
7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT

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Dear Sirs,

Executive Summary of the Strategic Analysis of the Engineering and Project Management Services Market and Overview of the Water Services Industry and Energy Sector in Malaysia. Market Overview of the Construction Industry in the Middle East, India and Indonesia

This Executive Summary of the 'Strategic Analysis of the Engineering and Project Management Services Market and Overview of the Water Services Industry and Energy Sector in Malaysia. Market Overview of the Construction Industry in the Middle East, India and Indonesia' is prepared by Protégé Associates Sdn. Bhd. ("Protégé Associates") for inclusion in the Prospectus of HSS Engineers Berhad ("HEB" or "the Company") in relation to the proposed listing of and quotation for the entire issued and paid-up share capital of HEB on the ACE Market of Bursa Malaysia Securities Berhad.

1 MALAYSIAN ECONOMIC OVERVIEW

The Malaysian economy registered a commendable growth in 2015 against a backdrop of challenging developments such as a slowing world trade, heightened volatility in the international financial markets and the collapse of energy price. Malaysia's real gross domestic product ("GDP") expanded by 5.0 percent in 2015. The growth is mainly driven by the continued expansion in domestic demand.

The Malaysian economy is expected to grow by between 4.0 to 4.5 percent in 2016. The services sector is expected to remain the largest contributor to the economy by accounting for more than half of Malaysia's real GDP in 2016.

2 INTRODUCTION

The report will begin with an introduction on the areas under review including engineering and project management services catering to both the property market and construction industry. This is then followed by an analysis of the market segments and types of engineering and project management services under coverage. A comprehensive overview of the engineering and project management services market will then be provided.

2.1 DEFINITIONS

Construction refers to the conversion of raw materials through the use of labour into various forms of buildings and infrastructures. A typical construction job is usually managed by a project manager and supervised by a construction manager, design engineer, construction engineer and/ or project architect.

Engineering services is a professional discipline dealing with the application of physical laws and principles of engineering in the design of machines, materials, instruments, structures, processes and systems. It also covers the consulting activities for machinery, industrial process and industrial plant, projects involving civil engineering, hydraulic engineering, traffic engineering, water management projects, projects elaboration and realisation relative to electrical and electronic engineering, mining engineering, chemical

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engineering, mechanical, industrial and systems engineering, safety engineering. The engineering services also include the elaboration of projects using air conditioning, refrigeration, sanitary and pollution control engineering, acoustical engineering etc.

Project management can be referred to as a process, a method, a discipline, a role or the application of tools, skills, knowledge and techniques to complete a certain construction project. Project management is about completing projects on time, within budget and to meet a set of specific requirements.

2.2 SEGMENTATION ANALYSIS

The construction industry can be segregated into 3 segments namely the construction of buildings, civil engineering as well as specialised construction activities.

Construction of buildings refers to the conversion of raw materials through the use of labour into buildings – entire dwellings, office buildings, stores and other public and utility buildings, farm buildings, etc.

Civil engineering revolves around the design, construction and maintenance of physically and naturally built environment, such as motorways, streets, bridges, tunnels, railways, airfields, harbours and other water projects, irrigation systems, sewage systems, industrial facilities, pipelines and electric lines, outdoor sports facilities, etc.

Specialised construction activities include the construction of parts of buildings and civil engineering works without the responsibility for an entire project. It is usually specialised in one aspect common to different structures, requiring specialised skills or equipment. Examples of specialised construction activities encompass pile-driving, foundation work, carcass work, concrete work, bricklaying, stone setting, scaffolding, roof covering, etc.

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3 OVERVIEW OF THE ENGINEERING AND PROJECT MANAGEMENT SERVICES MARKET

The engineering segment is crucial as it is a professional discipline dealing with the application of physical laws and principles of engineering in the design of machines, materials, instruments, structures, processes and systems.

The provisions of engineering services include, but are not limited to the list of services outlined in Figure 1 below.

Figure 1: Types of Engineering Services

Engineering Services	Function
Civil Engineering	Designs of dams, tunnels, shafts, airports, harbours, highways, railways, water storage, treatment and reticulation, sewage treatment plants and sewage collection systems, irrigation and conservation of water drainage, pollution control and generally projects involving the harnessing of natural resources to the service of man.
Electrical Engineering	Design of equipment and systems for the generation, transmission, distribution, control and protection of electricity in the industrial, commercial and domestic fields, also for radio, television and telephone communications, lighting, public address, security monitoring and other building services. Also includes the design of electric and electronic instrumentation and systems for automation in industry and the measurement, recording and control of industrial processes.
Mechanical Engineering	Design and development of machinery, industrial process and power plant, transportation and handling of goods and materials, in bulk and in detail, by mechanical, pneumatic and hydraulic means, steam raising plant, prime movers and self-propelled plant, mining and milling equipment, industrial gas cleaning, waste treatment and disposal, industrial pneumatics and hydraulics, automation, building and site services pertaining to heating, ventilation, air conditioning, lifts, water, gas and sewerage, etc.
Structural Engineering	A specialised field of civil engineering encompassing the design of commercial and industrial buildings and other structures. Structural engineers often work in conjunction with architects in the planning and design of major development projects.

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Engineering Services	Function
Others	Other areas of engineering which requires specialist knowledge and experience including mining engineering, chemical engineering, soils and foundations engineering.

Source: IMR Report

Traditionally, engineers assume the role of project managers, in particular for civil engineering developments due to the many requirements that need their technical knowledge. These vary across many areas including civil, electrical, mechanical and structural design. Leveraging on their technical know-how, engineers may also take up the role of project managers in building development. Other professionals that may assume the role of project managers in building development include architects, quantity surveyors, valuers/ agents or builders/ contractors or those having building/ contracting experiences and background.

A project manager oversees the entire project from the initiation, planning, execution, monitoring and closing of the project. Project managers are responsible for accomplishing the stated project objectives and some of their key accountabilities include creating clear and attainable project objectives, building the project requirements, and managing the various project constraints such as cost, time and scope. The project manager is also often the client's representative and has to determine and implement all plans according to their exact needs based on their understanding of the client's requirements.

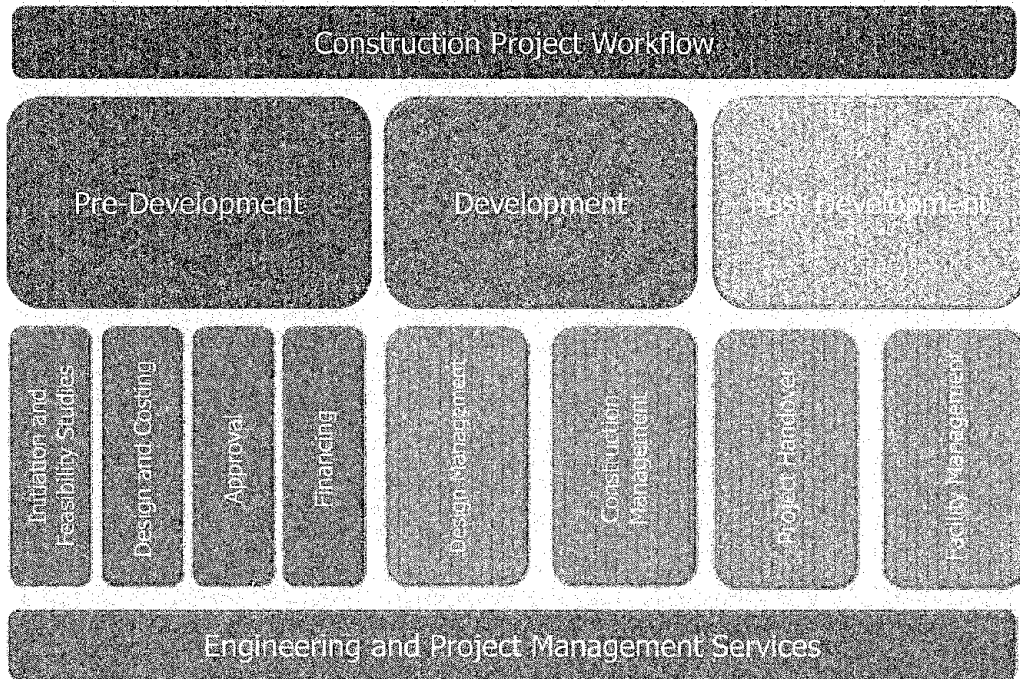
Construction is a process that requires huge financial commitment. The longer and more extensive the process is, the more costly the project will be. Therefore, it is very crucial to have proper management at every stage of the development to reduce the risk of cost and schedule overrun. The need for project management services is even more pronounced as the cost of construction in the country continues to rise in tandem with rising cost of land and building materials.

Figure 2 illustrates the 3 major stages in a construction project and the corresponding engineering and project management services applicable to each stage. Engineering and project management services will depend on the needs and requirements of the client for the particular project.

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Figure 2: General Engineering and Project Management Services throughout the Typical Construction Project Workflow



Source: IMR Report

3.1.1 Engineering and Project Management Services in the Pre-Development Stage

Initiation and Feasibility Studies

This is the commencement point of the construction process when a development is being considered. The engineer/ project management services provider can facilitate the market and feasibility study on the proposed development.

Design and Costing

At this stage, the engineer/ project management services provider will facilitate the preparation of plans and cost estimates for the proposed development. The engineer/ project management services provider will also come out with the proposed design that meets the requirements of the client.

