

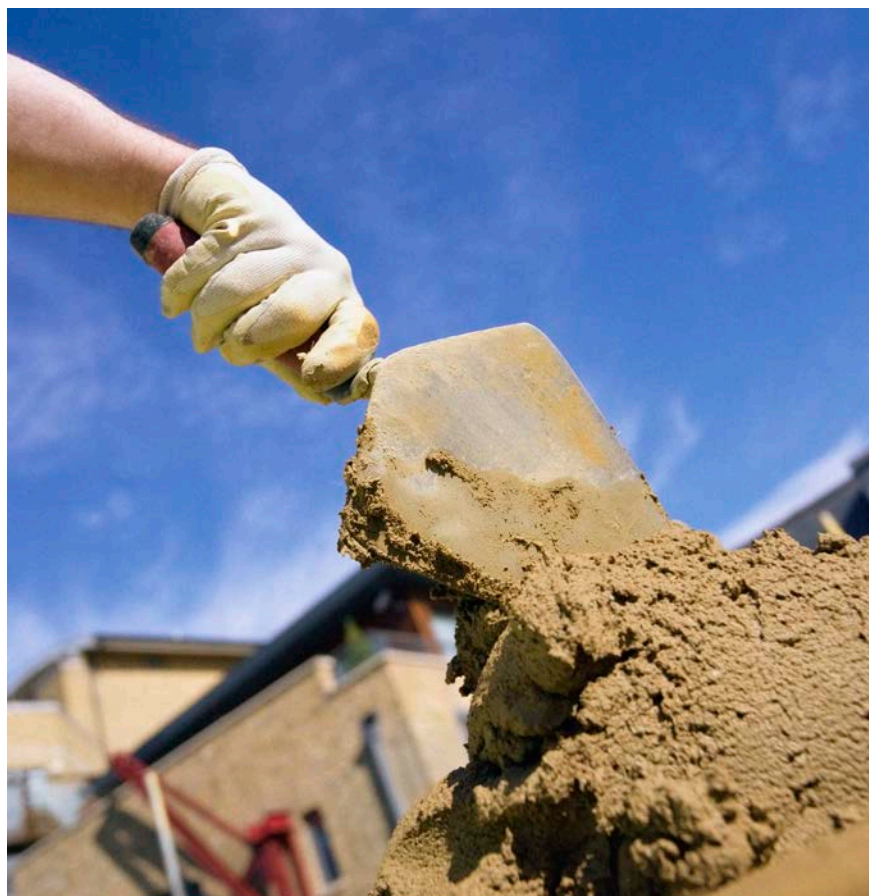


Fundamental, Incisive,  
Thematic, Thought-leading

## Industry ASEAN Strategy

Date  
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Asia  
Singapore  
Strategy



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## F.I.T.T. for investors

## ASEAN: The infrastructure push

### Infrastructure developments – where, what and how much?

US\$275bn will be invested in the next decade to improve ASEAN infrastructure, as leaders aim to resolve the bottlenecks in the less developed economies and Singapore equips itself for a further 25% increase in population. This report details the challenges and beneficiaries on a country by country basis, while future reports will examine the geopolitical context, the increasing role of China in ASEAN, funding/fiscal issues and the execution of plans amid shifting domestic political landscapes.





## ASEAN: The infrastructure push

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### Infrastructure developments – where, what and how much?

US\$275bn will be invested in the next decade to improve ASEAN infrastructure, as leaders aim to resolve the bottlenecks in the less developed economies and Singapore equips itself for a further 25% increase in population. This report details the challenges and beneficiaries on a country by country basis, while future reports will examine the geopolitical context, the increasing role of China in ASEAN, funding/fiscal issues and the execution of plans amid shifting domestic political landscapes.

### Thailand: revamping the economy via an infra revamp

Thailand is revamping ageing infrastructure and industries in Bangkok and the provinces. A large part of the budget (est. Bt1.4tr or US\$43bn) will go to the Mataphut airport upgrade and a new industrial zone in the Eastern Seaboard (EEC), set to create a seismic shift in population and employment movements as EEC becomes an ASEAN hub for new technologies. Industrial estate players like **WHA** and **AMATA** would benefit the most, then **banks, hospitals** and **commerce**.

### Indonesia: ambitious plan and tight budget, but determined

Infra spending (c.3% of GDP) in the Jokowi government's first 3 years is equal to the past decade's – with US\$30bn projected for 2018. Alternative funding to overcome budget constraints led contractors' receivable days to rise to 270. We prefer exposure to toll road operators (**JSMR**), a safer proxy for the infra boom. A trough is nearing for cement firms as losses may force consolidation. ASP is flat but demand could grow 5-6% in 2018. We like **SMGR** and **INTP**.

### Philippines: tax reform on track but delay in "build, build, build" dream

The Tax Reform for Acceleration and Inclusion (TRAIN) initiative is to fund Duterte's US\$22bn infra plans in 2018 (5-7% of GDP). If TRAIN is not passed, the government may need to hike debt-to-GDP or revive public private partnerships. Infra development benefits land values of property proxies like **ALI**. Improved connectivity to Entertainment City is a plus for casino operators like **BLOOM** and **MRP**. Expecting consumption gains, we favour **PGOLD**, **RRHI**, **JFC** and **MAXS**.

### Malaysia: the key to China's "One Belt, One Road" initiative in ASEAN

China and Malaysia signed MOUs worth US\$34bn in total in Nov-16. China will offer contractors and financing, limiting local contractors and banks' upside but providing spill-over benefits for property developers such as **KLK** and consumer proxies. The 2018 infrastructure budget could reach US\$5bn (c.2% of GDP), with a multiplier effect on CY18-20E M2 and a positive impact on consumer discretionary and tourism related proxies (**GENM** and **MAHB**).

### Singapore: Smart Nation building and improving existing infrastructure

The government's bid to grow the population to 6.9mn by 2030 (+25% from 5.6mn now) is shown in its infra plans. To pre-empt traffic congestion issues with a bigger population, infra development focuses on building a more connected public transport network, encouraging the use of personal mobility devices, and digitalisation. It has budgeted more than US\$27bn over the next five years for these projects. We expect the biggest beneficiaries to be firms with operating expertise in tourism (**SATS**) and telecommunications (**STEL** and **SJLU**).

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This research has been prepared in association with PT Deutsche Verdhana Sekuritas Indonesia. The opinions contained in this report are those of PT Deutsche Verdhana Sekuritas Indonesia.

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# Who are the beneficiaries?

## DB-identified key beneficiaries of the ASEAN infrastructure push

Figure 1: Overview of potential beneficiaries according to sectors and country

	Singapore	Malaysia	Indonesia	Thailand	Philippines
<b>Construction</b>		Gamuda Berhad (GAMU.KL) Sunway Con (SCOG.KL) Ahmad Zaki Resources (AZRB.KL) George Kent (GKMS.KL) WCT Holdings (WCTE.KL) IJM Corporation (IJSM.KL)	Adhi Karya (ADHI.JK) Wijaya Karya (WIKA.JK) Waskita Karya (WSKT.JK) PTPP (PTPP.JK)	Unique Engineering & Construction (UNIQ.BK) Sino-Thai Engineering & Construction (STEC.BK) Ch. Karnchang (CK.BK) Italian-Thai Development (ITD.BK)	DMCI Holdings (DMCI.PS) EEI Corporation (EEI.PS)
<b>Materials: Cement</b>		Lafarge Malaysia (LAFAL.KL)	Semen Indonesia (SMGR.JK) Indocement (INTP.JK)	Siam Cement (SCC.BK) Siam City Cement (SCCC.BK) TPI Polene PCL (TPIPL.BK)	Cemex Holdings (CHP.PS)
<b>Property Industrial estates</b>	Keppel DC REIT (KEPE.SI)	KL Kepong (KLKK.KL) Sime Darby (SIME.KL) Eco World (ECOW.KL) SP Setia (SETI.KL) Mah Sing (MAHS.KL) Sunway Berhad (SWAY.KL) Gamuda Berhad (GAMU.KL)	Surya Semesta Internusa (SSIA.JK) Kawasan Industri Jababeka (KIJA.JK) Bekasi Fajar (BEST.JK) Jasa Marga (JSMR.JK)	WHA Corporation (WHA.BK) AMATA Corporation (AMATA.BK)	Ayala Land (ALI.PS) Filinvest Land (FLI.PS) Megaworld (MEG.PS) SM Prime (SMPH.PS) Vista Land (VLL.PS)
<b>Banks</b>				Bangkok Bank (BBL.BK) Krung Thai (KTB.BK)	
<b>Consumer</b>		MyEG (MYEG.KL) Bison Consolidated (BISO.KL) 7-Eleven (SEVE.KL)			Puregold Price Club (PGOLD.PS) Robinsons Retail (RRHI.PS) Wilcon Depot (WLCON.PS) Philippine Seven (SEVN.PS) Jollibee Foods (JFC.PS) Max's Group (MAXS.PS) Shakey's Pizza (PIZZA.PS)
<b>Tourism</b>	SATS (SATS.SI) OUE Hospitality Trust (OUE.SI) Genting Singapore (GENS.SI)	AirAsia (AIRA.KL) Malaysia Airports Holdings (MAHB.KL) Genting Malaysia (GENM.KL)			Megawide (MWIDE.PS) Cebu Air (CEB.PS) Travellers Group (RWM.PS) Belle Corporation (BELLE.PS) Bloomerry Resorts (BLOOM.PS) Melco Resorts Philippines (MRP.PS)
<b>Telecos</b>	Singtel (STEL.SI) StarHub (STAR.SI) M1 (MONE.SI) NetLink Trust (SJLU.SI)	Axiata (AXIA.KL)			

Source: Deutsche Bank





## ASEAN infrastructure indicators

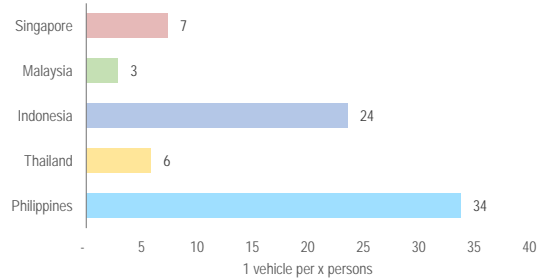
Figure 2: ASEAN infrastructure key statistics

	Units	Singapore	Malaysia	Indonesia	Thailand	Philippines
<b>(1) Population density</b>						
Land area	sqkm	719	330,290	1,913,578	513,119	300,000
Population	thousands	5,600	30,485	255,461	68,979	101,562
Population density	persons per sqkm	7,789	92	133	134	339
<b>(2) Road</b>						
Total road length	km	3,496	205,787	508,000	234,073	32,633
Length of paved road	km	3,496	156,692	287,926	190,077	28,919
% of paved road to total road length	%	100%	76%	57%	81%	89%
Total length of expressways	km	164	1,998	949	209	400
Vehicle ownership:						
Cars and four-wheelers	thousands	763	10,690	10,839	11,829	3,009
Two or three-wheelers	thousands	145	11,088	86,253	19,169	4,251
<b>(3) Railway</b>						
Total railway route length	km	183	1,641	5,368	4,034	494.9
Double-track railway route length	km	NA	774	1,008	90	125.4
Electrified track railway route length	km	183	774	400	105	33.8
Urban railway route length	km	183	158	900	85	78.2
Rail passenger	million passengers-km	9,391	1,306	15,231	6,473	8,631
<b>(4) Maritime</b>						
Total number of ports	count	1	28	2,286	249	562
Number of domestic ports	count	NA	13	2,150	242	412
Number of international ports	count	1	15	136	7	150
International sea cargo throughput	thousand TEUs	581,268	200,896	653,270	170,435	133,292
International sea container throughput	thousand TEUs	33,869	7,205	785	7,422	3,290
<b>(5) Aviation</b>						
Total number of airports	count	1	38	291	33	44
Number of international airports	count	1	8	27	11	11
Number of domestic airports	count	NA	30	264	22	33
International air passenger traffic	thousands	53,288	40,762	10,253	51,151	19,914
International cargo loaded	thousand tons	839	388	101	704	144
International cargo unloaded	thousand tons	1,005	386	NA	525	123
<b>(6) Construction</b>						
Steel consumption	million tonnes	4.0	10.0	11.3	16.7	8.8
Steel production	million tonnes	1.0	7.9	11.1	10.2	5.0
Cement consumption	million metric tonnes	7.7	22.9	62.1	30.6	26.0
Cement production	million metric tonnes	NA	27.8	63.1	46.7	23.0

Source: Deutsche Bank, ASEAN Statistics, Various government websites, World Bank, South East Asia Iron and Steel Institute

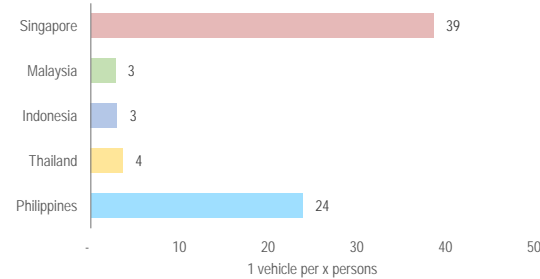
## ASEAN infrastructure key snapshot

Figure 3: Vehicle ownership: Cars & 4-wheelers



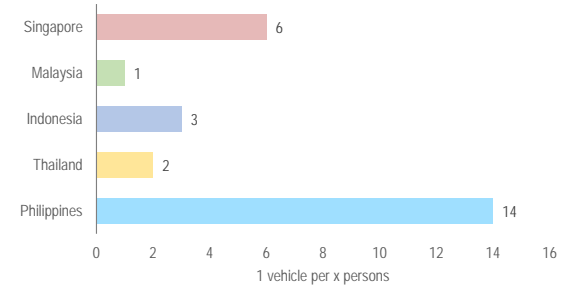
Source: Deutsche Bank, ASEAN statistics

Figure 4: Vehicle ownership: 2 & 3-wheelers



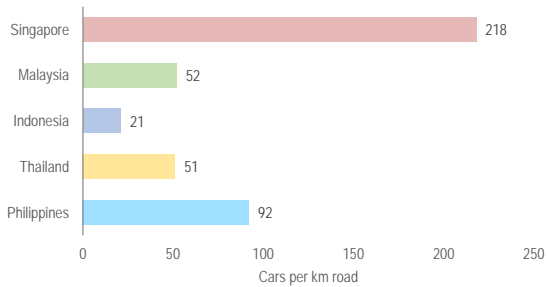
Source: Deutsche Bank ASEAN statistics

Figure 5: Vehicle ownership: Total



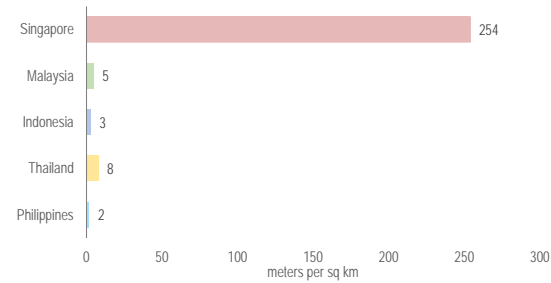
Source: Deutsche Bank ASEAN statistics

Figure 6: Vehicle density (no. of cars/road length)



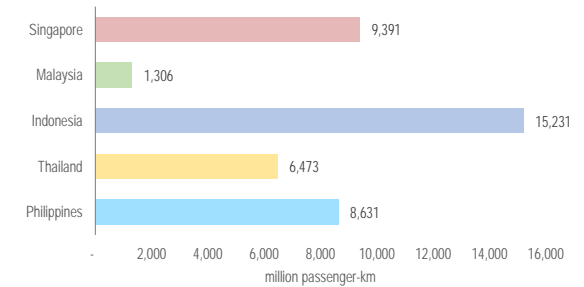
Source: Deutsche Bank ASEAN statistics

Figure 7: Railway network density (metres/sq km)



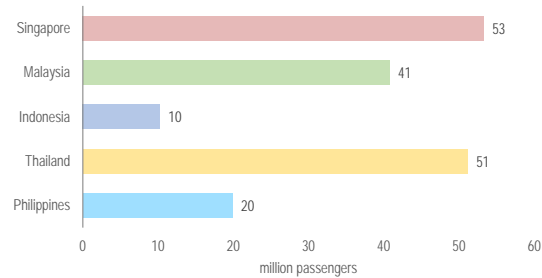
Source: Deutsche Bank ASEAN statistics

Figure 8: Rail passenger-km (mn passenger-km)



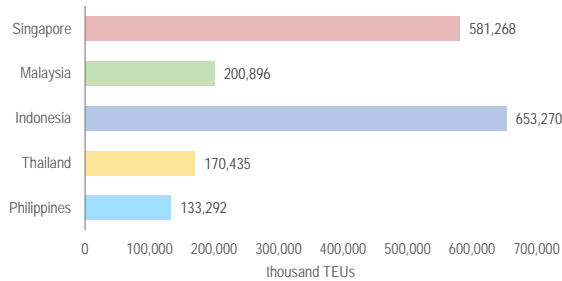
Source: Deutsche Bank ASEAN statistics

Figure 9: International air passenger traffic



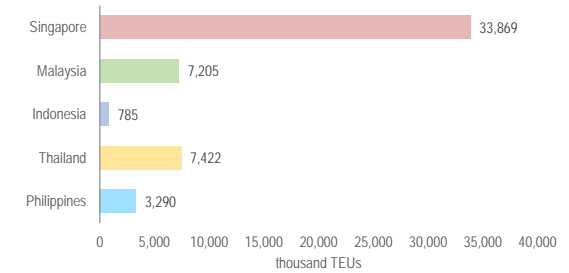
Source: Deutsche Bank ASEAN statistics

Figure 10: International sea cargo throughput



Source: Deutsche Bank ASEAN statistics

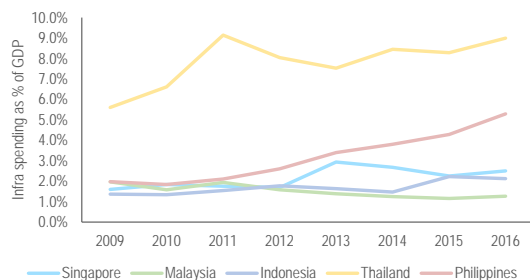
Figure 11: International sea container throughput



Source: Deutsche Bank ASEAN statistics

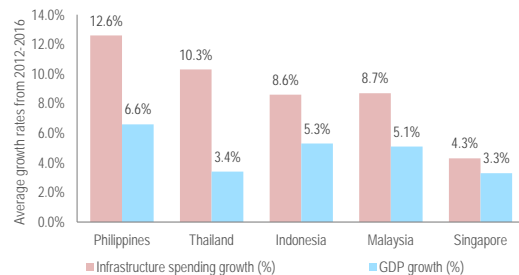


Figure 12: Infra spending as % of GDP



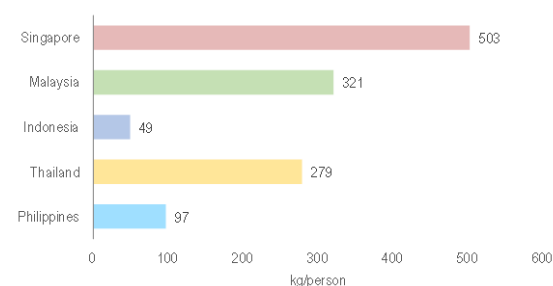
Source: Deutsche Bank estimates

Figure 13: 2012-16 infra spending & GDP growth



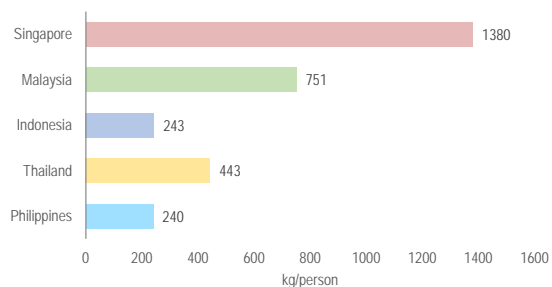
Source: Deutsche Bank, Various government websites

Figure 14: Steel consumption per capita



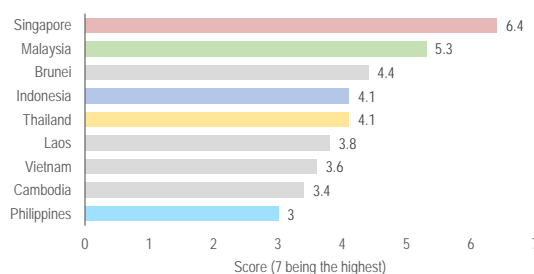
Source: Deutsche Bank, SEASI

Figure 15: Cement consumption per capita



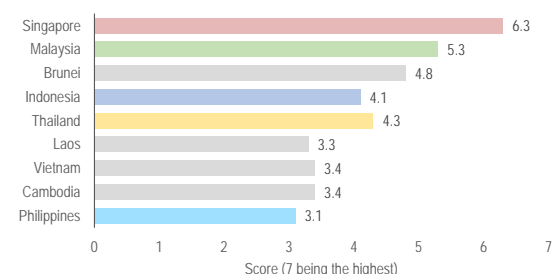
Source: Deutsche Bank, Global Cement

Figure 16: Quality of infrastructure (2017-18)



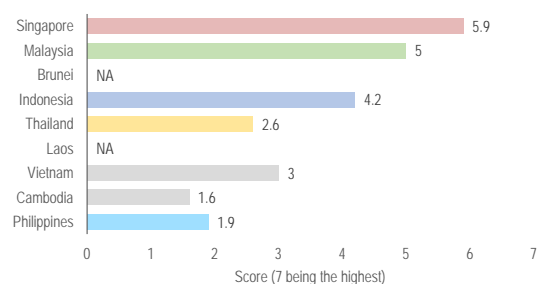
Source: Deutsche Bank, World Economic Forum Global Competitive Report\*

Figure 17: Quality of roads (2017-18)



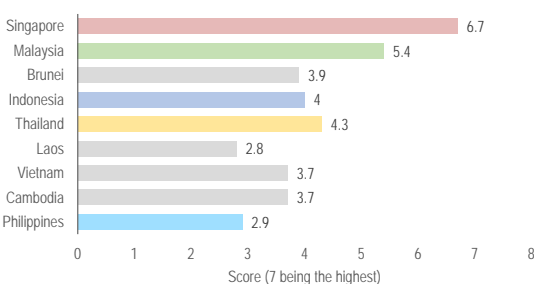
Source: Deutsche Bank, World Economic Forum Global Competitive Report\*

Figure 18: Quality of railroads (2017-18)



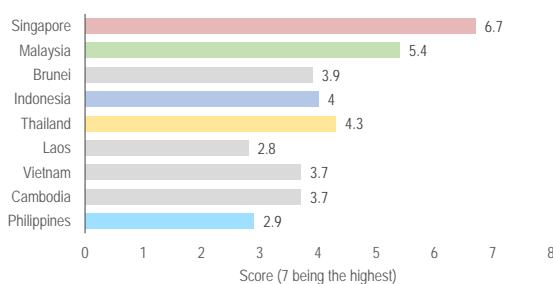
Source: Deutsche Bank, World Economic Forum Global Competitive Report\*

Figure 19: Quality of overall ports (2017-18)



Source: Deutsche Bank, World Economic Forum Global Competitive Report\*

Figure 20: Quality of air transport infra (2017-18)



Source: Deutsche Bank, World Economic Forum Global Competitive Report\*

Note: World Economic Forum Global Competitive Report assesses the competitive landscape of 140 economies.







# The infrastructure push

## ASEAN countries have been ramping up infra projects

Infrastructure plays a crucial role in the region's economic, social and environmental development, including boosting regional connectivity. Greater connectivity of the transport infrastructure enhances logistical efficiency and supports the growth of investment, trade and commerce while reducing business costs. While countries have invested in infrastructure to varying extents over the years, development has been gaining momentum, with more than US\$275bn key pipeline projects across ASEAN, as we detail in this report.

**Singapore:** To fulfil Singapore's 6.9mn population target (+25% from the current size) by 2030, the government is steering infrastructure development towards greater public network connectivity, usage of personal mobility devices, as well as usage of digitalisation to transform the city state into a Smart Nation. These infra developments, amounting to US\$44bn will help Singapore cope with population increase and prevent traffic congestion.

**Malaysia:** In the 10<sup>th</sup> Malaysia Plan (2011-2015), the government highlighted its commitment to infrastructure development. One focus is on building railways (MRT 2, MRT 3, LRT 3) to alleviate traffic congestion. Another focus is on connecting rural areas to urban clusters to ensure equitable development through the Pan Borneo Highway. Infrastructure growth is driven by China, having committed US\$34bn (RM144bn) to infrastructure projects such as the East Coast Rail Link, Kuantan Industrial Park and Melaka Gateway.

**Indonesia:** In the post-Suharto era, infrastructure development stalled and has not been able to keep up with economic growth amid the commodities boom. The inefficient transport network has resulted in acute distribution bottlenecks, driving up logistics cost. When President Jokowi took office, he diverted a portion of the energy subsidies to infrastructure development. Through priority infrastructure projects totalling US\$41bn, the government seeks to boost connectivity in the archipelago to increase business competitiveness.

**Thailand:** After a military coup, Thailand's economy plunged into uncertainty and has since struggled to recover. To fuel growth, the government has been actively pushing for infrastructure development – its 2017 infrastructure plan comprises 36 projects amounting to US\$27bn. Apart from improving the local transportation network, the government seeks to strengthen Thailand's connectivity to the rest of the world, tapping into its strategic location. Examples include the Thai-Sino railway running from Bangkok to Nong Khai (Laos), and the Eastern Economic Corridor (EEC) as a gateway to Asia.

**Philippines:** The Philippines has the least-developed infrastructure relative to its counterparts. The lack of an efficient transport network has resulted in chronic traffic congestion, causing a drag on productivity and the economy. To compensate for years of underinvestment, the Duterte administration has committed US\$160bn worth of investments over 2017-2022 as part of its "Build, Build, Build" campaign. The emphasis is on building efficient railways such as Mega Manila and connector roads such as Skyway 3 to decongest traffic.

