



# Nurturing A Sustainable Future through Environmental Management

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## ABOUT ME



### Jayasilen Sivapragasam

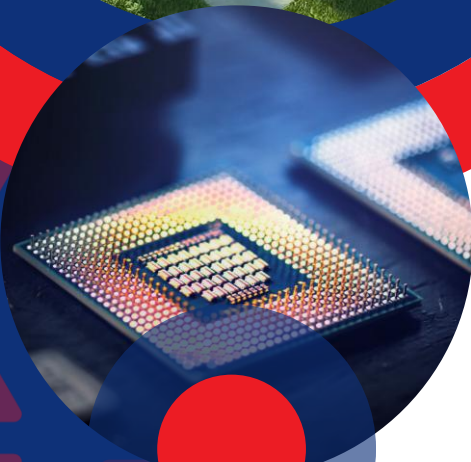
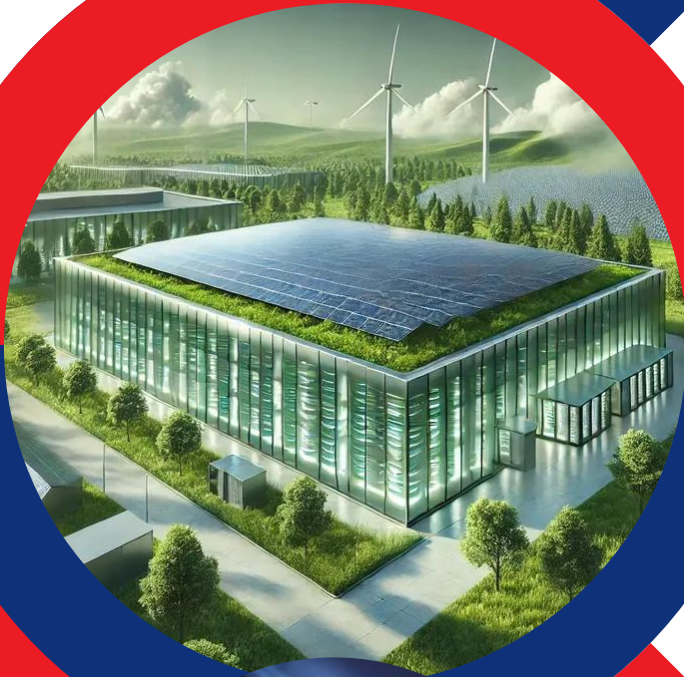
*BSc Biotech (Environment), MBA, Sustainability (GRI)*

- ✓ Trained sustainability professional with a strong background in environmental biotechnology as well as data science & analytics.
- ✓ Pioneered the use of blockchain technology in environmental reporting for greater transparency.
- ✓ Has more than 14 years of experience in marketing, corporate management and digital transformation.
- ✓ Clinched national & international Taekwon-Do titles with vast experience in sports governance.



