From Sensors to Services

INTRODUCTION

Founded in 2016, Malaysia IoT Association or commonly know as MyIoTA is the largest IoT & AI Eco-system & platform in Malaysia consisting of the entire IoT & AI value chain from semiconductors, sensors, 5G, connectivity, cloud, cybersecurity, software, hardware, research, funding & gov agency engagements. Find out more at www.my-iot.org

Working with Global IoT Research Organisations

IDC
Analyze the Future

MARKET NOTE

The Battle for In
Southeast Asia

Pranabesh Nath

EXECUTIVE SNAPSHO

FIGURE 1

Executive Snapshot:

This IDC Market Note disc
internet of things (IoT) use

sensor network (WSN) based on LoRa technology and create a local ecosystem of partners around its network of fixed-line and wireless technologies, its key value propositions.

IoT Forum in Malaysia by the Malaysian Communications and Multimedia Commission

The Malaysian Communications and Multimedia Commission (MCMC), partnering with the Malaysian IoT association MyIoTA, recently organized an IoT forum to encourage local companies to get a better grasp of the opportunities and build globally competitive companies based in Malaysia.

Besides featuring Sigfox and LoRa partner Atilze Digital, the MCMC also featured presentations from STMicroelectronics and Huawei. STMicroelectronics talked about use cases enabled through its STM32 microcontroller, which features low-power requirements and real-time capabilities, whereas Huawei featured its own IoT platform, chipsets, and modules. There were a considerable number of local companies that featured their products in the conference, a healthy sign of increasing market and

MCMC and other relevant government agencies, Malaysia has the
IoT solutions in Southeast Asia.

LoRa Networks in Thailand and Indonesia

panies to fund Sigfox, Korean operator SK Telecom has focused its
eginning with a nationwide (South Korea) launch in July 2016. It

MALAYSIA'S DIGITAL ECONOMY JOURNEY

The Government's long-standing commitment in harnessing the potential of technology for country-wide transformation began back in 1996.

Establishing the Multimedia Super Corridor (MSC) was the first step in this transformation journey. MSC introduced high-technology business districts and special economic zones to transform Malaysia into an advanced nation by 2020.

Focus was given to building a knowledge-based society as well as leveraging on information and communication technology (ICT).

Since then, the government has implemented a wide rang of policies and measures to spur technological and digital transformation in Malaysia, as shown in *Figure 2-2*.

Figure 2-2: Policy evolution in relation to ICT development

The COVID-19 pandemic has accelerated the growth of the digital economy, thereby helping build economic resilience.

In many countries, economic activities during the lockdown period were driven by eCommerce, working from home and online food delivery services. Contact tracing applications helped contain the spread of the virus, while enabling business continuity.

Inappropriate use of and vulnerabilities in digital technologies erode trust.

The World Economic Forum (WEF) has highlighted that data fraud and cyber attacks are among the top 10 risks to economic stability and social cohesion[11]. An increase in digital risks may affect people's trust and confidence in the digital economy.

Digitalisation in all facets of life also increase the risk of digital divide.

The lack of access to the internet and smart devices limit the opportunities to the underprivileged groups to quality education, healthcare services, employment and other benefits.

The advancement of digital technology is rendering conventional skills irrelevant.

People with limited digital skills are disadvantaged as automation and technology cause job displacement. The WEF estimated that 75 million jobs globally may be displaced by 2022[12].

As digital technologies become more prevalent, the digital economy will become the foundation of the modern economy. Accelerating the digital economy is no longer an option but crucial for Malaysia.

MyIoTA is on the taskforce & working groups setup by Malaysia government & various agencies


VEONIC
EAMAX
Mikro
tekmark
karuna
success
wipro
MPCN
Evidence-Based Nutraceuticals
e.co
enabling connectivity
favoriot
CRIT
ESPORTS
Coffee Star
Innowave
iStone
TM ONE
KoçSistem
TELTONIKA
ADVENXUS
mercantile
Comverge
i2D
pod group
+SOLAR
ADVANTECH
eye-port
retail redefined
LG
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& IoT TECHNOLOGIES
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FORMERLY KOFAX
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SIMIT
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MIP
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"INTEGRATED INDOOR ENVIRONMENTAL TECHNOLOGIES & ENGINEERING SERVICES"
HUB
http://www.my-iot.org/membership-application

