



Malaysia's Emerging Trends in Data Center Technology: Identifying Tomorrow's Hotspots



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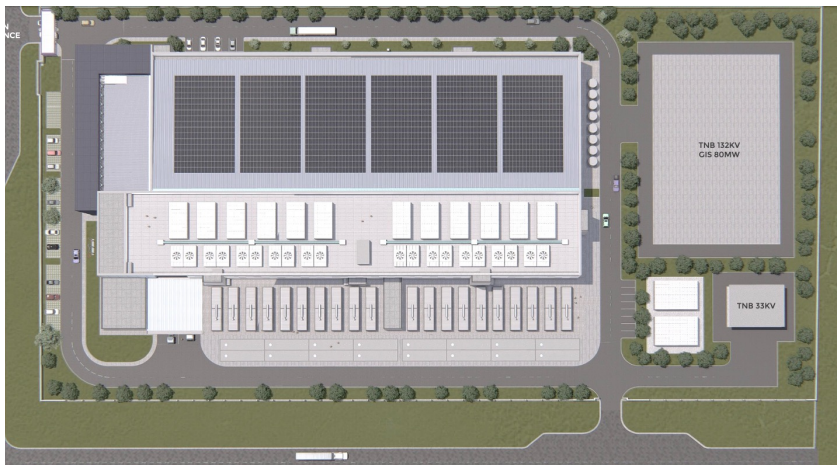
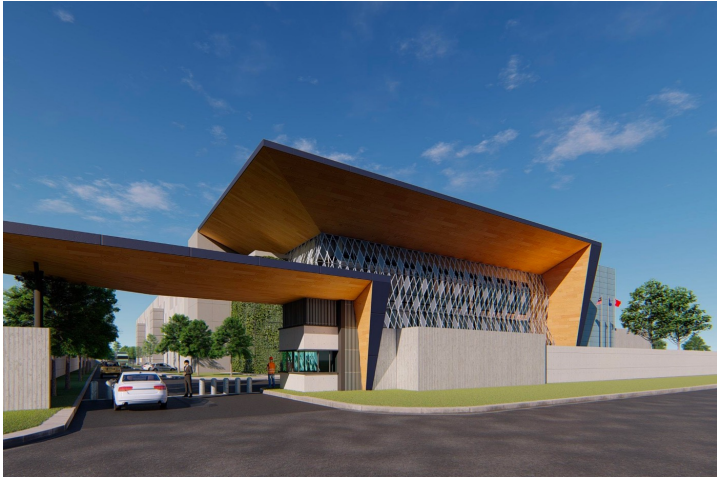


Classification of Data Centre Types



DC CLASSIFICATION	HYPERSCALE	WHOLESALE	COLOCATION	INTERCONNECTION
Tenant Size	Largest	Large	Smaller	Smallest
Tenant Space Requirement	>100,000 sq. ft.	> 5,000 sq. ft.	< 200 Racks	<100 Racks
Tenant IT Power Requirement	>10MW	>2MW	<2MW	<1MW
Lease Term	>15 years	3 to 15 years	<3 years	<2 years
Typical Tenants (Examples)	OTT/Cloud	Google, Microsoft, Amazon, Alibaba	Maybank, Petronas, MISC	Time, Maxis, Digi, TM, Akamai, Netflix
Type of Provider	Self ownership	Bridge DC, YTL, Yondr, GDS	VADS, NTT, Heitech, MAMPU	CSF TelcoHub 1, AIMS KL
Typical Facility Power	>50MW	>40MW	< 40MW	<20MW
Land Requirement	>15 acres	>5 acres	< 5 acres	< 2 acres
Connectivity Requirement	Dark Fibre, DWDM,	Dark Fibre, DWDM	Bandwidth, IPLC, ME, IEPL	Dark Fiber, DWDM, Bandwidth, IPLC, ME, IEPL
Bandwidth requirement	>1T	>100G	100M-100G	>1T

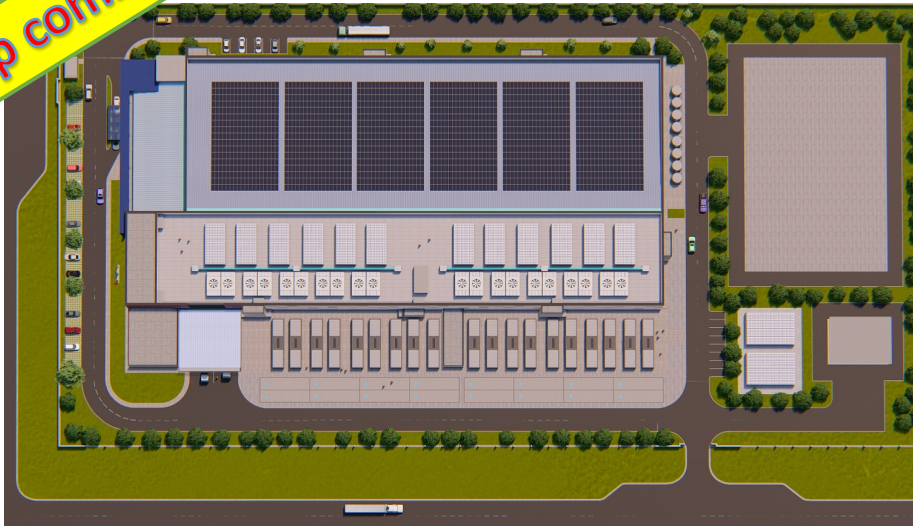
Wholesale / Hyperscale DC



CSF TelcoHub 5 (Client Project - Wholesale)