Figure 21: 2018 government budgets for infra works (estimated)

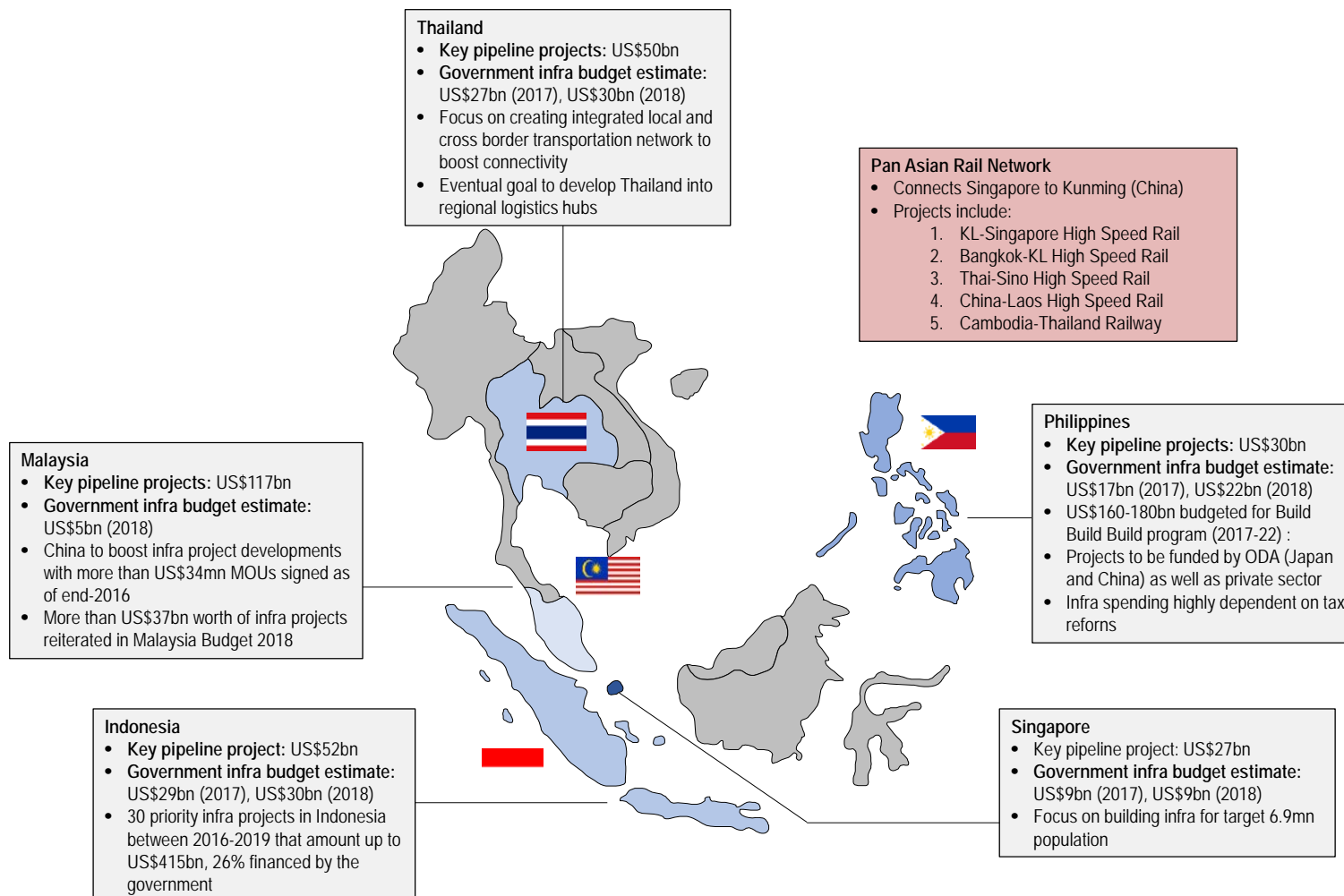
Country	Estimated budget (US\$bn)	Percentage of GDP (%)
Singapore	9	2.1
Malaysia	5	1.5
Indonesia	30	2.9
Thailand	30	6.9
Philippines	22	6.1
<b>Total</b>	<b>93</b>	

Source: Deutsche Bank estimates

# What is in the pipeline?

More than US\$275bn worth of projects in the pipeline to improve ASEAN infrastructure

Figure 22: Overview of infra developments and the areas pf focus across ASEAN nations



Source: Deutsche Bank





## DB-compiled key ASEAN infrastructure projects

Figure 23: Singapore – overview of key infrastructure projects

No	Project	Estimated capex (US\$bn)	Expected completion	Area
1	Thomson-East Coast Line		2024	
2	Jurong Region Line		2025	
3	Cross Island Line		2025	
4	North-South Line-Canberra Station	14.7	2019	
5	North East Line Extension-North East Line		2023	
6	Circle Line 6 - Circle Line		2025	
7	Johor Bahru-Singapore Rapid Transit System	na	na	
8	North South Corridor	na	2026	
9	Deep Tunnel Sewerage System Phase 2	2.5	2024	na
10	Transmission Cable Tunnel Project	1.5	2018	
11	Pasir Panjang Terminal 3-4	2.6	2016	
12	Tuas Terminal Development Phase 1	2.8	2030s	
13	Changi Airport Terminal 4	0.7	2017	
14	Changi Airport Terminal 5	0.7	Late 2020s	
15	Three Runway System	0.8	Late 2020s	
16	Jewel Changi Airport	1.1	2020	
<b>Total</b>		<b>27.4</b>		

Source: Deutsche Bank

Figure 24: Malaysia – overview of key infrastructure projects

No	Project	Estimated capex (US\$bn)	Expected completion	Area
1	Penang Undersea Tunnel	1.5	2025	North region
2	Lebuhraya Air Itam-Lebuhraya Tun Dr Lim Chong Eu Road; Tanjung Bungah-Teluk Bahang paired road	0.5	na	North region
3	West Coast Expressway	1.1	2019	North region
4	Kulim International Airport	0.4	2017	North region
5	South Kedah Expressway	na	na	North region
6	MRT Line 1 (Sungai Buloh-Kajang)	4.9	2017	Central region
7	MRT Line 2 (Sungai Buloh-Serdang-Putrajaya)	7.6	2022	Central region
8	MRT Line 3	na	na	Central region
9	LRT Line 3 (Damansara-Klang)	2.1	2020	Central region
10	Klang Valley Double Track Upgrade Project	0.3	2020	Central region
11	Carey Island Port Industrial City Project	47.0	2025	Central region
12	KL-Singapore High Speed Rail	16.9	2026	Central region
13	East Coast Rail Link	13.0	2024	East region
14	Kuantan Port Expansion and addition of breakwater	0.9	2019	East region
15	Integrated river project (Sungai Golok and Sungai Kelantan)	0.2	2020	East region
16	Melaka Gateway Development	10.1	na	South region
17	Electrified double track project (Gemas-Johor Bahru)	2.1	2020	South region
18	Johor Bahru-Singapore Rapid Transit System	na	na	South region
19	Pan Borneo Highway (Sarawak)	3.8	2021	Sarawak
20	Series of water projects (master pipeline or grid)	0.8	na	Sarawak
21	Pan Borneo Highway (Sabah)	3.0	2021	Sabah
22	Tawau Port Upgrade	na	na	Sabah
23	Sepanggar Bay Container Port Upgrade	0.2	2019	Sabah
24	3-lane carriageway (Yaysan Sabah-Sabah Convention Centre)	0.1	na	Sabah
25	57 high impact power supply projects	0.5	na	Sabah
<b>Total</b>		<b>117.3</b>		

Source: Deutsche Bank



Figure 25: Indonesia – overview of key infrastructure projects

No	Project	Estimated capex (US\$bn)	Expected completion	Area
1	Trans Sumatra Toll Road	5.7	2019	Sumatra
2	Tanjung Enim-Tanjung Api Train	2.5	2022	Sumatra
3	Muara Enim-Pulau Baai Railway	2.2	2023	Sumatra
4	Kuala Tanjung International port development	2.2	2021	Sumatra
5	Trans Java Toll Road	3.8	2019	Java
6	Jakarta Mass Rapid Transit (North-South/East-West)	6.9	2019/ 2025	Java
7	Jakarta Light Rapid Transit	1.9	2018	Java
8	Jakarta Bandung High Speed Rail	5.5	2019	Java
9	Airport Karawang	2.7	2023	Java
10	Port development in West Java - Patimban	3.2	2019	Java
11	Toll Road Jakarta- Cikampek II Elevated	1.2	2018	Java
12	Purukcahu-Bangkuang Train	5.7	na	Kalimantan
13	Pelabuhan KEK Maloy Seaport	1.7	2018	Kalimantan
14	East Kalimantan Railway (North, South)	3.3	2021	Kalimantan
15	Bitung Port Development	2.5	2022	Sulawesi
16	Trans Papua Highway	0.8	na	Maluku/Papua
17	Bicoli Seaport	na	na	Maluku/Papua
18	Tapaleo Seaport	na	na	Maluku/Papua
19	Wayabula Seaport	na	na	Maluku/Papua
20	Halmahera Airport	na	na	Maluku/Papua
<b>Total</b>		<b>51.8</b>		

Source: Deutsche Bank

Figure 26: Thailand – overview of key infrastructure projects

No	Project	Estimated capex (US\$bn)	Expected completion	Area
1	Rama 3 - Dao Kanong Outer Ring (West) Expressway	0.9	na	Central region
2	Bangkok Mass Rapid Transit extension and new lines	8.0	2019	Central region
3	Bangkok-Chiang Mai High Speed Rail	14.7	Late 2020s	
4	Double track network - Huahin-Prachuap Khiri Khan	1.7	na	West region
5	Double track network - Bangkok-Kanchanaburi	na	na	West region
6	Bangkok-Huahin High Speed Rail	2.9	na	West region
7	Double track network - Chumporn-Surat Thani	0.7	2018-2020s	South region
8	Double track network - Surat Thani-Songkhla	1.5	2018-2020s	South region
9	Double track network - Hat Yai-Padang Beza	0.2	2018-2020s	South region
10	Hat Yai-Thailand-Malaysia Border Expressway	0.8	na	South region
11	Kathu-Patong Highway Linkage	0.3	na	South region
12	Phuket Light Rapid Transit	0.7	2021	South region
13	Northern Route and East-West Corridor Expressway	0.5	na	East region
14	Expansion of U-Tapao Airport	6.0	na	East region
15	Development of Laem Chabang, Sattaheep and Map Ta Phut ports	Na	na	East region
16	Bangkok-Rayong High Speed Rail	5.1	2023	East region
17	Double track railway - Bangkok-Laem Chabang	na	2018-2020s	East region
18	Double track railway- Bangkok-Sa Kaew	na	na	East region
19	Double track network - Khonkaen-Nong Khai	0.7	2018-2020s	North-east region
20	Double track network - Jira-Ubontatchathani	1.1	2018-2020s	North-east region
21	Double track network - Ban Pai-Nakorn Phanom	1.7	2018-2020s	North-east region
22	Nakorn Phanom - Cha Am Expressway	2.3	na	North-east region
<b>Total</b>		<b>49.7</b>		

Source: Deutsche Bank



Figure 27: Philippines – overview of key infrastructure projects

No	Project	Estimated capex (US\$bn)	Expected completion	Area
1	NLEX-SLEX Connector Road	0.3	2020	Mega Manila
2	Skyway Stage 3	0.7	2019	Mega Manila
3	LRT 1 South Extension	0.9	2021	Mega Manila
4	MRT Line 7	1.2	2019	Mega Manila
5	Cavite-Laguna Expressway	0.4	2021	Luzon
6	PNR North-South Railway	11.6	2021 onwards	Luzon
7	Central Luzon Link Expressway	0.3	2020	Luzon
8	Clark-Subic Rail	1.1	2021	Luzon
9	Bohol-Leyte Link Bridge	1.4	na	Visayas
10	Cebu-Bohol Link Bridge	1.1	na	Visayas
11	Cebu Cordova Link Expressway	0.5	2021	Visayas
12	Cebu-Negros Link Bridge	0.3	na	Visayas
13	New Cebu International Port	0.2	na	Visayas
14	Mindanao Rail Project	0.7	2019	Mindanao
15	Davo City Expressway	0.5	2021	Mindanao
16	Davo Airport expansion	0.8	2025	Mindanao
17	Laguindingan Airport	0.3	2025	Mindanao
18	NLEX-SLEX Connector Road	0.3	2020	Mega Manila
19	Skyway Stage 3	0.7	2019	Mega Manila
<b>Total</b>		<b>29.2</b>		

Source: Deutsche Bank



# Malaysia

## Chinese taking the wheel in the infrastructure drive

In the Tenth Malaysia Plan (2011-2015), the government highlighted its commitment to infrastructure development and building a multimodal transport network. The transport network seeks to support the economic development of Malaysia, and is vital for domestic business, exports and tourism. Additionally, it also helps connect the rural areas to urban clusters to ensure inclusiveness in the sharing of economic benefits.

### Developing multimodal transport network: Rail, maritime and airport

To facilitate greater freight movement and alleviate congestion on roads, the government has emphasised rail projects, including Klang Valley Mass Rapid Transit, Light Rapid Transit, East Coast Rail Line, and Electrified Double Track. With ports a crucial component in the import and exports of goods, Melaka Gateway Port is planned and it is expected to attract 100,000 vessels annually, mostly from China. To enhance the increased mobility of people and drive tourism, airports are constantly upgraded; the construction of new airports in Pulau Tioman and Mukah are also being considered.

### Bridge infrastructure gaps between East and West Malaysia to drive growth

Since the formation of the Malaysian Federation in 1963, East Malaysia states Sabah and Sarawak have been among those making the largest contributions to Malaysia's growth. Yet, they have been neglected versus the Peninsula and their infrastructure development has lagged behind – with not even a complete and operational highway to date. To allay the unhappiness of their people, the government is committed to equitable development for all states. The implementation of the Pan-Borneo Highway to connect Sabah and Sarawak signifies a huge leap forward and will transform travel between the two states.

### Chinese white knight to boost infrastructure development in Malaysia

Malaysia is one of the key beneficiaries of China's Belt Road Initiative and attempt to extend influence into ASEAN. In the Belt and Road Forum (BRF) held in Beijing in May 2017, 9 memorandums of understanding (MOU) were signed between China and Malaysia on projects including the Kuantan Industrial Park in Pahang, Melaka Gateway and East Coast Rail Link. Till date, more than US\$34bn of MOUs have been signed. Chinese participation will help to fund and push completion of these projects.

### More than US\$37bn worth of infrastructure projects reiterated in Budget 2018

In Budget 2018, Prime Minister Najib Razak emphasised the importance of logistics and transport infrastructure to bridge the gap between urban and rural areas, and ensure a more balanced economic spill-over. As one of the government's top priorities, the key projects amount to more than US\$37bn (RM155bn), with the majority focused on public transport infrastructure, coherent with our theme. Although it initiated no new projects, it has made a more active push toward completion. For example, MRT 3 is expected to be completed in 2025, two years earlier than the original target of 2027. We expect government to spend US\$5bn from the Budget to fund these projects.

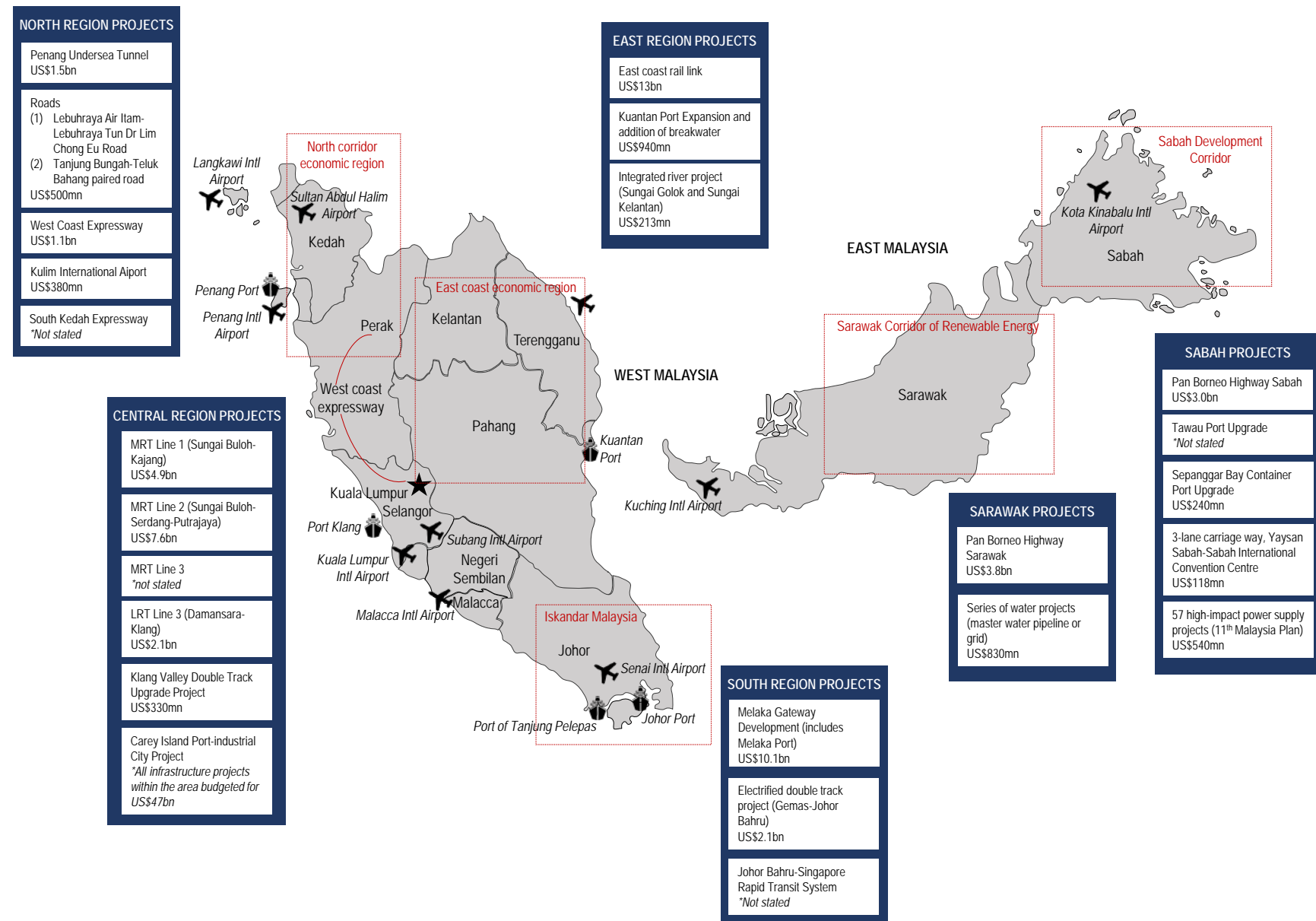
*Refer to Page 13 for the pipeline of infrastructure projects in Malaysia*

Figure 28: Malaysia statistics

<b>(1) Road</b>	
Total road length	205,787km
Length of paved road	156,692km
% of paved road to total road length	76%
Total length of expressways	1,998km
No. of registered cars & 4-wheelers	10,690 th
No. of registered 2 & 3-wheelers	11,088 th
<b>(2) Railway</b>	
Total railway route length	1,641km
Double-track railway route length	774km
Electrified track railway route length	774km
Urban railway route length	158km
<b>(3) Maritime</b>	
No. of domestic ports	13
No. of international ports	15
<b>(4) Aviation</b>	
Total number of airports	38
No. of international airports	8
No. of domestic airports	30

Source: Deutsche Bank, Government website

Figure 29: Malaysia – snapshot of key infrastructure projects



Source: Deutsche Bank





## East Coast Rail Link

The East Coast Rail Link (ECRL) connects Malaysia's East Coast states to the Greater Klang Valley. Stretching over 600km, the route has 23 stations running from Wakaf Bharu in Kelantan to Gombak in Kuala Lumpur. The completed route will cut travel time from 8-10 hours to 4 hours. The project is expected to be completed before 2024.

Figure 30: Proposed layout of East Coast Rail Link



Source: Deutsche Bank

### East Coast Rail Link

Project category: Rail

Cost: US\$13.0bn

Source of funding: 85% loan from China Exim Bank, 15% by Malaysia's Sukuk program

Status: In progress

Completion: 2024

### RM55bn capex funded by Malaysian government, financed by China

The investment cost is estimated to be US\$13bn (RM55bn) with 85% to be financed by a soft loan from China Export Import Bank at a 3.5% rate, seven-year moratorium and 20-year repayment period. The remaining 15% will be funded through Malaysia's sukuk programme, managed by local banks.

### Chinese firms the front runners; local firms promised at least 30% of projects

China Communications Construction Company was awarded the contract for the procurement, engineering and construction. Separately, the government had pledged that Malaysian contractors will be given at least 30% of the high-impact projects. During the Pre-Qualification exercise conducted in Oct-17, about 180 Malaysian subcontractors submitted applications.

### Economic and strategic benefits achieved with the East Coast Rail Line

Strategically, ECRL will create a link between Port Klang in the West and Kuantan Port in the East, which is undergoing massive Chinese-funded expansion to enable larger vessels to access the port. This would provide an alternative trade route for cargo currently moving through the Strait of Malacca via Singapore. Economically, ECRL is expected to create 80,000 jobs, handle 5.4mn passengers and 54mn tonnes of cargo annually by 2030. The local economy, including regions like Terengganu, Kelantan and Pahang, will be transformed into trade hubs and tourist destinations. The government is banking on a 1-1.5% increase in GDP due to the ERCL.





## Electrified Double Track Project

To reduce travel time and traffic congestion on the roads, the electrified double track project (EDTP) was introduced in 2008. It entails the electrification of Keretapi Tanah Melayu's (KTM) West Coast Line from Padang Besar to Johor Bahru, combined with the duplication of the single-track line and elimination of level crossings. The project comprises several sections. The completed ones include Rawang-Ipoh, Sentul-Port Klang extension to Batu Caves, Seremban-Gemas, and Ipoh- Padang Besar. Construction is in progress on the section from Gemas-Johor Bahru.

### Gemas-Johor Bahru section expected to be completed by 2020

The Gemas-Johor Bahru EDTP section covers 197km with 11 passenger stations, running through districts like Segamat, Kluang, Kulai and Johor Bahru. Once completed in 2020, it will cut travelling time from Johor to Kuala Lumpur from 6 hours to 3.5 hours. The project was awarded to a consortium of three China-based companies: China Railway Construction Co Ltd (40%), China Railway Engineering Corp (30%) and China Communications Construction Corp (30%). One of the sub-contractors is SIPP Railway Sdn Bhd (SIPP), a private vehicle controlled by Johor's Sultan Ibrahim Sultan Iskandar. Capex is budgeted at RM8.9bn (US\$2.1bn) and funded by the government.

### Klang Valley Double Track Project to upgrade KTM's existing double-track rail

Apart from building new double tracks, rehabilitation work is being conducted at the Rawang-Salak Selatan and Sentul-Simpang Batu line. The US\$330mn (RM1.4bn) project includes laying of new and replacement of 20-year-old signalling equipment to reduce metal theft and service disruption, installation of radio systems, upgrading of 16 stations and a new feeder station in Sentul to generate more electricity to increase train frequency.

#### Electrified Double Track Project

Project category: Rail

Cost: US\$2.1bn

Source of funding: Government

Status: In progress

Completion: 2020



## Melaka Gateway development (Melaka Gateway Port)

Melaka Gateway is a US\$10bn (RM43bn) project jointly developed by KAJ Development Sdn Bhd (KAJD) and Powerchina International Group Ltd. It comprises three reclaimed islands and a natural island totalling 1,366 acres. The islands are earmarked for various purposes: Island 1 –entertainment, tourism, commercial/property development; Island 2 – a free trade economic zone; Island 3 - Melaka Gateway Port; and Island 4 - Maritime Industrial Park.

### Strategic partnership with top Chinese operators on Melaka Gateway Port

Situated at the Straits of Malacca, the Melaka Gateway Port is in a strategic geographical location. It inherits a deep waterway of 25 to 30m, which makes it an ideal choice for a deep sea port facility. The port will be jointly developed by KAJ Development Sdn Bhd and two other partners, Shenzhen Yantian Port Group Co and Rizhao Port Group Co. Given their expertise in port construction, operations and management, as well as a strong network of shipping lines globally, the Melaka Gateway Port is poised to be a prime location and international maritime gateway to the world. The port is expected to attract 100,000 vessels annually, of which 70-80% will be from China.

### Maritime Industrial Park built to complement Melaka Gateway Port

To complement the Melaka Gateway Port, the Maritime Industrial Park will be built on the fourth island. This project comprises a container terminal (with a handling capacity of 12,000 TEUs), a break and dry bulk terminal, shipbuilding and ship repair services, as well as marine engineering and manufacturing.

### Melaka Gateway is centrepiece of China's One Belt, One Road initiative

The 'Malacca Dilemma', as termed by President Hu Jintao, explains China's over-reliance on the Strait of Malacca, which 80% of its energy needs (oil imports) pass through from the Middle East and Angola etc., using the sea route between Malaysia and Indonesia. The Straits of Malacca is a strategic part of Chinese trade and is thus aligned to the One Belt, One Road initiative (OBOR), which seeks to integrate Asia as a cohesive economic area. Melaka Gateway development is thus part of the plan to fulfil China's OBOR objectives to improve connectivity and promote unimpeded trade.

#### Melaka Gateway Development

Project category: Maritime

Cost: US\$10.1bn

Source of funding: NA

Status: In progress

Completion: NA

Figure 31: Melaka Gateway – connection to the rest of the world



Source: Deutsche Bank



## Klang Valley Mass Rapid Transit (KVMRT) Project

To transform Kuala Lumpur's public transportation network, the KVMRT project was approved by the Malaysian government in 2010. It is expected to help alleviate the chronic traffic congestion problem within the city and increase the public transport modal share from 18% in 2009 to 40% in 2020. The project to date is one of the most crucial infrastructure projects in Malaysia, and is listed as an Entry Point Project (EPP) under the Economic Transformation Program's Greater Kuala Lumpur National Key Economic Areas. It comprises the construction of three MRT lines: MRT Line 1, 2, and 3.

### #1. Mass Rapid Transit Line 1 (Sungai Buloh – Kajang)

The Mass Rapid Transit Line 1 (MRT Line 1) connects Sungai Buloh through Kuala Lumpur and ends in Kajang. The 31-station railway spans 51km and is expected to serve a population of 1.2mn. The project was completed in July 2017 and can serve 400,000 passengers per day. Construction cost amounted to US\$4.9bn (RM21bn) and was carried out by MMC Gamuda KVMRT (PDP) Sdn Bhd, a joint venture between MMC Corporation Bhd and Gamuda Bhd.

### #2. Mass Rapid Transit Line 2 (Sungai Buloh – Serdang – Putrajaya)

MRT Line 2 connects Sungai Buloh via the Central Business District of Kuala Lumpur to Bandar Malaysia, Kuchai Lama and Serdang and ends at Putrajaya. The 37-station railway spans 52km and is expected to serve a population of 2mn. The Sungai Buloh-Kampung Batu section is due to be completed by July 2021 and the Kampung Batu-Putrajaya Sentral section by July 2022. MRT 2 is expected to have a ridership of 529,000 passengers daily. The investment cost is estimated at US\$7.6bn (RM32bn) and the contract was awarded to MMC Gamuda.

