

Data Centre Connectivity

Hyperscale DC Boom Spurs Demand for Telco Connectivity Services

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We see compelling growth opportunities for Malaysian telcos, driven by the rapid expansion of digital infrastructure across ASEAN. This is underpinned by investments from hyperscalers, internet giants, content application providers, and co-location (co-lo) data centre (DC) operators in cloud regions, hyperscale DCs, points-of-presence, and edge-caching infrastructure.

Johor's DC growth potential of 6.4GW—over 3x its current 1.9GW capacity—anchors multi-year growth in connectivity demand from hyperscale campuses and enterprise co-lo sites. Malaysian telcos could capture these opportunities by providing international, terrestrial and enterprise connectivity solutions, which are essential for integrating digital infrastructure assets into national and global digital ecosystems.

While Tier-1 hyperscalers (e.g. Google, Microsoft, Amazon) operate their own global IP backbones, they still rely on local carriers for international connectivity to ensure network redundancy and resilience. The reliance is even greater for smaller hyperscalers (e.g. Oracle and Alibaba) which have limited investments in global subsea cables, thus requiring both internet access and backbone capacity.

Due to regulatory constraints and complexities in deploying terrestrial networks, hyperscalers effectively form a captive market in Malaysia as they rely on local telcos for middle- and last-mile connectivity to link their digital assets to internet exchange points, international submarine cables and the global digital ecosystem. TM (OP; TP: RM8.15) and TIMECOM (OP; TP: RM5.91) are a proxy to hyperscalers' connectivity needs, providing offerings such as managed wavelength, Indefeasible Right of Use (IRU) agreements, hot standby bandwidth allocation (HSBA), global IP transit, co-location at submarine cable landing stations, and fibre leasing (dark and lit). See Exhibits 3 & 4 for differentiation. Meanwhile, YTLPOWER (OP; TP: RM4.73) is also diversifying into the provision of fibre services.

The proliferation of hyperscale co-lo DCs in Malaysia is likewise driving strong demand for connectivity among enterprise tenants (e.g. banks, government agencies, MNCs). They require secure, high-speed private connections to link their co-lo DC sites, nationwide branches, and cloud environments. Both fixed line players and mobile network operators (MNO) such as CDB (OP; TP: RM4.50) and MAXIS (MP; TP: RM3.80) offer comprehensive connectivity solutions to fulfil these needs that include metro ethernet, metro private line, IP-VPN, SD-WAN, and cloud on-ramps.

For network deployments, specialist contractors such as OCK (MP; TP: RM0.38), REDTONE, THETA, and REACHTEN (all NOT RATED) are candidates to secure contracts for network design, ducting & trenching, and fibre installation etc.

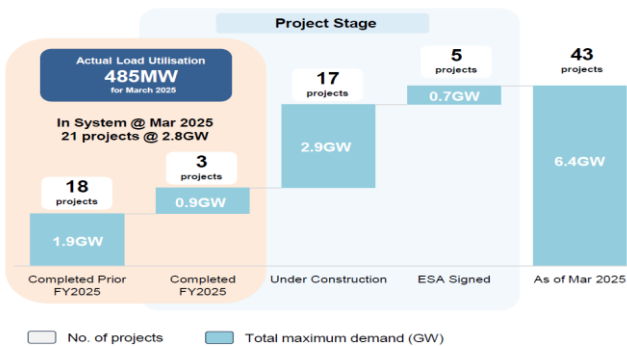
We expect earnings contributions from hyperscaler connectivity contracts to materialize from 2026 onwards, coinciding with the ramp-up of cloud regions in Malaysia. These contracts typically span 10–20 years, supporting capex recovery and long-term recurring revenues. Meanwhile, enterprise contract tenures often run 3–5 years, offering MNOs greater earnings visibility compared to the 1–2-year consumer mobile postpaid plans. Reflecting this, we project FY26F data revenue growth of 8% for TM and 11% for TIMECOM, with data contributing a chunky 33% of TM's revenue and a dominant 87% for TIMECOM.

ASEAN emerges as a digital infrastructure hotspot. We see compelling medium-to-long-term growth opportunities from the continued expansion of digital infrastructure across ASEAN. Key markets such as Singapore, Malaysia, and Thailand continue to attract investments from hyperscalers, internet giants, content application providers (CAPs) and data centre (DC) operators in the form of cloud regions, hyperscale DCs, Points-of-Presence (PoPs), and edge-caching infrastructure. Looking ahead, we expect sustained momentum as providers scale to meet surging demand for cloud computing, content delivery, and AI workloads. ASEAN's cost-competitive advantages—including affordable energy, land availability, water access, and robust connectivity—reinforce its status as a preferred regional digital hub. This is further supported by a rapidly growing digital population and pro-digital government policies.