IoT Eco-system

IoT Expertise Area	Market Segment				
	Healthcare	Transportation	Smart Factory	Smart Cities & Infrastructure	Agriculture
Sensors & Embedded		AXIOMTEK	ST life.augmented, Sierra Technology, JE	Cre8IOT	
Device software			Schneider Electric, ADVANTECH, SIEMENS	wpg, NexusLED, PROMOSYS TECHNOLOGY	
Connectivity	中国移动 China Mobile International	YTL COMMUNICATIONS, TM	PCCW Global, maxis, Industrial IoT	RENEON, XPERANTI, U mobile	REDtone
Mobile Apps		customedia	Clever Edge, AiMission robotic, SNS NETWORK		
Cloud & Server Software	Hewlett Packard Enterprise	Lenovo	ABLE, M3, IAT SOLUTION, E-TECH, PROGENET, PcVue Solutions, ECAVA	MIMOS, detik ideal, ENFRASYS CONSULTING	
Security			MAXITULIN, kaspersky, Vesta		
Data Analytics			AMD, steerix	ENVISION, ASIA DRONE, HEXA IoT	
Domain Knowledge	SMART OPTZ, MPCN		IoT Labs, AUTOMATION CONTROL SYSTEMS SDN. BHD.	ICEE, Resource Data Management	
3D Modeling & Design			Altair	i2O	

http://my-iot.org/membership-directory/

Introducing Special Interest Groups

- Launch of three special interest groups for focused collaboration in FY2025
- Smart Cities & Infrastructure aims to enhance urban living.
- Food Security Agritech group addresses agricultural sustainability and innovation.
- Smart Manufacturing focuses on industry 4.0, 5G, AI and IoT integration.

EVENTS & NETWORKING ACTIVITIES

https://www.hypernetofthings.net/event?date=all

Q1 ACTIVITIES

Contents

01

The Sensor Economy

Data Explosion from Connected Things

The Sensor Economy

Every second, billions of IoT devices stream temperature, vibration, location, and usage data.

This raw feed becomes the new currency for firms that can convert it into repeatable services.

By 2028 the sensor-data analytics market will reach

USD 28.5 Billion

driven by wearables, industrial machines, and smart vehicles.

From Raw Signals to Actionable Insight

Value emerges only after a series of critical transformations. These steps turn sporadic readings into reliable digital reliable digital assets ready for monetisation.

Collection
Raw data acquisition

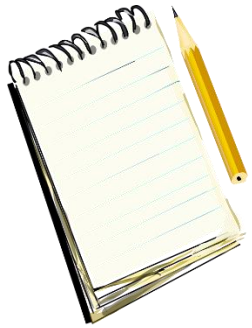
Cleansing
Noise removal

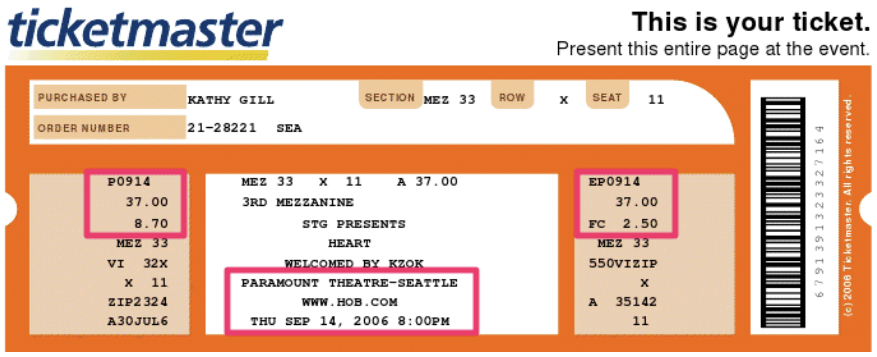
Feature Extraction
Isolate events

AI Models
Classify anomalies

Digital Asset
Ready for monetisation

WHAT DO THESE THINGS HAVE IN COMMON?