### #3. Mass Rapid Transit Line 3

MRT Line 3's coverage regions will include Bandar Malaysia, Ampang, Kuala Lumpur Ecocity, Bukit Kiara and Sentul. The project is at the tender stage. According to the latest news as of 14 November 2011, the construction and financing model for MRT 3, expected to cost US\$8-9bn (RM35-40bn), has been changed from Project Delivery Partner (PDP) to a turnkey model. The project is expected to be completed by 2025, earlier than the initial target of 2027.

## Light Rapid Transit Project

### #1. Light Rapid Transit Line 3

The Light Rapid Transit Line 3 (LRT 3) connects Bandar Utama in Damansara to Johan Setia in Klang, which helps improve accessibility to commuters in Klang, Shah Alam and Petaling Jaya. The 26-station railway spans 37km and is expected to connect an expected population of 2mn by August 2020. The investment cost is capped at US\$2.1bn (RM9bn). MRCB George Kent Sdn Bhd, a joint venture company between Malaysian Resources Corporation Bhd and George Kent, has been appointed as the project delivery partner.

Note that MRT 1, MRT 2, MRT 3 as well as LRT 3 will form parts of the Klang Valley Integrated Transit System, to be numbered lines 9, 10, 11 and 12, respectively.

*Refer to page 18 for the Klang Valley Integrated Transit Map.*

### Klang Valley Mass Rapid Transit Project

Project category: Rail

Cost:

MRT 1 (US\$4.9bn)

MRT 2 (US\$7.6bn)

MRT 3 (US\$8-9bn)

Source of funding: NA

Status:

MRT 1 (completed)

MRT 2 (in progress)

MRT 3 (in discussion)

Completion:

MRT 2 (2022)

MRT 3 (2025)

### Light Rapid Transit Project

Project category: Rail

Cost: US\$2.1bn

Source of funding: NA

Status: In progress

Completion: 2020

**RAIL LINE**

- 1 KTM SEREMBAN LINE
- 2 KTM PORT KLANG LINE
- 3 LRT AMPANG LINE
- 4 LRT SRI PETALING LINE
- 5 LRT KELANA JAYA LINE
- 6 ERL KLIA EKSPRES
- 7 ERL KLIA TRANSIT
- 8 KL ANSONIA LINE
- 9 MRT SG BULOH-KAJANG LINE
- 10 KTM SKYPARK LINE
- 11 LRT BAYAN LEPAS-KAYANG LINE
- 12 LRT KENANGA LINE

**BUS RAPID TRANSIT LINE**

- B1 BRT SUNWAY LINE
- B2 BRT KLANG LINE

**STATIONS**

- TAJAN MALIN
- KUALA KUBU BHARU
- RASA
- BATANG KALI
- SERENDAH
- KAWANG
- KUANG
- SUNGAI BULOH
- KEPONG SENTRAL
- KAMPUNG SELAMAT
- KUASA DAMANSARA
- KOWASA SENTRAL
- KOTA DAMANSARA
- BURIAN
- MUTARA DAMANSARA
- DAMANSARA UTAMA
- TROPICANA
- LIEN HOE
- DATAAN PRIMA
- PERSADA PLUS
- STADIUM
- BERKLYEN 14
- BERKLYEN 13
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- SEKSYEN 7
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## Pan Borneo Highway (Sabah-Sarawak)

The Pan Borneo Highway was conceptualised on the formation of the Malaysian Federation in 1963. The first intercity trunk roads in Sabah and Sarawak began in the 1960s. These trunk roads, notorious for their poor condition, pale in comparison to the highways in the Peninsula, such as the North-South Expressway. In 2015, the government introduced this project to develop and upgrade the trunk roads into four-lane dual carriageways.

### Infrastructure development in East Malaysia has not kept up with Peninsula

Being a large exporter of primary commodities, such as palm oil, the economic significance of Sabah and Sarawak to Malaysia's development should not be underestimated. In particular, Sarawak contributes c.16% to Malaysia's GDP, and has the fifth highest GDP per capita among the 15 states. Yet, development in the region has not kept up. Consequently, the population in two states cited this neglect by the Federal Government as a source of their unhappiness. In its response, the government began to initiate many large-scale projects in East Malaysia to pursue equitable development of all states.

### Pan-Borneo Highway introduced to connect Sabah and Sarawak

In the 2015 Budget, one of the key priorities was to intensify development in Sabah and Sarawak. As a result, the full development of Pan Borneo Highway (PBH) was formalised.

- **PBH Sarawak:** A 1,090km highway that stretches over Sarawak. Investment cost is budgeted at US\$3.8bn (RM16bn) and the project is expected to be completed by 2021.
- **PBH Sabah:** A 706km highway with four lanes, including a bypass, which connects Sidumin to Tawau. The investment cost is estimated at US\$3.0bn (RM12.8bn) and the project is to be completed by 2021.

The Pan Borneo Highway (PBH) will be toll free. Unlike the North-South Expressway in the Peninsula, where commuters have the option of other routes, the PBH is the only main road to travel from one city to another.

### Pan Borneo Highway a game changer for transport in Sabah and Sarawak

The transport infrastructure here is backward and underdeveloped. Currently, people get around mainly via river transportation. Rural air services are limited. The PBH will improve accessibility from rural areas to major towns and cities, eliminating the use of long boats and ferries.

### Better road infrastructure to drive economic development within East Malaysia

Improved accessibility will also speed up economic development. The highway will open up many far flung areas and native customary land that had been abandoned to allow the easier movement of people and goods, boosting domestic and international tourism. Through a multiplier effect, Prime Minister Najib said that the amount spent by the government on this project will bring about eight-fold benefits to the people.

#### Pan Borneo Highway (Sabah-Sarawak)

Project category: Road

Cost: Pan Borneo Highway Sarawak (US\$3.8bn), Pan Borneo Highway Sabah (US\$3.0bn)

Source of funding: Government

Status: In progress

Completion: 2021

Figure 33: Malaysia GDP per capita by state

No	State	GDP per capita (RM)
1	Kuala Lumpur	101,420
2	Labuan	61,833
3	Pulau Pinang	47,322
4	Selangor	44,616
5	Sarawak	44,333
6	Melaka	41,363
7	Negeri Sembilan	38,559
8	Pahang	32,244
9	Johor	31,952
10	Terengganu	27,268
11	Perak	27,246
12	Perlis	22,479
13	Sabah	21,081
14	Kedah	19,152
15	Kelantan	12,812
	<b>Malaysia</b>	<b>38,887</b>

Source: Deutsche Bank, Department of Statistics Malaysia





# Malaysia strategy

## Who stands to benefit?

Malaysia is one of the main beneficiaries of China's One Belt, One Road (OBOR) ambition, with project investments from China forecast at US\$40bn of in the next decade. And central government and state governments' funded projects amount to US\$15bn in the next 5 years. The infra-related pump priming will keep contractors busy but the spill-over impact may also be felt in property, consumer discretionary and tourism sectors.

- Construction:** The East Coast Railway Link (ECRL) project was awarded to China Communication Construction Co. with a stipulation for 30% local content requirement. Malaysian leading contractor, **Gamuda Bhd** (GAMU.KL, Hold) is also likely to get a subcontractor role outside the 30% content. With the government enforcing local content requirements to ensure a fair share of the pie, smaller local contractors, such as **Sunway Construction** (SCOG.KL, Not rated), **AZRB** (AZRB.KL, Not rated), **George Kent** (GKMS.KL, Not rated) and **WCT** (WCTE.KL, Not rated), may be able to win contracts at a subcontract level. **IJM** (IJMS.KL, Buy) too will gain via its Kuantan Port, which the Chinese are expected use as the main port for all raw material imports and finished goods exports.
- Cement:** The construction projects could have some spill-over effect on cement and ready-mix concrete product manufacturers. We identify two potential beneficiaries: **YTL Cement** and **Lafarge Malaysia** (LAFAL.KL, Not rated).
- Property/industrial estates:** Kuala Lumpur and Selangor property developers have the brightest prospects. With Malaysian properties in Kuala Lumpur and Johor offering 60-70% discounts to Singapore properties, it makes economic sense for a Malaysian working in Singapore to own a property in KL Central/Iskandar and commute home using the increased connectivity of the KL-SG high-speed railway. Moreover, 20% of the Malaysian population live in KL and contribute an enormous 50% of GDP – we estimate c.50% growth to 10mn by 2020. Potential beneficiaries are **KL Kepong** (KLKK.KL, Buy), **Sime Darby** (SIME.KL, Hold), **Eco World** (ECOW.KL, Not rated), **SP Setia** (SETI.KL, Not rated), **Mah Sing** (MAHS.KL, Not rated), **Sunway Berhad** (SWAY.KL, Not rated) and **Gamuda Bhd** (GAMU.KL, Hold).
- Consumer and tourism:** Malaysia and Bangladesh inked a deal to recruit 1.5mn workers in Feb-16, which will be done in stages over the next 3 years. Under the deal, the levy for these workers is fixed at RM1,946/person. However, the government-to-government project halted after an opposition party rejection. The reason given for the recruitment was to fulfil the needs of the economy. In hindsight, we can understand the need for such a large number of foreign workers in anticipation of project pipelines. Additionally, we have seen an influx of Chinese expats and construction workers.

Figure 34: Potential beneficiaries in Malaysia from infra growth

<b>Construction</b>	Gamuda Berhad (GAMU.KL)
	Sunway Con (SCOG.KL)
	Ahmad Zaki Resources (AZRB.KL)
	George Kent (GKMS.KL)
	WCT Holdings (WCTE.KL)
<b>Materials: Cement</b>	IJM Corporation (IJSM.KL)
	Lafarge Malaysia (LAFAL.KL)
<b>Property Industrial estates</b>	KL Kepong (KLKK.KL)
	Sime Darby (SIME.KL)
	Eco World (ECOW.KL)
	SP Setia (SETI.KL)
	Mah Sing (MAHS.KL)
	Sunway Berhad (SWAY.KL)
<b>Consumer</b>	Gamuda Berhad (GAMU.KL)
	MyEG (MYEG.KL)
	Bison Consolidated (BISO.KL)
<b>Tourism</b>	7-Eleven (SEVE.KL)
	AirAsia (AIRA.KL)
	Malaysia Airports Holdings (MAHB.KL)
	Genting Malaysia (GENM.KL)
<b>Telecos</b>	Axiata (AXIA.KL)

Source: Deutsche Bank



- **Primary impact** – Foreign worker related: the proxies will be **MyEG** (MYEG.KL, Not rated: online worker registration portal), **Axiata** (AXIA.KL, Hold: telco service provider), **Bison Consolidated Bhd** (BISO.KL, Not rated: press and convenience retailing) and **7-Eleven** (SEVE.KL, Not rated: convenience stores). In tourism, the proxies will be **AirAsia** (AIRA.KL, Sell: inbound flights benefit), **Malaysia Airports Holdings** (MAHB.KL, Buy: airport operator) and **Genting Malaysia** (GENM.KL, Buy: casino-theme park resort).
- **Secondary impact** – Consumer discretionary related: We believe the broader economy will eventually benefit too, especially consumer related names. The list below, in our view, will be the proxies.

Figure 35: Selected hotel and retail plays

Primary impact	Comment
MyEG	Provides an electronic link between the Malaysian Government and citizens and businesses. It also does foreign worker registrations, insurance issuance, deposits, remittances etc. It cross-sells prepaid SIM cards from Celcom to foreign workers.
Axiata	Axiata is Malaysia's leading telco service provider with 11mn subscribers and a 74% prepaid base. The free SIM card policy by MyEG to a certain extent ties foreign workers to their network, Celcom.
7-Eleven	It has the most convenience stores in Malaysia. Besides selling fast-moving consumer goods, it offers a prepaid top-up service, which is widely used by most prepaid users.
AirAsia	ASEAN's best low-cost carrier has extensive route coverage in Malaysia, Thailand, Indonesia and the Philippines. It is also establishing India routes. Inbound workers are likely to be carried by AirAsia, offering a one-off profit lift.
Secondary impact	Comment
Berjaya Food	Brands such as Starbucks, Kenny Rogers and Jollibean are under the Berjaya Food umbrella. Improved discretionary spending is likely to boost consumption at Starbucks.
Padini	The most common ladies' casual wear brand in Malaysia offers affordable products. An improved economy could have a spill-over effect in fashion spending.
Shangri-la Hotel	Operates hotels and beach resorts throughout Malaysia, including in Sabah, Penang and Kuala Lumpur. It also owns investment properties and a golf course.
Pavillion REIT	Owner of the Pavilion Mall, anchoring KL shopping belt Bukit Bintang. The sponsor is developing a Pavilion Mall extension and owns the shopping mall opposite on Jalan Bukit Bintang, Fahrenheit88.
IGB REIT	Owner of Mid Valley Megamall and the adjacent The Gardens shopping mall. Sponsor IGB Bhd is developing Mid Valley City Southpoint in Johor.
KLCC Property	Owner of the iconic KLCC Suria shopping centre and the Mandarin Oriental in KL City Centre.

Source: Deutsche Bank, Company data. Highlighted rows indicate stocks covered by DB.

- **Banks:** Bank fundamentals are turning around as DB forecasts a 25bps OPR hike in 1Q18 – we expect ALM measures to support gradual NIM expansion of 5-7bps. In addition, Chinese investments into Malaysia would be gradually supportive as local infrastructure corporates cautiously participate as supply falls behind demand in the years ahead – Maybank is a principal banker for the majority of these corporates. We forecast 3-year loan growth to grind higher from 6% to 7.5% p.a. among the big 3 banks. Fee income is expected to rise from corporate restructurings in Malaysia; we forecast growth of up to 6.5% p.a. However, upside to ROE via leveraging is capped and ROE-PB valuations are generally fair across the banking sector.



# Indonesia

## Weak infrastructure limits speed of economic progress

With the end of Suharto's authoritarian New Order government in 1998, infrastructure development stalled and was not able to keep up with economic growth amid the commodities boom. Weak infrastructure resulted in high logistics costs and a lack of competitiveness among businesses.

### Infrastructure projects largely hindered by post-Suharto land acquisition issues

In the post-Suharto era, the implementation of infrastructure plans slowed down due to a shift towards democracy and the decentralisation of the government. The change presented several problems: (1) developing big infrastructure projects that are cross-regional is more complex, (2) the military force can no longer be utilised to acquire land for infrastructure projects, and (3) local governments lack incentives to support the central government's infrastructure plans.

### Weak infrastructure leads to high logistic costs, reducing business profitability

Poor infrastructure support in Indonesia has led to an inefficient transport network and acute distribution bottlenecks. Consequently, this has ballooned logistics costs, which account for approximately 17% of a company's total operating expenditure, according to data from the Indonesian Chamber of Commerce and Industry. Traffic congestion in Jakarta has reached critical levels over the past few years. In using GPS data to calculate the frequency of stop-start driving among motorists, it was found that drivers in Jakarta make 33,240 stop-starts annually. The Jakarta Transportation Agency found that traffic bottlenecks in the city had cost up to US\$5.2bn (Rp70tn) annually.

### Jokowi administration signals a breakthrough in infrastructure development

After President Joko Widodo took office in 2014, he made a decision to cut the high proportion of energy subsidies and to increase the budget for infrastructure development. The budget increased from US\$13bn (Rp173tn) in 2014 to US\$29bn (Rp387tn) in 2017 and US\$30bn (Rp404tn) for 2018. Apart from that, Widodo appointed state-owned companies as developers of key infrastructure projects as they are able to raise funds from state-owned banks more easily than their private counterparts.

### 30 priority projects that focus on boosting connectivity within the archipelago

There are currently 30 priority infrastructure projects in Indonesia for the period 2016-2019 that require a total of US\$415bn (Rp5,519tn) worth of investments. Of this amount, US\$100bn (Rp1,400tn) will come from the government, and the remainder will be covered by the private sectors, through partnerships such as public-private partnerships.

*Refer to Page 23 for the pipeline of infrastructure projects in Indonesia.*

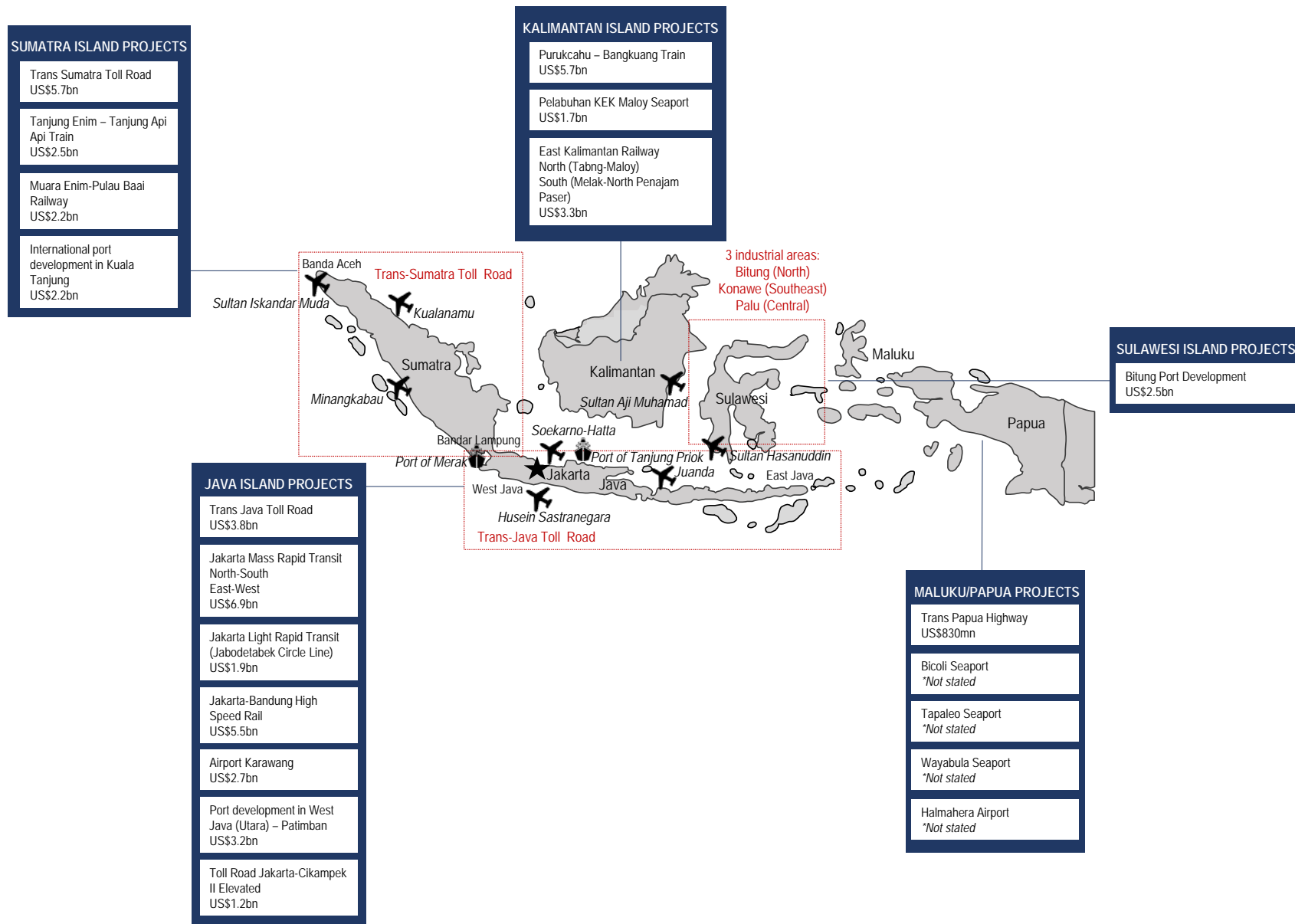
Figure 36: Indonesia statistics

<b>(1) Road</b>	
Total road length	508,000km
Length of paved road	287,926km
% of paved road to total road length	57%
Total length of expressways	949km
No. of registered cars & 4-wheelers	10,839 th
No. of registered 2 & 3-wheelers	86,253 th
<b>(2) Railway</b>	
Total railway route length	5,368km
Double-track railway route length	1,008km
Electrified track railway route length	400km
Urban railway route length	900km
<b>(3) Maritime</b>	
No. of domestic ports	2,150
No. of international ports	136
<b>(4) Aviation</b>	
Total number of airports	291
No. of international airports	27
No. of domestic airports	264

Source: Deutsche Bank, Government website



Figure 37: Indonesia – snapshot of key infrastructure projects



Source: Deutsche Bank





## Trans-Java toll road

To increase connectivity within the country, facilitate the flow of goods and mobility of people, the Trans-Java toll road was introduced. The toll road will span more than 1,000km when completed, and will run from Merak in the western Java province of Banten to Banyuwangi in East Java. Currently, about half the toll road is in operation.

### Toll road links Jakarta to Surabaya with full connectivity by 2019 elections

The toll road comprises 16 sections (Figure 39). For the first time, the Trans-Java toll road main stretch from West Java (Jakarta) to Central Java (Semarang) will be fully connected. This road, which will span 457km to connect Central Java to East Java (Surabaya), is expected to start operating partially. The construction to fully connect the Trans-Java toll road is expected to be completed before the 2019 Presidential Election.

#### Trans-Java Toll Road

Project category: Road

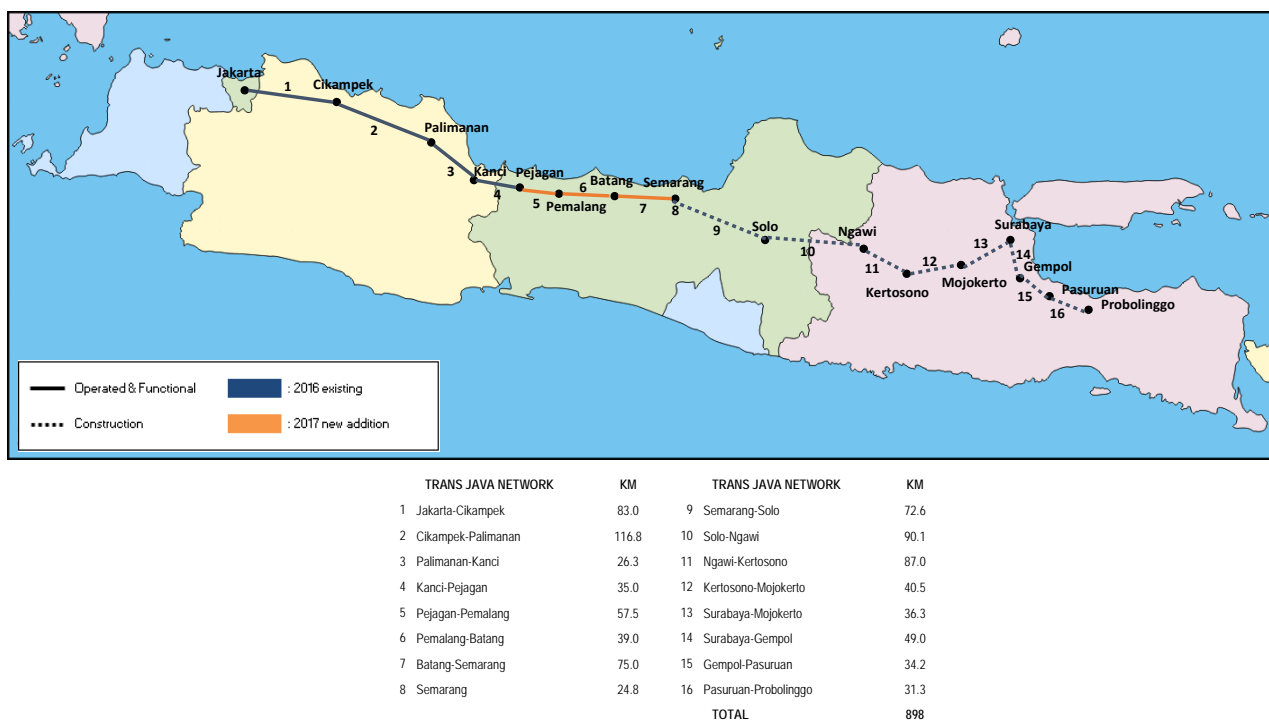
Cost: US\$3.8bn

Source of funding: Non-state budget; insurance or pension funds

Status: In progress

Completion: 2019

Figure 38: Trans-Java toll road map



Source: Deutsche Bank, Public Works & Public Housing Ministry's toll road regulatory agency (BPTJ)

### First project under the non-state budget infrastructure funding model

Apart from pushing the private sector's role in infrastructure projects with the public-private partnership scheme, the government introduced the Pembiayaan Investasi Non Anggaran (PINA) (non-state budget investment financing) scheme. Under this, long-term financial resources such as pension funds will be transferred to equity financing for public projects. For example, state infrastructure financing firms such as PT Sarana Multi Infrastruktur will issue bonds or equity that can be bought by insurance and pension funds. The proceeds will later be used to purchase equity in the state-run construction companies that are developing the toll road sections, such as Waskita and Hutama Karya. A total of US\$3.8bn (Rp52tn) is expected to be spent on the entire project.



## Trans-Sumatra toll road

The toll road was introduced in 2012 to connect major cities across Sumatra to reduce distribution cost within the island significantly, resulting in competitive commodity prices. Sumatra produces key commodities for the export and domestic markets, including palm oil, coffee and rubber.

### 2,048km toll road connecting Aceh in the North to Lampung in the South

The toll road consists of 17 main line segments and 7 connecting lines that are 770km in length, linking to cities like Padang, Bengkulu and Sibolga. The respective routes and distances are detailed in Figure 41.

### Development takes place in stages and 5 main projects are going on

- **Bakauheni-Terbanggi Besar:** Connects South Lampung to North Lampung; US\$3.8bn (Rp53tn) capex; Expected completion by 2019
- **Pekanbaru-Dumai:** Connects Riau capital with industrial and port city of Riau; US\$1.2bn (Rp16tn) capex; Expected completion by 2019
- **Tebing-Tinggi-Medan:** Connects Medan, Kualanamu Airport and Tebingtinggi; US\$300mn(Rp4tn) capex; Expected completion by 2017
- **Medan-Binjai:** Connects Medan City and Binjai City; US\$150mn (Rp2tn) capex; Expected completion by 2018
- **Palembang-Indralaya:** Connects the two cities in the Southwest of Palembang; US\$220mn (Rp3tn) capex; Expected completion in 2018

### US\$21bn (Rp273tn) budgeted for the project, executed by PT Hutama Karya

Authorities are exploring options for joint venture between PT Hutama Karya and Japanese investors, who will provide the financing facilities

#### Trans-Sumatra Toll Road

Project category: Road

Cost: US\$5.7bn for 5 ongoing projects, US\$21.0bn total

Source of funding: State-owned companies and Japanese investors (TBD)

Status: 5 projects in progress, the rest still in discussion

Completion: 2019 for ongoing projects

Figure 39: Trans-Sumatra toll road line segments and connecting lines

Route names Distance (km)

#### Main line toll roads

Bakauheni-Terbanggi Besar	150
Terbanggi Besar-Pematang Panggang	100
Pematang Panggang-Kayuagung	85
Kayuagung-Palembang-Betung	112
Jambi-Betung	191
Jambi-Rengat	190
Rengat-Pekanbaru	175
Pekanbaru-Dumai	135
Dumai-Rantau Prapat	175
Rantau Prapat-Kisaran	100
Kisaran-Tebing Tinggi	60
Tebing Tinggi-Medan	62
Medan-Binjai	16
Binjai-Langsa	110
Langsa-Lhokseumawe	135
Lhokseumawe-Sigli	135
Sigli-Banda Aceh	75

#### Connecting line toll roads

Indralaya-Palembang	22
Indralaya-Muara Enim	110
Muara Enim-Lahat Lubuk Linggau	125
Lubuk Linggau-Curup-Bengkulu	95
Pekanbaru-Bangkinang-Payakumbuh-Bukittinggi	185
Bukittinggi-Padang Panjang-Lubuk Alung-Padang	5
Tebing Tinggi-Pematang Siantar-Prapat-Tarutung-Sibolga	200

Source: Deutsche Bank, Ministry of Public Works and Public Housing (Indonesia)

Figure 40: Trans-Sumatra toll roadmap



Source: Deutsche Bank



## Jakarta Mass Rapid Transit

Although it has been 40 years after the concept of the Jakarta Mass Rapid Transit (MRT) was introduced, progress has been slow. A breakthrough came in 2012 when Jokowi became Governor of Jakarta, where he pushed to realise the MRT project. It consists of the North-South section, which connects Jakarta, and the East-West section along Cikarang (Bekasi) and Balaraja (Banten). It will relieve traffic congestion in the populated Jakarta City.