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)***The Evolution of Technology in the Designing Stage***

The designing stage is particularly essential as a fundamental part for the subsequent work of a construction project. In the early history of the construction industry, design drafting was done by paper drawing in a 1 dimensional ("1D") form.

As global technology evolved along with the introduction of the computer, design drafting was made easier with the introduction of electronic drafting using computer-aided design ("CAD") software. This replaced traditional manual drafting. First-generation CAD software was a two-dimensional ("2D") vector-based drafting application and subsequently, transformation from 2D to three-dimensional ("3D") drawings took place. Nonetheless, professionals continued working independently of one another with the lack of integration in design details and process.

Subsequent to developments above, Building Information Modelling ("BIM") was introduced. BIM is a new emerging technology in which a digital representation of the building is created through the integration of previously disparate processes and technologies. BIM facilitates the exchange and interoperability of information in digital format thus allowing organisations to support physical and functional requirements in the form of visualisation.

BIM is adopted throughout the lifecycle of a construction project. In the pre-development stage, BIM is deployed to create a visual simulation of a project and provide a virtual prototype of a building prior to construction. The same information model is then used for the design and construction management during the development phase. During the post-development stage, BIM is deployed in the maintenance scheduling, building system analysis, asset management, space management and tracking, as well as disaster planning in order to maintain the building throughout its lifecycle.

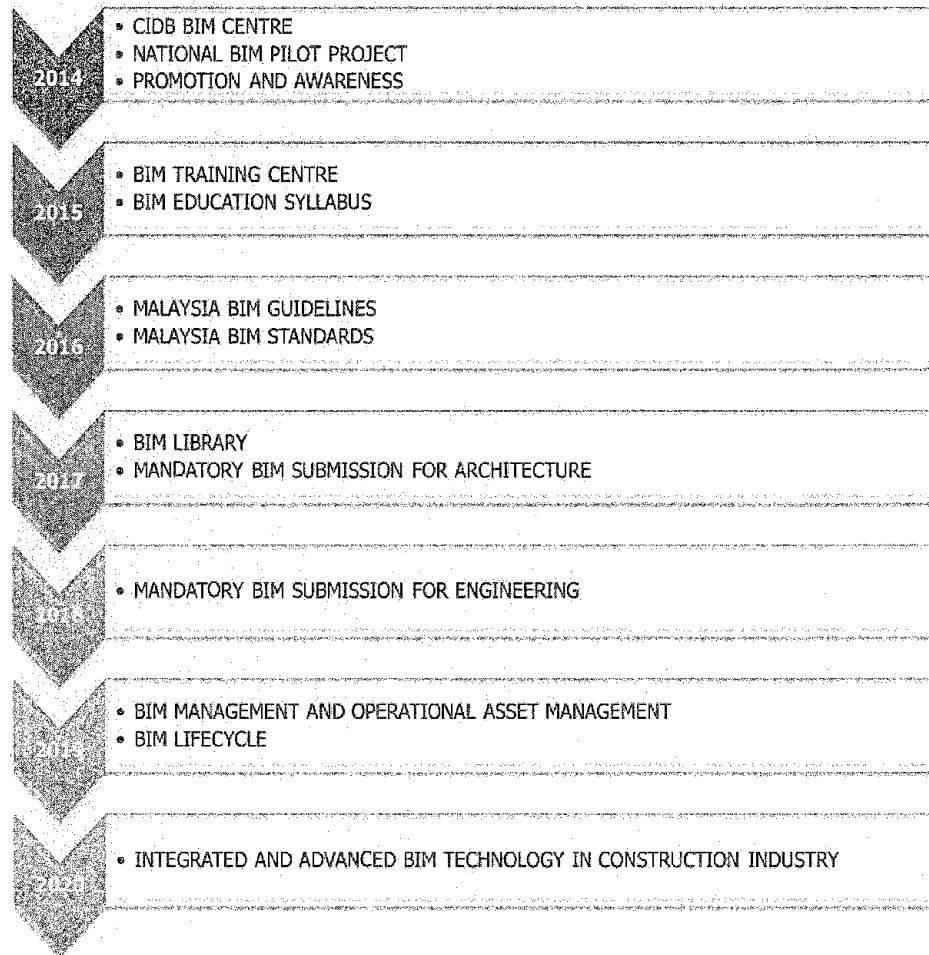
The Malaysian government perceives BIM as an important tool in their property management moving forward. Accordingly, the government had targeted to implement BIM for their projects by 2016. Application of BIM is essential to drive the construction industry towards sustainable construction that focuses on long term affordability, quality and efficiency. Therefore, CIDB has proposed the roadmap for the rollout of BIM, with the aim of utilising the integrated and advanced BIM technology in the construction industry by 2020 as illustrated in Figure 3 below. It is

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noted that the BIM submission for architecture and engineering will be made mandatory by 2017 and 2018 respectively under the proposed roadmap.

Figure 3: Proposed BIM Rollout (2014-2020)



Source: IMR Report

Approvals

Under the engineering and project management service category of approvals in the pre-development stage, the project management services provider conducts all tasks related to the facilitation and negotiation for the procurement of all necessary statutory planning and building permission from the local authorities.

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Financing

At this stage, the project management services provider will facilitate and arrange the required project financing for the client. Large civil engineering projects are often funded by the government and therefore do not require third-party project financing.

3.1.2 Engineering and Project Management Services in the Development Stage

Design Management

Here, project management services provider will prepare the scope of service, obtain proposals, and negotiate and appoint design consultants on behalf of the client. They could also help the client to select the design and construction team, and manage the design to prevent the unnecessary extension of project scope. Engineers assuming the role of project manager may also be appointed as one of the design consultants pertaining to engineering aspect.

Construction Management

This is the traditional role and responsibility of a project manager. The project manager oversees the entire project from the initiation, planning, execution, monitoring and closing of the project. Here, the project management services provider will manage the construction process including the management of appointed contractors, on behalf of the client.

3.1.3 Engineering and Project Management Services in the Post-Development Stage

Project Handover

At this stage, inspections and subsequent rectification works are conducted. Upon the completion of rectification works, the project is ready to be signed-off and hand over to the client.

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Facility management

The client may also engage the engineering/ project management services providers for the provision of facility management services for their buildings. Facility management is a professional service encompassing multiple disciplines to ensure the functionality of the built environment by integrating people, place, process and technology.

The facilities management segment is crucial for the building occupiers to live or operate in a secure and well-managed environment. The demand for facility management services is expected to increase in tandem with the growing sophistication in occupants' needs for a safer and more well-controlled environment. Continued modernisation is expected to result in increasing variety in the structure of occupants' households, thereby resulting in more diverse services needs for residential buildings. Meanwhile, the same is true for commercial buildings, considering the increasing flexibility of people's work schedules and, the blurring of boundaries between work and personal life.

The engineering and project management services market is highly dependent on both the property market and construction industry. An expansion in demand for property will spur an increase in property development and construction activities and accordingly, boost demand for project management services. Therefore, an overview of both the construction industry and property market will be provided in the subsequent sections.



4 OVERVIEW OF THE CONSTRUCTION INDUSTRY IN MALAYSIA

The Malaysian construction industry has again managed to maintain its long streak of uninterrupted growth that started in 2007. In 2015, the construction industry continued to expand albeit at a moderated growth of 8.2 percent. Slower growth in the residential sub-sector has proven to be a drag to the overall expansion in the industry. Nevertheless, a pickup in civil engineering activities and growth in the non-residential sub-sector has helped to provide the necessary impetus to spur further expansion in the construction industry in 2015. The civil engineering sub-sector was boosted by continuing works performed under existing infrastructure projects as well as petrochemical project in Johor while the non-residential sub-sector was driven by projects in both industrial and commercial segments. Moving forward, growth momentum in the Malaysian construction industry is expected to moderate slightly to 7.9 percent in 2016 in tandem with modest growth in both the residential and non-residential sub-sectors.

Figure 4 details construction activities including completions and starts for buildings sub-sectors from 2013 to 2015 as well as first quarter of 2015 ("Q1 2015") and first quarter of 2016 ("Q1 2016").

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Figure 4: Construction Activities in Malaysia, 2013 to 2015, Q1 2015 and Q1 2016

Type	Completions					Starts				
	2013	2014	2015	Q1 2015	Q1 2016 ^p	2013	2014	2015	Q1 2015	Q1 2016 ^p
Residential Property (units)	81,639	107,747	80,850	26,273	9,410	145,779	171,146	188,757	47,146	30,318
Purpose-built Office (s.m.)	141,685	415,944	520,718	111,130	5,225	290,553	183,395	481,642	71,074	4,608
Shops (units)	9,667	10,601	9,649	2,778	3,089	17,956	20,512	21,345	8,114	3,448
Shopping Complex (s.m.)	451,743	711,004	645,878	115,657	124,674	263,040	368,180	621,165	295,935	183,965
Industrial Property (units)	827	1,049	927	285	167	1,941	3,411	2,294	364	164

Notes:

- 1) s.m. denotes square metres
- 2) p denotes preliminary

Source: IMR Report

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The Malaysian Government's policies have remained accommodative and supportive of growth in the local construction industry. Each year, the local construction industry has been eagerly looking forward to the annual federal budget announcement. Federal budgets typically include proposed government projects as part of its development expenditure.