*Sustainable Data Centres*

# Minimising Footprint Through Circular E-Waste Management



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**#DCCIMalaysia**



# Is Data Center The Next Superpower?

**USD 4.04B  
in 2024**

**Market Value  
CAGR  
22.38%**

**USD 13.57B  
in 2030**

## **The Boom of Data Centres in Malaysia**

**1.26 GW in  
2025**

**Power Capacity  
CAGR  
15.01%**

**2.53 GW by  
2030**

**RM 184.7 billion worth of investments for data centre, cloud-related projects and data hosting since 2021**

**Distribution of data centres across Malaysia**  
(completed and under construction)



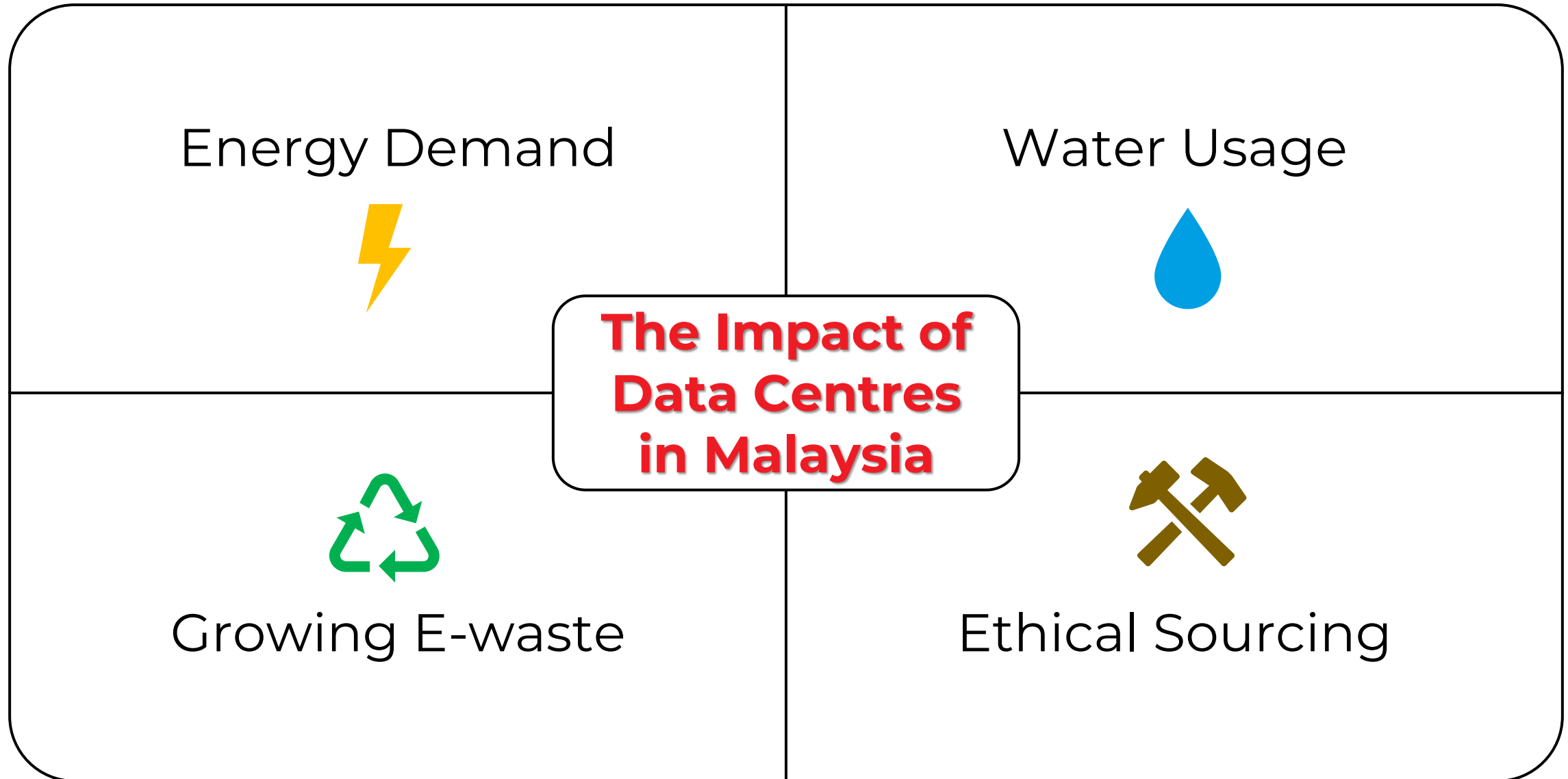
# The Boom of Data Centres in Malaysia

## UPCOMING DATA CENTRE LAUNCHES IN JOHOR IN 2024

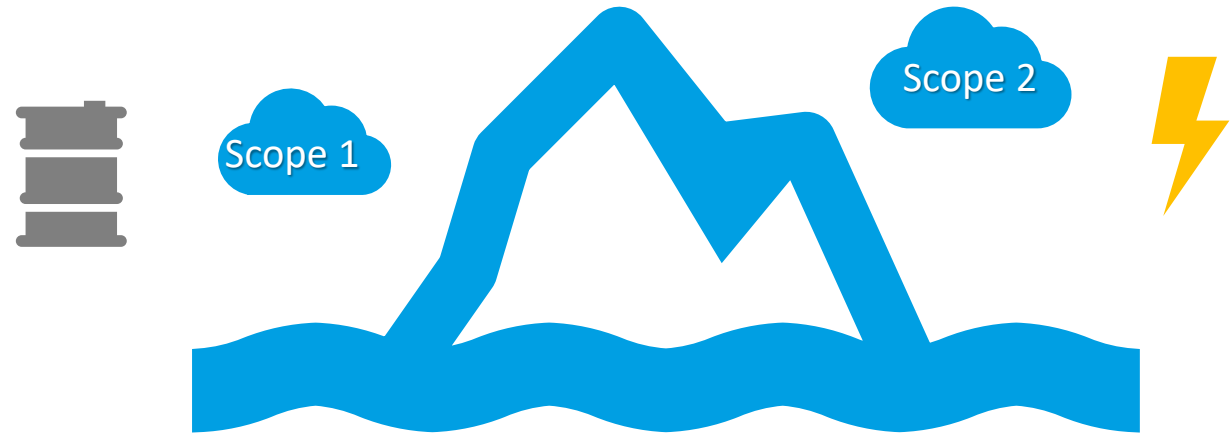
COMPANY / INVESTOR / PARTNER	LOCATION	TOTAL POWER (MW)	SIZE (SQ FT)	ESTIMATED LAUNCH	ESTIMATED COSTS
YTL Power 	Kulai	500	530k	1Q 2024 (first phase)	RM15 billion
yondr GROUP	STP	200	1350k	2024	N.A.
AIRTRUNK	Johor Bahru	150	235k	2024	N.A.
MN HOLDINGS	STP	120	38.5k	1H 2024	RM600 million
GOS HOLDINGS	Nusajaya Tech Park	54	242k	1Q 2024	RM1.38 billion
EQUINIX	Nusajaya Tech Park	N.A.	21k	1Q 2024	RM176 million

(list is not exhaustive)