### North-South Section Phase 1 under construction, Phase 2 to begin in 2018

The North-South section comprises two phases: (1) Lebak Bulus-Bunderan HI and (2) Bunderan-HI-Kampung Bandan. Phase (1) is expected to be completed by March 2019 and expected to serve 212,000 passengers/day and eventually 960,000/day. Phase (2) will begin construction in 2018. Both phases make up a 23.3km route with an estimated travel time of 53 minutes. An estimated US\$3bn (Rp40tn) capex will be funded by government budget and foreign loans.

### East-West Section under feasibility study, expected to be completed by 2025

The East-West Corridor will start from Balaraja and end in Cikarang, along an 87km route. The East-West line within Jakarta will run from Kembangan (West Jakarta) to Ujung Menteng (East Jakarta), 27km in length. Construction is expected to begin in 2020 and is estimated to be completed by 2025. Funding US\$3.9bn (Rp5.3tn) is required.

#### Jakarta Mass Rapid Transit

Project category: Rail

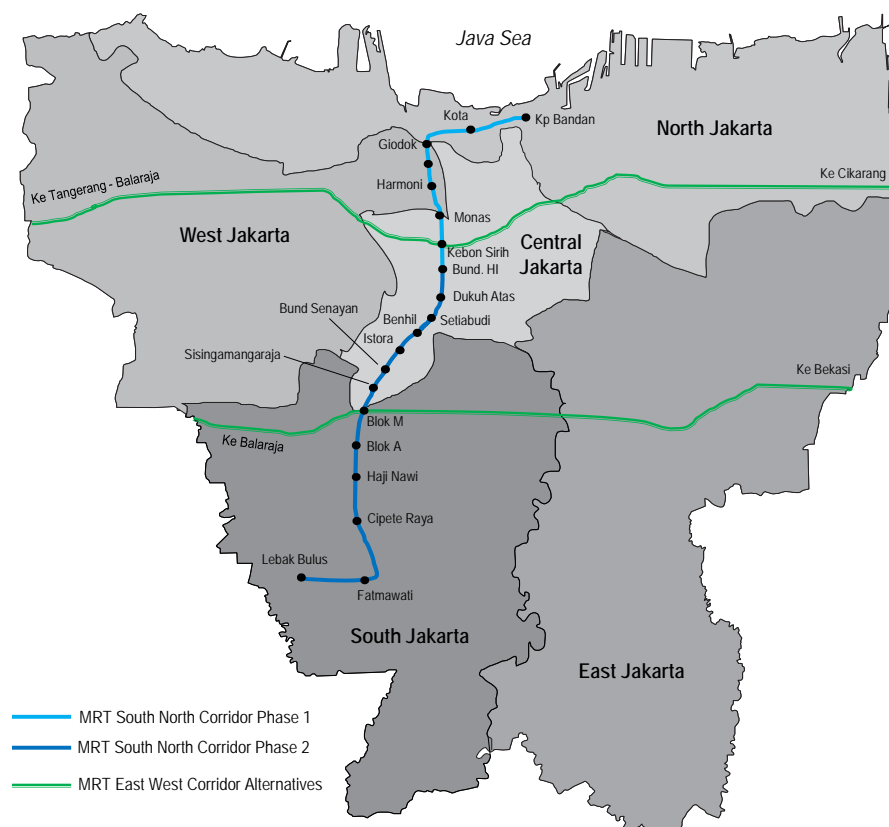
Cost: North-South Section  
US\$3.0bn; East-West Section  
US\$3.9bn

Source of funding: Government  
budget and foreign loans

Status: North-South Section in  
progress; East-West Section  
under feasibility study

Completion: North-South  
Section by 2019, East-West  
Section by 2025

Figure 41: MRT Jakarta Future Network



Source: Deutsche Bank, MRT Jakarta



## Jakarta Light Rapid Transit

Over 10mn people commute from the suburbs to Jakarta on working days, making Indonesia's capital one of the most traffic-congested and populated cities. The introduction of Trans-Jakarta bus services and the commuter train KRL Jabodetabek to serve Greater Jakarta have helped to alleviate the situation, but only to an extent. To ease traffic jams, the government plans the construction of Jakarta Light Rapid Transit (LRT) to connect the Jakarta city centre with suburban areas in Greater Jakarta (Bekasi, Bogor and Depok).

### Comprises Jakarta inner-city route and connecting route to Greater Jakarta

The Jakarta LRT comprises two routes executed by different authorities:

#### #1. Inner city LRT executed by DKI provincial government

The inner-city section of the LRT has 7 routes as shown in Figure 42. The construction started in June 2016 and it is expected to open to the public before the 2018 Asian Games. The projected capex amount to US\$4.4bn (Rp60tn).

#### #2. Greater Jakarta LRT executed by the central government

To serve the Greater Jakarta area, three light rail transit lines have been designed, routing 84km in total. Construction is divided into two phases. Phase 1 comprises the following routes: Cibubur-Cawang (13.7km), Cawang-Dukuh Atas (10.5km) and Cawang-Bekasi Timur (17.9km). Phase 2 comprises the following routes: Cibubur-Bogor Baranangsiang, Dukuh Atas-Palmerah Senayan and Palmerah-Grogol.

The estimated capex amounts to US\$1.9bn (Rp27tn), with US\$700mn (Rp9tn) contributed by the government in the form of a state capital injection. The remaining US\$1.3bn (Rp18tn) will come via syndicated loans from banks, namely Bank Mandiri, Bank Negara Indonesia (BNI), CIMB Niaga and state-owned financing company PT Sarana Multi Infrastruktur. The project is established by railway operator PT Kereta Api Indonesia and ADHI is the contractor.

#### Jakarta Light Rapid Transit (Inner City)

Project category: Rail

Cost: US\$4.4bn

Source of funding: NA

Status: In progress

Completion: 2018

#### Jakarta Light Rapid Transit (Greater Jakarta)

Project category: Rail

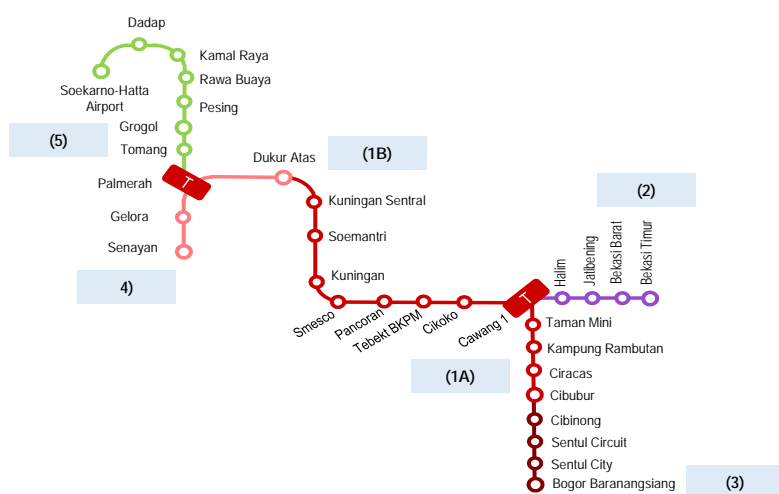
Cost: US\$1.9bn

Source of funding: Government and syndicated loans from banks

Status: In progress

Completion: 2018

Figure 43: Greater Jakarta LRT Roadmap



Source: Deutsche Bank, Ministry of Transport

Figure 42: Jakarta LRT inner-city routes

No	Routes	Distance (km)
1	Kebayoran Lama - Kelapa Gading	21.6
2	Tanah Abang - Pulo Mas	17.6
3	Joglo - Tanah Abang	11.0
4	Puri Kembangan - Tanah Abang	9.3
5	Pesing - Kelapa Gading	20.7
6	Pesing - Soekarno-Hatta Airport	18.5
7	Cempaka Putih - Ancol	10.0

Source: Deutsche Bank



## Jakarta-Bandung High Speed Rail

The 142.3km high speed rail connects national capital Jakarta with textile hub Bandung in the neighbouring West Java province. Upon completion, travel time between the two central hubs will be reduced to 36 minutes from the original 3-5 hours. It is expected to carry 29,000 passengers/day.

### Estimated US\$5.5bn (Rp75tn) construction cost; expected completion in 2019

The railway has four stations located at Halim (Jakarta end), Karawang, Walini and Tegalluar (Bandung end), with the depot at Tegalluar. 71.6km of the track will be at ground level, 53.5km elevated and 15.6km underground.

### Jakarta-Bandung railway to boost employment in West Java

39,000 workers will be needed for the construction phase and 48,000 in the next 15 years to construct the property and infra projects related to the railway as new economic centres arise along the route.

### Private venture Kereta Cepat Indonesia China (KCIC) to lead the construction

KCIC is formed by a joint venture of Pilar Sinergi BUMN Indonesia and China (60% stake) and Railway International Co Ltd (40% stake). The consortium behind Pilar Sinergi comprises Wijaya Karya, Jasa Marga, Kereta Api Indonesia and Perkebunan Nusantara VIII. KCIC is granted a 50-year concession period that commences in 2019 when the railway becomes operational; it expects to break even in 40 years.

### China beat Japan to win the project with a more favourable loan proposal

Japan and China contested for the project but Japan's proposal was rejected as it required a government guarantee. China's gained favour as it did not seek the Indonesia State budget, and was seen as a wholly private business deal. As it proposed, China Development Bank will provide 75% of the funding with a 40-year tenor and a 10-year grace period. The remaining amount will be funded by the joint-venture partners.

### Jakarta Bandung High Speed Rail

Project category: Rail

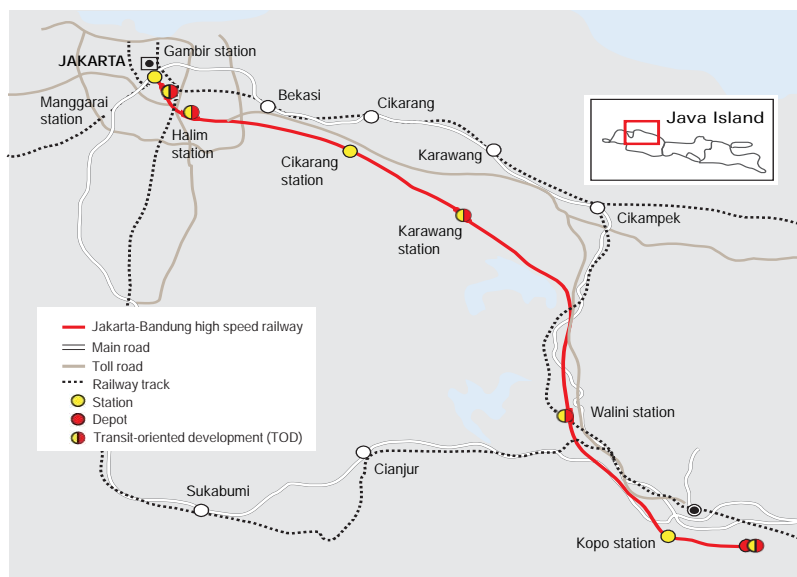
Cost: US\$5.5bn

Source of funding: 75% funded by China Development Bank, 25% funded by joint-venture partners

Status: In progress

Completion: 2019

Figure 44: Jakarta-Bandung High Speed Rail Plan



Source: Deutsche Bank



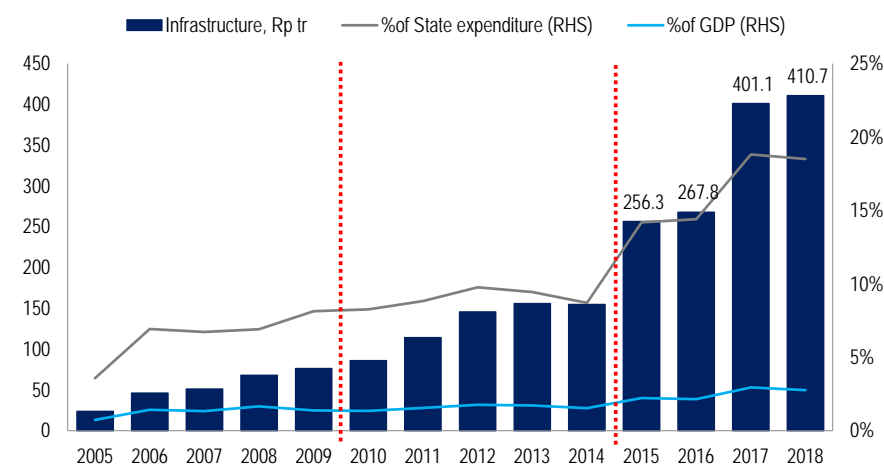
# Indonesia strategy

## Who stands to benefit?

With the government's aggressive push into infrastructure development, we believe that key beneficiaries includes sectors in: (1) construction, (2) cement, and (3) industrial estates.

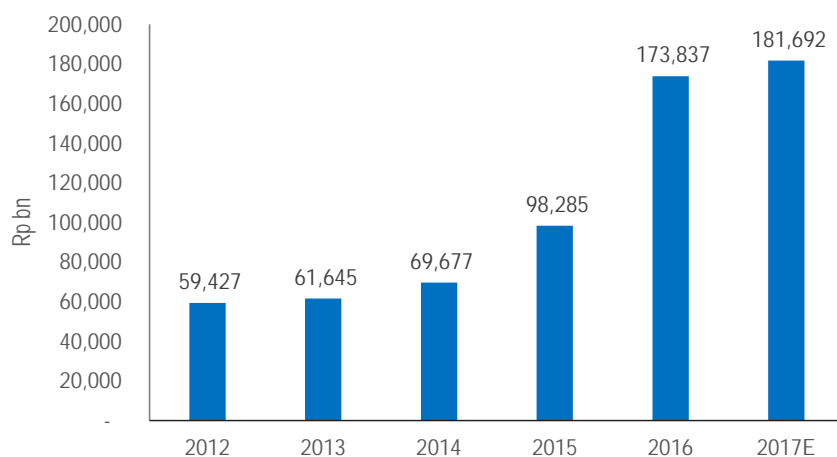
- Construction:** The big 4 major contractors benefiting from government projects are state-owned companies **Adhi Karya** (ADHI.JK, Not rated), **Wijaya Karya** (WIKI.JK, Hold), **Waskita Karya** (WSKT.JK, Buy) and **PTPP** (PTPP.JK, Buy). Within this sector, our top pick is ADHI for the simplest construction business model.

Figure 46: Infra budget as % of state expenditure and GDP



Source: Deutsche Bank, Ministry of Finance estimates

Figure 47: Big 4 contractors – new contracts



Source: Deutsche Bank estimates

Figure 45: Potential beneficiaries in Indonesia due to infra growth

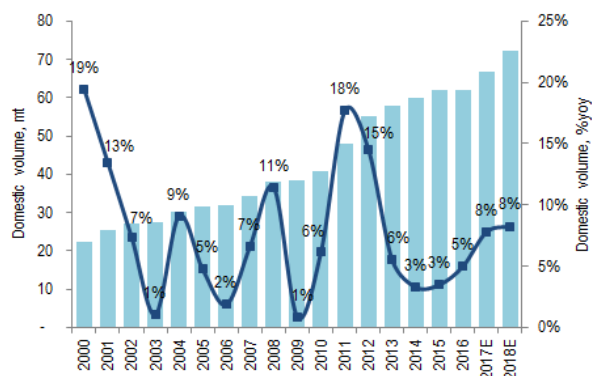
<b>Construction</b>	Adhi Karya (ADHI.JK)
	Wijaya Karya (WIKI.JK)
	Waskita Karya (WSKT.JK)
	PTPP (PTPP.JK)
<b>Materials: Cement</b>	Semen Indonesia (SMGR.JK)
	Indocement (INTP.JK)
<b>Property Industrial estates</b>	Surya Semesta Internusa (SSIA.JK)
	Kawasan Industri Jababeka (KIIA.JK)
	Bekasi Fajar PT (BEST.JK)
	Jasa Marga (JSMR.JK)

Source: Deutsche Bank



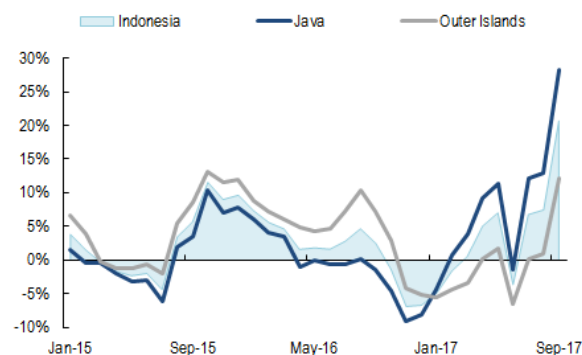
- Cement:** The two largest cement companies in Indonesia are state-owned **Semen Indonesia** (SMGR.JK, Buy) and Heidelberg's Indonesia arm **Indocement** (INTP.JK, Buy). We think SMGR could outperform INTP, as SMGR is in a sweet spot in the high-demand growth area in Central and East Java, where the competitive pressure is less than in West Java.

Figure 48: Indonesia cement demand



Source: International Cement Review

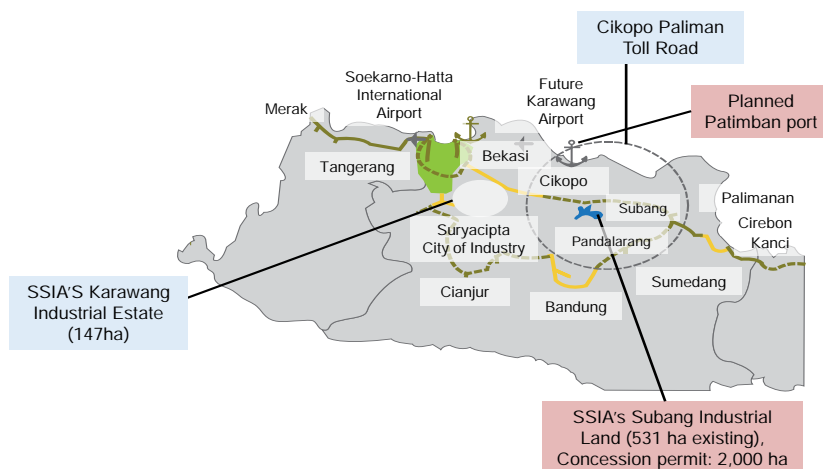
Figure 49: Cement sales volume % yoy (3M moving avg.)



Source: Deutsche Bank, Indonesia Cement Association

- Property/Industrial estates:** Major industrial estates companies in Indonesia include **Surya Semesta Internusa** (SSIA.JK, Buy), **Bekasi Fajar** (BEST.JK, Hold), and **Kawasan Industri Jababeka** (KIJA.JK, Not rated). In the sector, we prefer SSIA, which at the moment is planning to expand its green-field Subang industrial estate land in West Java, which may take 4-5 years to mature. Subang is located near the future potential Patimban port on the north western coast of Java. Patimban port is projected to have 1.5mn TEUs by 2019 capacity, 7.5mn TEUs by 2027 (vs. Tanjung Priok's existing capacity of 7.0mn) and 11.5mn in the farther future. There may be a development plan to connect the toll road between Cipali toll road (part of Trans-Java toll road) and Patimban port. **Jasa Marga** (JSMR.JK, Buy), as the largest toll road developer and operator in Indonesia, is one of the entities considering investing.

Figure 50: Map of SSIA's project locations



Source: Deutsche Bank, company report





# Thailand

## Infrastructure as an engine to power the economy

After the military seized power in 2014, the country plunged into uncertainty, and the economy has struggled to recover since, with exports and domestic demand remaining soft. To boost the sluggish economy, the government has shifted its focus to infrastructure development.

### US\$30bn infrastructure investments to boost Thailand's geographical edge

Being in a strategic central location, Thailand is well-positioned to be a primary economic hub connecting to the rest of the world. To strengthen this competitive edge, the government has begun ramping up on domestic infrastructure investments. The 2017 infrastructure plan comprising 36 projects is worth US\$27bn (Bt900bn). In a recent speech by Transport Minister Arkhom Termittayapaisith, it was made known that the government's investment in transport infrastructure will reach its peak in 2018, with 8 new projects valued at US\$3.2bn (Bt103bn), in addition to the 51 ongoing projects.

### Focus on creating integrated local and cross-border transportation network

The infrastructure plan outlines the expansion of the Bangkok mass transit network and double-track rail and high-speed train projects across the nation. In a cross-border project, the Thai-Sino railway running from Bangkok to Nong Khai is part of China's "One Belt, One Road" initiative. Strong connectivity with the world lays the foundation for Thai development of special economic zones such as the Eastern Economic Corridor (EEC) and logistics hub.

### Well-connected EEC to help Thailand venture into technological manufacturing

Projects such as expansion of U-Tapao Airport, three sea ports, and the Bangkok-Rayong high speed rail aim to improve connectivity to Thailand's Eastern Seaboard. Tapping into this strength, the government seeks to transform the eastern provinces (Chonburi, Rayong and Chachoengsao) into a leading economic zone focusing on technological manufacturing and services.

### Going a step further to develop Thailand into a regional logistics hub

With an extensive transportation network, the next step for Thailand is to become a key intra-regional and inter-regional logistics hub. The government has drafted the Manufacturing Logistics Master Plan 2017-2021, with the objective of reducing logistics cost to every industry by at least 20% and optimising the supply-chain by at least 10% by 2021. The plan focuses on developing supply chain logistics to support the special economic zones.

### Total infrastructure spending to reach US\$50bn, mostly funded by borrowings

Total infrastructure spending in 2017 is expected to come to US\$50bn (Bt1.7tn), with 36 projects for the year, as well as projects continuing from 2016. Funding will be from a myriad of sources: 65% from foreign borrowings, 26% from public partnerships, 6% from government budget, and the remaining 3% from state-owned-enterprises' revenue.

*Refer to Page 32 for the pipeline of infrastructure projects in Thailand*

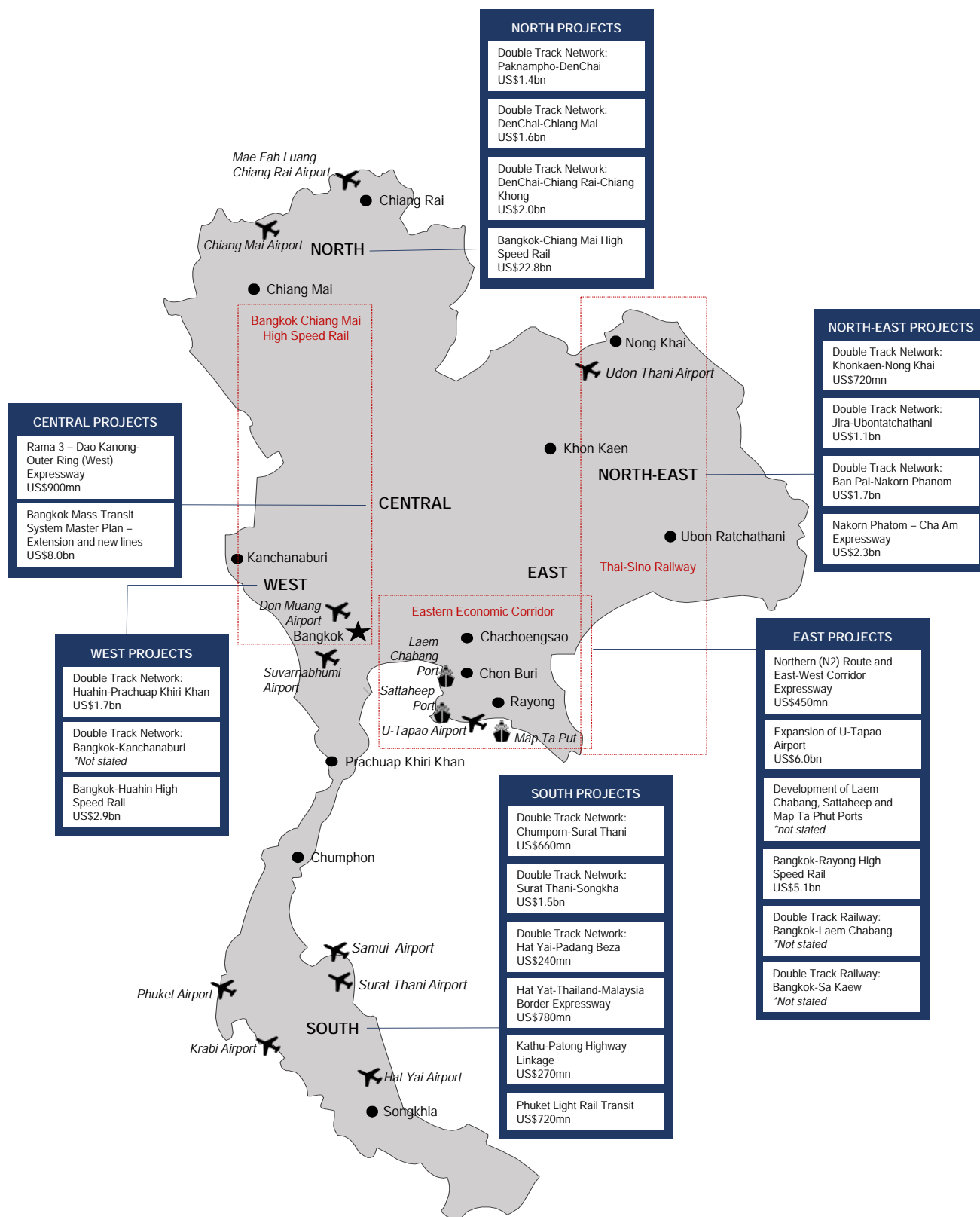
Figure 51: Thailand statistics

<b>(1) Road</b>	
Total road length	234,073km
Length of paved road	190,077km
% of paved road to total road length	81%
Total length of expressways	209km
No. of registered cars & 4-wheelers	11,829 th
No. of registered 2 & 3-wheelers	19,169 th
<b>(2) Railway</b>	
Total railway route length	4,034km
Double-track railway route length	90km
Electrified track railway route length	105km
Urban railway route length	85km
<b>(3) Maritime</b>	
No. of domestic ports	242
No. of international ports	7
<b>(4) Aviation</b>	
Total number of airports	33
No. of international airports	11
No. of domestic airports	22

Source: Deutsche Bank, Government website



Figure 52: Thailand – snapshot of key infrastructure projects



Source: Deutsche Bank, Ministry of Transport (Thailand)



## Bangkok Mass Transit System expansion

Bangkok, the largest city in Thailand, accounts for 20% of its overall population and contributes over half of its GDP. Over the years, the fast-paced economic development in Bangkok has led to a steep rise in person-trip travels, but the city's existing mass rapid transit (MRT) system is inadequate in terms of capacity and services, to cater for the ever-increasing travel demand.