- You have all of them in your pocket everyday!
- Most if not all are already obsolete or obsoleting along with the companies who created them
- Those that still exists in the next few years will have an embedded microcontroller with a mobile app & will be connected to the cloud to create “Internet-of-Things”

INTERNET OF THINGS


“DID YOU KNOW THAT BY 2025, THERE WILL BE OVER 75 BILLION CONNECTED DEVICES WORLDWIDE?”

02

AI-Powered Analytics

Four Layers of IoT Analytics

Together, they enable the shift from reactive firefighting to proactive service creation.

Descriptive

Quantify what happened.

Diagnostic

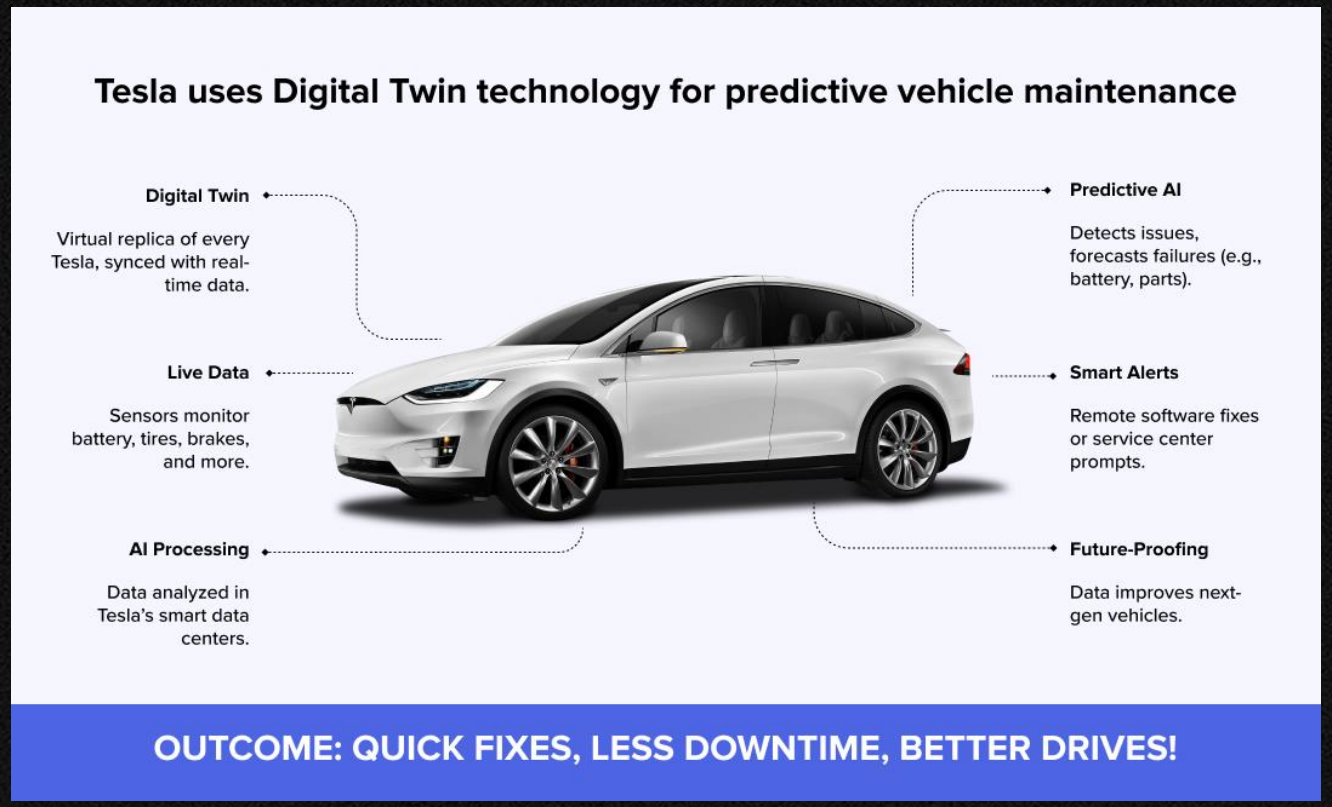
Reveal why it happened.

Predictive

Forecast what is next.

Prescriptive

Recommend exact actions.



Predictive Maintenance in Action

Manufacturers embed vehicle sensors that flag mechanical deviations before failure, creating new service opportunities.