Malaysia's data centre boom sparks connectivity demand. Evidently, total maximum power demand from DCs in Johor alone is projected to more than triple beyond FY2025, based on the confirmed pipeline of projects (Figure 1). In FY25, three new DCs are expected to come online, adding to the existing 18 to bring cumulative maximum demand to 2.8GW. With another 22 projects in the pipeline (either under construction or with signed energy supply agreements), total maximum demand is expected to surge to 6.4GW, dwarfing the current operational capacity of 485MW. Moreover, according to Knight Frank, Malaysia attracted USD32b of digital investments in 2024, far surpassing its SEA peers.

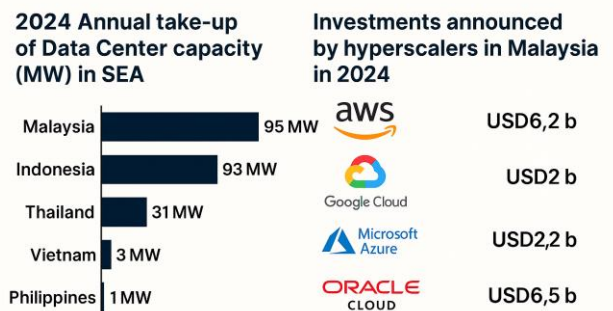
Against this backdrop of robust digital investments in Malaysia, we see significant demand for connectivity services that can be broadly categorized into: (1) one-off infrastructure installation and commissioning, and (2) recurring services, including provision of bandwidth and network maintenance. *Digital infrastructure assets require end-to-end, full-circuit connectivity to integrate them into the global digital ecosystem.*

Figure 1: Data Centre Capacity (Max Electricity Demand) in Johor



Source: TNB

Figure 2: (i) 2024 Annual Take-up of DC capacity in SEA (ii) Hyperscaler Investments in Malaysia



Source: MDEC, Kenanga Research

Demand Drivers

(1) Hyperscalers, internet giants and content application providers (CAP)

After hyperscalers, next could be content providers. While hyperscalers (e.g. Google, Microsoft, Amazon Web Services or AWS, Oracle) currently dominate digital infrastructure investments in Malaysia (Figure 2), we believe future growth could stem from internet giants and CAPs (e.g. streaming platforms, social media networks and online gaming companies). These include players such as Alphabet, Meta, Netflix, Spotify, Disney+, X (formerly Twitter), Apple, Roblox, and Bytedance. many of which are already scaling digital infrastructure across ASEAN.

Smaller hyperscalers require international connectivity services. Google, Microsoft (Azure), and AWS are Tier-1 hyperscalers that operate their own global Internet Protocol (IP) backbones, enabling them to reach any destination on the internet without relying on third-party IP transit providers. These players have ownership or co-ownership of private submarine cable systems (e.g. Google: Dunant, Equiano, and Topaz, Microsoft: MAREA and SEA-ME-WE 5; AWS: Hawaiki and CAP-1) that enable secure and cost-efficient transfer of data across continents.

The global backbones of Tier-1 hyperscalers form part of the internet's core routing infrastructure, exchanging traffic via settlement-free peering with other Tier-1 networks and internet exchange points (IXP). These hyperscalers typically leverage their own networks for end-to-end global connectivity. However, in regions with less extensive peering infrastructure such as Malaysia, *Tier 1 hyperscalers may still rely on local carriers for international connectivity to ensure network redundancy and resilience.*

Meanwhile, *smaller hyperscalers (e.g. Oracle and Alibaba) which lack their own Tier-1 IP networks rely more heavily on local operators for global internet access and backbone capacity.* Key services typically procured (see Figure 3) include: (1) managed wavelength: dedicated optical circuits over fibre cables provided as a managed service, (2) Indefeasible Right of Use (IRU) agreements: long-term leases of dark/lit fibre cable capacity, (3) hot standby bandwidth allocation (HSBA): reserved standby capacity for redundancy, and (4) global IP transit: access to the global internet backbone.

Hyperscalers' limited terrestrial ownership = Last-mile opportunities for locals. Despite their extensive global networks, Tier 1 hyperscalers typically have limited middle and last-mile infrastructure outside their home markets. In Malaysia, this is partly due to local regulations enforced by the Malaysian Communications and Multimedia Commission (MCMC), which stipulates that only licensed network facilities providers (NFP) may build, own, and operate telco infrastructure (including fibre networks and submarine cable landing stations (SCLS)).

Furthermore, we understand that *hyperscalers prefer to outsource the management of terrestrial networks to domestic players*. Unlike subsea cables laid on ocean floors, terrestrial fibre networks are land-based, comprising long-haul intercity routes and metro rings. Therefore, local expertise is critical for securing regulatory and right-of-way (wayleave) approvals, particularly on third-party land. This creates *opportunities for Malaysian NFPs to serve as interconnection partners, linking hyperscalers' digital assets to IXPs, submarine cables and global ecosystems*. Main terrestrial connectivity solutions (see Figure 3) include: (1) half-circuit connectivity (e.g. Singapore to Malaysia cross-border links), (2) co-location services at SCLS, and (3) DC-to-DC connectivity. These solutions are supported by a suite of services, including: (1) fibre leasing (dark and lit), (2) managed wavelength, (3) IRU agreements, and (4) HSBA.