**Johor is the new focal point for data centres**

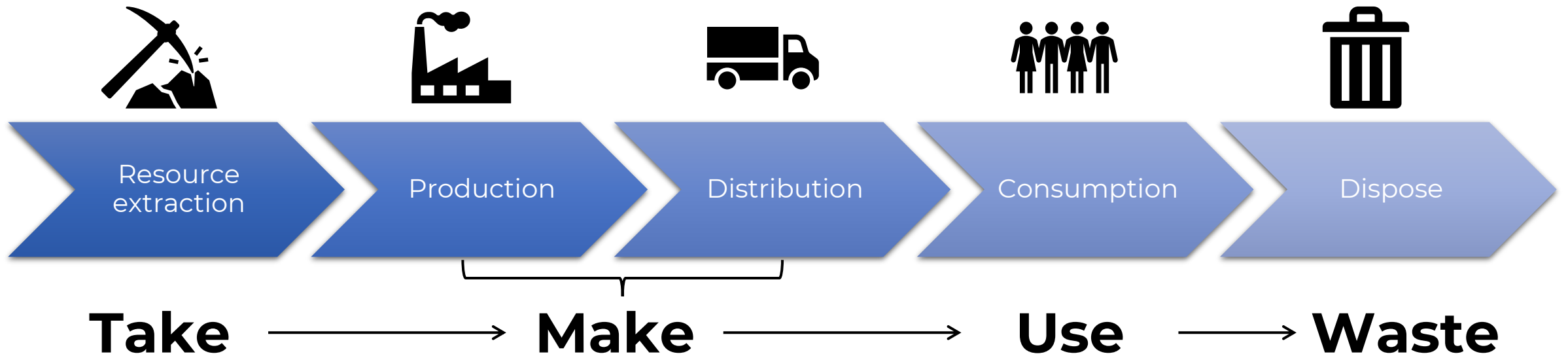


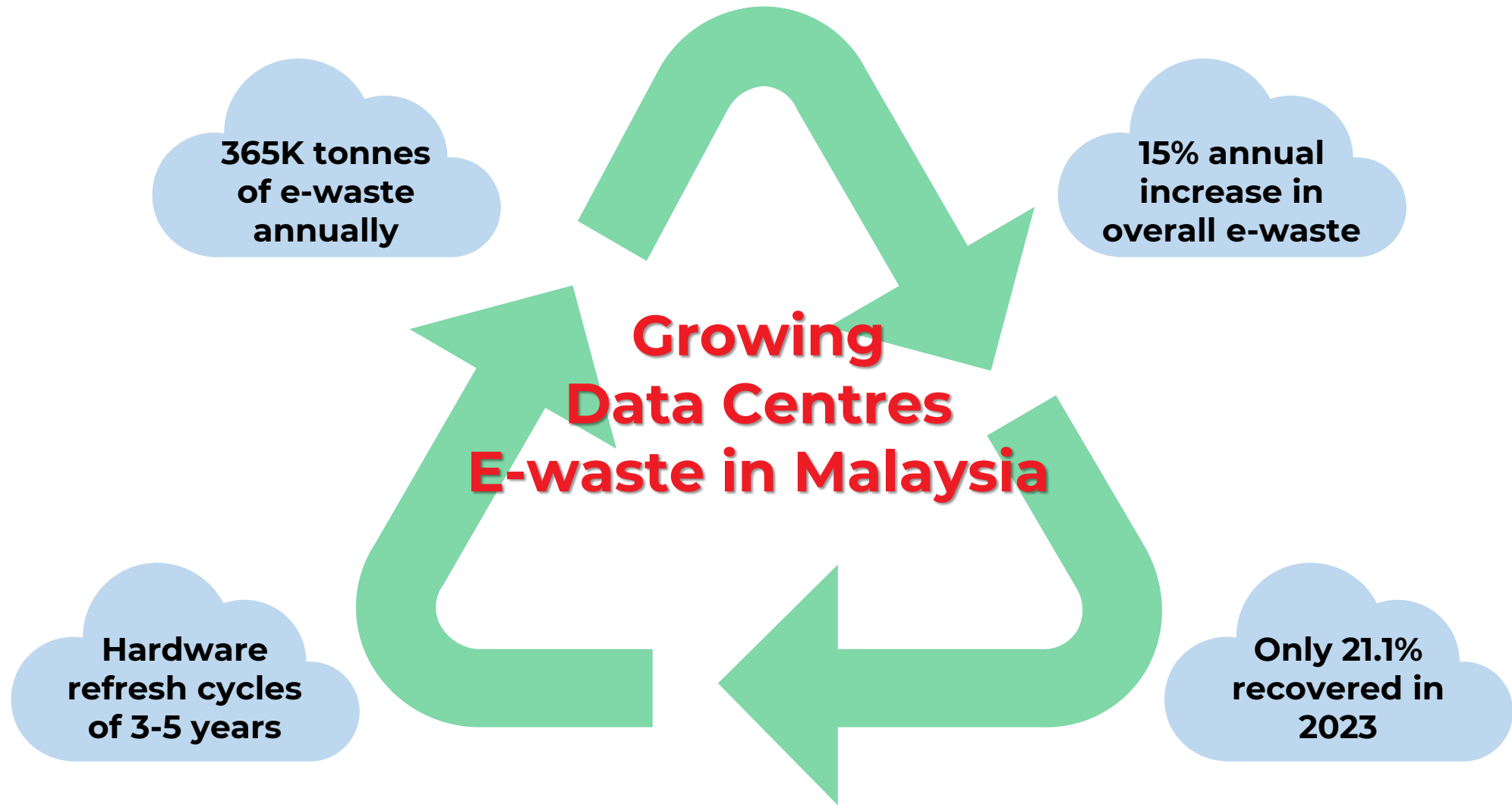
# The Carbon Iceberg



# Linear Trap – Resource Loss & Hidden Burdens

- Economic loss
  - Materials wasted
- Pollution
  - Hazardous waste leaking into ecosystems
- Resource depletion
  - Ongoing dependency on mining





A low-angle, night-time photograph of the Petronas Towers in Kuala Lumpur, Malaysia. The towers are illuminated with white lights, creating a strong contrast against the dark sky. The perspective is looking up, emphasizing the height and architectural details of the buildings.