Pattern-Learning Models
AI models learn normal behavior to detect subtle anomalies indicative of future failure.

Just-in-Time Service
Triggers proactive part replacement, cutting downtime and optimizing maintenance schedules.

Subscription Diagnostics
Creates subscription-based diagnostic offerings that customers willingly pay for, ensuring vehicle health.

03

Service Innovation Models

Outcome-Based & Pay-per-Use Models

Customers pay for guaranteed uptime or actual usage hours instead of owning hardware, creating recurring revenue streams.

Rolls-Royce TotalCare

Airlines pay a fixed dollar-per-flying-hour rate. Rolls-Royce retains ownership, using sensor data to manage all maintenance and ensure uptime. This shifts the focus from buying engines to buying guaranteed performance.

Mileage-Based Insurance

Premiums are calculated based on actual miles driven, as tracked by in-car sensors or telematics devices. This enables risk-sharing contracts that are fairer for low-mileage drivers and provide insurers with precise risk data.

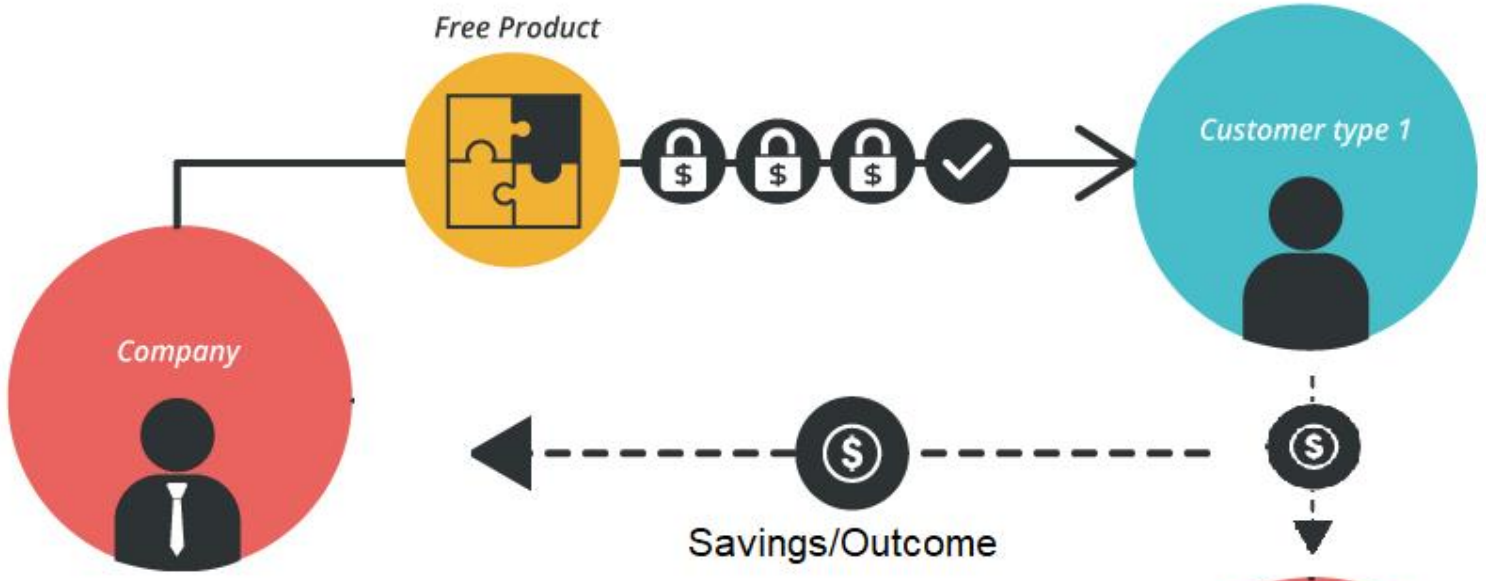
Sensing-as-a-Service Platforms

Vendors supply sensors, connectivity, cloud analytics, and maintenance as an integrated subscription. Clients gain immediate immediate operational insights without upfront investment. investment.