Figure 3: International and Terrestrial Connectivity Services

Infrastructure/ Service	Key Providers (Malaysian listed)	Description
INTERNATIONAL		
IRU (Indefeasible Right of Use)	TM, TIMECOM,	Exclusive long-term rights to subsea cable capacity (dark or lit).
HSBA (Hot Standby Bandwidth Allocation)		Leased standby capacity on subsea cables.
Managed Wavelength		Dedicated optical circuits over submarine DWDM (dense wavelength division multiplexing) networks. Fully managed by provider.
IP Transit		Global internet backbone access.
Co-location at SCLS		Rackspace at SCLS to house network gear for direct termination of submarine cable capacity; or For establishment of low-latency regional access.
DOMESTIC TERRESTRIAL / CROSS-BORDER		
Fibre Lease		
i. Dark Fibre	TM, TIMECOM, Fiberail*, YTLPOWR	Unlit dedicated fibre where the underlying networking equipment is deployed and managed by customers.
ii. Lit Fibre	TM, TIMECOM, CDB, MAXIS, TNB, YTLPOWR	Pre-lit fibre with active networking equipment fully managed by provider.
Managed Wavelength	TM, TIMECOM	Dedicated optical waves of light (e.g. 10G/100G/400G) transmitted over shared fibre infrastructure using DWDM technology. Fully managed by provider.
IRU		Exclusive long-term rights to use specific fibre pairs (dark or lit) over domestic fibre.
HSBA		Leased capacity on terrestrial fibre. Functions as standby fibre link for redundancy that is activated when the primary link fails.

*54:36:10 JV between TM, Keretapi Tanah Melayu Berhad, and Petrofibre Network (M) Sdn Bhd

Dark fibre is likely the preferred option for hyperscalers. Dark fibre comprises dedicated, unlit optical fibre strands that customers can activate and manage independently using their own network equipment. Its key advantages over lit fibre include: (1) greater control over network design and architecture, (2) scalable capacity upgrades, (3) enhanced security via physical isolation, and (4) long-term cost efficiency by avoiding recurring bandwidth fees. Despite higher upfront costs, we believe hyperscalers increasingly favour dark fibre leasing for these benefits and because they lack NFP licences.

Network contractors may also get a slice of the pie. On the other hand, contrary to general market perception, our channel checks indicate that *certain hyperscalers in Malaysia are pursuing co-ownership in terrestrial fibre via partnerships* with local NFPs. While foreign equity participation in NFPs is typically capped at 49% under current regulations, the MCMC may grant

exemptions on a case-by-case basis. In these instances, *local contractors that specialize in network deployment may secure contracts related to network design, regulatory permitting, civil works for ducting and trenching, fibre cable installation, testing and commissioning.*

(2) Enterprise Users at Co-Location Data Centre Sites

Co-location DCs drive enterprise connectivity demand. *The rapid growth of hyperscale co-location (co-lo) DCs in Malaysia is driving increased demand for advanced connectivity services from enterprise tenants (e.g. multinationals, banks, government agencies). These enterprise users require secure and high-speed private network connections that bypass the public internet to link their DCs, co-lo sites, nationwide branch offices, and hyperscale cloud environments. Domestic telcos offer a comprehensive suite of enterprise connectivity solutions to fulfil these requirements (see Figure 4).*

Based on Knight Frank data, international co-lo providers currently operating large-scale DCs in Johor include: (1) K2 Data Centres (K2): 120MW, (2) Bridge Data Centres (BDC): 126MW, and (3) DayOne: 115MW. Looking ahead, these operators have ambitious expansion plans in Malaysia. For instance, K2 is actively seeking new sites across Malaysia to achieve its goal of a 10-fold capacity increase to 1,200MW by 2030, according to *Forbes*.

Figure 4: Enterprise Solutions at Co-Location DCs

Infrastructure/ Service	Key Providers (Malaysian listed)	Backbone Type	Description
MPL (Metro Private Line)	TM, TIMECOM, MAXIS	Dedicated physical leased line	Dedicated, low-latency point-to-point connectivity
Metro Ethernet	TM, TIMECOM, MAXIS, CDB, REDTONE	Private Ethernet/MPL (Layer 2)	Scalable, high-bandwidth private network within metropolitan areas
IP-VPN (Internet Protocol VPN)	TM, TIMECOM, MAXIS, CDB	MPL (Layer 3)	Secure wide-area (WAN) connectivity across multiple sites over shared infrastructure
SD-WAN (Software-defined WAN)	TM, TIMECOM, MAXIS, CDB	Public internet, hybrid with MPLs and 5G	Software-defined overlay that dynamically routes traffic across hybrid network paths (e.g. MPLS, broadband, LTE).
Cloud Interconnect (Cloud On-Ramp)	TM, TIMECOM	Dedicated telco-cloud peering link	Connects enterprise DC sites directly to cloud providers' interconnect nodes