# Growing Data Centres E-waste in Malaysia

# Recent raids on illegal e-waste processing facilities in Malaysia.

HOME MALAYSIA SINGAPORE MONEY WORLD LIFE EAT/DRINK SHOWBIZ OPINION SPORTS TECH/GADGET

## E-waste crackdown: RM1.3b worth of machinery, e-waste seized; 27 arrested in Perak raid

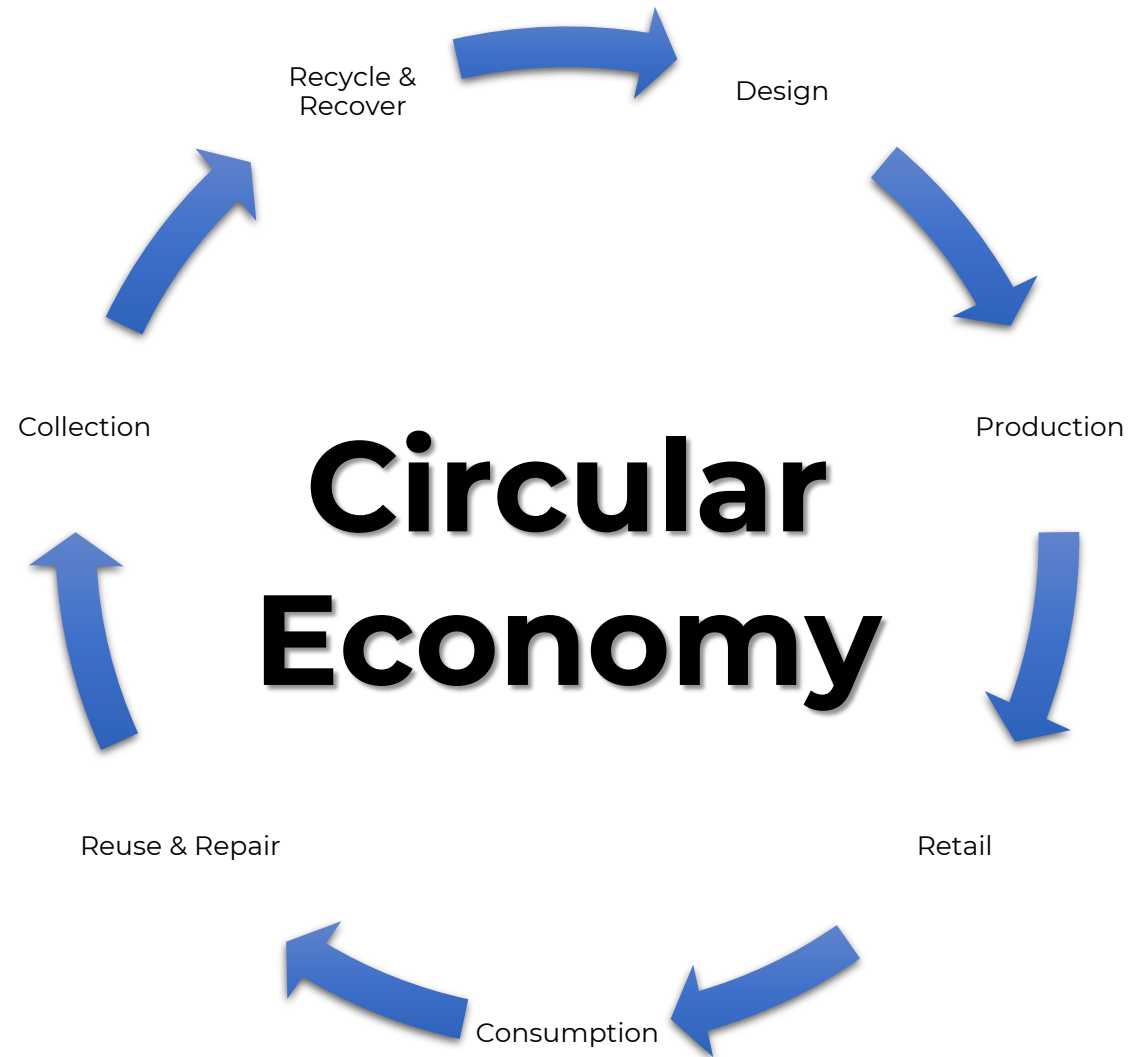


**Improper e-waste disposal can release heavy metals and toxins into the environment.**

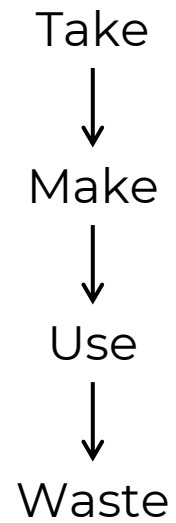


# Compliance & Carbon Saving

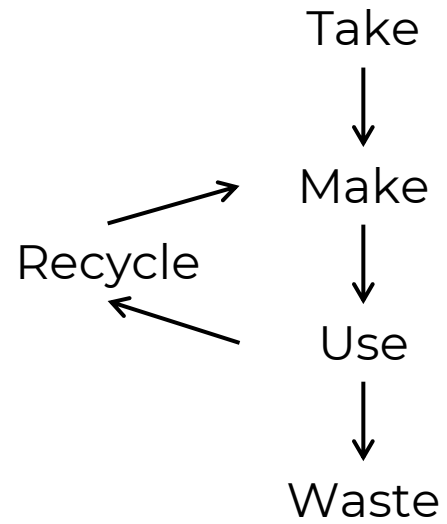
- Value retention
- Carbon reduction
- Regulatory compliance