### Introduction of Bangkok Mass Transit Master Plan

Consequently, the Bangkok Mass Transit Master Plan was introduced and approved by the cabinet in 2016. It detailed 475km of rail in addition to the existing 111km route – including new lines and extensions, as detailed below. The estimated capex for the expansion amounts to US\$8.4bn (Bt278bn).

- New Orange Line: Bang Khun Non-Thai Cultural Centre-Min Buri
- New Pink Line: Khae Rai to Min Buri
- New Yellow Line: Lat Phrao to Samrong
- Blue Line Extension: Bang Khae-Phutthamonthon Sai 4
- Purple Line Extension: Tao Poon to Rat Burana
- Green Line Extension: (1) Bearing to Samut Prakan and (2) Mo Chit to Sphan Mai to Khu Khot

Upon completion, it is estimated that the total number of passengers for all systems of mass transit by rail will rise to 4,384,000 people-trips/day in 2019, up from 1,840,000 people-trips/day. The percentage of passengers transferring from one mass transit by rail line to another is expected to grow to c.27% of total passengers in 2019, up from c.15% in 2014.

### Bangkok Mass Transit system expansion

Project category: Rail

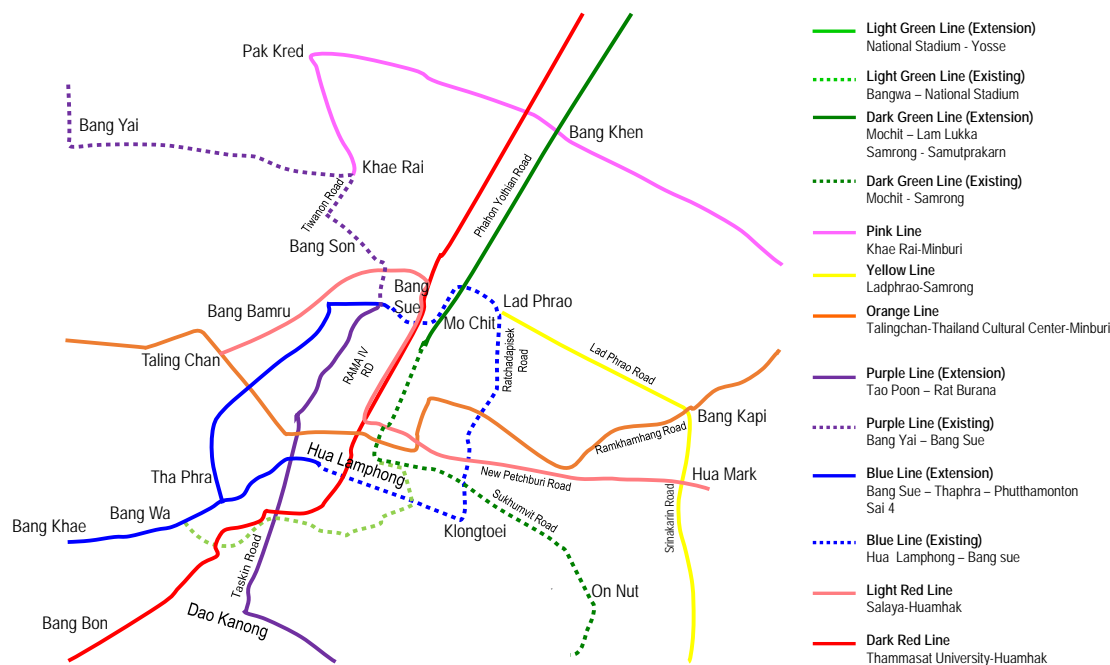
Cost: US\$8.4bn

Source of funding: NA

Status: In progress

Completion: 2019

Figure 53: Bangkok's Mass Transit System Roadmap



Source: Deutsche Bank, Media Rapid Transit Authority of Thailand



## Thai-Japanese Railway Cooperation

To strengthen bilateral relations, the Thailand-Japan Railway Cooperation was signed in 2015. This involves the joint development of high speed rail for: (1) Bangkok-Chiang Mai, and double track railway for (2) Kanchanaburi-Bangkok-Laem Chabang and (3) Bangkok-Sa Kaew. To date, only the Bangkok-Chiang Mai railway plan has been formalised. The rest are still in the discussion stages.

### #1. Bangkok-Chiang Mai High Speed Rail

- The high speed rail has two phases: (1) 380km route from Bangkok to Phitsanulok, and (2) 293km route from Phitsanulok to Chiang Mai.
- Main stations along the route will include: Don Muang, Ayuthaya, Lop Buri, Nakhon Sawan, Pijitr, Phitsanulok, Sukthothai, Lam Pang, Lam Poon.
- The first phase, which has already been discussed, is estimated to cost US\$8.2bn (Bt270bn). The second phase is estimated to cost US\$6.5bn (Bt217bn).
- The project will adopt Japan's bullet train technology (Shinkansen). Construction is expected to begin in 2019, and the service is expected to roll out by 2022.
- The first phase of the project is estimated to help the economies of local communities grow by c.15%, according to Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT).

### #2. Kanchanaburi-Bangkok-Laem Chabang double track railway

- The double track railway for Kanchanaburi-Bangkok-Laem Chabang will help to connect Thailand to Myanmar's Dawei Special Economic Zone (SEZ). The SEZ is located 17 miles northwest in Tanintharyi Region, and the first special economic zone proposed in Myanmar.
- **Plans for Dawei SEZ:** The key developments in the SEZ include – a deep sea port with the capacity to hold more than 250mn tonnes of cargo, integrated steel mills, a petrochemical complex and coal-fired power plants. The project is operated by Dawei SEZ Development Co, a joint partnership between Myanmar, Thailand and Japan, all three countries having equal shares in the special purpose vehicle.
- Once the SEZ is completed, Dawei will become the major gateway for the Mekong region's trade with India, the Middle East and Africa.
- The planned double track railways, Kanchanaburi-Bangkok-Laem Chabang and Bangkok-Sa Kaew, expected to be 574km in length, will further improve connectivity in the region.

#### Thai-Japanese Railway Cooperation

Project category: Rail

Cost: Phase 1 (US\$8.2bn), Phase 2 (US\$6.5bn), Phase 3 (NA)

Source of funding: Loans from Japanese government

Status: Phase 1 in progress, Phase 2 and 3 in discussion

Completion: Phase 1 by 2022

Figure 54: Thai-Japanese Railway Roadmap



Source: Deutsche Bank



## Eastern Economic Corridor Development Project

The Eastern Economic Corridor Development Project (EEC) is aimed at developing Thailand's Eastern Seaboard into a leading economic zone in ASEAN. It will be implemented in three provinces: Chon Buri, Rayong and Chachoengsao, spanning a total of 13,285 sq km.

### Eastern Seaboard makes up 20% of Thailand's GDP; well-connected to ASEAN

- Thailand's major industrial production base for petrochemical, energy and automotive industries.
- Enjoys strong connectivity to neighbouring countries and established trade routes including Dawei deep-sea port in Myanmar, Sihanoukville Port in Cambodia and Vung Tau Port in Vietnam.

### Government plans to improve its connectivity by air and road

- **By air:** Expand U-Tapao airport in Rayong with the opening of a second passenger terminal and runway. This will facilitate an increase in tourist arrivals and turn the airport into a hub for aviation maintenance, repair and overhaul, air cargo and logistics.
- **By road:** Development of high-speed and double track railways connecting ports, airports, industrial clusters and major urban centres throughout Thailand.

### Eastern Economic Corridor Development Project

Project category: Mixture of Rail, Aviation and Maritime

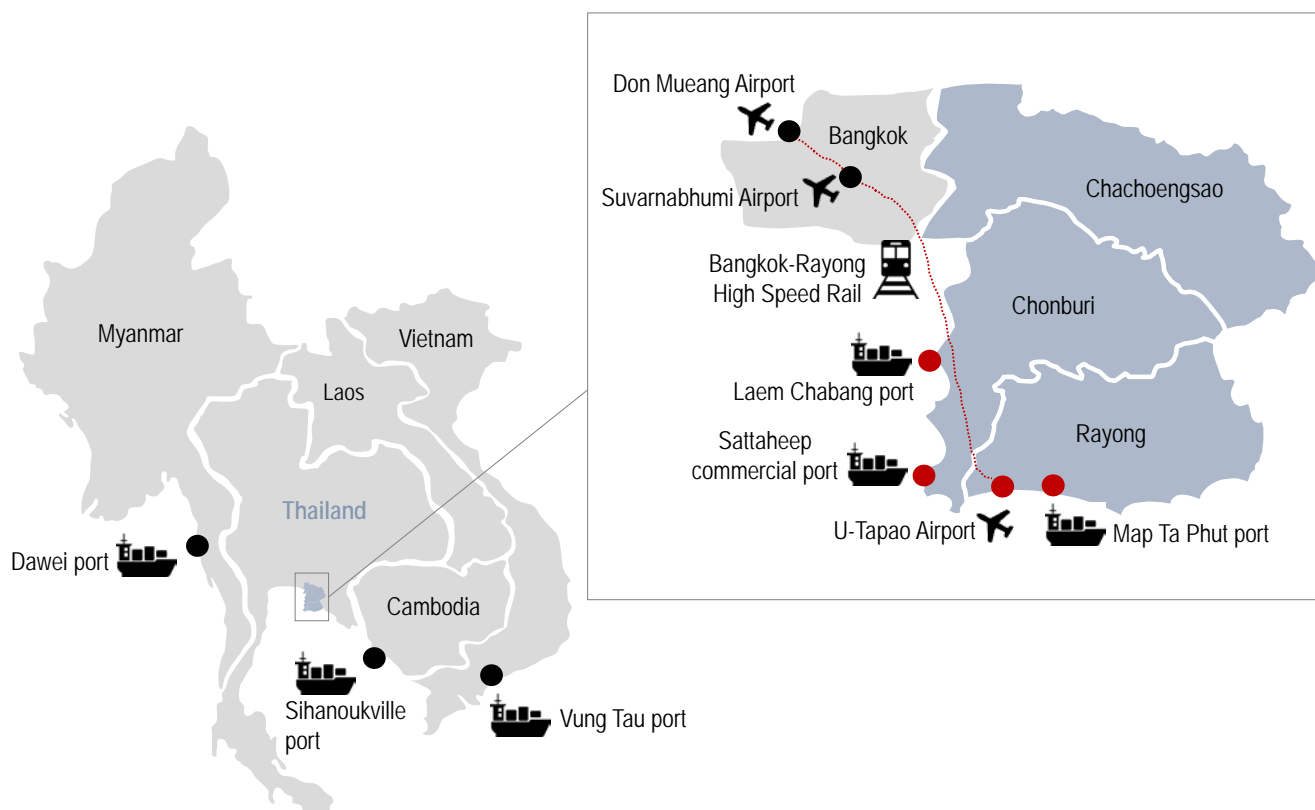
Cost: US\$45.0bn

Source of funding:  
Government, Foreign direct investments, Public private partnerships

Status: In progress

Completion: NA

Figure 55: Eastern Economic Corridor Development Project Map



Source: Deutsche Bank, ASEAN Briefing



EEC intends to promote target industries that can be divided into two groups

- **First S-Curve Industries** (existing groups of industries in which Thailand has high potential): Automotive, smart electronics, medical tourism, agriculture and biotechnology, food for the future.
- **New S-Curve Industries:** Robotics, aviation and logistics, biofuels and biochemical, digital, and medical hub.

Key Infrastructure Project Developments in the Eastern Economic Corridor

#### #1. Development of U-Tapao Airport

- A joint civil-military airport in Pattaya; overseen by Royal Thai Navy.
- Currently used as a hub by some domestic/international airlines to connect with flights to Northeast Thailand, Phuket and Chiang Mai.
- Expansion includes construction of: (1) a second runway, (2) a second passenger terminal (2.2mn sqm), (3) commercial area (1.1mn sqm), (4) maintenance repair and overhaul centre (0.9mn sqm), (5) personnel training centre (0.3mn sqm) and (6) new Free Trade Zone (1.5mn sqm).
- When completed, it is expected to increase passenger traffic from 800,000 to 15m passengers at the end of the first phase (five years), and 30m passengers at the end of the second phase (10 years).
- US\$6.0bn (Bt200bn) budgeted for capex

#### U-Tapao Airport

Project category: Aviation

Cost: US\$6.0bn

Status: In progress

Completion: NA

#### #2. Development of Laem Chabang, Sattah and Map Ta Phut Ports

- Laem Chabang Port: Increase container accommodation from 7mn to 18mn/year, car export accommodation from 1mn to 3mn units/year.
- Sattahip Port: Construction of a new 6,000 sqm ferry terminal to serve cruises, cargo vessels and ferries linking Pattaya, Chon Buri and Rayong with other destinations.
- Map Ta Phut Port: Construction of a liquid cargo-natural gas terminal.

#### #3. Development of Bangkok-Rayong High Speed Rail

- 193.5 km high speed rail connecting three airports – Don Mueang airport in Bangkok, Suvarnabhumi airport in Samut Prakan, and U-Tapao airport in Rayong.
- Six stations with total estimated travel time to be two hours, and hour for express service operation.
- US\$5.1bn (Bt215bn) budgeted for capex
- Once completed by 2023, the State Railway of Thailand expects 66,000 passengers/day by 2023, and 362,000 passengers/day by 2072

#### Bangkok-Rayong High Speed Rail

Project category: Rail

Cost: US\$5.1bn

Status: In progress

Completion: 2023

#### #4. Development of Double Track Railway

- Double track railway to link Laem Chabang, Sattaheep and Map Ta Phut ports to the Eastern Economic Corridor.

#### #5. Development of Eastern Future Cities

- Creation of new eco cities with green environment in Chachoengsao, Chonburi and Rayong provinces.

US\$45bn estimated funding for the Eastern Economic Corridor

- Total investment in EEC is estimated at US\$45bn (Bt1.5tn)
- EEC will be funded from a mixture of foreign direct investment, state funding and public private partnerships.



Eastern Economic Corridor in a strategic location, a gateway to Asia

- The total combined GDP of East Asia, ASEAN and India region represents one-third of the world's GDP.
- EEC represents a gateway to Asia, reaching more than half of the world's population.

Figure 56: Eastern Economic Corridor's connection to the region



Source: Deutsche Bank, Thailand Ministry of Industry



## Dual Track Railway

One of the major projects listed in the infrastructure plan includes the building of dual tracks on existing rail alignments. The dual track railway will allow trains to run in opposite directions and has several benefits such as time efficiency and lower logistics cost due to economies of scale.

For the 2017 action plan, there are 10 projects in the pipeline for the dual track railway network, amounting to a total of US\$4.7bn (Bt155bn). The top three projects with highest investments comprise: (1) Denchai to Chiang Khong (US\$2.2bn), (2) Denchai to Chiang Mai (US\$1.7bn) and (3) Ban Pai to Nakorn Phanom (US\$1.7bn).

### Dual Track Railway

Project category: Rail

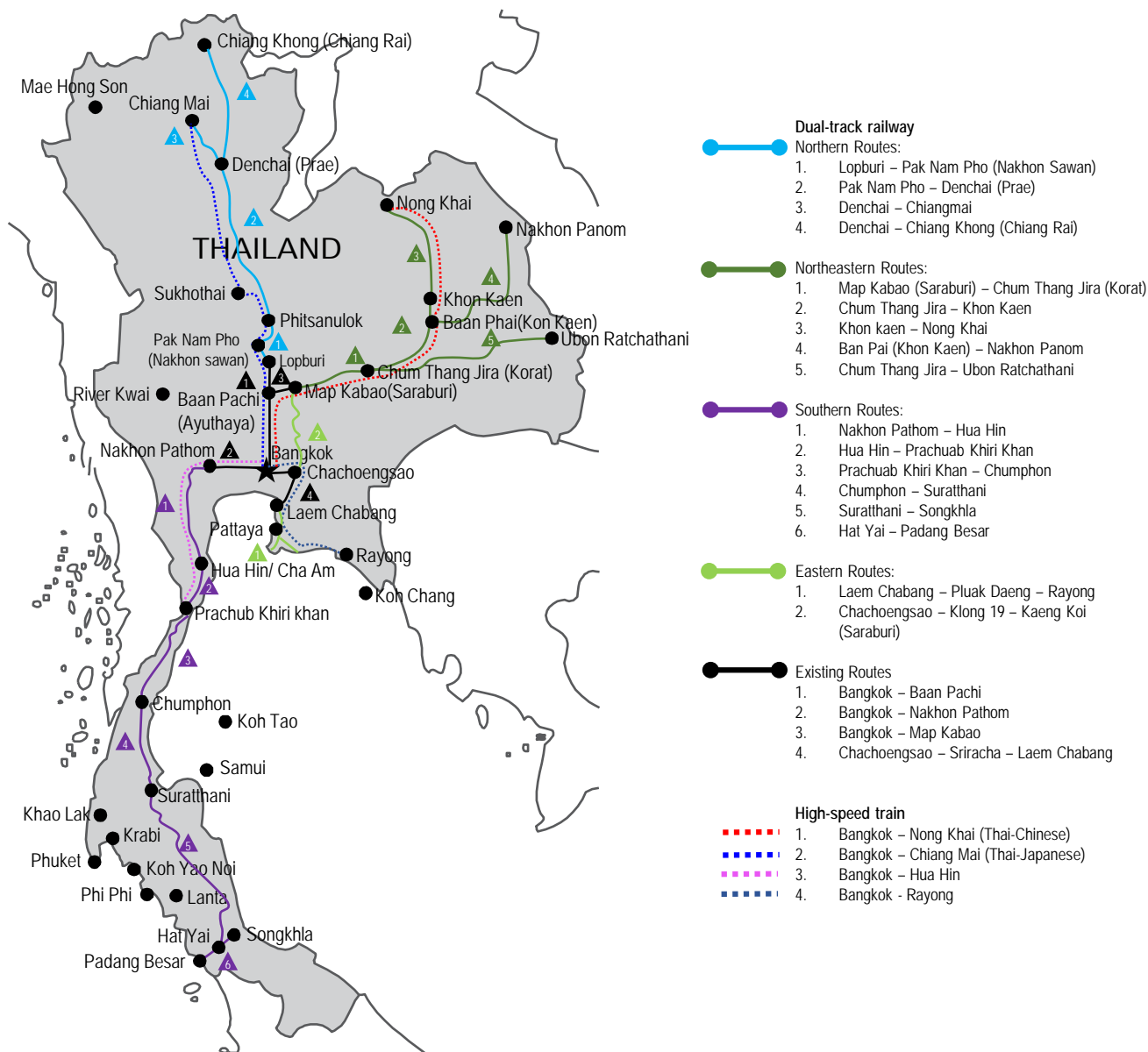
Cost: US\$4.7bn

Source of funding: Government

Status: In progress

Completion: 2018-2020

Figure 57: Thailand dual track and high-speed train projects overview



Source: Deutsche Bank





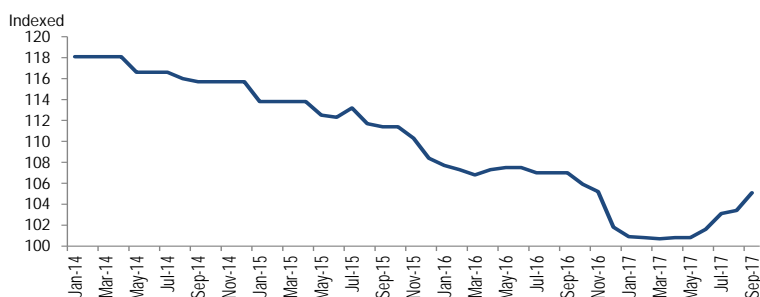
# Thailand strategy

## Who stands to benefit?

In our view, banks that focus on corporate and government infra project loans (BBL, KTB), major contractors (UNIQ, CK, STEC, ITD), construction materials (SCC, SCCC, TPIPL) and industrial estates (WHA, and to a lesser extent, AMATA) are the key beneficiaries of the EEC.

- Cement:** The key players in this sector include **Siam Cement PCL** (SCC.BK, Buy), **Siam City Cement PCL** (SCCC.BK, Not rated), and **TPI Polene PCL** (TPIPL.BK, Not rated). The cement price in Thailand has seen long structural decline since 2013 as a result of declining cement consumption with reduced public and private investment after the 2014 military coup, and increased production from one of the cement players. However, once the EEC project is in full swing, we expect local cement prices to recover.

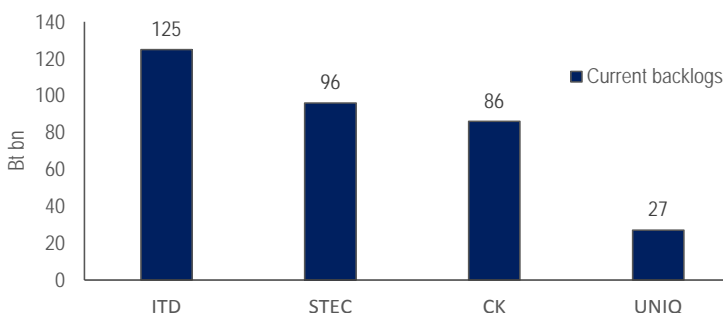
Figure 59: Local cement price index – starting to pick up



Source: Deutsche Bank

- Construction:** Key players in this sector include **Unique Engineering and Construction PCL** (UNIQ.BK, Not rated), **Sino-Thai Engineering and Construction PCL** (STEC.BK, Not rated), **Ch. Karnchang PCL** (CK.BK, Not rated) and **Italian-Thai Development PCL** (ITD.BK, Not rated). These contractors should see an increase in backlog due to uptick in private and public investment related to the EEC projects. Moreover, given that UNIQ, STEC, CK and ITD are Thailand's largest contractors, we expect them to win the majority of the infra bids.

Figure 60: Current backlogs of major contractors



Source: Deutsche Bank estimates, Company data

Figure 58: Potential beneficiaries in Thailand due to infra growth

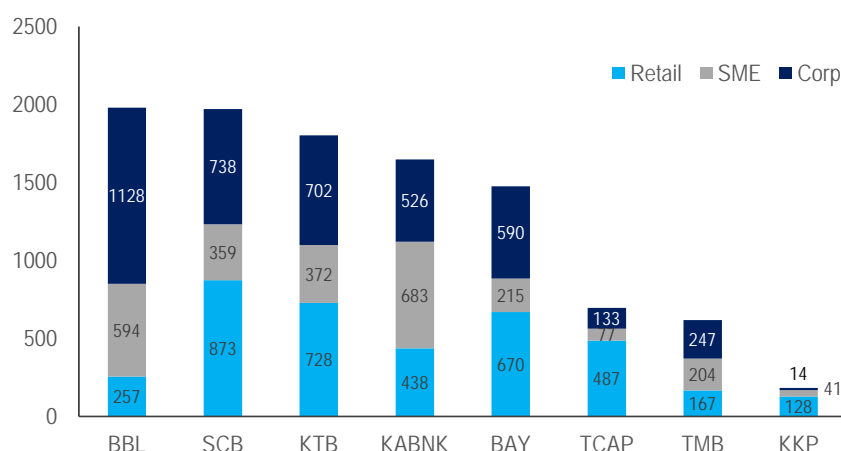
Construction	Unique Engineering & Construction (UNIQ.BK)
	Sino-Thai Engineering & Construction (STEC.BK)
Materials: Cement	Ch. Karnchang (CK.BK)
	Italian-Thai Development (ITD.BK)
Property	Siam Cement (SCC.BK)
	Siam City Cement (SCCC.BK)
Industrial estate	TPI Polene PCL (TPIPL.BK)
	WHA Corporation (WHA.BK)
Banks	AMATA Corporation (AMATA.BK)
	Bangkok Bank (BBL.BK)
	Krung Thai (KTB.BK)

Source: Deutsche Bank



- Property/Industrial estates:** Key players include **AMATA Corporation PCL** (AMATA.BK, Hold) and **WHA Corporation PCL** (WHA.BK, Buy). We expect the industrial estates sector to be the biggest beneficiary of the EEC projects, as the government plans to create a new industrial and development zone of 48 sq km in the provinces of Chon Buri, Rayong and Chachoengsao. These provinces are the heart of Thailand's auto industry and the government now seeks to encourage high-tech and innovative industries to set up factories there too. We think that WHA, whose industrial estates cater to diversified industries such as aviation (in contrast to AMATA's focus on auto-related plants), should be the primary beneficiary. AMATA and WHA have approximately 16 sq km of land, with the latter's nearer to Map Ta Phut and the former's closer to the Chon Buri province area. WHA has more upside in land price increases since AMATA's land prices are already high (being closer to the Suvarnabhumi airport).
- Banks:** Key players in corporate and government loans include **Bangkok Bank PCL** (BBL.BK, Hold) and **Krung Thai Bank PCL** (KTB.BK, Hold). With BBL focusing on corporate loans and KTB focusing on loans to the government sector, the uptick in EEC investment should benefit both of these banks the most. In reality, we expect all major banks to participate in EEC-related lending. Kasikornbank (KBANK.BK, Buy), Siam Commercial Bank (SCB.BK, Hold) and TMB Bank (TMB.BK, Buy) will likely compete with BBL and KTB for corporate and government loans. However, BBL and KTB tend to have the highest exposure to these types of loans while TMB, KBANK and SCB lean towards SME and retail loans in loan mix.

Figure 61: Thai banks loan mix



Source: Deutsche Bank estimates, Company data



# The Philippines

## Infrastructure remains weak link in its competitiveness

According to the 2017-2018 Global Competitiveness Report by World Economic Forum, the Philippines' ranking in infrastructure continues to lag behind its ASEAN counterparts, ranking 97 out of the 138 countries surveyed. Several infrastructure sub-indicators, such as the quality of roads, railroads, ports and airports, have been on a downward trend.