Beneficiaries

Fixed players to secure hyperscalers as connectivity clients. *We believe fixed operators (TM and TIMECOM) stand to benefit as providers of international and terrestrial connectivity to hyperscalers and CAPs. While new terrestrial players (e.g. Xenith IG, Bullish Aim, MSA Resources, and YTLPWR) are emerging, we view TM and TIMECOM as having a competitive edge due to their established nationwide fibre networks, stakes in submarine cable systems, and ownership of SCLS. To recap, TM has five SCLS sites across Malaysia, which serve as key gateways for its major international subsea cables: (1) Asia Link Cable System: Kuala Sedili, Johor, (2) SEA-ME-WE 6: Morib, Selangor, (2) SEA-ME-WE 3: Kuala Muda, Penang and Mersing, Johor and (3) SEA-ME-WE 4 and 5: Pengkalan Badak, Melaka. Meanwhile, TIMECOM has two SCLS located at Kuantan, Pahang (for Asia-Pacific Gateway) and Seberang Prai, Penang (for AAE-1).*

TM & TIMECOM have competitive edge due to sprawling networks. Notably, TM is currently the only Malaysian operator with Tier-1-like global IP transit capabilities. This is underpinned by its ownership of the country's largest domestic fibre infrastructure and extensive participation in international submarine cable consortia. TM is also present in underserved regions such as East Malaysia, where there are limited peering facilities (e.g. IXPs, carrier neutral DCs, cloud on-ramps). TM's key connectivity assets include: (1) domestic terrestrial fibre network spanning over 740k km, (2) participation in 33 global submarine cable systems totalling over 275k km, (3) 29 global PoPs, and (4) 160 content delivery nodes (CDN) worldwide.

TM has strong peering relationships (direct, settlement-free traffic exchange between networks) across Asia. However it is not considered a full Tier-1 carrier, as it still relies on transit from global Tier-1 providers (e.g., Lumen, Arelion) for certain routes. Nevertheless, TM's global reach far exceeds domestic peers, including TIMECOM, which ranks second with stakes in 76,350km of subsea cables and a 3,500km trunk network in Peninsular Malaysia.

Contributions may materialize from 2026 onwards. *We expect earnings contributions from hyperscaler and CAP connectivity contracts to start materializing from 2026 onwards.* This is in tandem with the ramp-up of cloud regions in Malaysia from the following hyperscalers: (1) Google: its hyperscale DC in Elmina, Selangor is expected to launch by 2026 following its ground breaking in Oct 2024, (2) AWS: its Malaysia region is set to gradually scale up following its early availability in Aug 2024, and (3)

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Microsoft: its Malaysia West region (comprising three DCs in Greater Kuala Lumpur) is expected to go live by 2025. In addition, Microsoft has acquired a cumulative 309 acres across four sites in Johor for its next wave of DC developments in Malaysia.

MNOs also get to diversify revenues from enterprise connectivity solutions. Meanwhile, in the enterprise space, both *fixed players and MNOs stand to benefit from rising connectivity demand at enterprise co-lo sites*. While this segment has traditionally been dominated by fixed-line providers and system integrators (e.g. REDTONE), the landscape is shifting as MNOs (particularly MAXIS) actively pursue DC connectivity contracts from enterprises. Currently, enterprise service contributions remain modest for MNOs, accounting for just 2% and 9% of 1QFY25 total service revenue for CDB and MAXIS respectively (TM: 23%). However, if MNOs secure more enterprise contracts, this could help boost and diversify their earnings beyond the saturated consumer segment where service revenue growth trickled to just 1.2%–1.5% YoY in FY23–24.

Enterprise connectivity contracts boost earnings visibility. Connectivity contracts are typically confidential and highly customized, with tenures stretching up to 10–20 years (for hyperscalers) and 3–5 years (for enterprises). This enables the recovery of substantial upfront infrastructure and equipment costs, especially for IRU, HSBA, and dark fibre leases. For enterprise contracts, while revenue recognition may be lumpy initially due to installation billings, they ultimately transition into steady service revenues streams thereafter. This enhances earnings visibility for MNOs, as consumer mobile plans typically have a maximum duration of two years.