Up coming



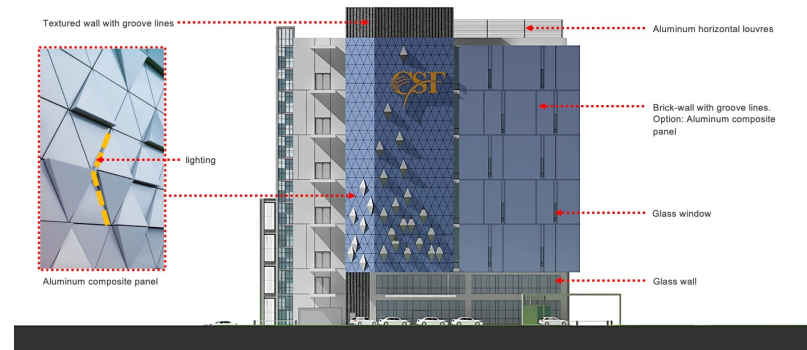
Location	TBA
Gross floor area	Approximately 300,000ft ²
Net Data Center floor area	Approximately 150,000 ft ²
Raised floor load	20kN/m ² in data centre area
Raised floor	1000mm/Optional
Power capacity	100MW
Electrical services	High Tension & Low Voltage
Power back-up	Multiple back-up power generation
Uninterruptible Power Supply	N+1 with 10/15 minutes battery reserve
Rack density	Average 25kW/Rack
Cooling system	Water-chilled systems
Fire suppression system	Clean Agent
Other	Data cabling and management Multiple Main Distribution Frame facilities Security access controls and intrusion alarms

CSF TelcoHub 5, TBA

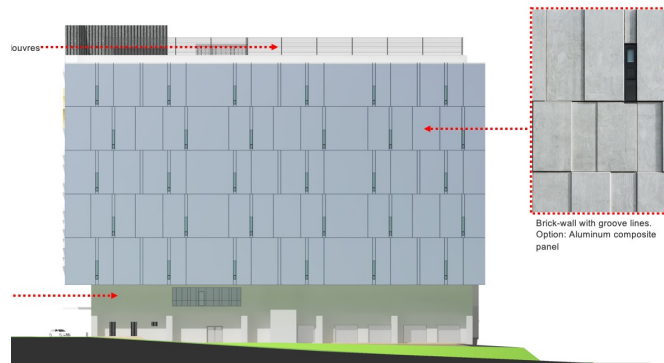


CSF Role: Design and Consult

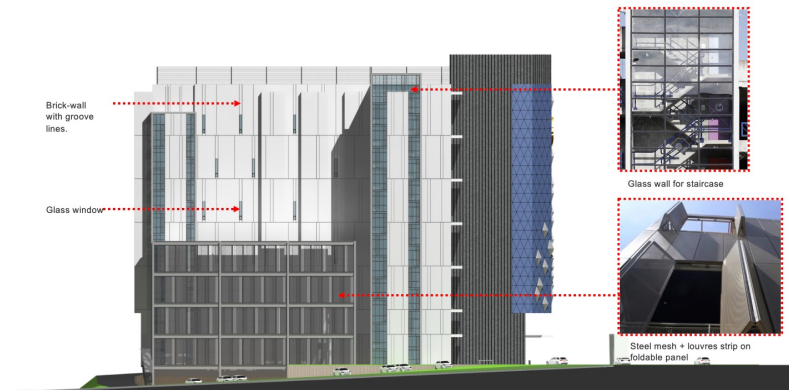
Colocation Data Center



FRONT ELEVATION



RIGHT ELEVATION



LEFT ELEVATION

CSF TelcoHub 2 (Client Project - Colocation)



New



Location	TBA
Gross floor area	Approximately 200,000ft ²
Net Data Center floor area	Approximately 80,000 ft ²
Raised floor load	20kN/m ² in data centre area
Raised floor	1000mm / Optional
Power capacity	P1: 20MW P2:20MW
Electrical services	High Tension & Low Voltage
Power back-up	Multiple back-up power generation
Uninterruptible Power Supply	2N with 10/15 minutes battery reserve
Rack density	Average 20kW/Rack
Cooling system	Water-chilled systems
Fire suppression system	Clean Agent
Other	Data cabling and management Multiple Main Distribution Frame facilities Security access controls and intrusion alarms

CSF TelcoHub 2, TBA



Tier Certification of Design Documents



Tier Certification of Constructed Facility

CSF Role: Design

Interconnect DC (CSF CX1/TelcoHub1 Annex Block)



New



CSF TelcoHub 1, 4Q 2025

Location	Cyberjaya, Greater KL.
Gross floor area	200,000ft ² (existing 100K)
Net Data Center floor area	90,000 ft ² (existing 45K)
Raised floor load	25kN/m ² in data centre area
Raised floor	1000mm/Optional
Power capacity	22MW
Electrical services	High Tension & Low Voltage
Power back-up	Multiple back-up power generation
Uninterruptible Power Supply	N+1 with 15 minutes battery reserve
Rack density	20kW/Rack to Max 200kW/Rack
Cooling system	Immersion Cooling, Liquid Cooling, Water and Air-Cooled Chiller Systems
Fire suppression system	Clean Agent
Other	Data cabling and management Multiple Main Distribution Frame facilities Security access controls and intrusion alarms