### Infrastructure cited as one of the top five problematic factors for productivity

Studies done by the Employers' Confederation of the Philippines indicated that traffic congestion in Metro Manila is wreaking havoc on workers' productivity and competitiveness; it is estimated that the country is losing US\$59mn/day or P3bn/day from the traffic mess. Thus, inadequate infrastructure is seen as one of the most critical binding constraints to Philippines' inclusive growth and sustainable development.

### "Build, Build, Build" campaign to usher in the golden age of infrastructure

To compensate for years of underinvestment in infrastructure, the Duterte administration has committed to spending US\$160-180bn (P8-9tn) between 2017 and 2022 to upgrade the infrastructure in the country. In 2017 alone, it budgeted US\$17bn (P850bn) for infrastructure, and expects to increase the amount to US\$21bn (P1,100bn) for 2018.

### Favours ODA funding, with Japan the biggest partner and China growing

Compared to the Aquino administration, the Duterte government prefers funding these infrastructure projects from Official Development Assistance (ODA) loans over the Public-Private Partnerships to speed up project execution. It is estimated that two-thirds of the projects (excluding unsolicited projects of the private sector) approved by the National Economic Development Authority (NEDA) will be funded by ODA loans. By far, Japan is Philippines' biggest development partner. China, previously not even in the top ten, is catching up, given Duterte's warmer relations with the Chinese.

### Indicated openness to unsolicited proposals, US\$680bn projects under review

While the government has opted to initially fund projects via ODA, it has nonetheless indicated openness to gathering private sector participation through unsolicited proposals. Thus, over US\$680bn (P3.5tn) worth of unsolicited projects have been submitted and are up for review in the next 1-2 years.

### Infrastructure projects up for implementation amount to US\$310bn

There are currently 75 high-impact Infrastructure Flagship Projects approved by the National Economic and Development Authority (NEDA), 53 of which amount to US\$310bn (P1.6tn). In the next section, we discuss some of these projects, as well as projects awarded to the private sector under the previous administration, and their potential economic impacts.

*Refer to Page 42 for the pipeline of infrastructure projects in Philippines*

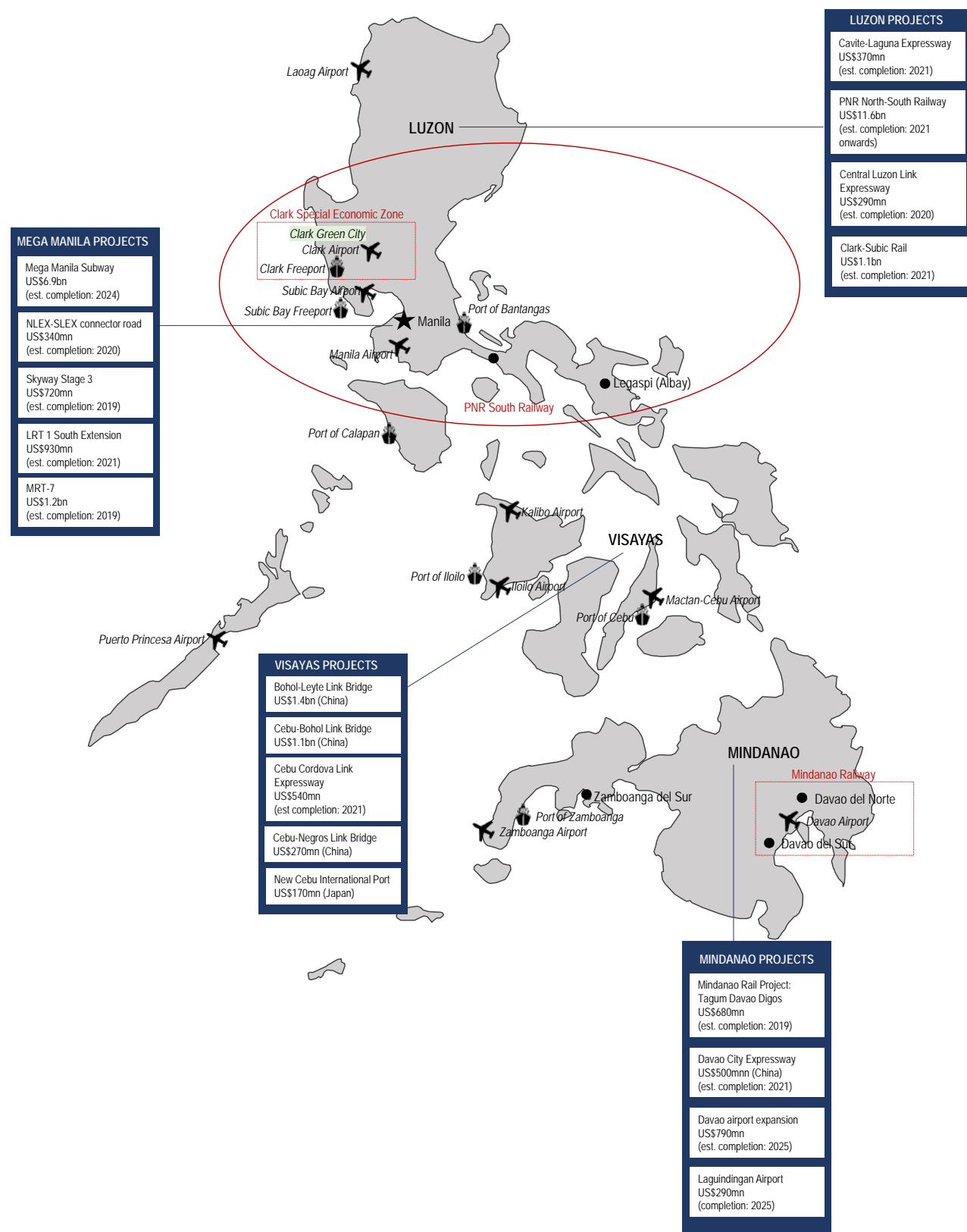
Figure 62: Philippines statistics

<b>(1) Road</b>	
Total road length	32,633km
Length of paved road	28,919km
% of paved road to total road length	89%
Total length of expressways	400km
No. of registered cars & 4-wheelers	3,009 th
No. of registered 2 & 3-wheelers	4,251 th
<b>(2) Railway</b>	
Total railway route length	494.9km
Double-track railway route length	125.4km
Electrified track railway route length	33.8km
Urban railway route length	78.2km
<b>(3) Maritime</b>	
No. of domestic ports	412
No. of international ports	150
<b>(4) Aviation</b>	
Total number of airports	44
No. of international airports	11
No. of domestic airports	33

Source: Deutsche Bank, Government website



Figure 63: Philippines – snapshot of key infrastructure projects



Source: Deutsche Bank, National Economic and Development Authority of Philippines (Flagship Infrastructure Projects)



## PNR North-South Commuter/Freight Railway

The PNR North-South railway is a proposed railway line that will connect Manila with Clark, Pampanga (North portion) and Legaspi City, Albay (South portion). It comprises a 180km commuter rail that will connect Clark to Laguna and a 581km passenger/freight long-haul service between Manila and Legaspi. The existing commuter line (56 km) running south from Manila to Calamba, Laguna transports 70,000 passengers/day despite its dilapidated condition. The expansion of the railway is expected to cost over US\$11.6bn (P600bn) in total and will be funded via ODA from various countries (Japan and China).

### #1. PNR North 1 (North South commuter railway)

A 38km mass transportation railway that will connect Malolos, Bulacan with NCR. It will reduce travel time between these two areas from over one hour 30 minutes today to 35 minutes once the railway is fully operational. The PNR North 1 is expected to serve over 300,000 passengers daily when completed in 2021. The US\$2.1bn (P105bn) project will be funded through ODA.

### #2. PNR North 2 (Malolos-Clark Airport-Clark Green City commuter railway)

A 69.5km mass transportation railway that will extend PNR North 1, connecting NCR with Clark International Airport (CIA) and New Clark City. It will enable a one-way travel time of 56 minutes between Manila and CIA, supporting the growth of CIA as a major air transport hub. PNR North 2 will cost US\$4.1bn (P212bn), funded by Japanese ODA.

### #3. PNR South Commuter Line (Tutuban-Los Banos)

A 72km mass transportation railway from Manila to Los Banos, Laguna. It is expected to have a daily ridership of over 300,000 in its opening year (2021). It will cut travel time between Manila and Calamba by more than half, from over two hours today to under one hour once the railway is fully operational. The project is estimated to cost P134bn (US\$2.6bn) and will be financed via ODA.

### #4. PNR Long Haul (Calamba to Albay)

A 581km, standard-gauge railway from Manila to Legaspi in Albay province. Provisions have also been made for freight rail services to operate. The project is estimated to cost US\$3.0bn (P151bn) and will be financed by Chinese ODA.

#### PNR North-South Commuter/Freight Railway

Project category: Rail

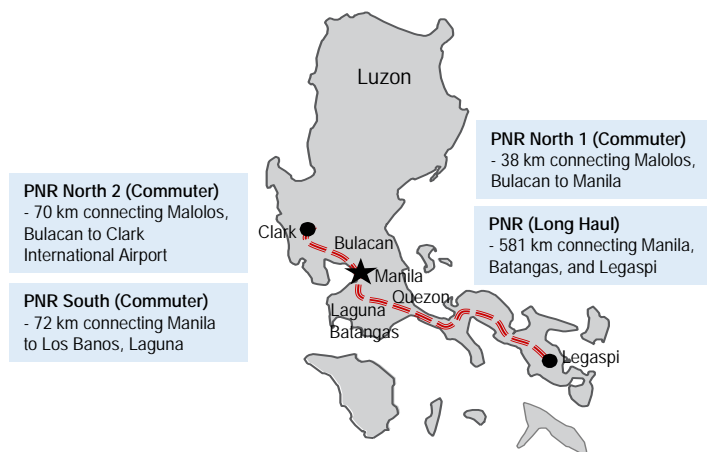
Cost:  
 PNR N1 (US\$2.1bn),  
 PNR N2 (US\$4.1bn),  
 PNR South (US\$2.6bn),  
 PNR Long Haul (US\$3.0bn)

Source of funding: Overseas Development Assistance from Japan and China

Status: In progress

Completion: 2021

Figure 64: PNR North-South Commuter/Long Haul Railway Project Map



Source: Deutsche Bank, Department of Transportation



## Mega Manila Subway Project

To decongest EDSA (Epifanio de los Santos Avenue) – one of the most heavily-used highways in the National Capital Region (NCR), the government introduced the Mega Manila Subway Project. It will be the Philippines' first subway system, 25km in route, underground and connecting major business districts and government centres. Upon completion, it is expected to serve 370,000 passengers/day.

Figure 65: Mega Manila Subway Project Map



Source: Deutsche Bank, Department of Transportation

### Mega Manila Subway Project

Project category: Rail

Cost: US\$5.4bn

Source of funding: Loan from Japan International Cooperation Agency

Status: Construction to begin in 2019

Completion: 2024

### Subway system to run from Quezon City to Ninoy Aquino International Airport

- 31 minutes expected travel time from Quezon City to Taguig
- Construction is expected to start in 2019, and completed by 2024

### Japan to provide majority of the funding for this project

- Expected capex at US\$5.4bn (P277bn) with US\$4.0bn (P205bn) loan estimated from Japan
- Philippines is targeting for below 1% interest on the loan from the Japan International Cooperation Agency, payable in 20 years and with a 15-year grace period



## Mindanao Railway: Tagum-Davao City-Digos segment

To facilitate greater connectivity between the existing and emerging growth centres in the Davao Region, the government is establishing the Mindanao Railway Project: the Tagum-Davao-Digos segment, which runs from Tagum City, Davao del Norte, to Digos City, Davao del Sur.

### 102km railway that runs from Tagum City to Digos City

- This is the first phase (180km) of the larger 830km Mindanao Railway
- Eight stations within the route: Tagum City, Carmen, Panabo City, Mudiang, Davao Terminal, Toril, Sta. Cruz and Digos City
- Estimated capex of US\$5.4bn (P35bn), financed by government
- The government plans to start construction in 3Q2018 and expects completion by 2022
- Upon completion, daily ridership is expected to hit 134,000 in 2022, and eventually 370,000 in 2042

#### Mindanao Railway

Project category: Rail

Cost: US\$5.4bn

Source of funding: Loan from Japan International Cooperation Agency

Status: Construction to begin in 2019

Completion: 2024

## Connector Road projects (Skyway 3/NLEX-SLEX Connector)

The Connector Road projects aim to decongest Metro Manila traffic and provide trucks with 24/7 alternative route, as well as providing better access to Manila Ports and Airports. There are two separate projects: Skyway Stage 3 of **San Miguel (SMC PM)** and NLEX-SLEX Connector Road of **Metro Pacific (MPI PM)**. Both are elevated expressways that will connect the existing northern toll road system (NLEX) with the southern toll road system (SLEX).

### Skyway Stage 3

- Skyway Stage 3 is an elevated expressway that will run from Buendia, Makati City to Balintawak, Quezon City (end point of NLEX).
- Road will traverse major roads within Metro Manila. The project is envisioned to attract passenger traffic.
- Project will decongest EDSA and other major roads by as much as 55,000 vehicles daily. EDSA is currently handling c. 300k vehicles (one-way) daily vs. capacity of 160k.
- Travel time from Buendia-Balintawak will be cut from two hours to 15-20 minutes.
- Construction of the US\$720mn (P37bn) toll road is ongoing. Expected completion: 2019.

#### Skyway Stage 3 Connector

Project category: Road

Cost: US\$720mn

Source of funding: NA

Status: In progress

Completion: 2019

### NLEX-SLEX Connector Road

- An 8km elevated 2x2 highway starting from NLEX Segment 10 in Caloocan City to Skyway Stage 3, traversing mostly along the PNR rail track. The project is estimated to cost US\$430mn (P21.8bn).
- Road will have access to the ports of Manila and is envisioned to attract more commercial traffic.
- Travel time from SLEX to NLEX will be cut from 2 hours to 20 minutes.
- Expected to benefit at least 35,000 vehicles/ day and provide trucks an alternative route from traversing roads within Metro Manila.
- Construction estimated to begin in 2Q18 and complete by 2020.

#### NLEX-SLEX Connector Road

Project category: Road

Cost: US\$430mn

Source of funding: NA

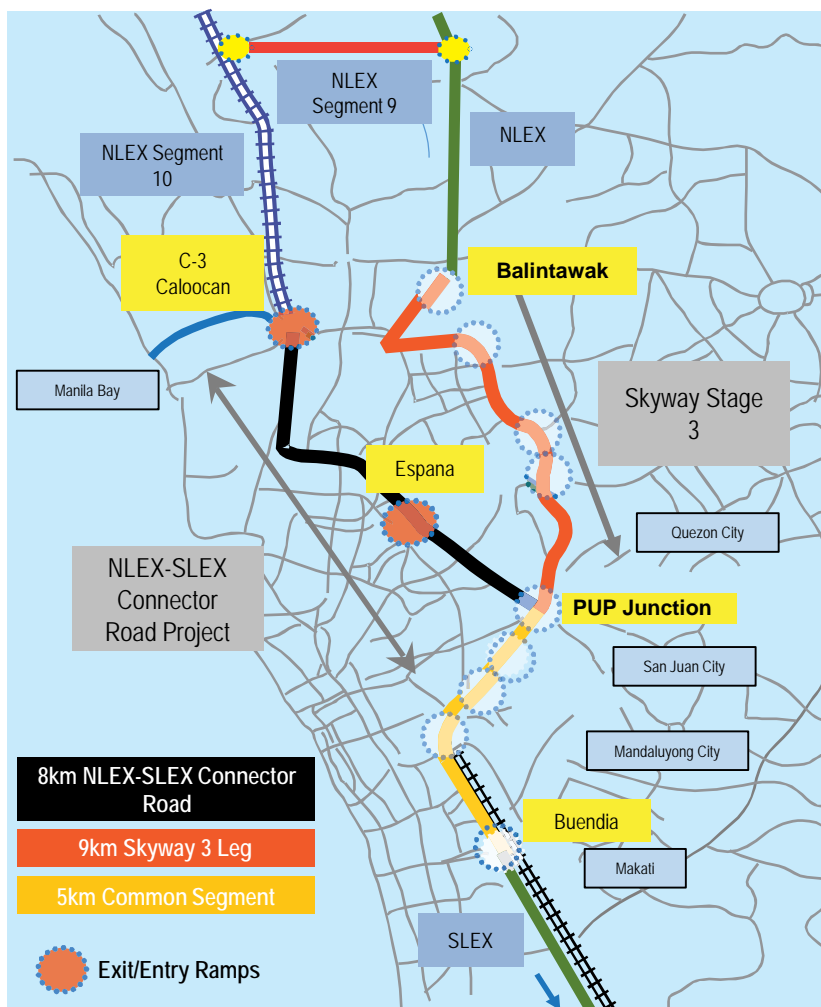
Status: In progress

Completion: 2020





Figure 66: Connector Road projects



Source: Deutsche Bank, Department of Public Works and Highways



## Cavite Laguna Expressway (CALAx)

The Cavite Laguna Expressway (CALAx) is a US\$370mn (P19bn), 45km at-grade expressway that will link the emerging provinces of Cavite and Laguna, connecting two major toll roads: the Cavite Expressway (CaviteX) and the South Luzon Expressway (SLEX). This is an attempt by the government to resolve traffic congestion issues in the said regions and provide access to the major industrial estates and urban development areas.

The Metro Pacific group (MPI.PS) held a ground-breaking ceremony last June 2017 and is targeting completion in 2021.

### Cavite Laguna Expressway

Project category: Road

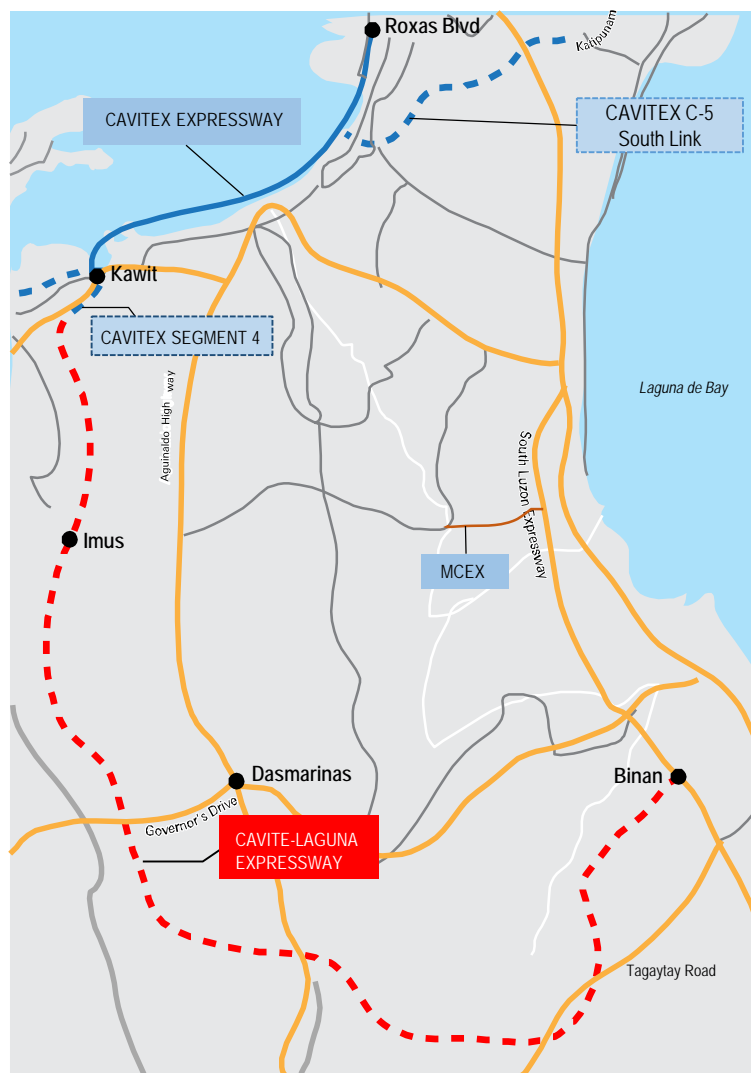
Cost: US\$370mn

Source of funding: NA

Status: In progress

Completion: 2021

Figure 67: CALA Expressway



Source: Deutsche Bank, Department of Public Works and Highways



## LRT-1 South Extension Project

The project aims to improve the existing LRT 1 system (20 km) and expand this further to the south (+11.7km) to serve the populous and rapidly developing province of Cavite. Light Rail Manila Corp. (LRMC) holds the 32-year concession for the rail line. LRMC is 55%-owned by Metro Pacific (MPI PM), 35% by Ayala Corp. (AC PM), and 10% by Macquarie Infrastructure.

- Project cost is US\$900mn (P48bn), excluding P9bn bid premium
- Construction to begin in 4Q17; completion in 2021
- Current daily ridership is approximately 430k (vs. capacity of 450k). Upon completion of the extension in 2021, daily ridership capacity is expected to rise to 1,200.

### LRT-1 South Extension Project

Project Category: Rail

Cost: US\$900mn

Source of funding: NA

Status: In progress

Completion: 2021

## MRT Line 7

The MRT-7 project is a greenfield railway project of the San Miguel group (SMC PM). The line will span 22.8 km and will service 14 stations. It will run in a northeast direction of Metro Manila, starting from North Avenue in Quezon City to San Jose del Monte, Bulacan. The province of Bulacan is the second most populous in the Philippines, with over 3mn people. It is home to a host of industrial plants due to its close proximity to Metro Manila.

- The project is estimated to cost US\$1.5bn (P63bn).
- Construction is currently ongoing and as of 15 September 2017, it is about 10% completed with no indication on completion end date yet
- Upon completion, the rail line is expected to serve 350k passenger daily

### MRT Line 7

Project category: Rail

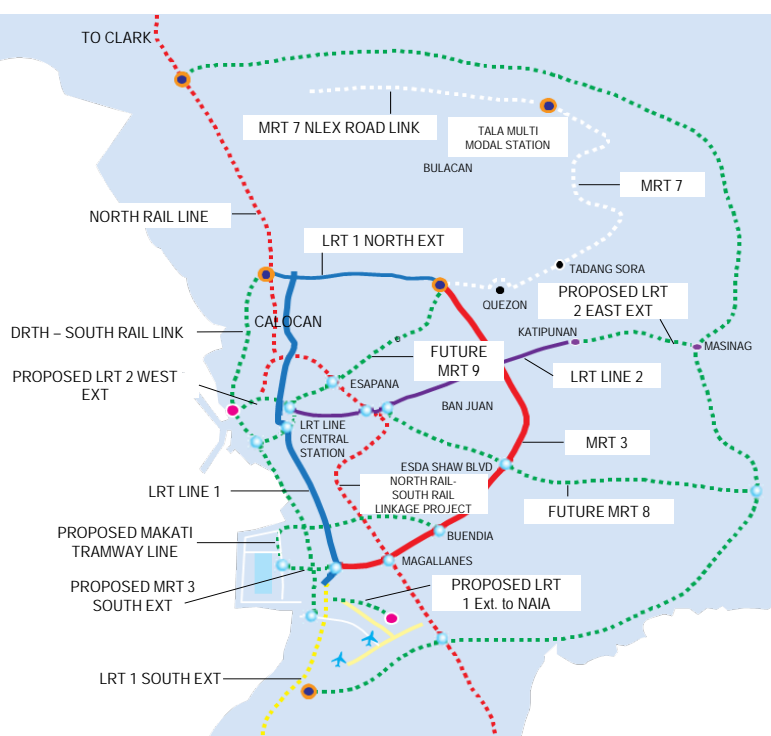
Cost: US\$1.5bn

Source of funding: NA

Status: In progress

Completion: NA

Figure 68: Metro Manila Railway Master Plan



Source: Deutsche Bank, Department of Transportation



# Philippine strategy

## Who stands to benefit?

While the Duterte administration's infrastructure program appears too ambitious, we see a possibility that some of these projects will be implemented within the next 5 years. Longer-term, their implementation holds benefits for the different sectors of the economy, in our view. We believe that construction and cement companies will immediately benefit from the infrastructure push. Indirectly, higher infrastructure spending will boost employment and, consequently, consumption. Moreover, property values and tourism demand will likely rise as access to these areas improves.

- **Cement:** We believe that cement companies such as **Cemex Holdings Philippines** (CHP.PS, Buy) will benefit from the anticipated progress in infrastructure spending over the near to medium term. Other listed cement companies include **Holcim** (HLCM.PS, Not rated), **Eagle Cement** (EAGLE.PS, Not rated) and **Aboitiz Equity Ventures** (AEV.PS, Not rated).
- Given the severe shortage of domestic cement capacity, the Philippines has seen an influx of imported cement from both local manufacturers and third-party traders in recent years. However, a recent Department of Trade and Industry order (DAO 17-02) implemented measures that will likely cause severe delays in the shipments of cement by traders (see *Industry Bulletin: Dissecting Cement Imports*, 17 August 2017). We believe this order will likely quell the flood of imports from traders and eventually ease competitive pressures that have been negatively affecting domestic prices.
- Longer-term, as recently reported, the possible entry of new players like China-based **Anhui Conch** (0914.HK) will likely alter the competitive landscape.
- **Construction:** The Philippine construction industry is likely to see healthy demand growth over the medium term. Companies such as **DMCI** (DMC.PS, Hold) and **EEl** (EEI.PS, Not rated) have long track records in building infrastructure projects and will likely be contenders for most of the big-ticket infrastructure projects. Meanwhile, a relatively new player, **Megawide** (MWIDE.PS, Hold), could continue to see healthy demand in the residential sector.
- The possible entry of Chinese contractors cannot be discounted, as the government has been talking about opening up the construction industry to foreign players. Typically, foreign contractors hire domestic firms as sub-contractors, since current immigration laws allow only highly-skilled construction workers.
- **Property/Industrial estates:** Improved infrastructure is a huge demand/price catalyst for property growth. The latest visible evidence is a surge in lot prices in the Manila Bay area. Its lot prices rose about 20% YoY in 1H17 after the completion of the NAIA expressway in 4Q16. Moreover, prices of some condominium units in the area rose

Figure 69: Potential beneficiaries in the Philippines due to infra growth

<b>Construction</b>	DMCI Holdings (DMCI.PS)
	EEl Corporation (EEI.PS)
<b>Materials: Cement</b>	Cemex Holdings (CHP.PS)
<b>Property</b>	Ayala Land (ALI.PS)
	Filinvest Land (FLI.PS)
<b>Industrial estates</b>	Megaworld (MEG.PS)
	SM Prime (SMPH.PS)
	Vista Land (VLL.PS)
<b>Consumer</b>	Puregold Price Club (PGOLD.PS)
	Robinsons Retail (RRHI.PS)
	Wilcon Depot (WLCON.PS)
	Philippine Seven (SEVN.PS)
	Jollibee Foods (JFC.PS)
	Max's Group (MAXS.PS)
<b>Tourism</b>	Shakey's Pizza (PIZZA.PS)
	Megawide (MWIDE.PS)
	Cebu Air (CEB.PS)
	Travellers Group (RWM.PS)
	Belle Corporation (BELLE.PS)
	Bloomerry Resorts (BLOOM.PS)
	Melco Resorts Philippines (MRP.PS)

Source: Deutsche Bank



about 50% YoY. Thus, developers with land bank near the government's planned infrastructure projects could benefit substantially.