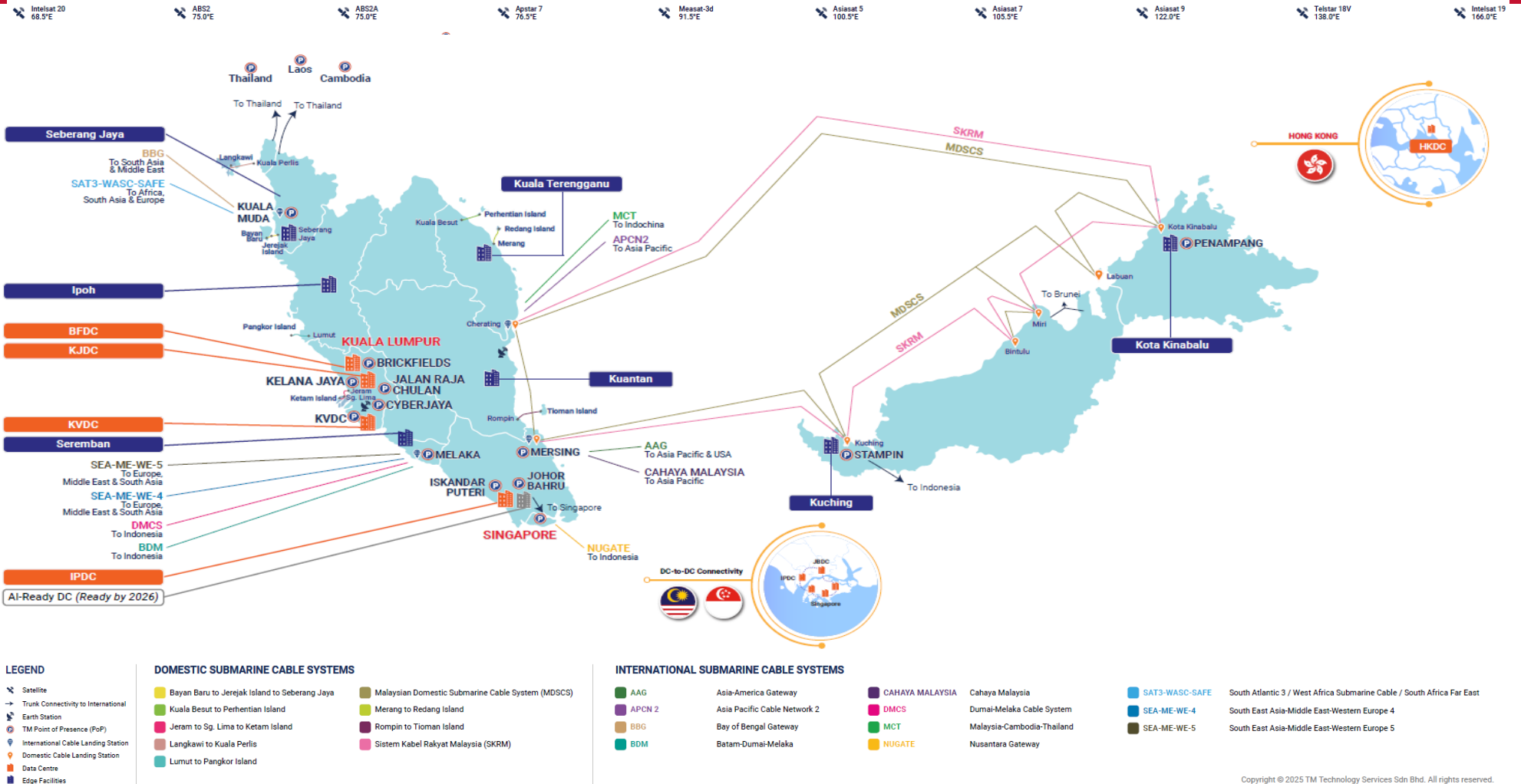
Telco network contractors are not left out. *For network deployments involving enterprise connectivity and dark fibre infrastructure, specialist contractors (e.g., OCK, REDTONE, THETA, REACHTEN) have opportunities* to participate either as main or subcontractors. These awards may arise either from hyperscalers seeking dedicated network builds, or via turnkey infrastructure contracts awarded by telcos and dark fibre operators.

Expect growth traction in data and enterprise revenues. We project FY26F data revenue growth of 8% for TM and 11% for TIMECOM, with data contributing a sizeable 33% of TM's revenue and a dominant 87% for TIMECOM. Encouragingly, both *telcos indicated accelerating traction and great growth potential for digital infra connectivity services*. In particular, TIMECOM highlighted increasing demand for: (i) half-circuit connectivity between Singapore and Malaysia, and (ii) DC-to-DC connectivity. Meanwhile, for mobile operators, our FY26F segmental revenue projections comprise: (1) CDB: 11% YoY expansion in Enterprise (ICT & Connectivity) and (2) MAXIS: 7% YoY growth in Enterprise (Fixed & Solutions). These projections reflect our optimism in growing demand for connectivity solutions from hyperscalers and enterprise DC co-lo users.