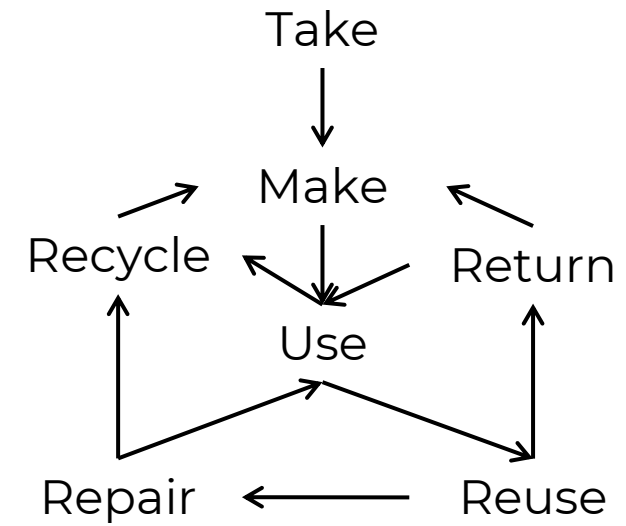
## Linear



## Recycling



## Circular



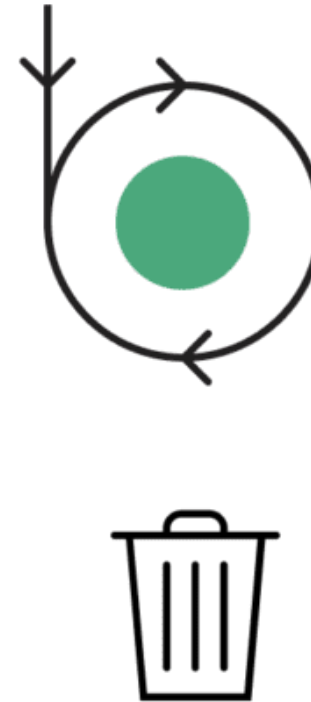
## Linear



## Recycling

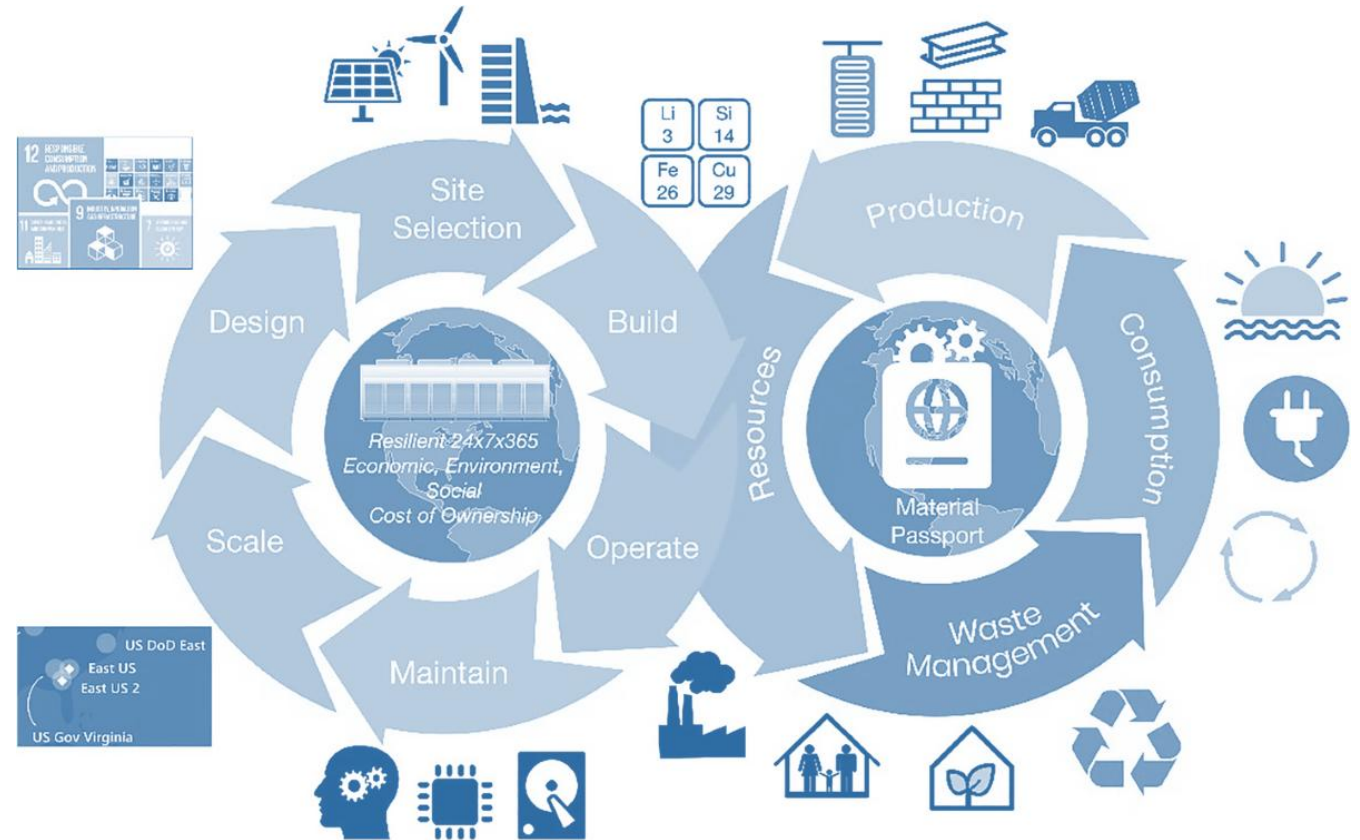



## Circular



# Circular Economy for Sustainable Data Centre

An approach that combines **ITAM** & **ITAD**, outlining how to **reuse, repair, and recycle** items, thereby promoting **sustainable** manufacturing and consumption.





**Sustainable  
ITAM & ITAD**



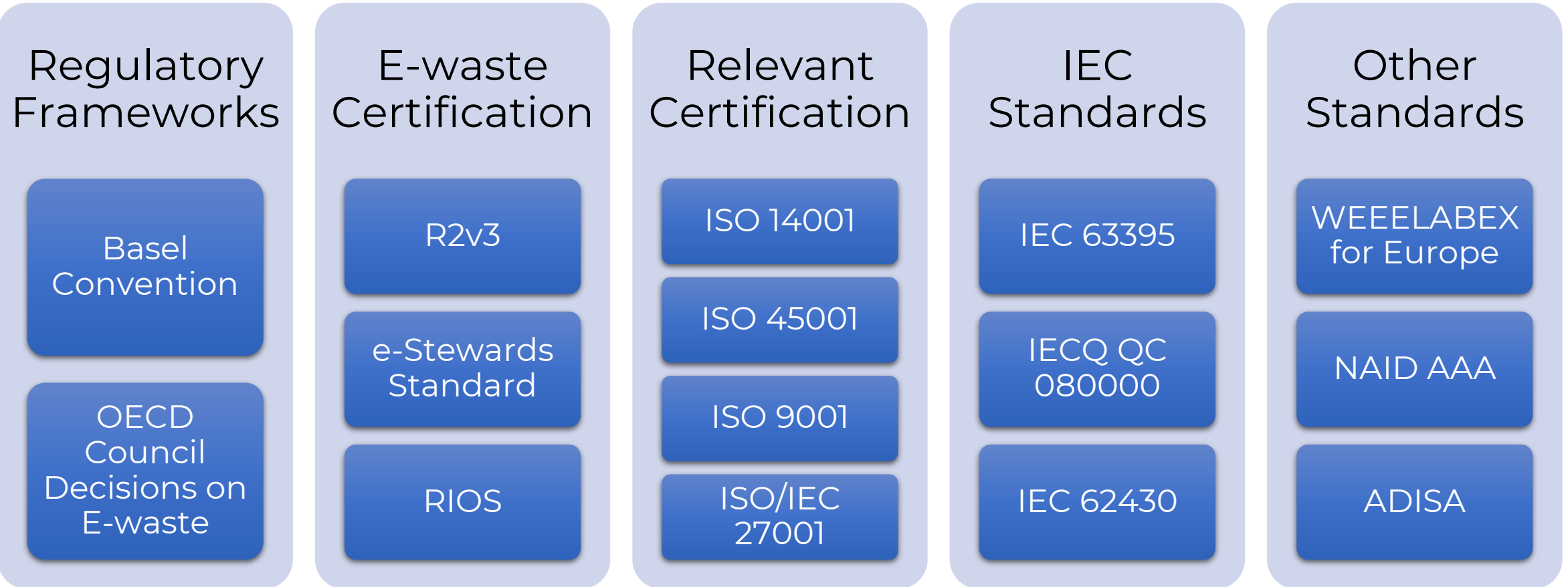
Responsible™  
Recycling



# Sustainable Framework, Standards & Certifications



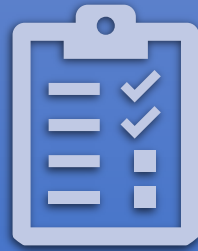
# Global Framework, Standards & Certifications