- **Ayala Land** (ALI.PS, Hold): We estimate that 40% of Ayala Land's NAV comprises land near planned government infrastructure projects. Land in Quezon City, Arca South, Bonifacio Global City should benefit from the Mega Manila subway while the LRT-1 South extension project and Cavite Laguna Expressway should improve access to the Cavite and Laguna land banks.
- **Filinvest Land** (FLI.PS, Buy): We estimate that 52% of Filinvest Land comprises land near the government's planned infrastructure projects. The largest portion is in Rizal.
- **Megaworld** (MEG.PS, Hold): We estimate that 53% of Megaworld's land is in Fort Bonifacio. This area could benefit from the planned Mega Manila subway.
- **SM Prime** (SMPH.PS, Hold): We estimate that 30% of SM Prime's NAV comprises land in Pasay and Paranaque Cities, including planned reclamation projects. These areas should benefit from the Mega Manila subway and the LRT-1 South Extension project.
- **Vista Land** (VLL.PS, Hold): We estimate that 30% of Vista Land's NAV comprises land near the government's planned infrastructure projects. The largest portion is in Cavite, which should benefit from the Cavite Laguna Expressway and the LRT-1 South Extension project.
- **Consumer:** Consumption indirectly benefits from infra spending as it creates jobs and spurs economic activity. Key beneficiaries, in particular, would be retailers (**PGOLD**, **RRHI**, **WLCON**, **SEVN**) and restaurants (**JFC**, **MAXS**, **PIZZA**). Improved infrastructure could help reduce high logistics costs, one of the factors hindering e-commerce in the Philippines.

Figure 70: Potential beneficiaries in the consumer sector

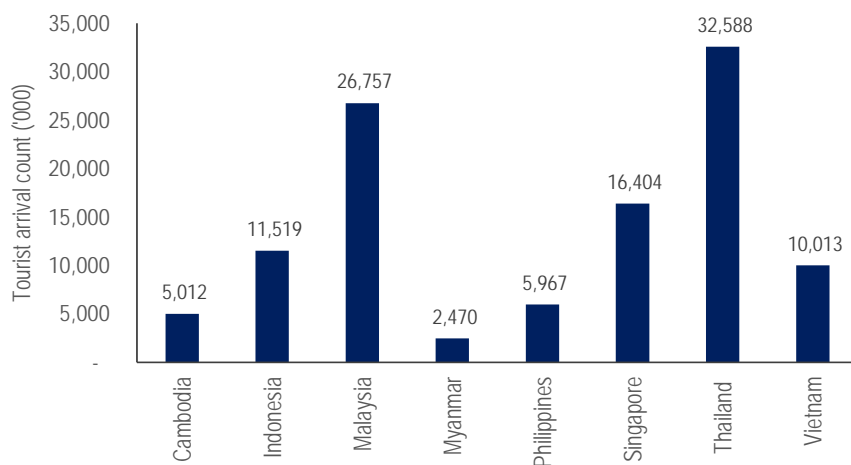
Company	Ticker, Rating	Description
Puregold Price Club	PGOLD.PS, Buy	Second-largest grocery retailer in the Philippines with over 200 stores across its four store formats - hypermarkets, supermarkets, discounters and membership shopping
Robinsons Retail Holdings	RRHI. PS, Hold	Second-largest multi-format retailer in the Philippines, operating 6 main retail formats: supermarkets, department stores, home improvement/DIY stores, convenience stores, drug stores, and specialty stores
Wilcon Depot Inc	WLCON.PS, Not rated	Supplier of home improvement and construction materials, such as plumbing and sanitary wares, paints, houseware, hardware, tools, furniture, electrical, lighting, furnishing, tiles and flooring products
Philippine Seven Corp	SEVN.PS, Not rated	Licensed to operate 7-Eleven convenience stores in the Philippines
Jollibee Foods Corp	JFC.PS, Hold	Owns, franchises and manages a network of fast food restaurants in the Philippines under trade names Jollibee, Chowking, Greenwich, Red Ribbon, and Mang Inasal. It has also ventured into China via Yonghe King, Hongzhuangyuan and the just-purchased San Pin Wang chains.
Max's Group	MAXS.PS, Hold	Owns, operates and franchises the largest portfolio of full-service restaurant brands in the Philippines.
Shakey's Pizza	PIZZA.PS, Buy	Owns, operates and franchises the largest brand of full-service restaurants in the Philippines, Shakey's.

Source: Deutsche Bank

**Tourism:** Infrastructure improvements are extremely crucial to the development of the Philippine tourism sector. The country receives a paltry 6mn tourists today, a far cry from Thailand (33mn) and Indonesia (11mn). As infrastructure improvements start to unlock access to popular tourist destinations, we believe airport operators **Megawide** (MWIDE.PS, Hold), airline Cebu Air (CEB.PS, Buy) and casino operators – **Travellers Group** (RWM.PS, Sell), **Belle Corporation** (BELLE.PS, Buy), **Bloomerry Resorts** (BLOOM.PS, Buy) and **Melco Resorts Philippines** (MRP.PS, Buy) are poised to take advantage of a rise in tourist arrivals.



Figure 71: ASEAN tourist arrivals



Source: Deutsche Bank, ASEAN Secretariat, Bloomberg Finance L.P.

- **Banks.** Infrastructure spending will likely result in higher loan demand. The most positive for the sector would be projects that have private sector proponents via PPP. For government-led projects, banks could still benefit as major contractors would still require financing. However, banks could be largely cut out of ODA/G2G-funded projects as the counterpart government would do most of the funding and importing of equipment, etc. That said, increased overall economic activity could still boost loan growth, albeit in a more indirect and/delayed manner.



# Singapore

## Top class in ASEAN and constantly improving

The transport sector has been a cornerstone of Singapore's economic success and collectively employs more than 300,000 workers. Other than being a key enabler for the economy, the transport infrastructure connects not just places within the island, but also the rest of the world. It has helped Singapore develop from a fishing village in the early days to an international hub today. The government continues to prioritize infrastructure developments, with the focus on building a network that can cater to the 6.9mn population target by 2030. We estimate US\$44bn (S\$60bn) worth of projects are currently in the pipeline.

### Public transport network upgrades to boost connectivity across the island

As announced in Budget 2017, the government has set S\$20bn for Mass Rapid Transit (MRT) network upgrades over the next five years. This is part of the plan to expand the rail network to 360km by 2030, longer than in major cities such as Hong Kong and comparable to London. By then, 8 in 10 households will live within 10 minutes of a train station. New projects include: Cross Island Line, Jurong Region Line and Thomson-East Coast Line, which will significantly improve connectivity across the island.

### New international connections to drive future economic development

To pursue further economic growth, the Committee on the Future Economy (CFE) highlighted one of the key strategies to develop Singapore as a vibrant and connected city of opportunity. It emphasised that Singapore's capacity to flourish in the future is tied to its ability to attract and create opportunities. CFE urges the government to continually invest in external connectivity through new international connections, such as Changi Airport Terminal 5, the mega Tuas Terminal and KL-Singapore High Speed Rail.

### Integrating technology with infrastructure to raise productivity and standards

The transport sector is a crucible of innovation, ripe for disruption and transformation. Future infrastructure developments will not only focus on connectivity, but more importantly, leverage on advanced technologies to raise productivity. For example, automated self-check-in facilities at the airport, robotics for baggage handling, driverless cargo vehicles, automated cranes at the sea-ports and using big data to optimise traffic flow.

### The next wave of infrastructure: develop Singapore into a 'Smart Nation'

Apart from the physical transport infrastructure mentioned above, the government has shifted the focus to digital infrastructure to tackle potential problems such as its ageing population and urban density. Through the usage of big data and analytic technologies, a series of initiatives have been launched to transform Singapore into a Smart Nation.

*Refer to Page 53 for the pipeline of infrastructure projects in Singapore*

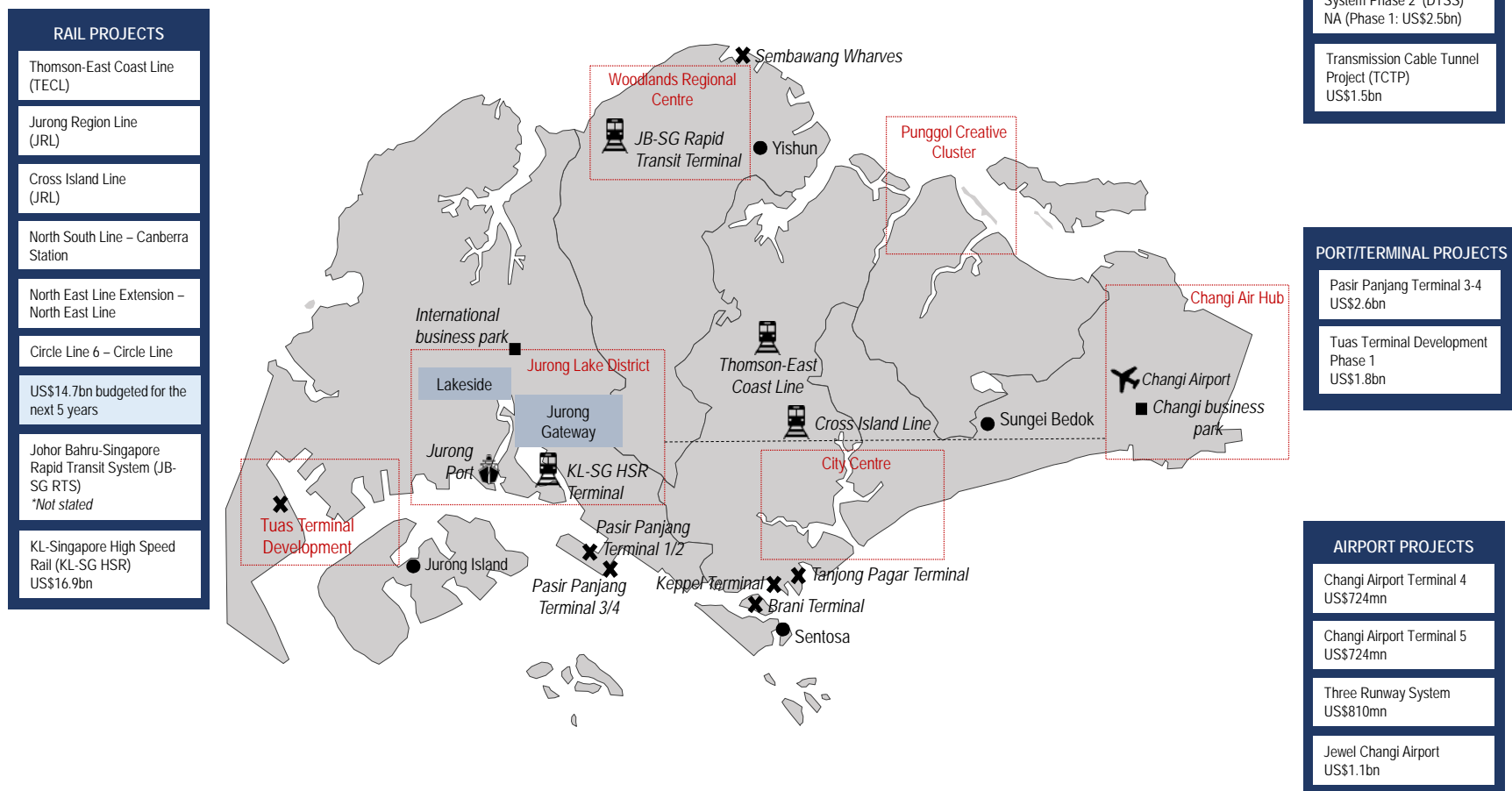
Figure 72: Singapore statistics

<b>(1) Road</b>	
Total road length	3,496km
Length of paved road	3,496km
% of paved road to total road length	100%
Total length of expressways	164km
No. of registered cars & 4-wheelers	763 th
No. of registered 2 & 3-wheelers	145 th
<b>(2) Railway</b>	
Total railway route length	183km
Double-track railway route length	NA
Electrified track railway route length	183km
Urban railway route length	183km
<b>(3) Maritime</b>	
No. of domestic ports	NA
No. of international ports	1
<b>(4) Aviation</b>	
Total number of airports	1
No. of international airports	1
No. of domestic airports	NA

Source: Deutsche Bank, Government website



Figure 73: Singapore – snapshot of key infrastructure projects



Source: Deutsche Bank





## Mass Rapid Transit upgrades and extension

The Mass Rapid Transit (MRT) system forms the backbone of Singapore's public transport network. It first began running in 1987 and has five lines in operation now, with a ridership of 3.1mn passengers a day. The Land Transport Authority (LTA) plans to expand the rail network to about 360km by 2020. By then, 8 in 10 households will live within 10 minutes of a train station.

### Stretches over 360km with 8 distinct lines by 2030

To expand the rail network, new lines and extensions are planned. Some of the main projects (new lines) include:

- **Thomson-East Coast Line:** Connects Woodlands North (currently not served directly by any rail line) to Marina Bay city centre and further down to Sungei Bedok in the east. Expected completion: 2024.
- **Jurong Region Line:** Connects Jurong Innovation District and Jurong Lake District to the existing rail network. Expected completion: 2025.
- **Cross Island Line:** Connects the opposite corners of the Singapore map from Changi to Jurong. Daily ridership is projected at 600,000. Expected completion: 2030.

### Train infrastructure expected to cost US\$15bn (S\$20bn) in the next five years

As announced in Budget 2017, the government plans to expand the rail network to 360km by 2020 and expect this to cost more than S\$20bn over the next five years. It will be funded from government reserves.

#### Mass Rapid Transit upgrades and extension

Project category: Rail

Cost: More than US\$14.7bn

Source of funding: Government

Status: In progress

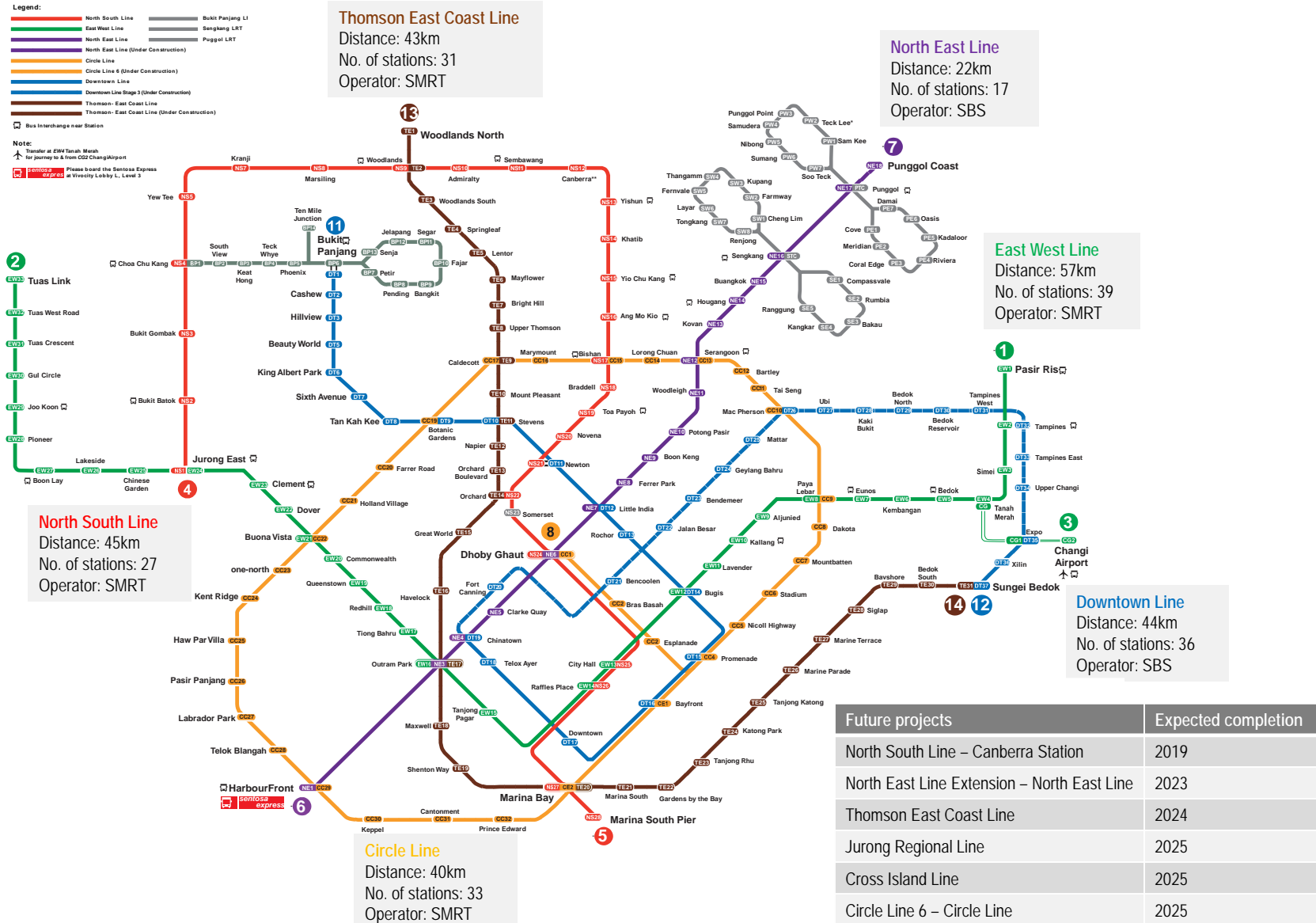
Completion: 2025

Figure 74: Contracts awarded for upcoming projects

MRT Line	Contractor	Contract Sum (S\$)
<b>Thomson East Coast Line</b>		
Sin Ming	Penta-Ocean Construction Co Ltd	\$454mn
Havelock	Gammon Construction Limited	\$210mn
Amber	Wo Hup Pte Ltd	\$146mn
Orchard Boulevard	KTC Civil Engineering & Construction Pte Ltd	\$143mn
Great World City	Tiong Seng Contractor (Pte) Ltd - Dongah Geological Engineering JV	\$316mn
Outram Park Station	Daelim Industrial Co Ltd	\$301mn
Shenton Way	Shanghai Tunnel Engineering Co Ltd	\$368mn
Marina Bay	Taisei Co	\$425mn
East Coast	Samsung C&T Co	\$55mn
Bedok South	China Jingye Engineering Co Ltd	\$188mn
Sungei Bedok	KTC Civil Engineering & Construction Pte Ltd	\$418mn
<b>Circle Line 6</b>		
Keppel	China State Construction Engineering Co Ltd and Nishimatsu Construction Co Ltd JV	\$314mn
Prince Edward -Marina Bay	Koh Brothers Building & Civil Engineering Contractor Pte Ltd	\$225mn
Kim Chuan Extension		\$1mn
<b>Tuas West Extension</b>		
Tuas West and Tuas Link		\$150mn
Tuas Crescent	China Railway 11 Bureau Group	\$357mn
Tuas	Shanghai Tunnel Engineering Co Ltd	\$190mn
<b>North South Line</b>		
Canberra	China State Construction Engineering Co Ltd	\$90mn
<b>North East Line</b>		
North East Line Extension	Samsung C&T Corporation	\$358mn

Source: Deutsche Bank, Land Transport Authority

Figure 75: Singapore Mass Rapid Transit and Light Rapid Transit Systems



Source: Deutsche Bank. Land Transport Authority (Singapore)





## Changi Airport Terminals 4 and 5

Since its maiden flight took off in 1981, Changi Airport has grown to become a major global air hub today. It is the world's sixth busiest airport, welcoming 60mn passengers a year, handling 7,000 flights a week, with 100 airlines connecting to a network of 380 cities globally. By 2035, the Asia-Pacific is set to account for over 3bn air passengers per year, boosted by Asia's rising middle class. To cater to this demand, Terminals 4 and 5 are introduced.

### Terminal 4 adds 16mn capacity, focuses on new technology to drive process

Changi Airport Terminal 4 began construction in 2013 and opened its doors on 31 October 2017, serving both full-service and low-cost carriers. The 225,000 sq m terminal is able to handle 16mn passengers annually. This brings Changi Airport's total passenger capacity to 82mn p.a. Automation is a major breakthrough at the terminal as new technology is introduced for baggage handling, security etc. For example, the fully automated departure system equipped with facial recognition allows travellers to go through immigration without needing to meet security officers.

### Changi East to include Terminal 5, three-runway system and industrial zone

Terminal 5 is able to handle 50mn passengers p.a., bringing Changi Airport's capacity to 135mn when construction is completed in late 2020s. It will be connected to Terminals 1 to 3 so that the expanded airport can be operated as a single, integrated unit for easy transfer between its various terminals. The terminals will also connect to Singapore's MRT network. A three-runway system will be implemented to increase the runway capacity – the existing third runway used by the military will be extended to handle larger passenger aircraft. Furthermore, to support the long-term growth of logistics and aerospace industries, an industrial zone will be developed for airfreight, air express operators as well as Maintenance Repair and Overhaul (MRO) services.

### Aviation industry to be a big winner, based on expansion plans

A study by International Air Transport Association (IATA) estimates that the number of air travellers and aviation-related jobs in Singapore could more than double in 20 years. This would double the industry's contribution to Singapore's GDP to an estimated US\$65bn (S\$88bn) in 2035.

### Changi Airport Terminals 4 and 5

Project category: Aviation

Cost: US\$3.5bn

Source of funding: Government

Status: In progress

Completion: T4 is completed, T5 completed by late 2020s

Figure 76: Concept plan for Changi Airport Terminal 5



Source: Deutsche Bank, Changi Airport Group



## Tuas Terminal Development

The Port of Singapore enjoys a geographical advantage, being at the heart of key trade flows, connecting to more than 200 countries and 600 ports globally. Over the years, it has grown to be one of the busiest ports in the world, and the top trans-shipment and bunkering hub globally. It hosts one of the highest concentrations of shipping groups like Maersk Line and China Cosco Shipping. According to the Maritime and Port Authority (MPA) of Singapore, the industry accounts for 170,000 jobs and more than 7% of Singapore's economic growth.

### Growth of mega vessels led to formation of shipping lines to share resources

The maritime industry has gone through many structural cycles – vessel capacity grew from 6,000 twenty-foot equivalent units (TEUs) in the 1990s to 10,000 TEUs in the 2000s and 19,000 plus TEUs currently. To achieve economies of scale, bigger vessels are being acquired for long-haul routes. With the growth of mega vessels, filling up the ships have become more crucial, especially given the current excess capacity and low freight rates. This has led to the formation of vessel sharing agreements with four main alliances today: G6, CKYHE, Ocean Three and 2M.

### Introduction of Next Generation Port Vision to stay relevant as a major port

To attract these mega alliances, many regional ports have taken steps to upgrade and build new facilities. For example, Westports are planning to increase capacity to 16mn TEUs in the next 10 years at Port Klang. To better prepare for the future, the Next Generation Port Initiative 2030 (NGP 2030) was introduced to deliver world-class services not only to shipping lines, but also to all customers. NGP 2030 seeks to utilise new technologies to increase efficiency and productivity, intensify land use in the port, and build a port that is community-oriented and accessible to the public.

### Tuas Terminal consolidates existing port operations to handle 65mn TEUs

To improve connectivity and the economies of scale, the Tuas Terminal will be a consolidation of the current terminals into one location: Brani, Keppel, Tanjong Pagar, Pasir Panjang Terminal 1 and Pasir Panjang Terminal 2. The project will be completed in four phases over 20 years. Phase 1 costing US\$1.8bn (S\$2.4bn), which began in 2016, is expected to be completed by the early 2020s with 20 deep-water berths that can handle about 20mn TEUs annually. The contract was awarded to a joint venture between Belgium's Dredging International and South Korea's Daelim Industrial. When the terminal is fully completed, it will have a capacity of 65mn TEUs, making it the largest mega container terminal in the world.

### Use of advanced technologies to develop Tuas Terminal as an intelligent port

There has been increasing emphasis on smart shipping where ship owners turn to automation, big data and predictive analytics to lower operating costs and increase efficiencies in port operations. To stay relevant, Tuas Terminal will leverage on these advanced technologies. For example, there will be an intelligent port system where built-in algorithms detect when two vessels are coming together at the wrong place or time and alert the port operators. There will also be the Next-Gen Vessel Traffic Management System, where smart ships can communicate vital information to port operators via sensors.

#### Tuas Terminal Development

Project category: Maritime

Cost: US\$1.8bn (Phase 1)

Source of funding: Government

Status: In progress

Completion: Phase 1 by early 2020, entire project by 2030s





## Digital infrastructure to drive mobility: Smart Nation

Singapore's target to grow its population to 6.9mn by 2030 (+25% from today's 5.6mn) has steered the direction of its infrastructure development. To cope with a growing population in limited land space (719 sq km, 460x smaller than its neighbour Malaysia), the government is striving to improve connectivity within the city-state. This drives the push in technology and data analytics to transform Singapore into a 'Smart Nation'. In our discussion below, we focus on the initiatives to increase mobility within the country:

**#1. Contactless fare payment for public transport:** Using the new Near Field Communication (NFC) SIM, users of compatible NFC-enabled mobile phones can simply tap in and out of the MRT, LRT and public buses using their phones. NFC-enabled payments are also accepted in taxis.

**#2. Mobility on demand:** A new system of shared mobility-on-demand services powered by fleets of self-driving vehicles will complement existing public transport – this is part of the government's vision of a car-light future. To achieve this, the Land Transport Authority signed partnership agreements with:

- **Delphi Automotive:** Cloud-based mobility-on-demand platform to provide self-driving vehicle services.
- **nuTonomy:** Cloud-based mobility-on-demand platform to provide self-driving vehicle services.
- **Beeline Singapore:** Open, cloud-based smart mobility platform developed to provide data-driven shuttle bus services for commuters. Routes are adaptive: utilizing crowd-sourced requests and public transport data, new routes can be activated based on demand.

Figure 77: Delphi automotive self-driving vehicle



Source: Smart Nation SG

Figure 78: nuTonomy self-driving vehicle



Source: Smart Nation SG

Figure 79: How does Beeline Singapore work?