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APPENDIX

Appendix 1: TM's Domestic Digital and Connectivity Assets

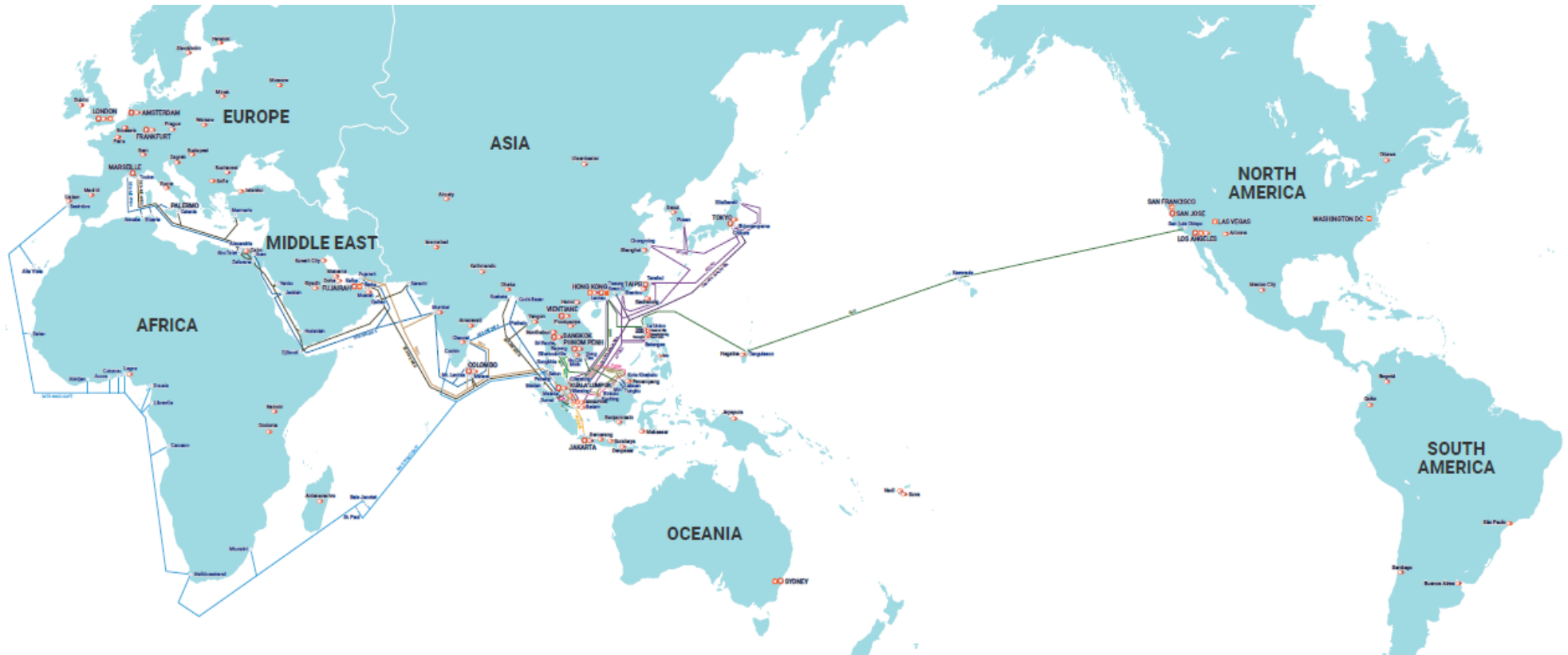


Source: Company

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Appendix 2: TM's Global Submarine Cable Systems Coverage

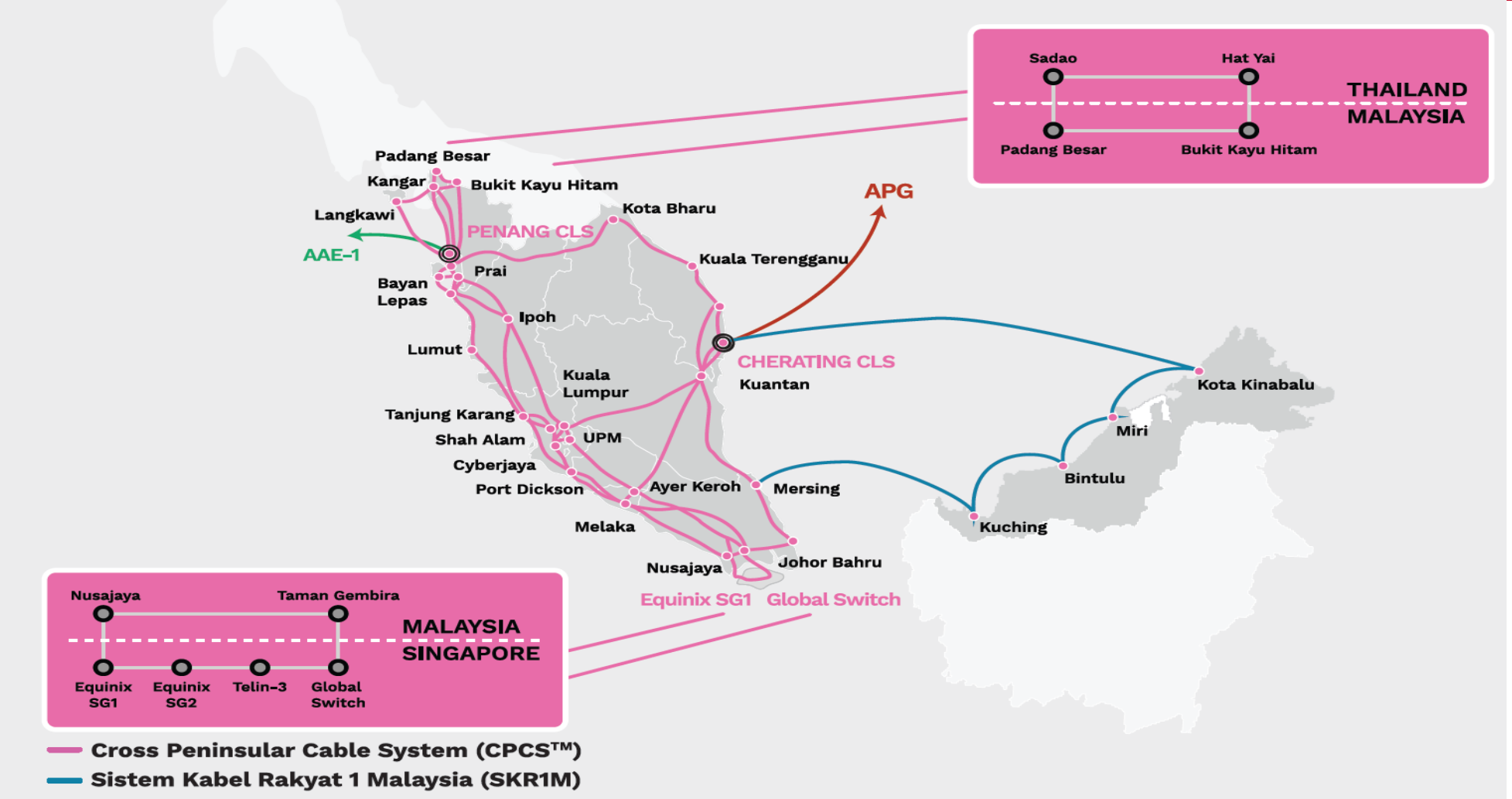
- IntelSat 20
68.5°E
- ABS2
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- Measat-3d
91.5°E
- Asiasat 5
100.5°E
- Asiasat 7
105.5°E
- Asiasat 9
122.0°E
- Telstar 18V
138.0°E
- IntelSat 19
166.0°E