In Budget 2016, the Malaysian Government had given higher priority to projects with larger multiplier effects in terms of supporting consumption and enhancing future productive capacity, place the people first and reduce imports. Infrastructure has been viewed by the Malaysian Government as the catalyst to all economic and social development. Hence, it is unsurprising that a slew of infrastructure projects had been announced in Budget 2016. As part of the efforts to boost public transport networks, the Malaysian Government is implementing 3 notable projects namely the second line of the Klang Valley mass rapid transit ("MRT") project, the Sungai-Buloh-Serdang-Putrajaya Line ("MRT2"), the third line of the light rail transit ("LRT"), the Bandar Utama, Damansara-Johan Setia, Klang Line ("LRT3") and the Rapid Bus Transit ("BRT") including BRT Kota Kinabalu.

The cost involved for the 52-kilometre ("km") MRT2 project is estimated at RM28 billion. The construction of MRT2 is commencing in the second quarter of 2016 with 2022 being earmarked as the completion year. Meanwhile, the 36-km LRT3 project is estimated to cost RM10 billion with construction works commencing from 2016. The LRT3 project is scheduled to be completed by 2020. The Malaysian Government is also implementing the BRT project at a cost of more than RM1.5 billion and the BRT Kota Kinabalu at a cost of almost RM1 billion to boost public bus services.

Other notable infrastructure projects announced for development were the highways of Damansara-Shah Alam, Sungai Besi-Ulu Klang, Pulau Indah and Central Spine Road. A sum of RM900 million has also been allocated to implement the Jalan Tun Razak Traffic Dispersal Project to reduce congestion in Kuala Lumpur. Besides that, a sum of RM42 million has been allocated for the upgrading of airports in Kuantan, Pahang and Kota Bahru, Kelantan as well as for the construction of Mukah Airport in Sarawak. Infrastructure development in rural area is also expected to gain further traction with the allocation of RM1.4 billion to build and upgrade 700km of rural roads across the country and RM200 million to upgrade roads in Federal Land Development Authority ("FELDA") settlements. A sum of RM180 million has also been allocated to upgrade drainage and irrigation infrastructure in the Integrated Agricultural Development areas.

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Development in East Malaysia is being intensified by the Malaysian Government. Besides the construction of Mukah Airport in Sarawak, it has been highlighted that the 1,090-km Sarawak Pan-Borneo Highway is projected to be completed in 2021. Total cost involved for the Sarawak Pan-Borneo Highway is estimated at RM16.1 billion. Over in Sabah, the construction of the 706-km highway from Sindumin to Tawau at an estimated cost of RM12.8 billion has been given the go-ahead by the Malaysian Government with construction works commencing in 2016.

The construction industry in Malaysia is also expected to benefit from the implementation of various projects and initiatives by the Malaysian Government to boost domestic investment. As highlighted in Budget 2016, the Malaysian Government expects significant amount of investment being poured into projects and initiatives such as the development of the Malaysian Vision Valley covering an area from Nilai to Port Dickson in Negeri Sembilan, the Kuala Lumpur International Airport ("KLIA") Aeropolis, Cyber City Centre in Cyberjaya, Rubber City in Kedah, Samalaju Industrial Park in Sarawak, Palm Oil Jetty in Sandakan, Sabah and the Refinery and Petrochemical Integrated Development Project ("RAPID") Complex in Pengerang, Johor.

Affordable housing also received close attention from the Malaysian Government. Measures related to affordable housing announced in Budget 2016 included the construction of 175,000 units of affordable houses by the 1Malaysia People's Housing Programme ("PR1MA"), 10,000 units of 'Rumah Mesra Rakyat' by Syarikat Perumahan Negara Berhad, 100,000 houses by Perumahan Penjawat Awam 1 Malaysia, 22,300 units of apartment and 9,800 units of terrace houses by the People's Housing Programme ("PPR"), a First House Deposit Financing Scheme under the Ministry of Urban Wellbeing, Housing and Local Government to be established to assist first-time house buyers of affordable houses, RM60 million allocation to the Department of Orang Asli Development for building houses, houses for the second generation settlers by FELDA, Federal Land Consolidation and Rehabilitation Authority ("FELCRA") and Rubber Industry Smallholders Development Authority ("RISDA"), and RM40 million allocation for reviving abandoned low and medium-cost private housing projects.

The local construction industry is also poised to benefit from the various ongoing or planned major development projects. The development of the RM8.7 billion mixed development Bukit Bintang City Centre project on the 19.4-acre former Pudu Jail site and Kwasa Damansara project on 2,330 acres of prime land located in the Klang Valley is set to drive more construction activities. In addition, the industry can also expect a stream of potential

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upcoming major construction projects in the pipeline namely the KL118 Tower, Kuala Lumpur-Singapore high speed rail ("HSR"), Tun Razak Exchange and Bandar Malaysia. This development augurs well for the growth in the construction industry in Malaysia.

5 OVERVIEW OF THE PROPERTY MARKET IN MALAYSIA

The Malaysian property market registered slowdown in both total transaction volume and value in 2015. Total transaction volume contracted by 5.7 percent to 362,105 transactions from 384,060 transactions in the preceding year while the value of transactions dropped by 8.0 percent to RM149.9 billion. In Q1 2016, both total property transaction volume and value were lower as compared to Q1 2015. Total transaction volume stood at 80,029 transactions amounting to close to RM32.0 billion, as compared to 93,490 transactions amounting to close to RM39.0 billion in the corresponding period in 2015.

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Figure 5: Volume and Value of Property Transaction by Sub-Sector in Malaysia, 2013-2015, Q1 2015 and Q1 2016

Sub-Sector	2013		2014		2015		Q1 2015		Q1 2016 ^p	
	Volume	Value (RM million)	Volume	Value (RM million)	Volume	Value (RM million)	Volume	Value (RM million)	Volume	Value (RM million)
Residential	246,225	72,060.4	247,251	82,059.6	235,967	73,469.9	59,490	17,945.2	49,612	16,248.5
Commercial	34,298	35,561.9	35,528	31,835.1	31,776	26,399.5	9,356	7,627.1	5,411	5,224.0
Industrial	8,418	12,328.6	8,100	14,509.4	7,046	11,970.8	2,165	4,018.5	1,262	2,607.1
Agricultural	70,698	13,283.4	72,104	12,723.4	66,705	13,087.5	16,960	3,157.7	18,606	3,896.8
Development Land	21,455	19,121.5	21,040	21,702.0	20,534	24,915.8	5,500	6,205.7	5,111	3,954.8
Others	36	16.2	37	144.9	77	54.5	19	2.0	27	62.0
Total	381,130	152,372.1	384,060	162,974.4	362,105	149,898.0	93,490	38,956.3	80,029	31,993.2

Notes:

1. p denotes preliminary;
2. Total value of property transaction may not add up due to rounding error.

Source: IMR Report

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)**Residential Property**

In 2015, there were 235,967 residential property transactions valued at approximately RM73.47 billion.

There were approximately 4.9 million residential units and serviced apartments in Malaysia by the end of 2015 with 892,099 units expected to be added to the existing stock and another further 642,405 units being planned. Meanwhile, Selangor led all the other states and federal territories in terms of existing stock and incoming supply of residential units and serviced apartments as at end of 2015.

In Q1 2016, there were approximately 4.9 million residential units in Malaysia with 793,586 residential units expected to be added to the existing stock and another further 577,732 residential units being planned. Meanwhile, Selangor continued to lead all the other states and federal territories in terms of existing stock and incoming supply of residential units during the period.

Shop

There were 415,754 shops and small office/home office ("SOHO") in Malaysia by the end of 2015 with 96,664 units expected to be added to the existing stock and another further 73,254 units being planned. Selangor has the highest number of existing stock and incoming supply for shops and SOHO as at the end of 2015.

In Q1 2016, there were 415,569 shops in Malaysia, with 81,358 shops expected to be added to the existing stock and another further 61,606 shops being planned. In addition, there were 4,242 SOHO in Malaysia in Q1 2016, with 16,234 SOHO expected to be added to the existing stock and another further 11,454 SOHO being planned.

On the other hand, there were 78,703 serviced apartments in Malaysia in Q1 2016, with 131,798 serviced apartments expected to be added to the existing stocks and another further 85,813 serviced apartments being planned.

Shopping Complex

Malaysia's stock of retail space in 2015 stood at approximately 13.8 million square meter ("s.m."). During the same year, incoming and planned supply recorded a total of over 1.5 million s.m. and 1.0 million s.m. respectively.

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In Q1 2016, Malaysia's stock of retail space stood at close to 14.0 million s.m.. During the same period, incoming and planned supply recorded a total of close to 1.7 million s.m. and 1.0 million s.m. respectively.

Purpose-built Office

Malaysia's property market also witnessed a steady performance from its purpose-built office sub-sector in 2015 with the stock of office space of over 20.1 million s.m.. The occupancy rate for purpose-built office in Malaysia was recorded at 84.9 percent in 2015.

In Q1 2016, there was an existing stock of 20,223,939 s.m. of purpose-built office in Malaysia, with 1,817,074 s.m. incoming supply and 1,055,607 planned supply.

Industrial Property

There was an existing stock of 103,868 industrial units in Malaysia as at end of 2015, with 11,206 incoming units and 9,981 planned units. Selangor topped the rest in terms of existing stock and incoming supply as at end of 2015.

In Q1 2016, there was an existing stock of 104,627 industrial units in Malaysia, with 10,635 incoming units and 9,566 planned units. Selangor topped the rest in terms of existing stock and incoming supply during the period.