- Sensors
- Connectivity
- Cloud Analytics
- Maintenance

IoT Business Models

- **Subscription Model**
- **Outcome-Based Model**
- **Asset-Sharing Model**
- **The “Razor Blade” Model**



IoT – Driving Behavior

An AXA FlexiDrive app is also available, allowing users to view their Safe Driving Discounts, received personalised driving tips and check their car battery status on their smartphones. There’s no extra cost to the service – a standard comprehensive motor insurance premium and a refundable deposit of RM70 for the device is all that’s required, and customers will not be penalised for harsh driving.

IoT Business Model Canvas

The chiller performance optimization specialists

http://icee.com.my

PROBLEM

List your top 1-3 problems.

Energy wastage in existing Chiller Systems

FUNCTIONALITY

- Comfort Cooling
- Manufacturing Process Assurance
- Precision Cooling Achievement
- FM Facilitation & Streamlining
- Engineering Diagnostics
- Power Monitoring

EXISTING ALTERNATIVES

List how these problems are solved today.

Manual adjustments, scheduled maintenance

SOLUTION

Outline a possible solution for each problem.

IoT & AI solution that will optimise chillers

KEY METRICS

List the key numbers that tell you how your business is doing.

Up to 30% savings on electrical consumption of optimised chillers

UNIQUE VALUE PROPOSITION

Single, clear, compelling message that states why you are different and worth paying attention.

Free IoT Sensors usage & autonomous data monitoring & optimisation

HIGH-LEVEL CONCEPT

List your X for Y analogy e.g. YouTube = Flickr for videos.

UNFAIR ADVANTAGE

Something that cannot easily be bought or copied.

Risk-free, guaranteed savings

CHANNELS

List your path to customers (inbound or outbound).

CUSTOMER SEGMENTS

List your target customers and users.

FACILITY

- Factory / Industrial Plants
- Office Buildings
- Shopping Malls
- Hospitals & Airports
- Hotels & Convention Centers
- Technical Facilities: Clean Room / Data Center, etc

EARLY ADOPTERS

List the characteristics of your ideal customers.

COST STRUCTURE

List your fixed and variable costs.

Cost of sensors, cloud infra, installation & maintenance

COST REDUCTION & ENERGY SAVINGS

GREEN & SOCIAL SUSTAINABLE RESPONSIBILITY

REVENUE STREAMS

List your sources of revenue.

Monthly recurring shared savings from electricity bills based on contractual agreement on duration

04

Field Service Revolution

From Reactive to Anticipatory Dispatch

IoT Telemetry

Alerts field teams before breakdowns breakdowns occur.