Tier Certification of Design Documents



Tier Certification of Constructed Facility

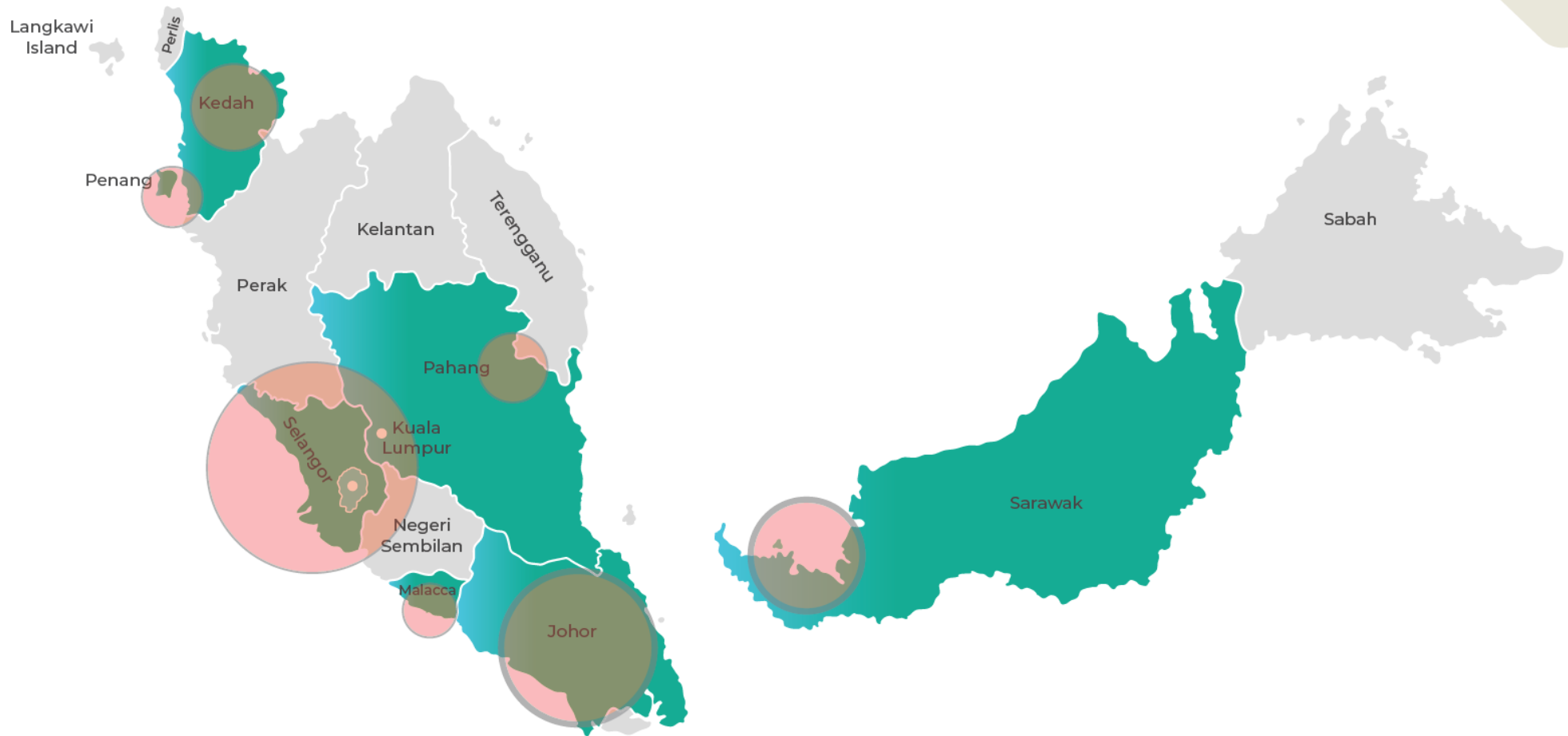
CSF Role: Design, Build, Develop, Construct, Operate and Maintenance

Research Methodology

- 01 Data is collected from public news, websites, and through virtual or physical site verification.
- 02 Data classification is determined through discussions with various third-party industrial sources.
- 03 Exclusions include non-purpose-built data centre developments, except for interconnect DC.
- 04 Exclusion of in-house enterprise data centers, telecom exchanges.



Map overview of Data Centre zoning in Malaysia



Overview of Total Count of Data Centre Development in Malaysia



TYPE	EARLY STAGE		UNDER CONSTRUCTION		OPERATING		TOTAL	
	2023	2024	2023	2024	2023	2024	2023	2024
INTERCONNECT	3	1	0	2	4	4	7	7
COLOCATION	7	12	4	3	11	14	22	29
WHOLESALE	12	15	5	8	3	7	20	30
HYPERSCALE	2	7	1	0	0	1	3	8
	24	35	10	13	18	26	52	74

2023= 52 | 2024= 74

Status Transitions Progress from 2023 to 2024



LOCATION	TRANSITION	NEW EARLY STAGE	EARLY STAGE > CONSTRUCTION	CONSTRUCTION > OPERATING
JOHOR	INTER		1	
	COLO	2	1	
	WS	5	4	3
	HS	3		
KL	COLO			2
	WS		1	
CYBER	COLO	4	1	2
	WS	1	1	2
	HS			1
SELANGOR (BANGI & NILAI)	COLO	1		
	HS	2		