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6 ANALYSIS OF THE ENGINEERING AND PROJECT MANAGEMENT SERVICES MARKET IN MALAYSIA

6.1 MARKET DYNAMICS SCORECARD

Figure 6: Market Dynamics Scorecard for the Engineering and Project Management Services Market in Malaysia

Market Dynamics Indicators	Measurement	Trends
2015 Market Size (RM billion)	4.24	Increasing
2015 Market Growth Rate (%)	9.9	Stable
2020 Forecast Market Size (RM billion)	5.85	Increasing
Forecast Period Market Compound Annual Growth Rate ("CAGR") (2015 – 2020) (%)	6.5	Stable
Competitive Landscape	Around 2,700 to 3,000 small to large market participants. These market participants consist of local companies and subsidiaries or local offices of multinational corporations.	Stable
2016 Demand Conditions	Government-led initiatives and spending along with sustained economic growth and growing interest by landowners to develop their land will continue to underpin demand.	Stable
2016 Supply Conditions	There is a general increase in engineering and project management professionals to meet the increase in demand in tandem with overall growth seen within the construction industry and property market.	Stable

Source: IMR Report

6.2 HISTORICAL MARKET PERFORMANCE AND GROWTH FORECAST

In the past few years, there has been an increasing demand for engineering and project management services in tandem with overall growth seen within the construction industry and property market. Construction activities involve substantial financial commitment and high risk, and this was further exacerbated by rising cost of land, building materials and labour. As such, the demand for engineering and project management services has become

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more profound as prospective developers and construction companies seek to complete their projects within a stipulated timeline, while at the same time managing cost to stay within allocated budget.

Protégé Associates' estimate places the engineering and project management services market in Malaysia at approximately RM4.24 billion in 2015. The engineering and project management services market is projected to grow at a CAGR of 6.5 percent over the forecast period of 2015 to 2020.

Figure 7: Market Size and Growth Forecast for the Engineering and Project Management Services Market in Malaysia, 2013-2020

Year	Market Size (RM billion)	Growth Rate (%)
2013	3.47	-
2014	3.86	11.1
2015	4.24	9.9
2016	4.44	4.6
2017	4.73	6.5
2018	5.05	6.8
2019	5.42	7.5
2020	5.82	7.3

Notes:

1. CAGR (2015 – 2020): 6.5 percent;
2. All figures are rounded, the base year is 2015;
3. The market size and corresponding growth and forecast include:
 - i. Engineering design and consulting activities for machinery, industrial processes and industrial plant; projects involving civil engineering, hydraulic engineering, traffic engineering; water management projects; project elaboration and realisation relative to electrical and electronic engineering, mining engineering, chemical engineering, mechanical, industrial and systems engineering, safety engineering; project management activities related to construction;
 - ii. Elaboration of projects using air conditioning, refrigeration, sanitary and pollution control engineering, acoustical engineering, etc.

Source: IMR Report

The engineering and project management services are largely dependent on the construction industry, and its outlook is encouraging in the light of favourable growth seen for the construction industry moving forward. In 2015, the construction industry expanded by 8.2 percent. Growth in 2015 was stemmed from a pickup in civil engineering activities, while growth in the non-residential sub-sector has helped to provide the necessary impetus to spur further expansion.

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Moving forward, the continued upward trajectory of the engineering and project management services market is expected to be driven by a combination of factors such as the government-led initiatives and spending, sustained economic growth to support spending and investment in properties, steady population growth, the strategic need for project management services and increasing participation by professionals into the provision of project management services. Meanwhile, the outlook for the construction industry remains positive going forward.

6.3 COMPETITIVE ANALYSIS

HSS Engineers Berhad ("HEB") and its subsidiaries ("HEB Group" or "the Group"), through its collaboration with HSS Integrated Sdn Bhd and HSS Mekanikal & Elektrikal Sdn Bhd, participates in the engineering and project management services market through its provision of engineering services encompassing engineering design and construction supervision, project management and BIM services.

HEB Group has a longstanding history of over 15 years with a reputation built upon the Group's experiences in undertaking projects for a wide array of sectors including, but not limited to, buildings and structures, urban infrastructure, roads and highways, railways and metro systems, airports, ports and harbours, transportation planning, power generation and distribution, water resources and supply, and sewerage and public health-related construction projects.

For its financial year ended ("FYE") 31 December 2015, HEB Group reported revenue of RM121.5 million, of which 97.5 percent or 118.5 million was contributed from the Malaysian market.

Due to the wide and diversified requirements for engineering and project management related services, the engineering and project management services market is highly competitive and fragmented with around 2,700 to 3,000 small to large market participants. These market participants constitute the local companies and subsidiaries/ local offices of multinational corporations ("MNCs") established in Malaysia.

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)**Figure 8: Selected Market Participants in the Engineering and Project Management Services Market by Category**

Company	Local Company	Subsidiary/ Local Office of MNC
AECOM Perunding Sdn Bhd ("AECOM Perunding")		✓
Arup Jururunding Sdn Bhd		✓
CH2M Hill Malaysia Sdn Bhd		✓
EDP Consulting Group Sdn Bhd	✓	
HEB Group	✓	
K.L. Consult Associates Sdn Bhd	✓	
KTA Tenaga Sdn Bhd	✓	
Meinhardt (Malaysia) Sdn Bhd		✓
Minconsult Sdn Bhd	✓	
Mott MacDonald (Malaysia) Sdn Bhd ("Mott MacDonald Malaysia")		✓
Perunding ZKR Sdn Bhd	✓	
Ranhill Bersekutu Sdn Bhd ("Ranhill Bersekutu") and Ranhill Consulting Sdn Bhd ("Ranhill Consulting")	✓	
Sepakat Setia Perunding Sdn Bhd ("Sepakat Setia Perunding")	✓	
SMEC (Malaysia) Sdn Bhd ("SMEC Malaysia")		✓
SMHB Sdn Bhd	✓	
Zaidun-Leeng Sdn Bhd	✓	

Notes:

1. Details of subsidiaries/ local offices of MNCs are listed below;
 - i) AECOM Perunding is the Malaysian office of AECOM, US;
 - ii) Arup Jururunding Sdn Bhd is the Malaysian office of Arup, UK;
 - iii) CH2M Hill Malaysia Sdn Bhd is the Malaysian subsidiary of CH2M Hill, US;
 - iv) Meinhardt (Malaysia) Sdn Bhd is the Malaysian office of Meinhardt Group, Australia;
 - v) Mott MacDonald Malaysia is the Malaysian office of Mott MacDonald, UK;
 - vi) SMEC Malaysia is the Malaysian office of SMEC, Australia;
2. Ranhill Bersekutu is a subsidiary of Ranhill Berhad which is currently not a listed company;
3. These market players are randomly identified for comparison purpose only, and do not constitute and is not limited to the actual quantity of market players within the engineering and project management services market;

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

4. *The selected market players are alphabetically arranged and this does not constitute as a ranking.*

Source: IMR Report

Moving forward, Protégé Associates anticipates an expanding importance of BIM within the construction industry pursuant to the government's initiative in promoting the adoption of the said methodology. An example of the government's focus on BIM includes the launching of the PR1MA BIM Guide for the government's PR1MA development in February 2015. Furthermore, the CIDB has also proposed a roadmap for the rollout of BIM, with the aim of utilising the integrated and advanced BIM technology in the construction industry by 2020. It is noted that the BIM submission for architecture and engineering will be made mandatory by 2017 and 2018 respectively under the proposed roadmap, which is expected to further spur the utilisation of BIM.

6.3.1 HEB Group's Comparison with Selected Market Participants

For comparison purposes, Protégé Associates has detailed selected market players within the engineering and project management services market in Figure 9 below based on the following criteria:

- Established in Malaysia with over 15 years of history;
- Offer multidisciplinary engineering services, including the provision of engineering services, project management or BIM;
- Turnover of over RM40 million based on latest publicly available financial information;
- Possess a track record in infrastructure development in Malaysia.

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

Figure 9: Selected Market Players within the Engineering and Project Management Services Market in Malaysia

Company	Description	Financial Information	Track Record in Infrastructure Development in Malaysia
AECOM Perunding	<ul style="list-style-type: none"> Incorporated in 1993 and is the Malaysian office of AECOM, US; An integrated service provider of engineering services from project planning and programming to designing, project delivery, administration and supervision of construction and facilities management; Field of specialisation encompasses building, environment and transportation segments. 	FYE 30 September 2014 Revenue RM154.7 million Profit before Tax ("PBT") RM13.4 million Profit after Tax ("PAT") RM10.4 million	<ul style="list-style-type: none"> Klang Valley MRT Electrified Double Track between Rawang and Ipoh Express Rail Link Kuala Lumpur - KLIA KL Monorail Second Penang Bridge Ampang Kuala Lumpur Elevated Highway Seri Bakti Bridge (BR1) and Seri Bakti Bridge (BR4) Putrajaya New Pantai Expressway MRR II Package 11 Kuala Lumpur Duta Ulu Kelang Expressway ("DUKE") Pasir Gudang Highway Johor Cyberjaya Dual Carriageway Subang – Kelana Link – Jalan Kewajipan Subang Jaya to Federal Highway 2, New Klang Valley Expressway ("NKVE") and Lebuhraya Damansara-Puchong ("LDP")
Mott MacDonald Malaysia	<ul style="list-style-type: none"> Incorporated in 1990 and is the Malaysian office of Mott MacDonald, UK; Provides a comprehensive range of planning, design, project delivery and business advisory services covering all stages of a project from concept to completion; Field of specialisation encompasses airports, 	FYE 31 December 2014 Revenue RM77.5 million PBT RM4.5 million PAT	<ul style="list-style-type: none"> Stormwater Management and Road Tunnel ("SMART") Kelana Jaya line LRT extension KL Monorail Fleet Expansion Klang Valley MRT Blue Line

