:** Border patrol, hostile environment penetration, DDOAF.

Global Gold Standard ISR Drone

- **Endurance:** Up to 27 hours continuous flight.
- **Operational Range:** >1,850 km (1,000+ nautical miles).
- **Max Payload:** 1,700 kg (Hellfire, JDAMs, precision strike).
- **Altitude Ceiling:** 50,000 ft.
- **Sensor Suite:** EO/IR, Synthetic Aperture Radar (SAR), Laser Designator.
- **Combat Role:** ISR, electronic warfare, AI-assisted targeting.

Tactical Target Acquisition in GPS-Denied Environments



Airspace Architecture

DOOAF Integration

Direction of Own Artillery Fire via real-time coordinates, enabling rapid artillery adjustments with minimal human error.

Persistent Surveillance

High-resolution, AI-driven analytics autonomously detect, classify, and track hostile mobile assets.

Multi-Domain Synchronization

Maintaining live data feeds to ground command centers while operating deep within denied airspace.

Precision Strikes

Coordinating loitering munitions and armed UAVs for surgical interventions in highly constrained environments.

The MADDOS Drone Detection and Neutralisation Dome



Uncompromising Airspace Integrity

Mobile Anti-Drone Defense & Observation Systems (MADDOS) designed to detect and defeat the intrusion of unwanted UAVs.

Capabilities Framework

- **Detection Horizon:** Up to 80 km tracking range with up to 6THz/s sweep speed.
- **Signal Processing:** Real-time Direction Finding (DF) monitoring across all frequencies simultaneously (including 3G, 4G, and 5G telemetries).
- **AI Target Recognition:** Detects >99% of commercial drones, identifying manufacturer and type, while tracking the geographical location of the operator.
- **Full-Dome Coverage:** Operational in adverse weather, fog, and night conditions with highly accurate 3D height and trajectory mapping.



Agricultural Geo-Intelligence

UAV customization for precision agriculture, GIS mapping, and food security.

Conducting oil palm audits, crop health detection, and land rights verification with centimetre-level accuracy.



Urban Hazard & Infrastructure

Deployment of Customised Firefighter Drones alongside ground-based AI Van Trucks for rapid command deployment.

Proprietary lab-developed chemical formulations for heavy-duty infrastructure and solar panel cleaning at scale.



Quantum Future-Readiness

Advisory membership in the Malaysia Quantum Computing Institute (MQCI) QPU Consortium.

Paving the way for Quantum-enhanced AI training, cryptography, and complex swarm optimization.

The Council of Architects Driving Regional Sovereignty

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The Leadership Matrix

Strategic & Civilizational Leadership

- **Elanggovan Thanggavilo** (Founder/CIO): Architect of civilizational frameworks and national STEM drone curricula.
- **Mohd Saharin Bin Zakaria** (CEO): 10-year veteran of Japanese automotive manufacturing, driving industrial scaling.
- **Datuk Hj Abdul Rahim** (Chief Global Officer) & **Dr. Bryan Lee** (CMO): Masters of global entrepreneurship, diplomatic alliances, and multilingual commercialization.

Sovereign Tech & Defense Architecture

- **Shanmugam S. Thanggavilo** (CTO): AI and quantum systems pioneer, architect of indigenous flight controllers.
- **Muhammad Helmi** (Chief Defence Tech Officer): Founder of ONYX Innovation, specialist in RF signal interception and anti-drone warfare.
- **Syed Alwi** (Tech Officer) & **Dr. Harikrishnan**: Masters of thermodynamics, fluid mechanics, and IR4.0 embedded software integration.

Field Operations & Institutional Onboarding

- **Vadivelan Veerasinggam** (Chief Project Officer): Grant activation, CAAM-certified trainer, and national TVET collaborator.
- **Zainudin Saman & Eswaran Raman**: Experts in agricultural geo-intelligence, complex multi-role field deployment, and human-centered expedition leadership.

The Integration of Mind, Body, and Shield

The Indigenous Intelligence (Mind)

The profound restoration of technical authorship, youth onboarding, and Tamil-origin mathematical R&D.

We design the logic.

The Sovereign Ecosystem (Body)

The 29,000 sq ft manufacturing infrastructure, multi-brand MDCoCI restoration authority, and resilient supply chains. **We build the hardware.**

Self-Sustaining National Capability

The Tactical ISR Capabilities (Shield)

The global gold standard UAVs, DDOAF integration, and MADDOS domes.

We protect the airspace.

The Synthesis: HiLSE does not merely assemble imported parts. We offer a completely integrated, loop-closed national defense and commercial ecosystem.

A Self-Sustaining Trajectory for Global Export

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Authoring the Future

Leading the integration of Quantum Processing Units (QPUs) into unmanned systems, establishing the next frontier of secure, autonomous swarm intelligence.

Institutional Diplomacy

Activating cross-border UTM systems, BVLOS frameworks, and sovereign drone training protocols for allied nations.

Scaling Regional Infrastructure

Operationalizing the RM65M Garuda Aerospace mega-plant to meet immediate ASEAN and SAARC market demands.

The Final Signal: HiLSE Drone Malaysia stands as the definitive partner for governments and enterprises ready to abandon reliance and author their own technological sovereignty.