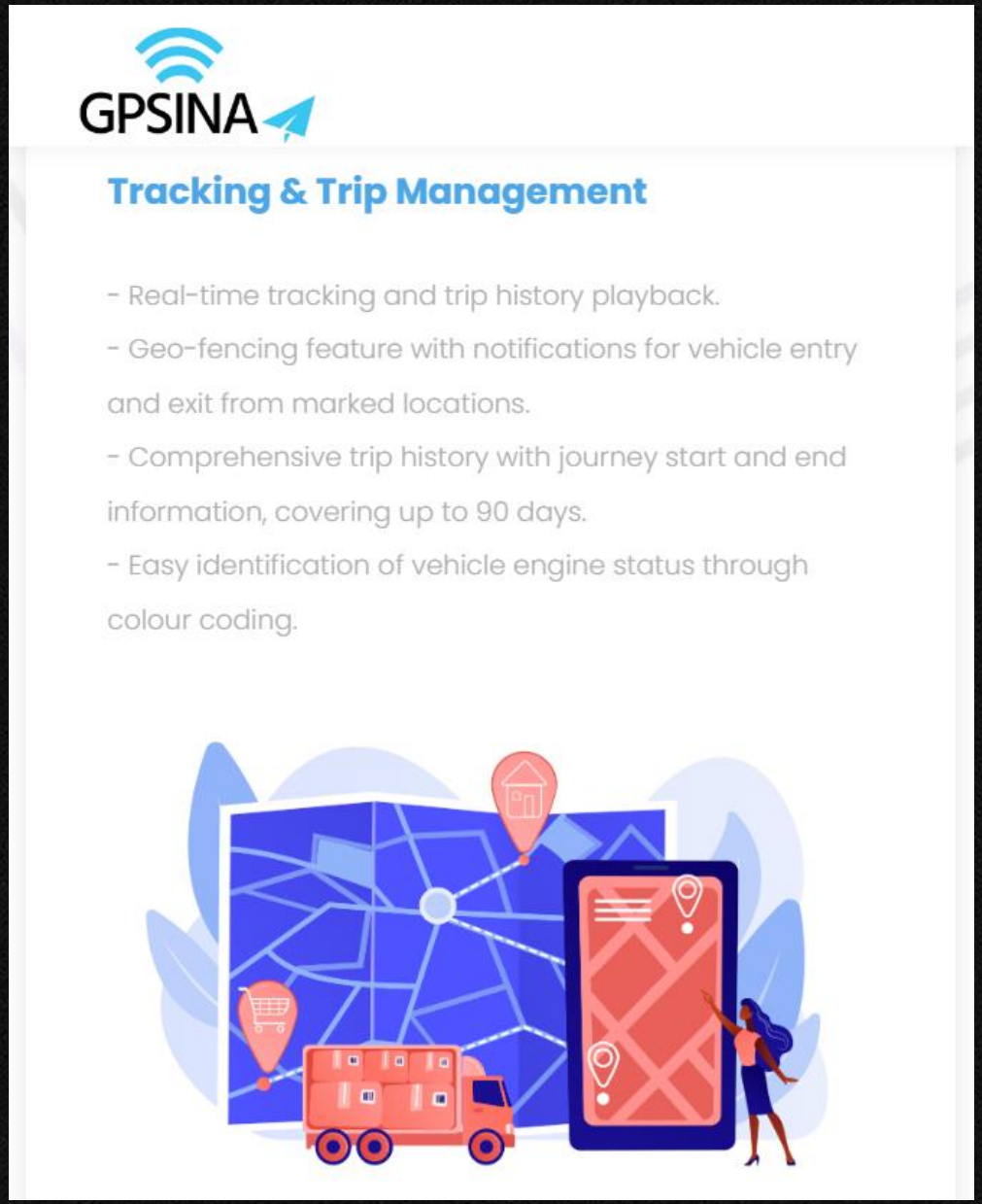
AI Optimization

Optimizes routes, inventory, and arrival windows.

Superior Results

Higher satisfaction, lower operational cost.

The result is a transformation in field service: **higher customer satisfaction** and **lower operational cost** through data-driven efficiency.



Augmented Reality Remote Fix

AR glasses overlay sensor data on equipment, guiding on-site staff or customers through complex repairs, turning physical service calls into scalable digital interactions.

Reduce Truck Rolls

Remote experts can guide fixes without traveling, saving time and travel costs.

Scale Expertise

A single expert can assist multiple sites in a day, overcoming geographical limitations.

05

Monetising Data Assets

New Revenue from Old Machines

Legacy assets gain digital twins through retrofitted sensors, creating multi-sided markets where one data stream yields multiple income channels.

Equipment Users
Pay for performance insights.

Financiers
Pay for asset utilization data.

Insurers
Pay for risk assessment data.

Multi-Sided Market

The same data stream is packaged and sold to multiple parties, creating diverse revenue channels from a single sensor investment.