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

Company	Description	Financial Information	Track Record in Infrastructure Development in Malaysia
Ranhill Bersekutu and Ranhill Consulting	<p>architecture, building and infrastructure, building energy modelling, bridges, coastal engineering, communications, dams, environmental services, foundation and geotechnical engineering, highways, hydrology and hydraulic modelling, integrated transport, irrigation and drainage, mechanical and electrical engineering, oil and gas, power, railways and transportation systems, sustainability, transport planning and economics, tunnels as well as water and sewerage.</p> <ul style="list-style-type: none"> Ranhill Bersekutu was incorporated in 1981 and is a subsidiary of Ranhill Berhad which is currently not a listed company); Ranhill Consulting was incorporated in 1996 based on the resources and track record of Ranhill Bersekutu; Collectively, they provide engineering, procurement and construction management services and project management services; Field of specialisation encompasses water supply, sewerage, flood mitigation, drainage and irrigation, infrastructure, buildings, industrial facilities, maritime, environmental, waste and ecologically sustainable design and green technology. 	<p>RM4.0 million</p> <p>Ranhill Bersekutu FYE 31 December 2014 Revenue RM38.4 million PBT RM1.3 million PAT RM0.5 million</p> <p>Ranhill Consulting FYE 31 December 2014 Revenue RM28.5 million</p>	<ul style="list-style-type: none"> Medini Iskandar Malaysia Electrified Double Tracking Project LRT System Kelana Jaya Line KLIA and KLIA 2 North-South Expressway ("NSE") Senai Desaru Expressway Ampang KL Elevated Highway Extension South Klang Valley Expressway ("SKVE") New Deep Water Terminal at Kuantan Port Muar Bypass Malaysia-Singapore Second Crossing PETRONAS Twin Tower and Suria KLCC Shopping Complex

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

Company	Description	Financial Information	Track Record in Infrastructure Development in Malaysia
Sepakat Setia Perunding	<ul style="list-style-type: none"> Incorporated in 1973; Provides a wide array of engineering services encompassing feasibility studies, investigation and reports, design, contract documentation, calling and evaluation of tenders, project management, quality assurance and quality control, supervision of construction, design audit and independent design clerk; Field of specialisation encompasses airports, bridges, commercial, industrial and residential buildings, dams, defence, drainage, dredging, education, geotechnical, highways and roads, hospitals, housing, infrastructures, irrigation, land development, LRT, marine structures, port development, power station, railway, sewerage, solid waste, tunnels, water supply, water resources, mechanical and electrical building services, and environmental services. 	<p>PBT RM3,416 PAT RM2,466</p> <p>FYE 31 December 2014 Revenue RM15.9 million PBT RM9.3 million PAT RM6.9 million</p>	<ul style="list-style-type: none"> Sg Besi – Ulu Kelang Elevated Highway Bridges Sg Buaya Interchange, Rawang New Seremban Interchange Penang Second Bridge Crossing Pasir Gudang Interchange Seputeh Interchange, Kuala Lumpur East West Link Expressway Salak Interchange, Kuala Lumpur Eastern Dispersal Link in Johor Lebuhraya Kemuning – Shah Alam Kajang-Seremban Expressway Cheras-Kajang Highway Damansara-Puchong Expressway NSE Central link and KLIA Expressway Seremban – Ayer Hitam Expressway Gemas-Johor Bahru Electrified Double Electrified Double Tracking Seremban-Gemas Electrified Double Tracking project Putrajaya LRT Tunnel Genting Sempah tunnel ventilation, lighting and control system

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

Company	Description	Financial Information	Track Record in Infrastructure Development in Malaysia
SMEC Malaysia	<ul style="list-style-type: none"> Incorporated in 1991 and is the Malaysian office of SMEC, Australia; Provides a wide range of engineering services covering planning, design, project management and implementation of projects; Field of specialisation encompasses hydro and thermal power generation, transmission and distribution, dam engineering, water resources, roads and transportation, regional development and infrastructure and water supply. 	<p>FYE 30 June 2015</p> <p>Revenue RM53.4 million</p> <p>PBT RM7.3 million</p> <p>PAT RM5.4 million</p>	<ul style="list-style-type: none"> New Pantar Expressway Railway network development linking Samalaju Industrial Park – Bintulu – Mukah – Tanjung Manis, Sarawak Temporary track for Ipoh to Padang Besar double track project Link from Jalan Awan Besar to KESAS Highway and ramp Trumpet Interchange KM 3.5 North-South Expressway, Johor

Notes:

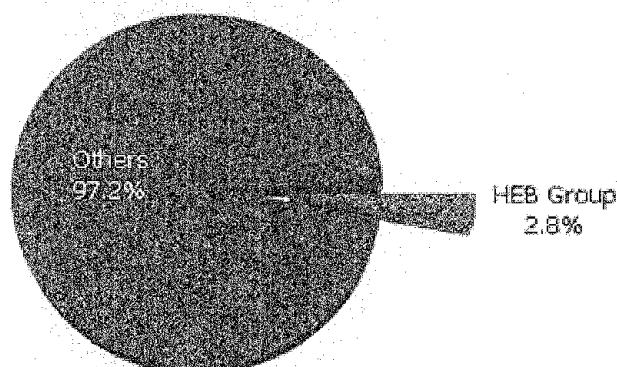
- List of track record is not exhaustive;
- The selected market players are alphabetically arranged and this does not constitute as a ranking;
- The financial figures may include contributions from other business segments.

Source: IMR Report

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)**6.3.2 Market Share Analysis**

For FYE 31 December 2015, HEB Group garnered total revenue of RM121.5 million, of which RM118.5 million or 97.5 percent stemmed from the Malaysian market. This is equivalent to 2.8 percent share of the engineering and project management services market during the year, as illustrated in Figure 10. This is based on HEB Group's Malaysian revenue of RM118.5 million from Malaysian market against Malaysia's engineering and project management services market revenue of RM4.24 billion in 2015.

Figure 10: HEB Group's Market Share in Malaysia's Engineering and Project Management Services Market, 2015



Source: IMR Report

6.4 DEMAND AND SUPPLY CONDITIONS**6.4.1 Demand Conditions****Government-led Initiatives and Spending**

The engineering and project management services market is expected to benefit from government-led initiatives and spending on the construction industry. A RM260 billion development allocation has been earmarked under the Eleventh Malaysia Plan ("11MP"). Of the RM260 billion development allocation, around half is for developing infrastructure – which is to be undertaken by the construction industry. The Construction Industry Transformation Programme ("CITP") that covers the period from 2016 to 2020 which was introduced by the Malaysian Government under the 11MP is also expected to drive the local construction industry forward. This programme has identified four main strategies under the 11MP to transform the construction industry namely enhancing knowledge content, driving

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

productivity, fostering sustainable practices and increasing the internationalisation of construction firms.

The construction industry is also set to benefit directly from the rollout of the Economic Transformation Programme ("ETP"). Under the ETP, a number of major property development projects planned within the Greater KL along with infrastructure projects would support the growth of the construction industry. The industry as a whole is expected to benefit from the mammoth Klang Valley MRT project. Besides that, the on-going development in the Iskandar Malaysia project as well as the RAPID project in Pengerang, Johor is expected to continue to provide the catalyst for the growth in the industry. In addition, Budget 2016 unveiled the government's plans development projects such as the Pan-Borneo Highway and Mukah Airport in Sarawak, the highway from Sindumin to Tawau in Sabah as well as the upgrading of airports in Kuantan and Kota Bharu is also expected to be a boon for the local construction industry.

Sustained Economic Growth to Support Spending and Investment in Properties

Malaysian consumers are generally attaining greater affluence as a result of broad economic growth seen for the country over the past half-century. Malaysia's real GDP is expected to expand at a slower rate of 4.0 to 4.5 percent in 2016. However, the moderating effects are expected to be partially offset by continued growth in income and employment coupled with support from the government measures targeted at enhancing households' disposable income. Accordingly, this is expected to provide them with greater propensity to purchase, upgrade or invest in properties. Hence, the construction industry stands to benefit from the increase in properties demand that can be translated into more demand for engineering and project management services.

Steady Population Growth

The total population of Malaysia was 28.6 million in 2010. This figure is projected to grow steadily to reach 38.6 million in 2040. The demand for properties is positively correlated to the growth in population. A higher population can translate to a higher demand for housing which is one of the life's basic necessities. A higher population can also create a bigger pool of potential demand for recreational needs offered by leisure properties such as shopping complexes and hotels. In addition, infrastructures need to be built or upgraded in order to cope with higher frequency of usage stemming from a higher population. These demands will translate to greater construction activities and accordingly, encourage demand for engineering and project management services.

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)**Property Overhang**

In Q1 2016, there was an overhang of 12,268 residential units, 6,640 units of shop and 267 industrial units worth approximately RM9.70 billion.

The property overhang situation for the property is considered to be still manageable. The expanding Malaysian economy is expected to continue supporting demand for properties.