# Sustainable ITAD & Data Destruction



Policy &  
Governance



Asset  
Management &  
Accountability



Data  
Destruction &  
Security



Environmental  
Sustainability

# Sustainable ITAD & Data Destruction

## Policy & Governance

Policy Framework

Legal & Regulatory Compliance

Employee Training & Security

## Asset Management & Accountability

Asset Inventory Management

Chain-of-Custody Management

Downstream Vendor Accountability

## Data Destruction & Security

Data Destruction Practices

Verification & Certification

Physical Security

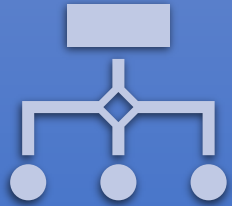
## Environmental Sustainability

Reuse & Refurbishment

Environmentally Sound Recycling

Documentation & Reporting

# Impact on Carbon Emissions



Downstream  
Vendor  
Accountability



Data Destruction  
Practices



Reuse &  
Refurbishment



Environmentally  
Sound Recycling



# Impact on Carbon Emissions

## Downstream Vendor Accountability

Vendor vetting and selection

Compliance monitoring of recycling partners

Regular downstream audits

## Data Destruction Practices

Method selection (sensitivity/media)

Data wiping, degaussing, physical destruction

Adherence to data destruction standards

## Reuse & Refurbishment

Asset evaluation for reuse/refurbishment

Data sanitization for reusable assets

Circular economy alignment

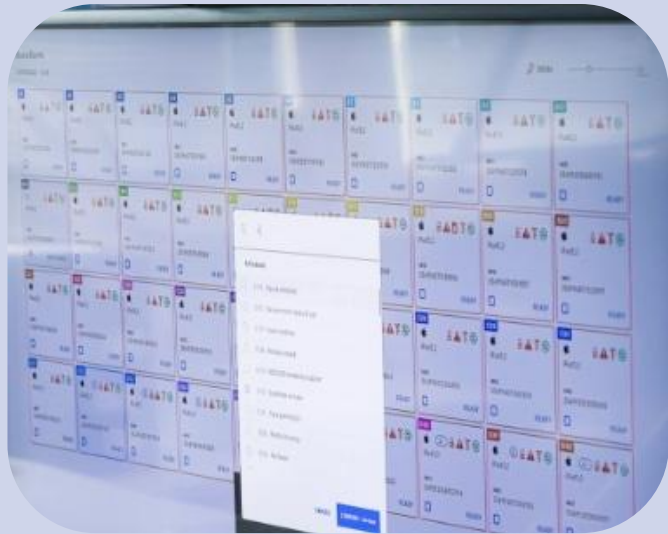


## Environmentally Sound Recycling

Sustainable recycling practices

Hazardous materials management

Prohibited disposal practices

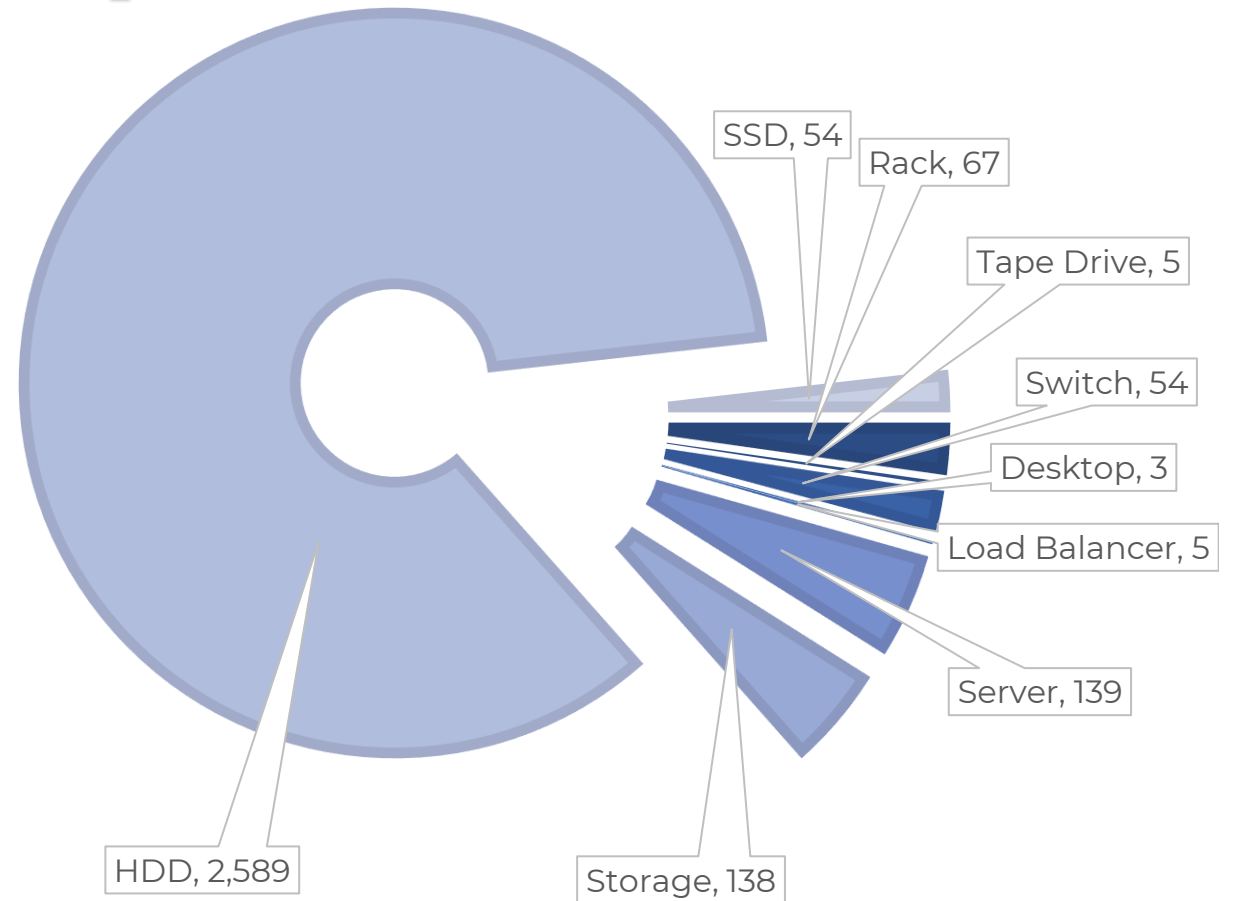
# Best Practices: Data Destruction

	Data Erasure	Magnetic Media Degaussing	Storage Media Shredding
Method			
Technology			
Suitability			
Security Level			
Output			
Media Reusability			
Scalability			
Sustainability			

# Best Practices: Data Destruction

	Data Erasure	Magnetic Media Degaussing	Storage Media Shredding
Method	Logical	Physical	Physical
Technology	Random binary data is used to securely digitally overwrite the data according to specified standards, making it irrecoverable.	Strong magnetic field to neutralise or randomise the alignment of the magnetic particles, rendering the stored data unreadable.	Robust, sharp blades & a solid engine to disintegrate storage media into small particles of regulated sizes.
Suitability	All types of SSD, HDD & flash drives.	All magnetic data media such as HDD, tape & floppy drives.	All types of data storage media, integrated memory & electronic components.
Security Level	Common Criteria   TUV   BSI	NSA Listed   DoD Approved   NATO Listed   Approved (EU)   CESG Approved (UK)	H-5, E-4 T-5, O-4, F-2 (DIN 66399)
Output	1-35 overwrite passes	20,000 Gauss (2 Tesla)	HDD – 17 mm SSD & other – 4 mm
Media Reusability	Reusable	Not reusable	Not reusable
Scalability	High	Low	Medium / High
Sustainability	Yes	No	No