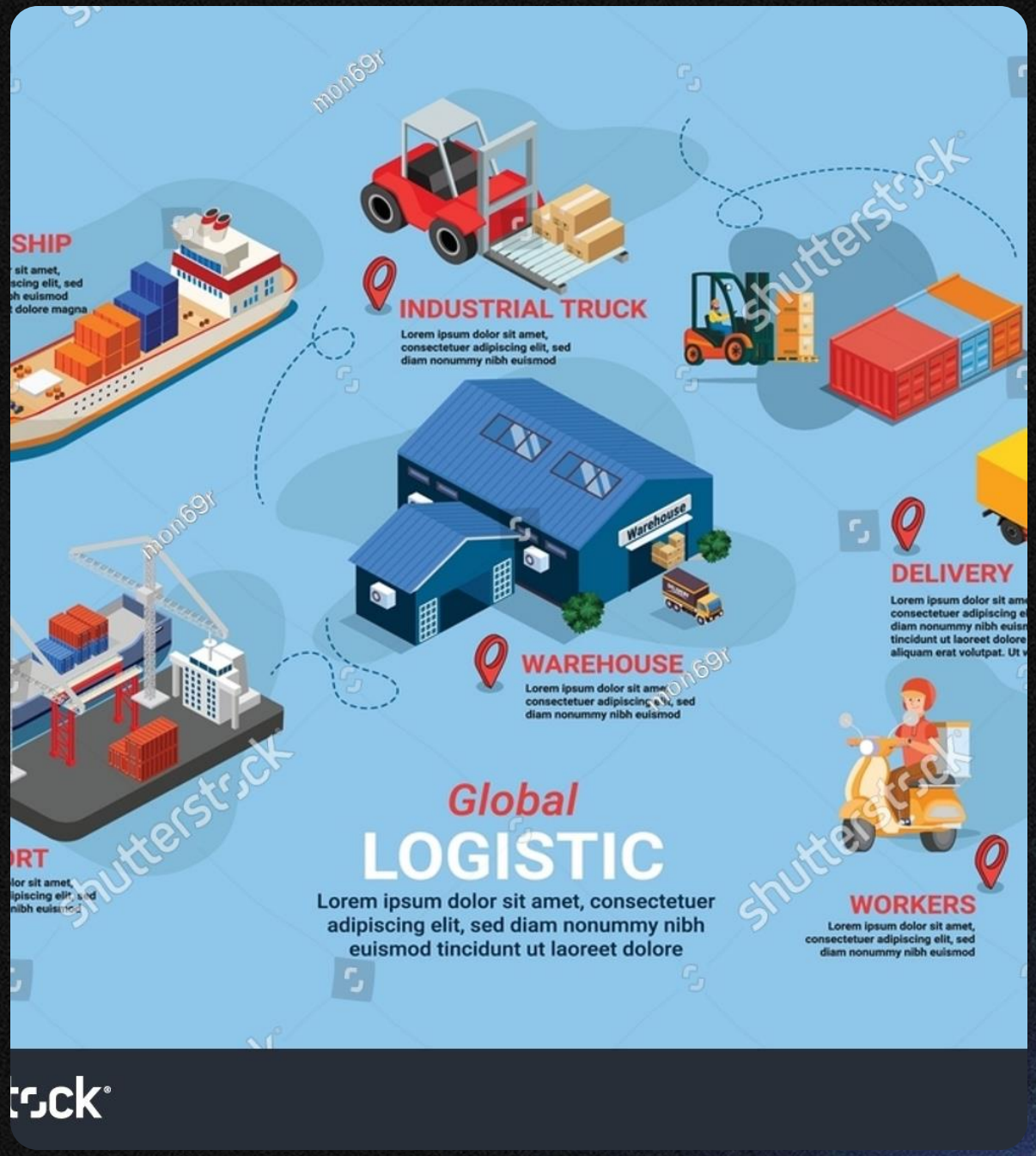
Asset-Tracking Ecosystems

Real-time location and condition data prevent loss, optimise utilisation, and trigger automated reordering, transforming cost centres into profit centres.

Prevent Loss & Theft
Real-time location tracking for high-value assets.

Optimise Utilisation
Data-driven insights to improve asset efficiency.

Automated Reordering
Trigger replenishment based on consumption data.



06

Scaling Securely

Trust, Privacy, and Compliance

Security is not a barrier, but a competitive differentiator. End-to-end encryption, device identity, and granular consent are prerequisites for data monetisation.

End-to-End Encryption

Protects data in transit and at rest, ensuring confidentiality from sensor to cloud.

Device Identity Management Management

Ensures data integrity by authenticating every device on the network.

Granular Consent

Builds trust by giving users control over over how their data is used and shared. shared.

Compliance with **GDPR, HIPAA**, and industry standards turns security into a **competitive advantage**.