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SARAWAK

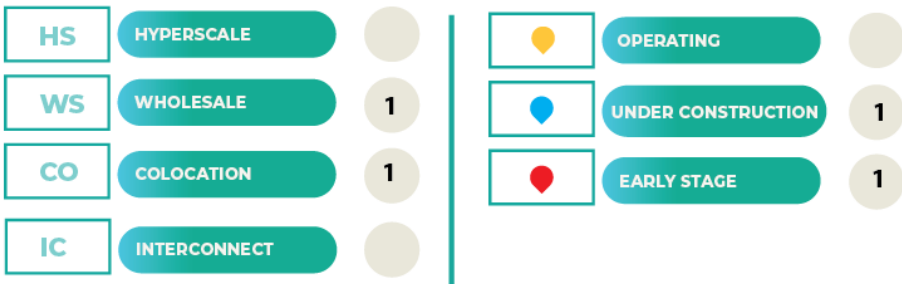


HS	HYPERSCALE	0
WS	WHOLESALE	2
CO	COLOCATION	0
IC	INTERCONNECT	0

	OPERATING	1
	UNDER CONSTRUCTION	0
	EARLY STAGE	1



2 KEDAH

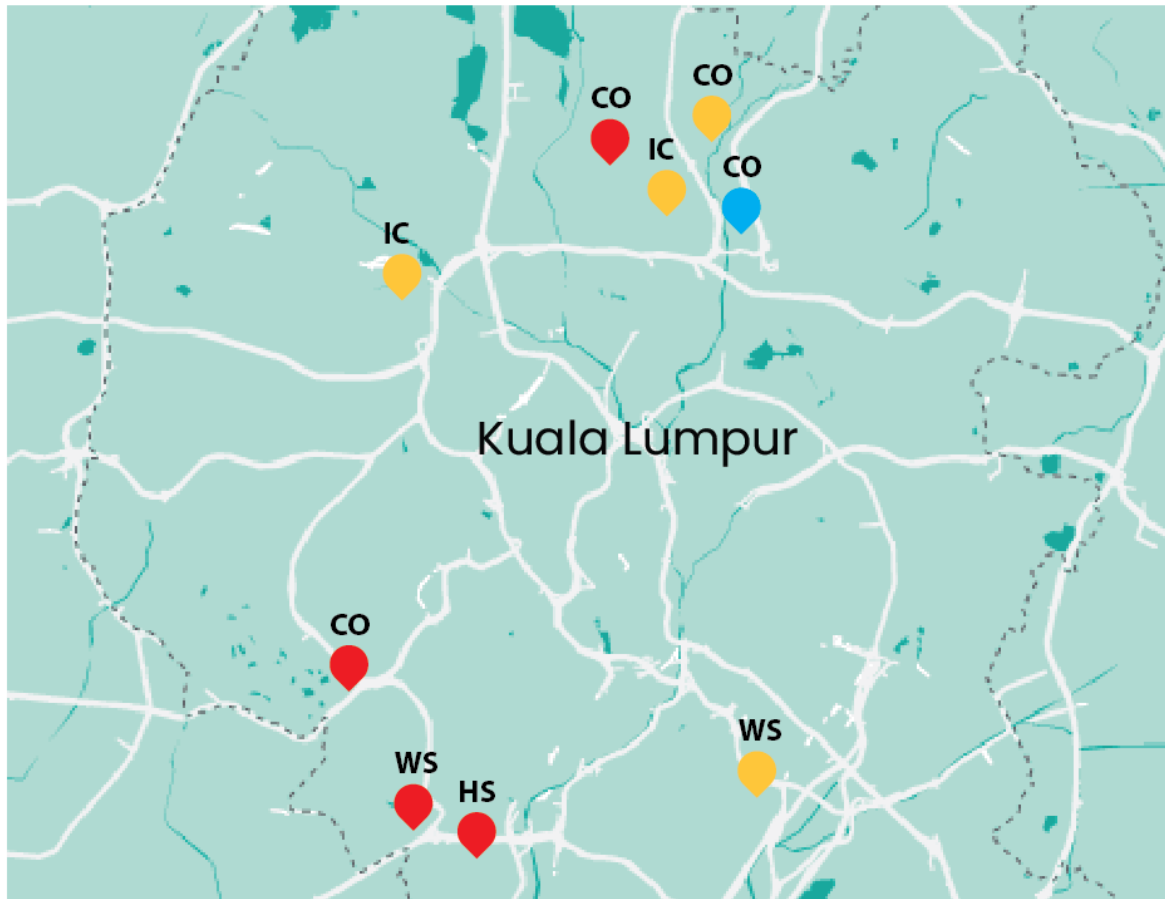


PENANG 3



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KUALA LUMPUR

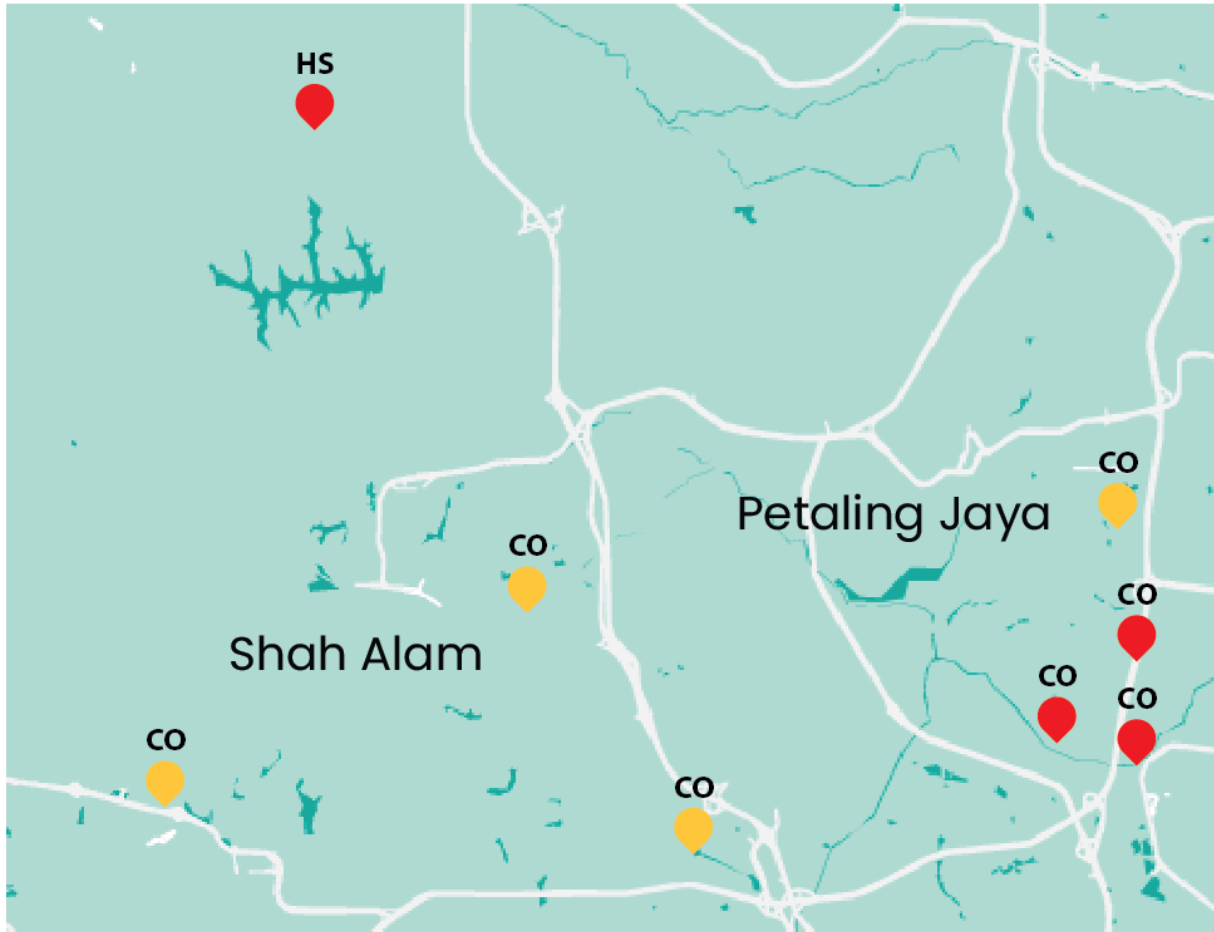


HS	HYPERSCALE	1
WS	WHOLESALE	2