<p>LEGEND</p> <ul style="list-style-type: none"> Satellite Trunk Connectivity to International Earth Station TM Point of Presence (PoP) International Cable Landing Station Domestic Cable Landing Station Data Centre Edge Facilities 	<p>DOMESTIC SUBMARINE CABLE SYSTEMS</p> <ul style="list-style-type: none"> Bayan Baru to Jerejak Island to Seberang Jaya Kuala Besut to Perhentian Island Merang to Redang Island Jeram to Sg. Lima to Ketam Island Langkawi to Kuala Perlis Lumut to Pangkor Island Malaysian Domestic Submarine Cable System (MDSCS) Rompin to Tioman Island Sistem Kabel Rakyat Malaysia (SKRM) 	<p>INTERNATIONAL SUBMARINE CABLE SYSTEMS</p> <ul style="list-style-type: none"> AAG Asia-America Gateway APCN 2 Asia Pacific Cable Network 2 BBG Bay of Bengal Gateway BDM Batam-Dumai-Melaka CAHAYA MALAYSIA Cahaya Malaysia DMCS Dumai-Melaka Cable System MCT Malaysia-Cambodia-Thailand NUGATE Nusantara Gateway SAT3-WASC-SAFE South Atlantic 3 / West Africa Submarine Cable / South Africa Far East SEA-ME-WE-4 South East Asia-Middle East-Western Europe 4 SEA-ME-WE-5 South East Asia-Middle East-Western Europe 5
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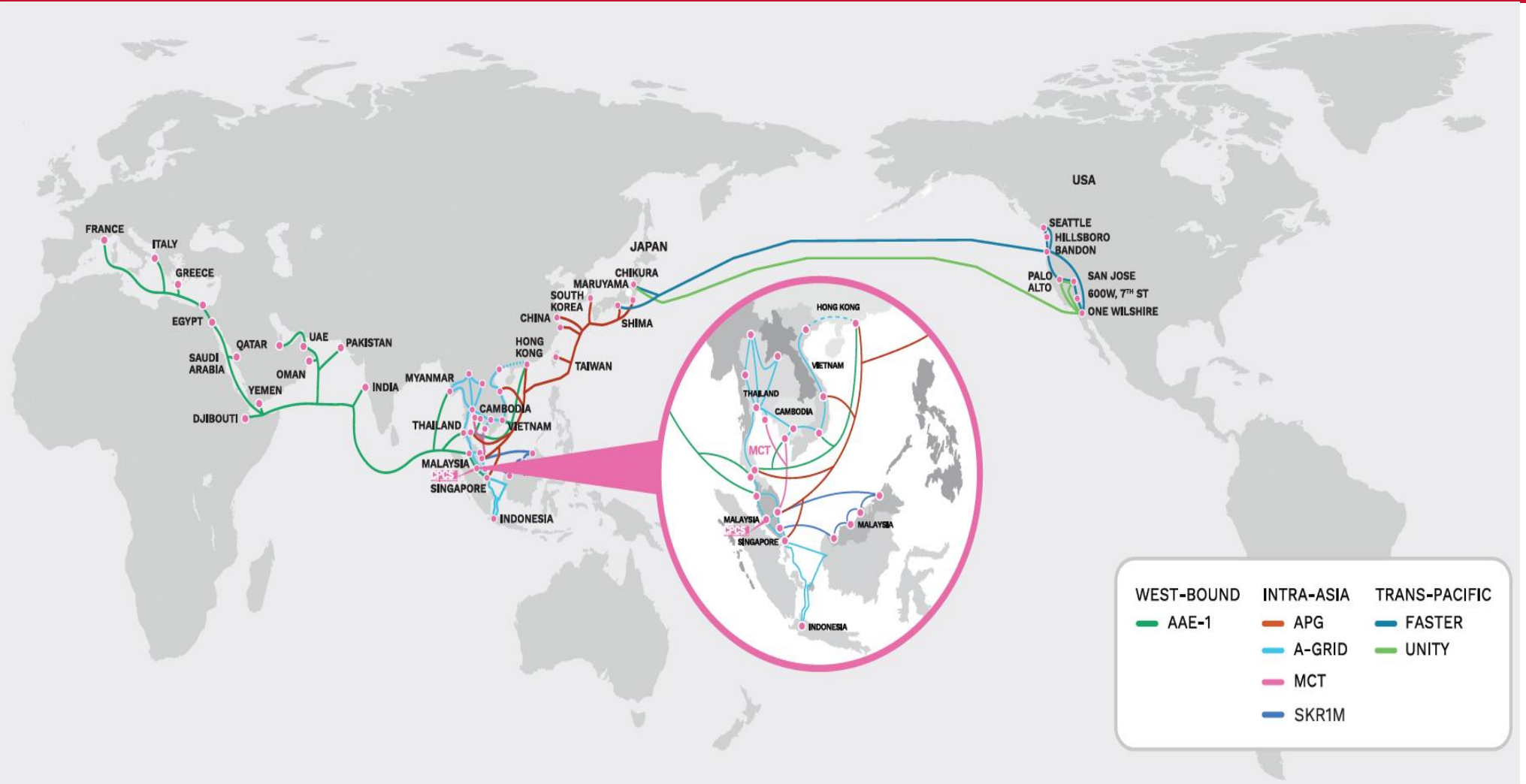
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Appendix 3: TIMECOM's Domestic Terrestrial Fibre Network