6.4.2 Supply Conditions**Increasing Participation by Professionals into the Engineering and Project Management Services Market and Enhancing Provision of Services**

There has been an increasing demand for engineering and project management services in tandem with the overall growth seen within the construction industry, particularly in the past few years. As such, the construction industry may see an increasing number of professionals venturing into the engineering and project management services market in order to meet the growing demand.

Compelling Business Case for Project Management Services

The cost of construction is growing in tandem with the rising cost of land, building materials and labour and as such, all construction projects and activities involve substantial financial commitment and high risks. For strategic purposes and to minimise the risks involved, prospective project owners are turning to external project management service providers.

6.5 MARKET CHALLENGES

Growth within the engineering and project management services market is highly dependent on the performance of the construction industry. Any negative impact on construction industry would adversely affect the demand for engineering and project management services market in Malaysia. The following section presents the key market challenges for the construction industry in Malaysia.

Labour Shortage and High Dependency on Foreign Workers

The construction industry in Malaysia is labour intensive. However, it has continued to grapple with labour shortage including for skilled workers. Poor participation from Malaysians has also further exacerbated the problem. Most locals shun these jobs as they view them as dangerous, dirty and difficult, and they expect higher wages. Therefore, the construction industry has been relying heavily on foreign workers.

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)**Higher Capital Demand from Elevated Post-GST Cost of Construction**

Notable cost components for construction project namely, construction input materials, outsourced construction works as well as related architectural, legal and professional services in Malaysia are subject to a 6 percent GST. In addition, local construction industry players need to invest in more manpower and related software to undertake the additional administrative works required and comply with the regulatory requirements. Hence, market participants within the construction industry need to commit more working capital to undertake construction activities.

Stringent Policies Dampening Growth in the Property Market

Amidst concerns over spiralling prices and home ownership issues, the Malaysian Government has put in place various measures and initiatives to curb speculative activities and promote responsible financing practices over the past years. Examples of such measures and initiatives include the implementation of a maximum loan-to-value ratio of 70 percent for the third mortgage and above taken out by a borrower, application of net income calculation method for potential borrowers by financial institutions, reduction on maximum tenure of financing, and tagging on the Central Credit Reference Information System ("CCRIS") for rescheduled or restructured loans.

In another development, the Malaysian Government announced a few measures that can be seen as efforts to curb speculative buying in the property market. These measures include raising the real property gain tax ("RPGT") to 30 percent for gains on properties disposed of within three years, 20 percent for four years and 15 percent for 5 years, imposing 30 percent RPGT for properties disposed of by non-citizens within five years and 5 percent for disposals after five years, prohibiting the Developer Interest Bearing Scheme ("DIBS") and increasing the minimum price of property that can be purchased by foreigners from RM500,000 to RM1 million. Such measures are expected to blunt the vibrancy in the property market with potentially lesser number of property transactions expected to be registered moving forward.

Any unfavourable impact to the property market can hinder the progress in the construction industry.

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

7 KEY ISSUES AND TRENDS

7.1 BARRIERS TO ENTRY

Established Track Record and Reputation – Construction projects involve high risks and require substantial financial commitment from the prospective project owners hence, the selection of engineering and project management services are critical and one of the key consideration lies with the provider's track record and reputation.

Industrial Expertise and Management – A strong team is crucial in order to succeed in the engineering and project management services market, and the experience and expertise required of the team are diverse and time consuming to develop. In general, the development of a building or construction of a property or infrastructure works on very tight timeframes, as numerous parties such as architects, engineers, quantity surveyors, contractors, etc. have to be coordinated, and activities have to be performed as scheduled. As a result, the market places high value on efficiency, reliability and quick delivery.

7.2 SUBSTITUTE PRODUCTS OR SERVICES

There are no direct substitutes to the engineering services as illustrated in Figure 1 (civil engineering, electrical engineering, mechanical engineering, structural engineering and other engineering services) as it refers to a form of professional services serving both the property development and construction activities.

Likewise, the project management services are not directly substitutable. There is however a considerable degree of substitutability within the segment itself in terms of differing forms and compositions of services offered by the provider of different background and experience. The role of project manager for civil engineering is typically assumed by the engineers. Meanwhile, project management services for building development may be provided by architects, engineers, quantity surveyors, valuers/ agents or those having building/contracting experiences and background.

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)**7.3 VULNERABILITY AND RELIANCE ON IMPORTS**

Engineering and project management services in Malaysia are offered by both local, as well as foreign-based market participants. Although there may be demand for imported talents or services from outside the country for certain specific projects, there are however no dependencies on imported talents or services under normal circumstances.

7.4 RELEVANT LAWS AND REGULATIONS GOVERNING THE ENGINEERING AND PROJECT MANAGEMENT SERVICES MARKET AND PECULIARITIES OF THE MARKET

There are no specific laws or regulations governing the provision of project management services in Malaysia, likewise for incentives. However, the provision of engineering services is governed by the Registration of Engineers Act 1967 (Revised 2007).

8 MARKET PROSPECTS AND OUTLOOK

The outlook for the engineering and project management services market remains positive throughout the forecast period of 2015 to 2020. In 2015, the engineering and project management services market in Malaysia was estimated to be worth approximately RM4.24 billion and it is expected to grow at a CAGR of 6.5 percent over the forecast period of 2015 to 2020.

Moving forward, the continued upward trajectory of the engineering and project management services market is expected to be driven by a combination of factors such as the government-led initiatives and spending, sustained economic growth to support spending and investment in properties, steady population growth, increasing participation by professionals into the provision of engineering and project management services and the strategic need for project management services. Meanwhile, the outlook for the construction industry remains positive going forward, which is a positive factor for the engineering and project management market.

Construction is a process that requires huge financial commitment. The longer and more extensive the process is, the more costly the project will be. Therefore, it is very crucial to

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

have proper management at every stage of the development to reduce the risk of cost and schedule overrun. The need for project management services is even more pronounced as the cost of construction in the country continues to rise in tandem with rising cost of land and building materials.

Continued government spending coupled with the increase in the number of residential and non-residential projects in the past few years as a result of real estate value appreciation, have led to a general shortfall in the supply for skilled engineering and project management professionals. As such, the construction industry may see an increasing number of professionals venturing into the engineering and project management services market in order to meet the growing demand. Existing market participants would also enhance their services offerings to stay competitive in the business. This includes the adoption of BIM technology by the market participants to enhance their efficiency by reducing risks, construction timeline and overall project costs, and to stand out among the crowd. Given the infancy of BIM utilisation in Malaysia, Protégé Associates anticipates an increasing adoption of the technology going forward – particularly if the proposed mandatory BIM submission for architect and engineering in 2017 and 2018 are materialised.

Prospects and Outlook of the Construction Industry

The demand for engineering and project management services is dependent on the construction industry, and its outlook is encouraging in light of favourable growth seen for the construction industry moving forward. Much of the construction industry's growth prospects hinges upon the speed and effective implementation of the various projects identified under the 11MP and ETP, along with the continued execution of various public-private partnership projects. The Malaysian construction industry is expected to expand by 7.9 percent in 2016.

9 OVERVIEW OF THE CONSTRUCTION INDUSTRY IN THE MIDDLE EAST

9.1 ECONOMIC OVERVIEW OF THE MIDDLE EAST, NORTH AFRICAN, AFGHANISTAN AND PAKISTAN REGION

The economic development in the Middle East, North African, Afghanistan and Pakistan ("MENAP") region is diverse. The real GDP of the MENAP region registered a growth of 2.5 percent in 2015. The economy of the oil exporting nations grew by 1.9 percent while the economic growth of the oil importing nations stood at 3.8 percent in the same year.

Moving forward, the real GDP for the MENAP is projected to increase by 3.1 percent in 2016. For oil importing nations, downside risks such as insufficient improvement in employment and political transitions and reform implementation could undermine the growth. As for the oil exporters, uncertainties in the future oil prices and progress in the resolution of regional conflict could weigh on their economic growth. While promoting growth and job creation in the private sector, there is a need for the oil exporting nations to diversify their economies in relation to the reduction of their dependency on oil revenue.

9.2 THE CONSTRUCTION INDUSTRY IN THE MIDDLE EAST

The construction industry in the Middle East exhibited signs of growth due to favourable oil prices from the 2009 to 2013 period. The strength of oil prices provided the impetus to the growth as projects that were previously postponed and delayed began to be revitalised. This further drove the industry's recovery subsequent to the global economic crisis in late 2008.

The construction industry in the Middle East continued to expand until the second half of 2014 when dipping oil prices, political succession in the Kingdom of Saudi Arabia and heightened geopolitical tensions resulted in business uncertainties and restrained its growth. As the downward pricing trend persisted in 2015, investors sentiments were adversely affected thus resulting in cancellation and deferment of construction projects for budget revision. Nonetheless, major developments in the Middle East include those from countries

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

leading the growth in the region – including the Kingdom of Saudi Arabia, Qatar and the United Arab Emirates (“UAE”), are expected to provide the impetus to the industry’s growth in the long run.

The prospect of the construction industry in the Middle East is anticipated to remain positive in the long term. The positive outlook mainly stems from government-led initiatives and spending in major developments such as the King Abdullah Economic City in the Kingdom of Saudi Arabia, preparations for the World Cup 2022 in Qatar, spending on Expo 2020 in Dubai and various developments within the energy, transportation and infrastructure sectors.

The population in the Middle East and North Africa (“MENA”) region is projected to escalate from 440 million in 2010 to 618 million by 2040. Population growth is expected to spur the demand for properties and infrastructure development moving forward.