CO	COLOCATION	4 +2
IC	INTERCONNECT	2

	OPERATING	4 +1
	UNDER CONSTRUCTION	1
	EARLY STAGE	4 +3

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PETALING JAYA & SHAH ALAM

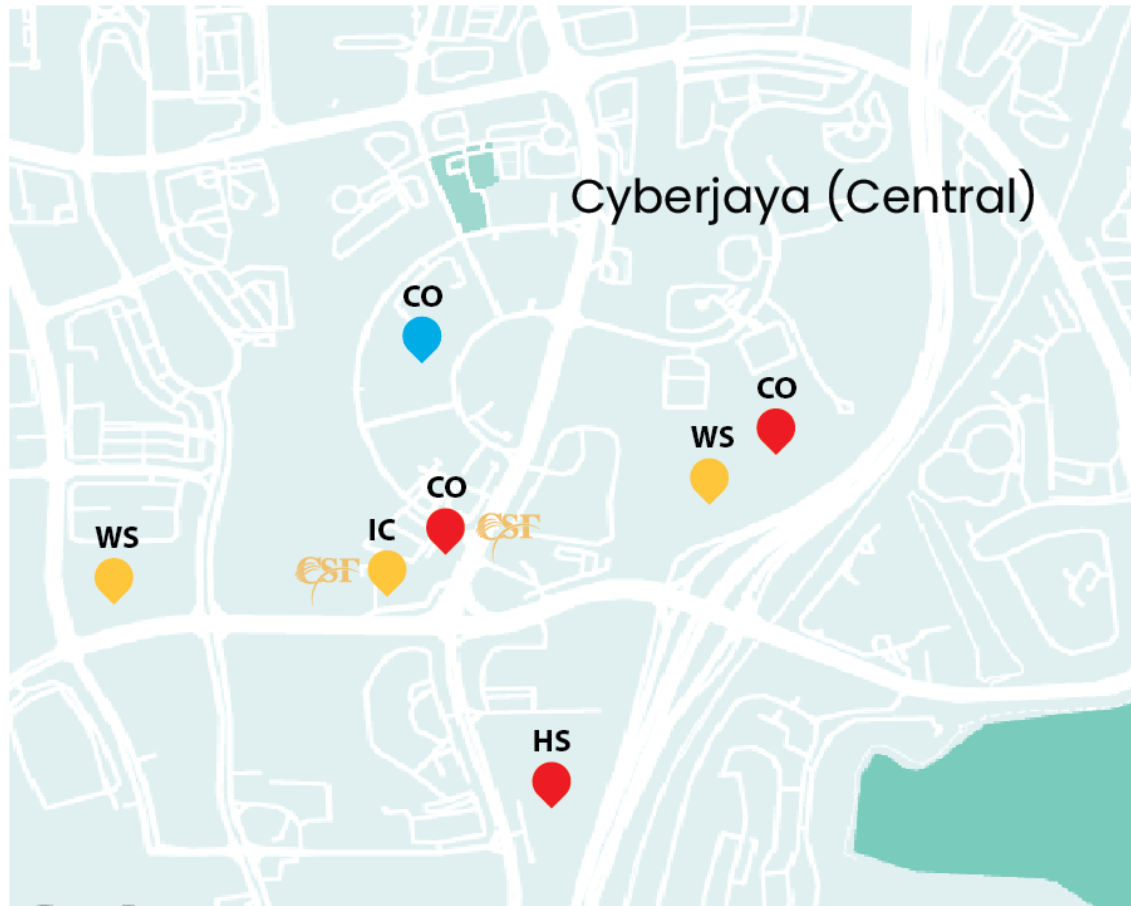


HS	HYPERSCALE	1	+1
WS	WHOLESALE		
CO	COLOCATION	7	+2
IC	INTERCONNECT		

	OPERATING	4	
	UNDER CONSTRUCTION		
	EARLY STAGE	4	+3

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CYBERJAYA (Central)