# Partnering for Impact: Telco



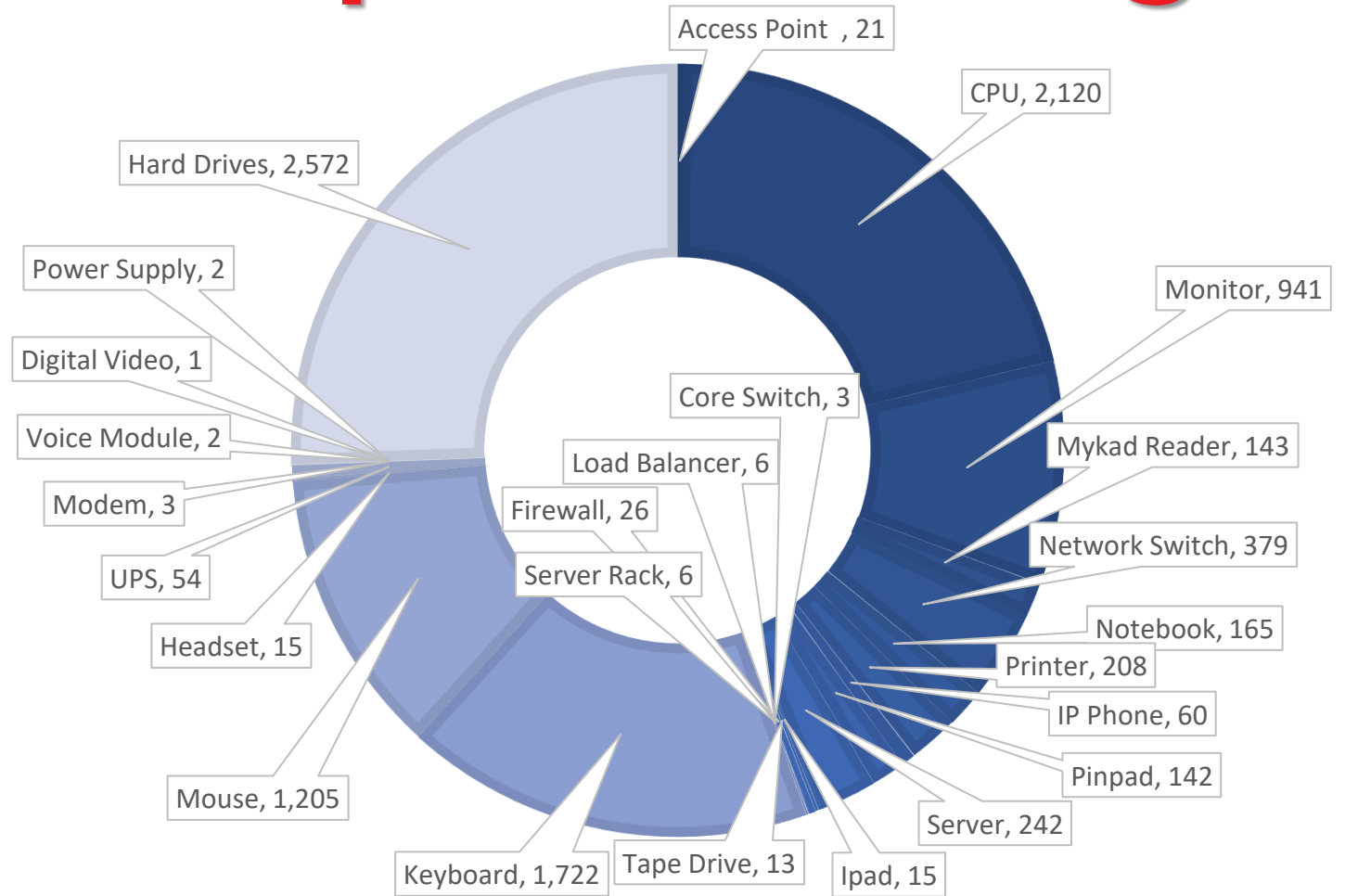
# Partnering for Impact: Semicon



Hard Drives,  
4,296

Mobile Phones,  
229

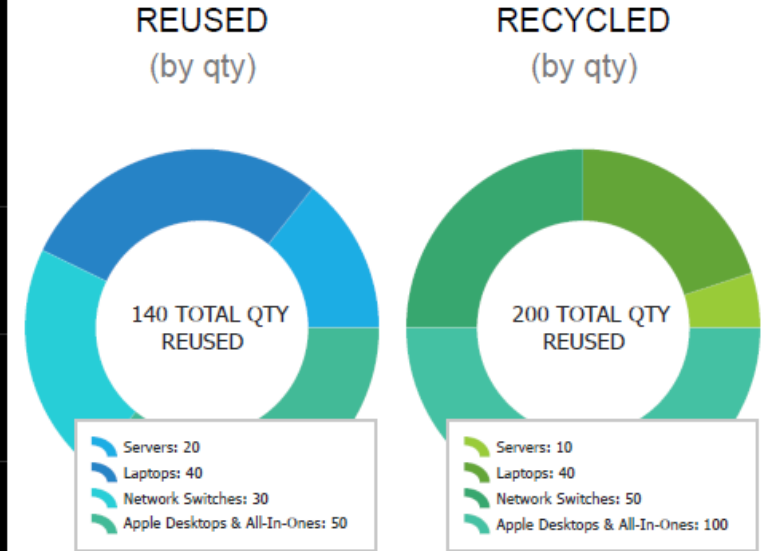
# Partnering for Impact: Banking



# Partnering for Impact: Sustainability Reporting

- ✓ US EPA Electronics Benefits Calculator
- ✓ Analysis based on various product carbon footprints (PCF)
- ✓ Develop metrics based on processes & data in Malaysia

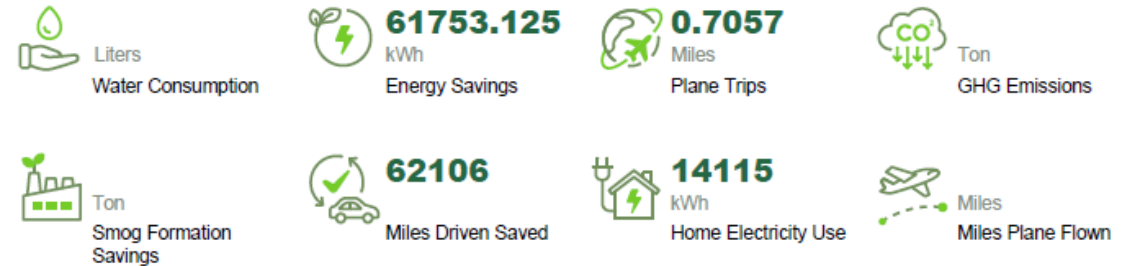
MATERIAL SUMMARY
Total Weight Audited <b>6,020 kg</b>
Total Items Audited <b>340</b>
RECYCLED <b>200</b>
REUSED <b>140</b>