Source: Company, Kenanga Research

Appendix 4: TIMECOM's Global Submarine Cable Network



Source: Company, Kenanga Research

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Peer Comparison

Name	Rating	Last Price (RM)	Target Price (RM)	Upside	Market Cap (RM m)	Shariah Compliant	Current FYE	Core EPS (sen)		Core EPS Growth		PER (x) - Core Earnings		PBV (x)	ROE (%)	Net Div. (sen)	Net Div. Yld. (%)
								1-Yr. Fwd.	2-Yr. Fwd.	1-Yr. Fwd.	2-Yr. Fwd.	1-Yr. Fwd.	2-Yr. Fwd.	1-Yr. Fwd.	1-Yr. Fwd.	1-Yr. Fwd.	1-Yr. Fwd.
Stocks Under Coverage																	
AXIATA GROUP BHD	MP	2.69	2.15	-20.1%	24,709.0	Y	12/2025	5.2	5.5	-44.0%	5.6%	51.7	49.0	1.4	2.3%	11.0	4.1%
CELCOMDIGI BHD	OP	3.79	4.50	18.7%	44,462.0	Y	12/2025	16.1	17.9	5.4%	11.5%	23.5	21.1	2.7	11.6%	13.0	3.4%
MAXIS BHD	MP	3.50	3.80	8.6%	27,423.0	Y	12/2025	18.4	18.7	1.5%	1.5%	19.0	18.7	4.5	24.0%	16.0	4.6%
OCC GROUP BHD	MP	0.420	0.380	-9.5%	450.0	Y	06/2025	3.9	2.7	30.1%	-31.9%	10.7	15.7	0.7	6.4%	2.0	4.8%
TELEKOM MALAYSIA BHD	OP	6.75	8.15	20.7%	25,905.0	Y	12/2025	47.4	47.6	-11.8%	0.4%	14.2	14.2	2.4	17.3%	33.0	4.9%
TIME DOTCOM BHD	OP	5.12	5.91	15.4%	9,466.0	Y	12/2025	26.3	28.9	11.1%	10.0%	19.5	17.7	2.5	12.6%	32.0	4.7%
SECTOR AGGREGATE					132,415.0					-6.7%	5.0%	21.6	20.6	2.4	12.4%		4.4%

Source: Bloomberg, Kenanga Research

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Stock Ratings are defined as follows:**Stock Recommendations**

OUTPERFORM	: A particular stock's Expected Total Return is MORE than 10%
MARKET PERFORM	: A particular stock's Expected Total Return is WITHIN the range of -5% to 10%
UNDERPERFORM	: A particular stock's Expected Total Return is LESS than -5%

Sector Recommendations***

OVERWEIGHT	: A particular sector's Expected Total Return is MORE than 10%
NEUTRAL	: A particular sector's Expected Total Return is WITHIN the range of -5% to 10%
UNDERWEIGHT	: A particular sector's Expected Total Return is LESS than -5%

******Sector recommendations are defined based on market capitalisation weighted average expected total return for stocks under our coverage.***

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