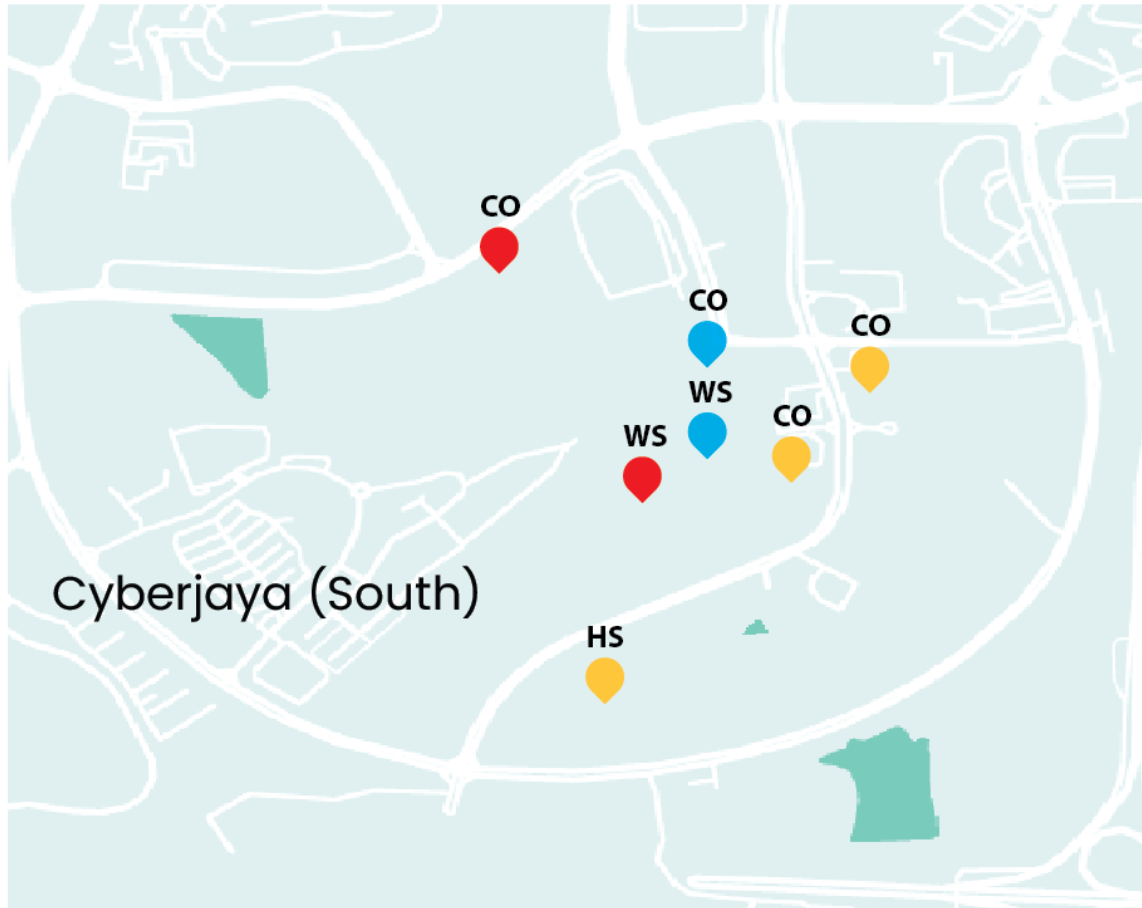


HS	HYPERSCALE	1
WS	WHOLESALE	2
CO	COLOCATION	3 +2
IC	INTERCONNECT	1

	OPERATING	3
	UNDER CONSTRUCTION	1
	EARLY STAGE	3 +2

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CYBERJAYA (South)

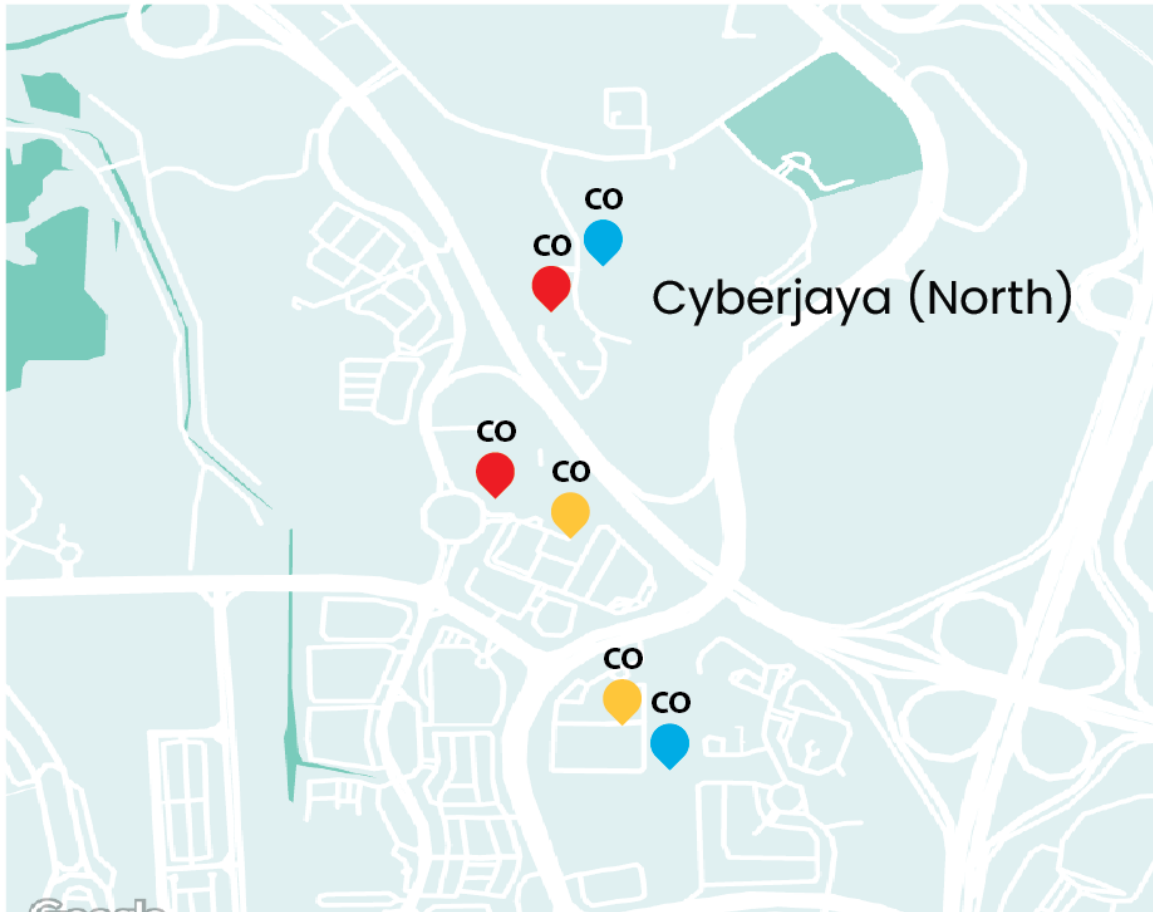


HS	HYPERSCALE	1	
WS	WHOLESALE	2	+1
CO	COLOCATION	4	+2
IC	INTERCONNECT		

	OPERATING	3	+1
	UNDER CONSTRUCTION	2	
	EARLY STAGE	2	+2

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CYBERJAYA (North)



HS	HYPERSCALE	0	
WS	WHOLESALE	2	+1
CO	COLOCATION	4	
IC	INTERCONNECT	0	
<hr/>			
	OPERATING	2	
	UNDER CONSTRUCTION	2	
	EARLY STAGE	2	+1

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JOHOR (South)