Source: Beeline SG, Digital News Asia

**#3. Open data and analytics for urban transportation:** This involves the collection and analysis of data from commuters' fare cards to identify commuter hotspots and manage bus fleets. In the pipeline: Fusion Analytics for a public Transport Emergency Response (FASTER) system will help the authorities visualize commuting patterns to improve transport planning and predict the impact of incidents to respond and recommend mitigating measures (e.g. injection of additional buses and trains in emergencies).



# Singapore strategy

## Who stands to benefit?

To achieve government's population target of 6.9mn (+25% growth from current 5.6mn), infrastructure development has been geared towards stronger transport network connectivity, promoting usage of personal mobility devices and digitalisation. In our view, limited number of Singapore companies will benefit from these infrastructure projects. This is due to two reasons: (1) construction projects are mostly outsourced to foreign companies; and (2) infrastructures are largely owned by the government. We believe that the biggest beneficiaries are companies that focus on their operating expertise and provides integration with technology. They include: airport operators, telcos, data centres and to a smaller extent, technological engineering.

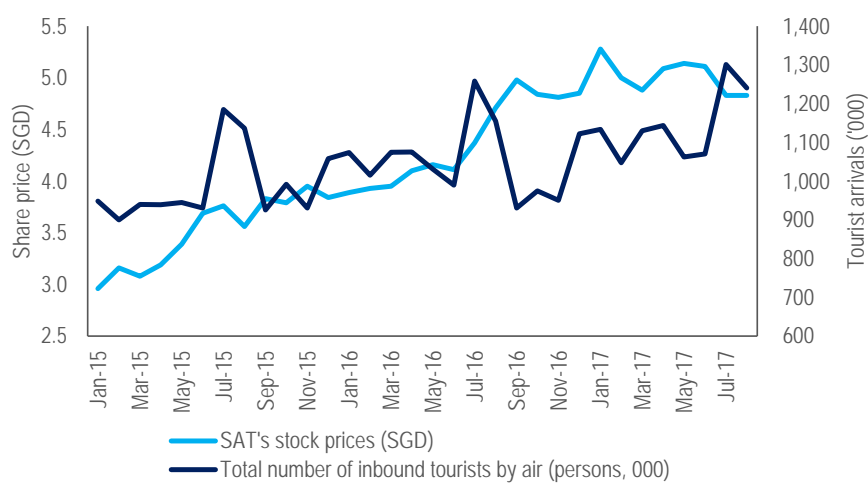
- Tourism:** The completion of Terminal 4 this year increased airport capacity by 24% from its current 66m annual passenger capacity. Terminal 5 is being planned and is expected to increase passenger capacity to 135m in the late 2020s. This will keep the airport's position as a leading global aviation hub which, and allow ample capacity for the growth of inbound tourists. We believe that airport operator **SATS** (SATS.SI, Buy), being a dominant player in providing gateway and food solutions at Changi Airport, will be a direct beneficiary of the traffic growth. In the mid to long term, we believe that investments into automation will bring about greater cost efficiencies, and help keep escalating labour costs under control. With stronger tourism arrivals, we believe that **OUE Hospitality Trust** (OUE.SI, Hold) will also be a potential beneficiary given its ownership of Crowne Plaza Changi Airport in the portfolio. We also expect **Genting Singapore** (GENS.SI, Buy), the operator of Resorts World Sentosa – boasting a casino, Universal Studios theme park, and hotels to benefit with increasing footfall.

Figure 80: Potential beneficiaries in Singapore due to infra growth

Property/Industrial estates	Keppel DC REIT (KEPE.SI)
	SATS (SATS.SI)
Tourism	OUE Hospitality Trust (OUE.SI)
	Genting Singapore (GENS.SI)
Telecommunications	Singtel (STEL.SI)
	StarHub (STAR.SI)
	M1 (MONE.SI)
	NetLink Trust (SJLU.SI)

Source: Deutsche Bank

Figure 81: SATS share price vs inbound tourists



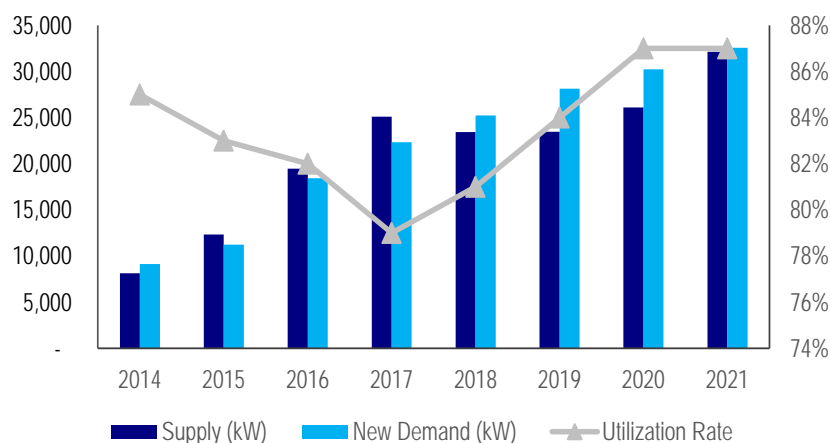
Source: Deutsche Bank, Singapore Tourism Board





- **Telecommunications:** Amid the vast opportunities presented by the Smart Nation initiatives, we believe the integrated telecom companies are key players – **Singtel** (STEL.SI, Buy), **StarHub** (STAR.SI, Buy) and **M1** (MONE.SI, Buy) have a strong edge in providing connectivity and data analytics. The rise in usage of IoT sensors and equipment would lead to an exponential surge in data traffic usage, which is revenue-generating for the telcos. Telcos also have access to large amounts of data that they can monetise via the provision of useful insights and support for various smart city applications. **Netlink Trust** (SJLU.SI, Not rated) may also benefit from providing NBAP fibre network connections in the next-stage phases of the Smart Nation project.
- **Industrials:** We believe that **ST Engineering** (STEG.SI, Buy) is well positioned to tap into the national initiatives of Smart Nation. It is participating in a trial in Jurong and has secured seven out of 15 pilot projects in the Jurong Lake district. These include: (1) Test Bed Infrastructure; (2) Multi-Modal Positioning in an Urban Environment; (3) Smart Traffic Management Systems; (4) Estate Energy Management System; (5) Operational Solutions for Parks; (6) Smoking Detection at Bus Stops; and (7) Smart Walk Application. We believe that some of these trials will convert successfully to larger-scale projects on an incremental basis.
- **Property/Industrial estates:** Singapore's data centre industry is buoyed by an excellent telecommunications infrastructure. This has helped position it as a leader in green data centres, as well as the Southeast Asia hub for cloud computing. Singapore's absorption of data centre space has increased steadily since 2009 and despite the unabated new supply, utilisation has hovered consistently around 86%, higher than many other markets. We believe that **Keppel DC Reit** (KEPE.SI, Hold) will continue to benefit from the growing data generation and storage needs, driven by Singapore's Smart Nation initiatives as well as increasing regulatory requirements in data security. We expect overall new demand to post a CAGR of 23.6% from 2014-2021, with pricing likely to see similar growth, driven by rising utilisation.

Figure 82: Data centres – supply, demand and utilisation



Source: Deutsche Bank estimates



# Pan-Asian Rail Network

## China-led initiative to link Singapore to Kunming by rail

Under President Xi Jinping's helm, China's political stance has evolved to become more expansive, championing the idea of free trade and globalisation. The "One Belt, One Road Initiative" is a prime example. Through investment in strategic infrastructure projects abroad, China seeks to develop economic ties along its old Silk Road to Europe and along maritime links in and around Asia and as far away as Africa. This helps cement China's position as a global leader.

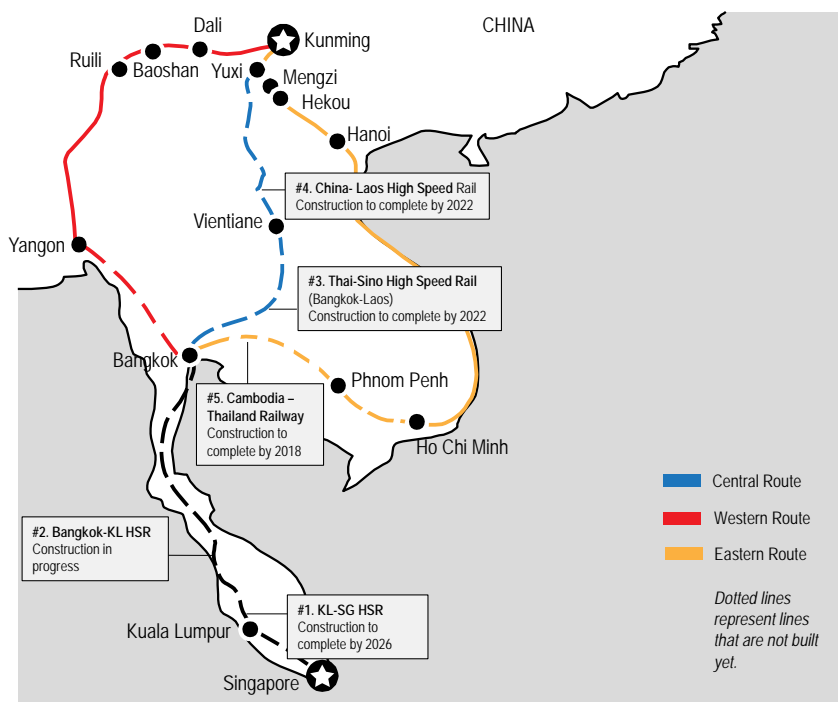
### ASEAN is of strategic importance to China's Belt Road Initiative

With member states Philippines, Malaysia and Indonesia holding overlapping claims to the South China Sea, the Association of Southeast Asian Nations (ASEAN) has become a crucial region to China, from the national security and strategic perspective. On the economic front, bilateral trade has increased from US\$8bn in 1991, to US\$471bn in 2015, and is projected to hit US\$1tn by 2020. Thus, China has been trying to pull ASEAN within its sphere of influence.

### Pan-Asian Railway Network is a manifestation of China's Belt Road Initiative

The railway connecting Singapore and Kunming was conceptualised in the 1900 by the British and French empires. However, after World War II, these two empires broke up and amid regional conflicts, progress in creating a continuous railway stalled. The project was revived in 2007 when ASEAN and China proposed building three routes: Eastern, Western, and Central via Laos.

Figure 83: Pan-Asian Railway Network roadmap



Source: Deutsche Bank



## #1. Kuala Lumpur-Singapore High Speed Rail

The Kuala Lumpur-Singapore High Speed Rail (KL-SG HSR) is a strategic project between the governments of Malaysia and Singapore that aims to facilitate seamless travel between the countries. The project is run by SG HSR Pte Ltd, a wholly owned subsidiary of Singapore's LTA, and MyHSR Corp, a wholly owned subsidiary of Malaysia's Ministry of Finance.

Figure 84: Kuala Lumpur – Singapore High Speed Rail roadmap



Source: Deutsche Bank, Singapore Land Transport Authority

### KL-SG HSR comprises 8 stations over 350km, is budgeted to cost US\$17bn

- The 350km railway include 8 stations as seen above. Total travel time will be cut from about 4 hours to merely 90 minutes.
- Capex is expected to be US\$17bn (S\$23bn), co-funded by Singapore and Malaysia. There is no clarity yet on the payment structure.
- Land acquisition, as well as a 3-month HSR public inspection period at key locations around the railway route has begun on 1 Nov 2017.

### Potential bids from many international players in China, Japan, South Korea

- The AssetCo (responsible for designing, building, financing and maintaining rail assets) tender is expected to be called in mid-December. We think that China Railway Construction Corporation may be one of the front runners.
- Six local firms have been selected to partner with the AssetCo – Clifford Capital, DBS, Sembcorp Design & Construction, SMRT, Surbana Jurong and Singapore Technologies Electronics

### KL-SG HSR will be a game changer for both Singapore and Malaysia

- The HSR will transform how people travel between Singapore and Malaysia, making it easy and affordable. It will integrate both economies and create business opportunities in a process likened to Taipei and Kaoshiung in Taiwan. The 'income multiplier effect' created by the KL-SG HSR would significantly boost GDP and employment. The project is stipulated for completion by 2026.



## #2 Bangkok-Kuala Lumpur High Speed Rail

Following the Kuala Lumpur-Singapore connection, the next link along the Central Route of the Pan-Asian Railway is between Malaysia and Thailand. The Bangkok-Kuala Lumpur route is currently served by low-speed trains that run on 1-metre gauge tracks. The usage of high speed trains will require a new set of 1.4m standard-gauge tracks, to be built.

### Kuala Lumpur-Bangkok electrified double track railway: discussion underway

For the Bangkok-Kuala Lumpur High Speed Rail (Bangkok-KL HSR) project, an electrified double track railway will be built from Bangkok through Hat Yai to Padang Besar, a border town located in the northern part of the state of Perlis in Malaysia. The route is estimated at 1,500km, comprising six sections:

- **Nakorn Pathom – Huahin:** The 169km route is split into two sub-sections: (1) Nakhon Pathom to Nong Pla Lai valued at US\$250mn (Bt8.4bn) and (2) Nong Pla Lai to Hua Hin, valued at US\$230mn (Bt7.7bn). Bids were called in May 2017 and 2 giant construction companies won the contracts: AS Associated Engineering Co Ltd for section (1); Sino-Thai Engineering and Construction Plc for section (2).
- **Huahin – Prachuab Kiri Khan:** The 84km route is valued at US\$220bn (Bt7.3bn) The bidding was called in July 2017 and contract was won by Italian-Thai Development Public Company Limited.
- **Prachuab Khiri Khan – Chumphon:** The 167km route is split into two sections: (1) Prachuab Khiri Khan to Bang Saphan Noi valued at US\$190mn (Bt6.4bn) and (2) Bang Saphan Noi to Chumphon, valued at US\$180mn (Bt5.9bn). Bids were called in September 2017. The contract for section (1) was won by KS-C (joint venture between KS Joint Venture Co Ltd and China Railway) while section (2) was won by STPP (a joint venture between Sino-Thai Engineering and Construction and Thai Pico & Industry Co Ltd).
- **Chumphon – Suratthani** The route, valued at US\$700mn (Bt23bn) has been forwarded by the State Railway of Thailand to the cabinet for consideration by end 2017.
- **Suratthani – Songkhla:** The route, valued at US\$1.6bn (Bt51bn) has been forwarded by the State Railway of Thailand to the cabinet for consideration by end 2017.
- **Hat Yai – Padang Besar:** A 48km route is planned and expected to cost up to US\$240mn (Bt7.9bn). The project proposal was approved by the State Railway of Thailand and forwarded to the Transport Ministry.

### China and Japan express interest in Bangkok-KL HSR

Although the Bangkok-KL HSR is in the initial phase of discussion and planning, China and Japan have already expressed interest in a feasibility study for the project.

Figure 85: Bangkok – Hat Yai – Padang Besar Railway roadmap



Source: Deutsche Bank



### #3. Thai-Sino High Speed Rail (Bangkok-Laos)

The Thai-Sino High Speed Rail will span across Thailand and connect it to Vientiane in Laos and Kunming in China (via the China-Lao high speed railway). It is planned to eventually connect with the KL-SG HSR to form part of the Pan-Asian Railway.

Figure 86: Thai-Sino High Speed Rail roadmap



Source: Deutsche Bank

#### Stretches 873km across 10 provinces, divided into four sections

- The rail will run through 10 provinces in Thailand and is divided into four sections: (1) 133km from Bangkok to Kaeng Khoi, (2) 247km from Kaeng Khoi to Map Ta Phut, (3) 139km from Kaeng Khoi to Nakhon Ratchasima and (4) 355km from Nakhon Ratchasima to Nong Khai. The project is expected to be completed by 2022.

#### Estimated US\$15bn for overall project; Phase 1 capex at US\$5.4bn

- The first phase of the project will focus on a 250km track from Bangkok to Nakhon Ratchasima, costing US\$5.4bn (Bt180bn). The Thai government will bear the full cost of construction for this phase by issuing bonds or seeking loans from banks (not concluded yet). The second phase of the project will be discussed at a later stage.

#### Main contract awarded to China Communications Construction

- The project is divided into two parts: (1) construction supervision consultant services to be operated by local operators and (2) detailed design services of tunnels to be contracted to Chinese companies. Thailand has signed a contract with China Railway International Co Ltd and Railway Design Corporation for detailed design services.

#### HSR to benefit both Thailand and Laos in trade activity and tourism

- Laos exports agricultural products and timber to Thailand, and imports construction materials and consumer products from Thailand
- However, Laos does not have direct access to the sea and trucks are the only mode of transport. Hence, the high speed rail will ease transport between the countries and reduce export costs. This will further improve trade and economic activity between them.
- Expected to boost the domestic tourism industry in both countries.



## #4. China-Laos High Speed Rail

The China-Laos High Speed Rail is a major strategic project for both countries. Once completed, it will promote China-Laos cooperation and strengthen ties in the China-ASEAN Free Trade Area.

### China-Laos railway stretches from Kunming to Vientiane over 415km

- The China-Laos railway stretches 415km from Kunming, the capital of China's Yunnan province, to Vientiane, the capital of Laos.
- As the railway will run through mountainous terrain, it will require 76 tunnels and 154 bridges. It will be divided into 6 sections (as listed in Figure 89) and comprise 32 stations.
- The total travel time through the entire route is estimated at 10 hours.

Figure 88: Sectional breakdown of China-Laos High Speed Railway

Section.	Rail section	Length (km)
1	Boten-Meuang Xay	68.7
2	Meuang Xay-Nam Seu Bridge	68.8
3	Nam Seu Bridge-Phou Sanaen	65.6
4	Phou Sanaen-Ban Pa Village	6.15
5	Ban Pa-Phonhong	79.5
6	Phonhong-Vientiane	65.7

Source: Deutsche Bank

### RMB40bn to build the entire project funded by China and Laos

- The project is estimated to cost US\$6bn (RMB40bn) and is jointly funded by the Chinese and Laotian governments on a ratio of 70% and 30%. The Laotian payment will be funded by various state enterprises and a series of low-interest loans from China to Laos.

### Main contract awarded to China Railway Corporation

- The contracts of this project have been awarded to three of China Railway Corporation's subsidiaries. Expected completion is in 2022.

### Only one railway in Laos currently; new railway will drive exponential growth

- Currently, Laos only has one railway linking to Thailand's Nong Khai, which we believe cannot meet the demand of rail passengers and the development of the economy.
- The new railway has multiple benefits:
  - Mobilise the development of the Laotian economy, improve transportation, boost the tourism industry and create jobs.
  - Create cost-competitive travel the two countries besides costly flights or time-consuming coaches.
  - Allow easy transportation of Laotian products (such as agricultural ones) to China rather than costly air freight.

Figure 87: China-Laos High Speed Railway roadmap



Source: Deutsche Bank



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## #5. Cambodia-Thailand Railway

The Cambodia-Thailand railway line had been planned for a long time but progress had been slow. The project was given a push during Cambodian Prime Minister Hun Sen's historic first-in-a-decade visit to Thailand in 2016.

### Cambodia and Thailand to upgrade current railways to connect both countries

The railway is connected in two separate segments from different countries. Also, as both countries have existing railway infrastructure, it is not an entirely new development. The segments are:

- **Cambodia:** The railway runs from Sisophon (the capital of Banteay Meanchey province) to Poipet on the Thai border. A new station is being built in Banteay Meachey.
- **Thailand:** The State Railway of Thailand is rehabilitating the track from Aranyaprathet station in Sa Kaeo province to Ban Khlong Luek at the border, opposite Cambodia's Poipet. The track had been mostly destroyed during the civil wars in the 1970s.

### RMB40bn estimated for the entire project, jointly funded by China and Laos

- Cambodia and Thailand will sign an agreement on the connection of the railway lines by end 2017.
- Both countries will hold a ceremony in early 2018 to celebrate the official opening of the railway connecting Phnom Penh and Bangkok.

### Bilateral trade to increase with better infrastructure connecting two nations

- Cambodia and Thailand share strong trade relations and after the railway opens, both governments target to triple bilateral trade to US\$15.0bn by 2020. As of end 2016, bilateral trade amounted to US\$5.4bn.





## DB-identified key beneficiaries in the ASEAN infra push

Figure 89: Stock information

Name	Ticker	DB Rating	Share price	Name	Ticker	DB Rating	Share price
<b>Singapore</b>							
Keppel DC REIT	KEPE.SI	Hold	S\$1.40	Starhub Ltd	STAR.SI	Buy	S\$2.78
SATS Ltd	SATS.SI	Buy	S\$5.12	M1 Ltd	MONE.SI	Buy	S\$1.77
OUE Hospitality Trust	OUER.SI	Hold	S\$0.82	NetLink Trust	SJLU.SI	Not rated	S\$0.83
Genting Singapore PLC	GENS.SI	Buy	S\$1.32	ST Engineering Ltd	STEG.SI	Buy	S\$3.27
Singtel Ltd	STEL.SI	Buy	S\$3.66				
<b>Malaysia</b>							
Gamuda Bhd	GAMU.KL	Hold	MYR4.74	SP Setia Group Bhd	SETI.KL	Not rated	MYR3.54
Sunway Construction Bhd	SCOG.KL	Not rated	MYR2.35	Mah Sing Group Bhd	MAHS.KL	Not rated	MYR1.55
Ahmad Zaki Resources Bhd	AZRB.KL	Not rated	MYR1.05	Sunway Bhd	SWAY.KL	Not rated	MYR1.65
George Kent Malaysia Bhd	GKMS.KL	Not rated	MYR3.25	MyEG Services Bhd	MYEG.KL	Not rated	MYR2.12
WCT Holdings Bhd	WCTE.KL	Not rated	MYR1.66	Bison Consolidated Bhd	BISO.KL	Not rated	MYR2.62
IJM Corporation Bhd	IJSM.KL	Buy	MYR3.03	7-Eleven Malaysia Holdings Bhd	SEVE.KL	Not rated	MYR1.55
Lafarge Malaysia Bhd	LAFAoL.KL	Not rated	MYR6.94	AirAsia Bhd	AIRA.KL	Sell	MYR3.17
KL Kepong Bhd	KLKK.KL	Buy	MYR24.44	Malaysia Airports Holdings Bhd	MAHB.KL	Buy	MYR8.27
Sime Darby Bhd	SIME.KL	Hold	MYR9.09	Genting Malaysia Bhd	GENM.KL	Buy	MYR4.93
Eco World Devt Grp Bhd	ECOW.KL	Not rated	MYR1.50	Axiata Group Bhd	AXIA.KL	Hold	MYR5.18
<b>Indonesia</b>							
Adhi Karya PT	ADHI.JK	Not rated	IDR2,240	Indocement PT	INTP.JK	Buy	IDR19,500
Wijaya Karya PT	WIKA.JK	Hold	IDR1,970	Surya Semesta Internusa PT	SSIA.JK	Buy	IDR555
Waskita Karya PT	WSKT.JK	Buy	IDR2,150	Bekasi Fajar PT	BEST.JK	Hold	IDR278
PTPP PT	PTPP.JK	Buy	IDR2,750	Kawasan Industri Jababeka PT	KIJA.JK	Not rated	IDR306
Semen Indonesia PT	SMGR.JK	Buy	IDR9,950	Jasa Marga PT	JSMR.JK	Buy	IDR6,450
<b>Thailand</b>							
Unique Engineering & Construction PCL	UNIQ.BK	Not rated	THB17.70	WHA Corp PCL	WHA.BK	Buy	THB4.02
Sino-Thai Engineering & Construction PCL	STEC.BK	Not rated	THB24.50	AMATA Corporation PCL	AMATA.BK	Hold	THB24.80
Ch. Karnchang PCL	CK.BK	Not rated	THB27.25	Bangkok Bank PCL	BBL.BK	Hold	THB196.00
Italian-Thai Development PCL	ITD.BK	Not rated	THB4.00	Krung Thai Bank PCL	KTB.BK	Hold	THB18.50
Siam Cement PCL	SCC.BK	Buy	THB470.00	Kasikornbank PCL	KBANK.BK	Buy	THB221.00
Siam City Cement PCL	SCCC.BK	Not rated	THB278.00	Siam Commercial Bank PCL	SCB.BK	Hold	THB147.50
TPI Polene PCL	TPIPL.BK	Not rated	THB2.12	TMB Bank PCL	TMB.BK	Buy	THB2.72
<b>Philippines</b>							
DMCI Holdings Inc	DMCI.PS	Hold	PHP14.60	Jollibee Foods Corp	JFC.PS	Hold	PHP258.8
EEL Corporation	EEL.PS	Not rated	PHP12.28	Max's Group Inc	MAXS.PS	Hold	PHP18.22
Cemex Holdings Philippines Inc	CHP.PS	Buy	PHP4.39	Shakey's Pizza Inc	PIZZA.PS	Buy	PHP13.00
Ayala Land Inc	ALI.PS	Hold	PHP41.55	Megawide Construction Corp	MWIDE.PS	Hold	PHP18.00
Filinvest Land Inc	FLI.PS	Buy	PHP1.89	Cebu Air Inc	CEB.PS	Buy	PHP100.00
Megaworld Corp	MEG.PS	Hold	PHP5.35	Travellers International Group Inc	RWM.PS	Sell	PHP3.82
SM Prime Holdings Inc	SMPH.PS	Hold	PHP35.5	Belle Corporation	BELLE.PS	Buy	PHP3.79
Vista Land & Lifescapes Inc	VLL.PS	Hold	PHP6.22	Bloomerry Resorts	BLOOM.PS	Buy	PHP10.20
Puregold Price Club Inc	PGOLD.PS	Buy	PHP49.50	Melco Resorts Philippines	MRP.PS	Buy	PHP6.69
Robinsons Retail Holdings Inc	RRHI.PS	Hold	PHP92.00	Holcim Philippines Inc	HLCM.PS	Not rated	PHP11.90
Wilcon Depot Inc	WLCON.PS	Not rated	PHP8.20	Eagle Cement Corp	EAGLE.PS	Not rated	PHP14.80
Philippine Seven Corp	SEVN.PS	Not rated	PHP214.00	Aboitiz Equity Venture	AEV.PS	Not rated	PHP71.00

Source: Deutsche Bank, Bloomberg Finance LP (Data as of 16 November 2017)



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# Appendix 1

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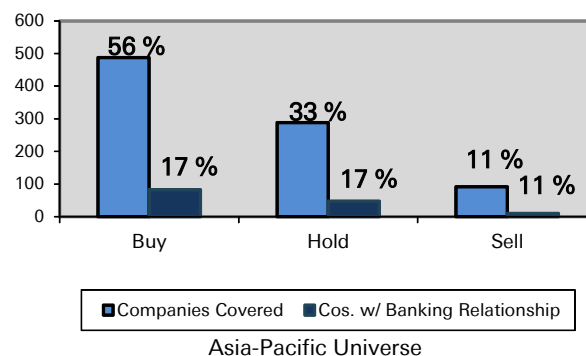
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