Growth within the construction industry is also set to benefit from the expansion in the tourism sector in relation to various visitor targets set by the countries. These include Dubai’s Tourism Vision 2020 which targets to double the annual visitor numbers to the city from 10.0 million in 2012 to 20.0 million in 2020; and the Kingdom of Saudi Arabia’s 20.0 million visitors target by 2020 from 11 million tourist in 2013. In addition, the Kingdom of Saudi Arabia’s Extended Umrah Tourism Programme allows the visitors who travel to the country to stay up to a month. Other than that, Dubai’s World Expo 2020 and Qatar’s FIFA World Cup 2022 are also anticipated to attract large number of visitors to the region. World Expo was first held in London in 1851, and the event was subsequently hosted in different countries at irregular intervals of time before 2000, and every 5 years thereafter. The event represents a key meeting point for the global community to share innovations and make progress on issues of international importance such as the sustainable development and improved quality of life for the world’s population. Each World Expo attracts millions of visitors to explore and discover pavilions, exhibitions and cultural events thereby providing the impetus of growth to the tourism sector of the hosting country. The Shanghai 2010 World Expo brought 73 million visitors to the city, and the former World Expo in Milan, Italy in 2015 attracted over 20 million of visitors.

These major events would accordingly lead to the demand for the refurbishments and renovations of existing hotels and also the establishment of new hotels to accommodate the increase in visitors. Moreover, the expansion of airports and railways are also needed to provide better accessibility and connectivity to the visitors. The on-going transportation projects such as the expansion of Abu Dhabi airport in the UAE, Qatar’s integrated rail project

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

and Oman's national railway are further contributing to the demand in the region's construction industry.

10 OVERVIEW OF THE CONSTRUCTION INDUSTRY IN INDIA

10.1 ECONOMIC OVERVIEW OF INDIA

The Indian real GDP (at constant 2011-2012 prices) expanded by 7.3 percent in its fiscal year ("FY") 2015 – slightly higher as compared to 7.2 percent posted in FY 2014. The Indian economy expanded by 7.6 percent in FY 2016 on the back of pickup in the manufacturing sector in response to lower input cost following the downward pricing trend of global commodity. Moving forward, the Indian economy is projected to expand by 7.5 percent in FY 2017.

In the long run, the Indian economy is envisaged to continue on its expansion trail on the back of the revival in investment and improved performance from the industrial sector, as the economy shifts from an agricultural to a manufacturing base in line with the Indian government's initiatives for economic reform. As part of its initiatives, the Indian government has unveiled various development plans under its 'Make in India' programme to bolster its manufacturing sector. The new national programme includes various initiatives designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property, and build manufacturing infrastructure. This initiative is expected to increase the purchasing power of the nation, hence boosting the domestic demand and spurring the country's development.

10.2 THE CONSTRUCTION INDUSTRY OF INDIA

The construction industry in India registered a 4.4 percent growth in FY 2015 in line with the Indian government's initiatives for economic reform after its election in May 2014. As part of its initiatives, the Indian government has unveiled various development plans under its 'Make in India' programme to bolster its manufacturing sector. The new national programme includes various initiatives designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property, and build manufacturing infrastructure which are

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

also set to benefit its construction industry. For FY 2016, the construction industry of India registered a slower growth of 3.9 percent due to slower production growth from several infrastructure-related sub-sectors namely the steel, cement, and electricity sub-sectors. Nonetheless, the construction industry continued to receive higher spending by the Indian government coupled with higher foreign direct investment in the housing and transportation development.

The Indian construction industry is projected to exhibit positive growth in the long term. Growth within the construction industry is primarily driven by the government-led initiatives and policies for industrialisation, urbanisation and economic development. The large amounts allocated by the Indian government for spending in the development of smart cities, construction of industrial and economic corridors, as well as investment in the power and transportation infrastructure are anticipated to spur the demand for activities and services within the construction industry. In terms of supply, the ease of access to foreign direct investment is expected to have a positive impact on the construction industry in India.

The Indian population continued to flourish from 1.22 billion in FY 2011 to 1.27 billion in FY 2015. In FY 2016, the total Indian population is estimated to reach 1.28 billion, representing 1.3 percent year-on-year growth. By 2022, the population in India is projected to reach approximately 1.35 billion. The growing population indicates a rising demand for shelter and this would accordingly spur the growth within the construction industry for the development residential properties and infrastructures.

Nonetheless, there are few challenges within the construction industry to be noted. These challenges include the shortage of skilled workers and contractors and the lack of proper financing supply.

The construction industry in India faces the challenge of a shortage of skilled workers, which include civil, electrical and mechanical engineers. The shortage of skilled workers may induce hikes in the labour cost, which could impact the affordability, quality and timeliness of construction projects.

The supply of financing to the construction industry presents another challenge to India's construction industry. At present, some financial institutions are reluctant to lend to the construction industry as a result of inadequate understanding on the working dynamics of the construction industry. This may possibly cause a delay in the project delivery and impact the overall construction cost. Nevertheless, this market challenge is anticipated to have low

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

impact on the construction industry pursuant to the government's initiatives to attract more foreign investment in the construction industry.

11 OVERVIEW OF THE CONSTRUCTION INDUSTRY IN INDONESIA

11.1 ECONOMIC OVERVIEW OF INDONESIA

In 2015, the Indonesian economy exhibited a slower growth amid deceleration in fixed investment, moderated household consumption in response to higher inflation and tighter consumer credit, coupled with a weaker external sector. As a result, the Indonesian economy grew by 4.8 percent.

Moving forward, downside risks to the outlook such as further declines in commodity prices as well as slowing demand from the main trading partner, namely China, remains a concern to the Indonesian economic growth. Nonetheless, the economy is projected to grow at 4.9 percent in 2016, attributed to an anticipated increase in household consumption in response to an expected lower inflation rate and pay rises for the civil services coupled with anticipated recovery in its external trade sector.

11.2 THE CONSTRUCTION INDUSTRY OF INDONESIA

The Indonesian construction industry registered an expansion of 6.7 percent in 2015 on the back of increased spending in infrastructure by the government. Growth within the construction industry is also supported by improved investor sentiment subsequent to the introduction of the Masterplan for Acceleration and Expansion of Indonesia's Economic Development. Launched in 2011, the Masterplan outlines various strategies, among others, encouraging private sector participation to develop the country towards achieving the status of developed nation by 2025.

The construction industry in Indonesia was largely dominated by civil works, and this is likely to remain the same moving forward, attributing to strong government push for infrastructure development. The third stage of its National Long-Term Development Plan, also known as the National Medium Term Development Plan (2015-2019), focuses on fully satisfying the needs

7. EXECUTIVE SUMMARY OF THE INDEPENDENT MARKET RESEARCH REPORT (Cont'd)

of basic services and housing needs with supporting infrastructure and facilities. An estimated IDR4,886 trillion has been earmarked for infrastructure investments during the said period, including IDR3,386 trillion for strategic infrastructure and IDR1,500 trillion for basic infrastructure.

Various highway and railway projects were announced to improve the connectivity in the country. The Jakarta Mass Rapid Transportation project constituting the North-South line and the East-West line stretches across over 110km and is expected to complete by 2027. Other infrastructures development in the pipeline, among others, are the construction of the 2,600km Trans-Sumatra highway, the 1,000km Trans Jawa Highway, the 4,325km Trans-Papua highway, the 2,168km Trans-Sumatra Railway, the 2,428km Trans-Kalimantan Railway, and the 145km Trans-Sulawesi Railway.

The construction industry in Indonesia is also set to benefit from the strong government support towards developing its energy infrastructure in order to meet its increasing energy demand subsequent to economic expansion, rapid urbanisation and population growth. With a current population of around 250 million, the Indonesian population is projected to exceed 290 million by 2045, with majority living in urban areas.

Nonetheless, there are few challenges within the construction industry to be noted. These challenges include shortage of skilled workers forces and the distribution and cost of construction resources and materials.

The construction industry in Indonesia faces the challenge of a shortage of professionals and skilled workers that are certified by the Indonesian construction law. As the continuing growth in the construction industry creates more demand for certified personnel, the shortage of professionals and skilled workers could impact the affordability, quality and timeliness of construction projects.

In Indonesia, the cost of building materials has increased in tandem with improving property demand, while insufficient transportation infrastructure adds a logistic element to the cost of materials. Due to the geographical characteristics of Indonesia constituting more than 13,000 islands, the distribution of construction resources and materials requires more supporting construction and infrastructure development in order to increase logistic services and to reduce logistic cost. The Indonesian government is committed to address this challenge with the introduction of National Logistics System to improve the delivery of goods in a bid to reduce logistics costs and to ensure sound inter-island and inter-village connectivity. In

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addition, local building materials manufacturers also begin to invest in increasing their output to cope with rising demand. Therefore, the impact of this challenge is expected to lower over the long term as more infrastructures are developed to improve the connectivity and increase logistic services in Indonesia, coupled with increase in local building materials supply in Indonesia.

12 OVERVIEW OF THE WATER SERVICES INDUSTRY IN MALAYSIA

The water services industry in Malaysia comprises 2 main elements i.e. the supply of clean water through water treatment, and wastewater management through sewage systems.

Water treatment involves the process of removing undesirable chemical, physical and biological contaminants from raw or contaminated water to produce water that is suitable for specific applications, such as human consumption, medical and pharmacology, chemical and industrial applications.