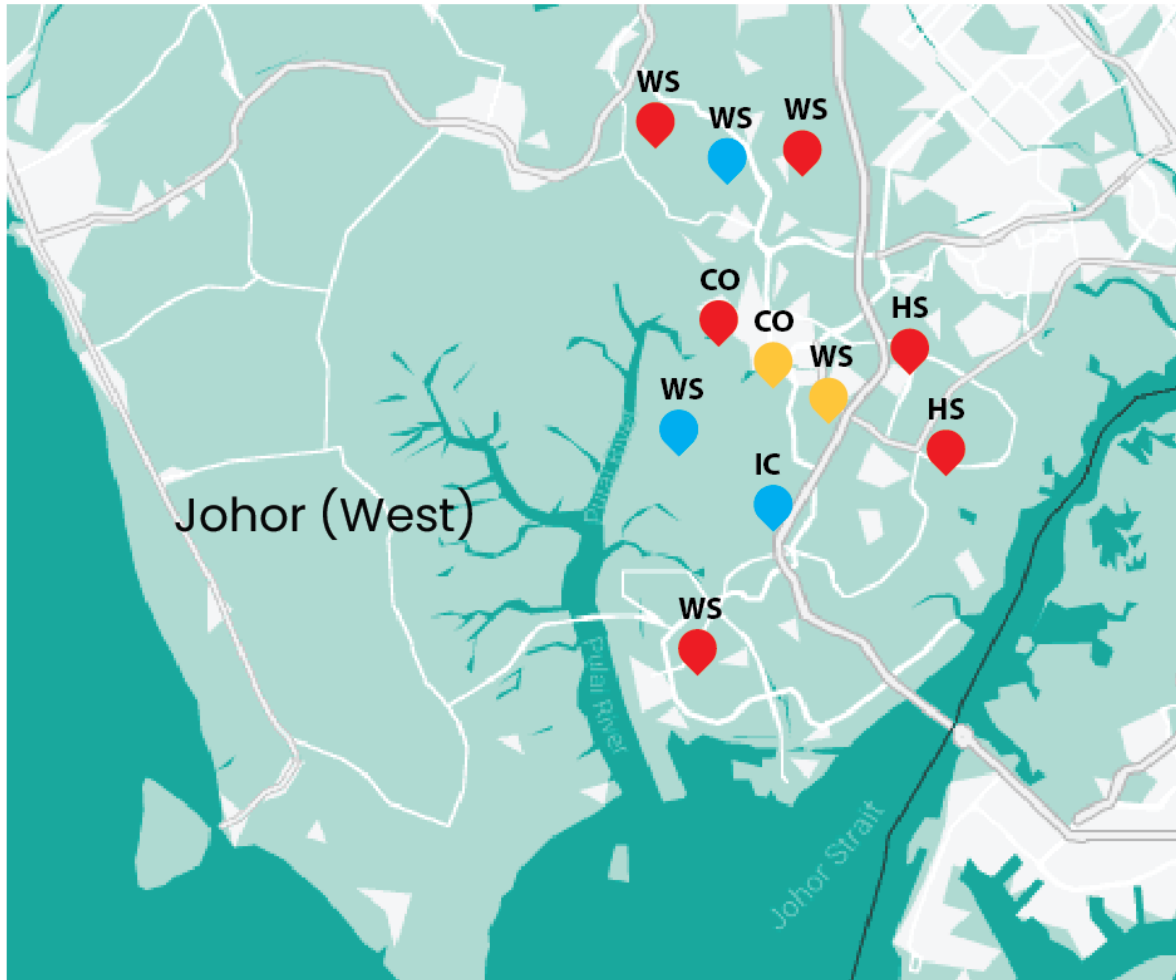


HS	HYPERSCALE	0
WS	WHOLESALE	3 +1
CO	COLOCATION	0
IC	INTERCONNECT	1

Yellow Pin	OPERATING	1
Blue Pin	UNDER CONSTRUCTION	0
Red Pin	EARLY STAGE	3 +1

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JOHOR (West)

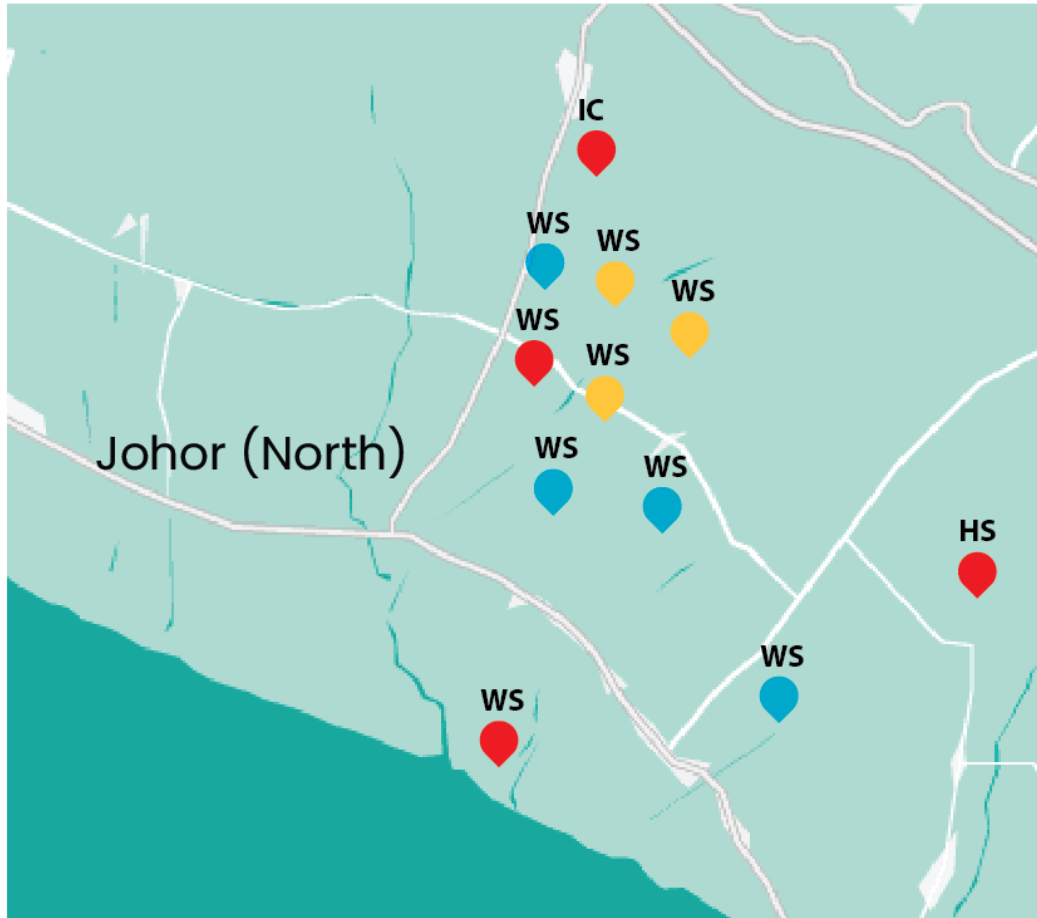


HS	HYPERSCALE	2	+2
WS	WHOLESALE	6	+5
CO	COLOCATION	2	+1
IC	INTERCONNECT	1	

Operating (Yellow)	OPERATING	2	+1
Under Construction (Blue)	UNDER CONSTRUCTION	3	+1
Early Stage (Red)	EARLY STAGE	6	+6