**Carbon kg Offset**  
**70,575 kg**

**Total Cost Savings**  
**RM 12,351**

## Equivalence Conversions



# Compliant Path to Lower Carbon

- ✓ Substantial Scope 3 carbon reduction
- ✓ Data security
- ✓ Compliance with local regulations & international standards
- ✓ Circular expertise
- ✓ Strategic partnership





**Green Data Centre Is No Longer a Buzzword but a Global Imperative**



**Let's Build a  
Carbon-Responsible  
Future Together**



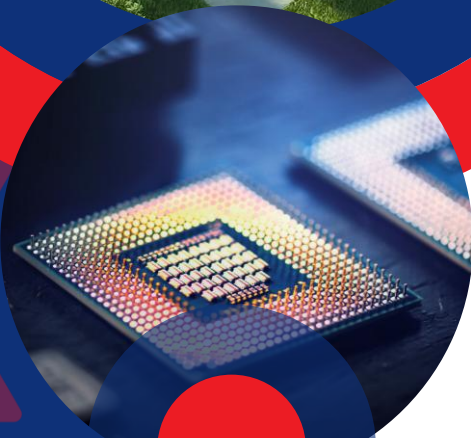
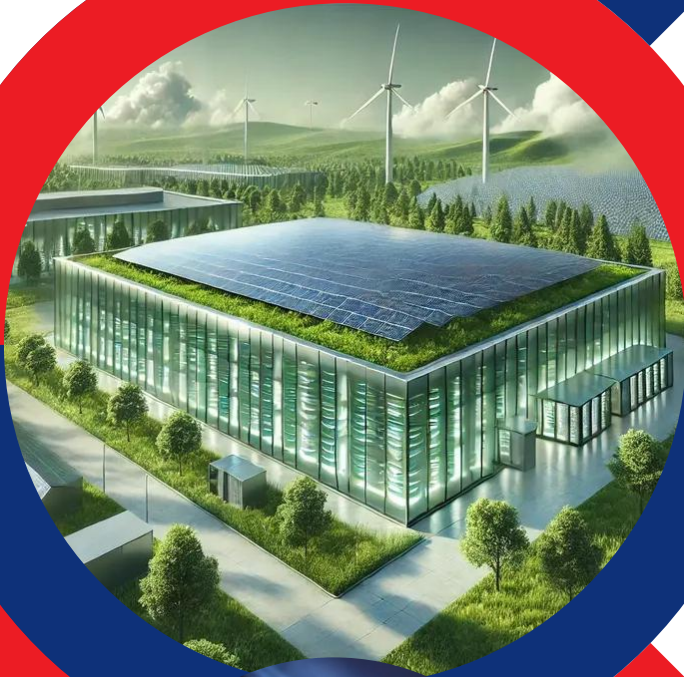
**Great power comes with  
great responsibility**

*Sustainable Data Centres*

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Let's chat @ Booth L1

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