Roadmap to Sensor-Driven Growth

1. Start with High-Value Pain Points
Identify clear problems where sensor data can provide immediate ROI.

2. Pilot on Retrofitted Assets
Test and learn on existing equipment to prove value before large-scale rollout.

3. Iterate Toward Platform Plays
Evolve from point solutions to integrated platforms that serve multiple stakeholders.

4. Partner & Build Culture
Collaborate for talent and build internal DataOps DataOps culture for sustained innovation.

THANK YOU

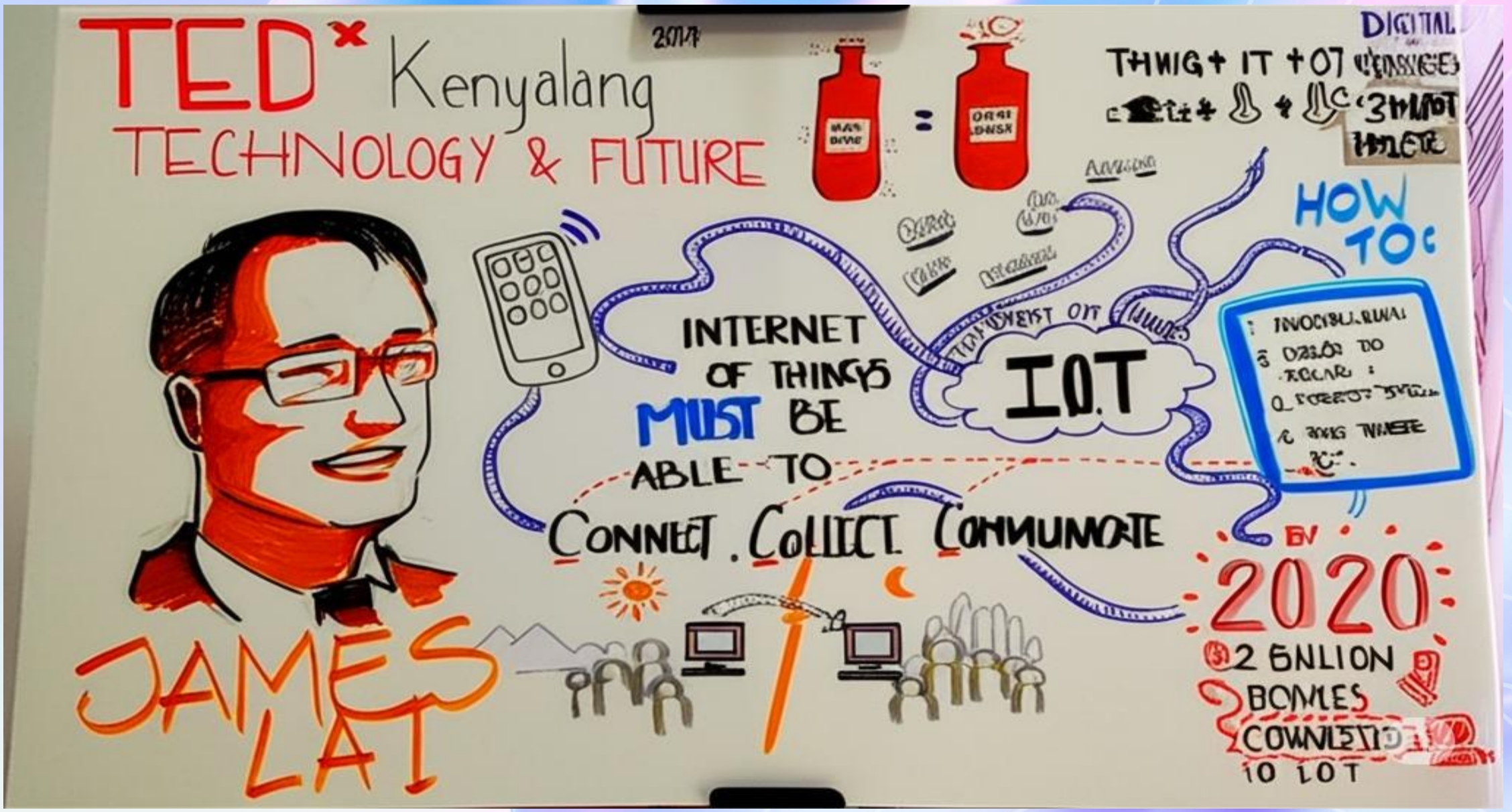
Kimi AI

2025/08/05

MyIoTA


Navigating the AIoT Revolution in Malaysia: Opportunities and Strategies for Enterprises
AIoT

WHAT IS IOT?



https://youtu.be/HF1Y3_IcOEo