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JOHOR (North)

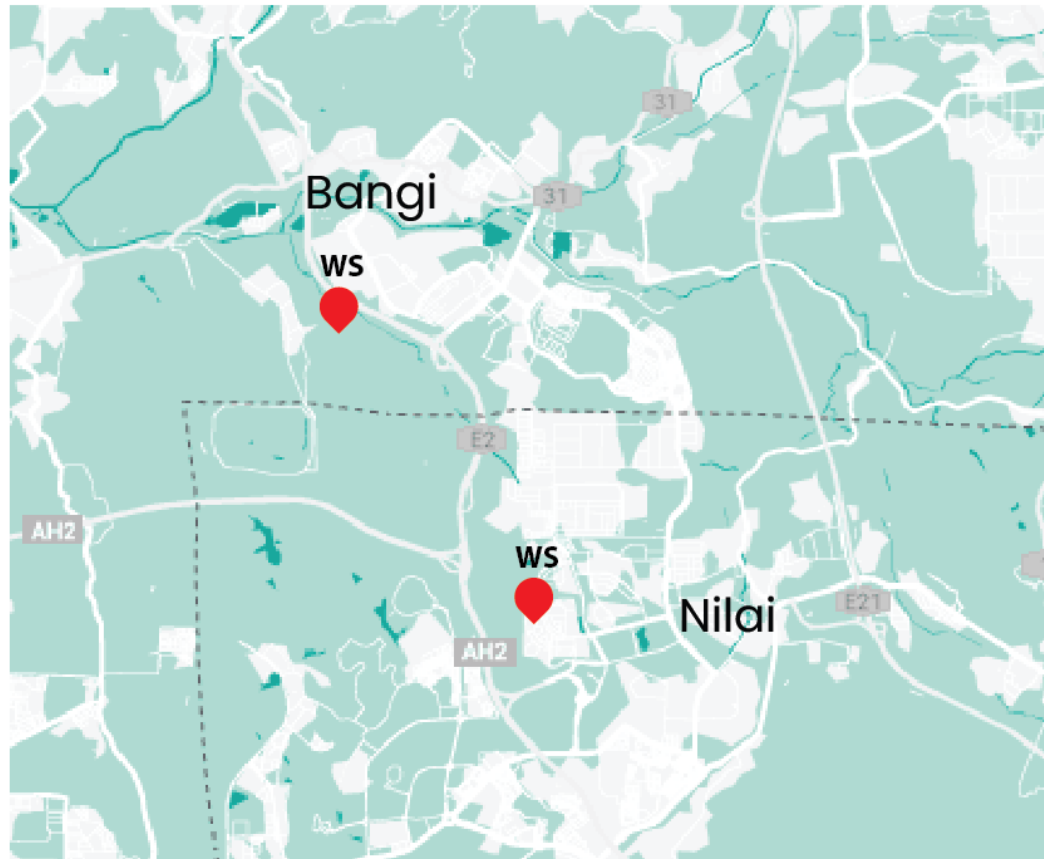


HS	HYPERSCALE	1	+1
WS	WHOLESALE	9	+3
CO	COLOCATION		
IC	INTERCONNECT	1	

	OPERATING	3	+1
	UNDER CONSTRUCTION	4	
	EARLY STAGE	4	+3

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BANGI & NILAI



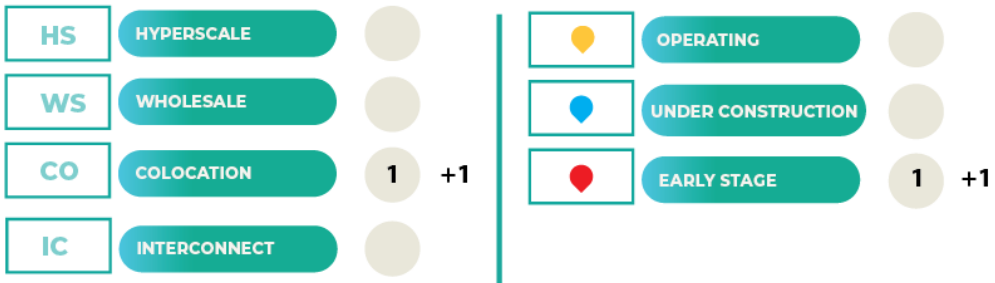
HS	HYPERSCALE	●
WS	WHOLESALE	2
CO	COLOCATION	●
IC	INTERCONNECT	●

●	OPERATING	●
●	UNDER CONSTRUCTION	●
●	EARLY STAGE	2



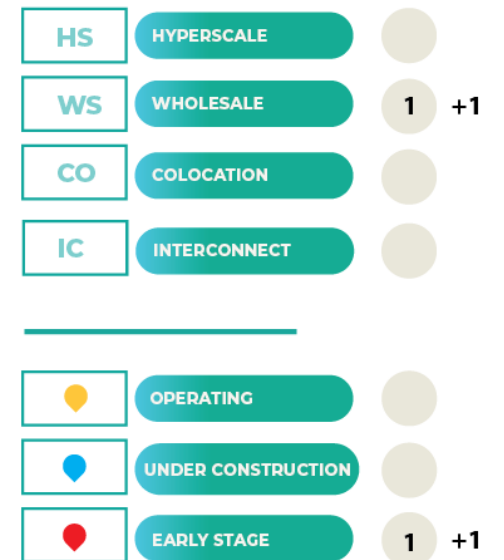
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PAHANG



MELAKA

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Key Takeaways



01 There has been substantial growth in both the central and southern regions, with the southern region experiencing nearly twice as much development

02 The wholesale data centre sector dominates the southern region

03 Hyperscale expanded its footprint from the central region last year to the southern region.

04 Dark fibre is no longer the primary site selection criterion; availability of power now carries more weight.

05 The new developments in the northern region could lead to a shift in the dynamics of traffic both locally and regionally

06 East Malaysia is experiencing significant interest in new developments, but many projects have yet to be finalized

07 To support the growth requirements of new developments in the northern, east coast, central, and southern regions, new subsea cable landings should be developed.

Thank you



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Complete Secure Facilities for maximum availability*