In Malaysia, demand for clean water has been on the increase. This is due to the increasing population and industrial growth in the country. According to SPAN, total water consumption in the country stood at 10,176 million litres per day ("MLD") in 2014, representing 6.8 percent increase from 9,532 MLD in 2012. The year 2014 also saw an increase in total number of operational water treatment plant to 505 from 475 in 2012, thus raising the water treatment capacity from 17,901 MLD to 18,730 MLD. However, the additional capacity is yet to cope with the demand for water treatment services in Malaysia as the reserve margin in water treatment plants fell from 16.1 percent to 15.7 percent due to increased production from 15,012 MLD to 15,790 MLD.

Aside from the water treatment, wastewater treatment is the other essential component in water services. Wastewater treatment involves removal of physical, chemical and biological contaminants to produce an environmentally-safe treated effluent system. In Malaysia, about 2.97 billion cubic meters of wastewater was generated by municipal and industrial sectors each year, and this is also increasing along with rising population and growth in the manufacturing sector which expanded by 6.2 percent and 4.9 percent in 2014 and 2015 respectively.

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The demand for water and waste management service is anticipated to escalate in correspondence with expansion in economic activities in Malaysia, particularly industrial activities in the manufacturing sector. The manufacturing sector continues to register healthy expansion since 2011 and this trend is likely to persist going forward.

The sewage systems in Malaysia consist of public sewage treatment plants, private sewage treatment plants, septic tanks and pour flushes. Public sewage treatment plants have the largest share of 60.7 percent, or around 22.5 million of population equivalent in the sewage treatment services industry. The wastewater treatment industry is primarily led by Indah Water Konsortium Sdn Bhd, Taliworks Corporation Berhad and Veolia Water Malaysia, together with 200 to 300 small and medium enterprises ("SMEs").

The water services industry is likely to expand moving forward as the Malaysian population is projected to grow steadily to reach 38.6 million by 2040, and this is expected to spur the continued demand for water services. A higher demand for water services will translate to greater expansion in water treatment and sewerage facilities. More importantly, the lower reserve margin of water treatment plants that dropped from 16.1 percent in 2012 to 15.7 percent in 2014 indicates the need for an expansion in plant capacities to address the increasing demand for clean water supply.

The Malaysian government continued to exert strong support to the water service industry during the Tenth Malaysia Plan ("10MP") period. As outlined in 10MP, the capacity of Pantai 2 sewage treatment plant is set to upgrade from its existing design capacity of 550,000 population equivalent ("PE") to 1,423 million PE. The said project is expected to be completed in 2017. In addition, a total of RM1.26 billion is also allocated in the implementation of Mengkuang Dam Expansion Enlargement project.

The 11MP reiterated the government's commitment for the continued expansion and investment in new water and sewerage networks and treatment capacity. Under the same plan, continued emphasis will be placed towards extending provision of rural basic infrastructure including expanding coverage of access to clean and treated water. Focus will also be given to a holistic non-revenue water reduction programme and improving the performance of the sewerage system. By 2020, the government aims to provide 99 percent of the population with clean and treated water, 80 percent with connected sewerage services and reduce non-revenue water to 25 percent.

13 OVERVIEW OF THE ENERGY SECTOR IN MALAYSIA

Malaysia has tremendous reserves for both non-renewable and renewable sources of energy. The largest non-renewable energy source found in Malaysia is fossil fuel (coal and coke, as well as oil and gas), which is actively exploited. Fossil fuels were the main energy sources in Malaysia from 2008 to 2013, and this trend is expected to continue into the long term. Collectively, fossil fuels like petroleum products, natural gas, coal and coke supply over 70.0 percent of the total energy consumed in Malaysia. Consumption of biodiesel in Malaysia began in 2011 but its contribution towards the energy sector remains minimal. In 2013, only 0.3 percent of the total energy consumed in Malaysia was sourced from biodiesel.

Energy consumption is considered as a barometer of economic activities in a country. Higher energy consumption is observed in the event of better economic growth; and vice versa, as less energy is utilised during economic downturns. In 2009, energy consumption was lower as growth in the Malaysian economy contracted by 1.7 percent. However, total energy consumption moved on upward trajectory from 2010 to 2013 as Malaysian economy grew. The top 3 energy sources from 2008 to 2013 were petroleum products, natural gas and electricity.

The economic development in Malaysia stimulates a high demand for energy. From 2009 to 2013, energy input in power station has expanded by 25.8 percent from 24,616,000 tonnes oil equivalent ("toe") to 30,958,000 toe, whereas final energy consumption per capita escalated from 1.46 toe to 1.72 toe during the same period. In terms of electricity generation, the sector again possesses relatively high reliance on fossil fuels. In 2013, natural gas was the main energy source for electricity generation, constituting about 50.4 percent of total electricity generation. Coal comes second with 38.0 percent of total electricity generation. Hydro contributed 8.4 percent whereas diesel and oil contributed respectively 1.2 percent and 1.1 percent in 2013.

The energy sources in Malaysia were mainly consumed in the transportation sector. In 2013, 50.5 percent of the energy usage in Malaysia was attributable to the transportation sector. The industry sector was the second largest in terms of energy consumption with 30.5 percent share in 2013. The residential and commercial sector as well as the agriculture sector made up the remaining 16.7 percent and 2.3 percent of total energy consumption respectively.

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As the Malaysian economy is forecast to remain on a positive trajectory, the energy sector is likely to capture a higher demand moving forward. Thus, the government aims to lift domestic oil and gas production through a number of Entry Point Projects ("EPPs") as outlined in the ETP. The relevant initiatives include the rejuvenation of existing field through enhanced oil recovery ("EOR"), developing marginal fields through innovative solutions, intensifying exploration activities, and unlocking premium gas demand.

In addition to the oil and gas industry, the government is also ambitious in catalysing the renewable energy sector as a measure to reduce the dependency on fossil fuel. The government has targeted the solar power to contribute a minimum of 220 megawatts by 2020 as outlined under the National renewable Energy Policy. The government has also highlighted in the ETP on the need to build approximately 4 gigawatts of additional power capacity in Peninsular Malaysia in ensuring an adequate power supply and a healthy power reserve margin in long term.

Also outlined in the ETP, the government is ambitious in tapping the hydroelectricity potential in Malaysia as part of its initiatives in promoting the renewable energy sector. In East Malaysia, the government is actively expanding the hydro generation capacity with the development of various projects such as the 1,200 megawatts Baram hydro dam, the 1,285 megawatts Baleh hydro dam, and the development of 17 small hydro-power sites in Sabah with estimated combined installed capacity of 432 megawatts.

Moving forward, the energy commission has committed to the launch of a few new generation projects in Peninsular Malaysia as detailed in the following figure.

Figure 11: New Generation Projects in Peninsular Malaysia, 2016-2025

Projects	Fuel	Capacity (Megawatts)	Expected Commencement Year
TNB Prai	Gas	1,071	2016
CBPS Redevelopment	Gas	375	2016
Hulu Terengganu (Tembat)	Hydro	15	2016
Tanjung Bin Energy	Coal	1,000	2016
Ulu Jelai	Hydro	372	2016
Pengerang Co-Generation	Gas	400	2017
TNB Manjung Five	Coal	1,000	2017
Additional Pengerang Co-generation	Gas	200	2019

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Projects	Fuel	Capacity (Megawatts)	Expected Commencement Year
SIPP P.Gudang	Gas	1,400	2019
Jimah East Power	Coal	2,000	2019
Edra Global Energy	Gas	2,400	2021
Tekal	Hydro	168	2021
New Coal	Coal	1,000	2023
Nenggiri	Hydro	300	2024
Telcom	Hydro	190	2024
Lebir	Hydro	274	2024-2025

Source: IMR Report

Under the 11MP, efforts to ensure energy security through improvements on infrastructure and service delivery for electricity subsectors will be undertaken. New investment in generation capacity and reinforcement of transmission, and distribution networks will continue under the same plan. A total of RM28 billion will be allocated to build 3 coal plants in Johor, Perak and Negeri Sembilan, and 2 gas plants in Penang and Johor. These power plants, upon completion, will top up a total of 7,626 megawatts of electricity generation to the nation.

The Government also intends to enhance alternative energy sources. Biomass and biogas power plants will be pursued given their large potential to further enhance the generation mix. Electricity generation through renewable sources including biomass, biogas, solar PV, and mini hydro are targeted to reach 7.8 percent of total installed capacity in Peninsular Malaysia and Sabah by 2020, or about 2,080 MW. The use of nuclear power as an alternative energy resource will also be explored further. Rural electrification programmes will also be enhanced to improve national coverage to 99 percent by 2020. All these augur well for the development of energy sector moving forward.

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Protégé Associates has prepared this report in an independent and objective manner and has taken adequate care to ensure the accuracy and completeness of the report. We believe that this report presents a true and fair view of the industry within the boundaries and limitations of secondary statistics, primary research and continued industry movements. Our research has been conducted to present a view of the overall industry and may not necessarily reflect the performance of individual companies in this industry. We are not responsible for the decisions and/ or actions of the readers of this report. This report should also not be considered as a recommendation to buy or not to buy the shares of any company or companies.

Thank you.

Yours Sincerely,

A handwritten signature in black ink, appearing to read "Tan Chin How", is written over a faint, light-colored signature line.

TAN CHIN HOW

Director

Protégé Associates Sdn Bhd