

# Malaysia Country Report

19<sup>th</sup> Asia Construct Conference  
Jakarta, Indonesia



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## 1. Executive Summary

The Malaysian economy recorded a higher, respectable growth of 5.6% in 2012. The construction sector expanded strongly at 18.1% in 2012 (2011: 4.7%), due to commencement and progress of several major infrastructure projects that also provided significant positive spill over effects to domestic manufacturing and services sector. The private sector continued its domination, obtaining projects awarded in 2012 worth RM101.3 billion or 85.2% of the total value of projects for the year. The public sector took a back seat with only RM17.6 billion or 14.8% of construction projects awarded for the same period. The main building material prices in 2012 increased marginally compared to 2011. Wages of construction personnel too were showing the same upward trend. The number of registered construction workers, as in previous years, steadily increased. Malaysian economy is expected to grow moderately in 2013 by 4.5% - 5.0%. Under the 2014 Budget, the government targeted the construction sector to grow by 10.6% in 2013 and 9.6% in 2014. CIDB estimated that the value of construction projects awarded may reach RM110.0 billion in 2013 and RM115.0 billion in 2014.

## 2. Macroeconomic Review

### 2.1. Overview of the National Economy

#### Overview of the Malaysian Economy in 2012

The Malaysia economy performed better with a higher growth of 5.6% (2011: 5.1%). The growth was most supported by resilient domestic demand which recorded its highest rate of expansion for the decade at 10.6% (2011: 8.2%), supported by strong consumption and investment spending. Private consumption registered a firm growth of 7.7% in 2012. In the public sector, public consumption recorded a moderate growth of 5.0% amidst continued fiscal consolidation efforts during the year. Investment activity is driven by capital spending of both the private and public sector. Private investment recorded a double-digit growth of 22% and public investment also registered a strong growth of 17.1%.

On the supply side, all economic sectors continued to expand in 2012. The construction sector benefited from the strong expansion in investment activity, registering its highest pace of growth at 18.1% (2011: 4.7%) since 1995. The service sector continued to

expand by 6.4% (2010: 11.4%), followed by the manufacturing sector at 4.8% (2011: 4.7%) and the mining sector at 1.4% (2011: -5.5%). Labour market conditions remained stable in 2012 with continued gains in employment. The inflation rate was lower at averaged 1.6% in 2012 (2011: 3.2%), due to slower rate of price increases in the food and non-alcoholic beverages and transport categories.

Foreign direct investment (FDI) continued to register a sizeable net inflow of RM29.1 billion or 3.1% of GDP (2011: RM36.6 billion) in 2012. Interest rates remained stable in 2012 reflecting the stance of monetary policy to promote balanced and sustainable growth of the economy. The Overnight Policy Rate (OPR) is maintained at 3.0% throughout 2012 and base lending rate (BLR) of commercial banks remained at 6.5%. The Ringgit ended the year at RM3.06 against the US Dollar, thus recorded a year-on-year appreciation of 3.9%. The performance of the Ringgit was influenced by the global and regional developments amid periods of heightened volatility in the global financial markets.

**Table 2.1 Malaysian Macroeconomic Overview**

	2010	2011	2012
<b>GDP growth by economic activity at 2005 constant price (RM million)</b>			
Agriculture	51,263	54,253	54,782
Mining	66,182	62,565	63,432
Manufacturing	170,261	178,237	186,748
Construction	21,459	22,464	26,531
Services	359,829	385,179	409,976
<b>Real GDP</b>	<b>676,653</b>	<b>711,351</b>	<b>751,471</b>
<b>GDP growth by economic activity at 2005 constant price (%)</b>			
Agriculture	2.4	5.8	1.0
Mining	-0.3	-5.5	1.4
Manufacturing	11.9	4.7	4.8
Construction	11.4	4.7	18.1
Services	7.4	7.0	6.4
<b>Real GDP Growth</b>	<b>7.4</b>	<b>5.1</b>	<b>5.6</b>
<b>Demographic Indicator</b>			
Population (million)	28.6	29.0	29.3
Labour force ('000 persons)	12.3	12.70	13.1
Unemployment rate (%)	3.3	3.1	3.0
<b>Financial Indicator</b>			
Inflation rate (%)	1.7	3.2	1.6
Short term interest rate - 3 months (%)	2.74	2.99	2.98
Long term interest rate - 12 months (%)	2.97	3.22	3.15
Exchange rate at end of period (RM against USD)	RM3.08	RM3.18	RM3.06

Source: Central Bank of Malaysia Annual Report 2012.

### **Review of the Malaysian Economy in the First Half of 2013**

The Malaysian economy continued to grow by 4.2% in the first half of 2013 (1Q 2013: 4.1%; 2Q 2013: 4.3%). In spite of prolonged weakness in the external sector, Malaysian economy was driven by a stronger expansion in domestic demand amid a further moderation in external demand. On the supply side, all economic sectors continued to expand further, with growth in the second quarter led by strong performance in the construction and services sectors. The construction sectors growth remained strong at 9.9% in the second quarter (1Q 2013: 14.2%). The growth was mainly driven by civil engineering and residential sub-sector such as the MRT, Tanjung Bin and Janamanjung power plant, Sabah-Sarawak gas pipeline and high-end residential properties in Klang

Valley, Penang and Sabah. The services sector registered a growth of 5.4% in the first half of 2013 (1Q 2013: 5.9%; 2Q 2013: 4.8%), the manufacturing sector grow slightly at 1.9% (1Q 2013: 0.3%; 2Q 2013: 3.3%), the agriculture sector expanded at 3.1% (1Q 2013: 6.0%; 2Q 2013: 0.4%) and the mining sector with a positive growth of 1.0% (1Q 2013: -1.9%; 2Q 2013: 4.1%).

### **3. Overview of the Construction Industry**

#### **3.1. Construction Project Review in 2012**

The value of construction projects awarded in 2012 increased by 20.0% to RM118.9 billion (2011: RM99.0 billion), with the private and public sectors contribution of 85.2% and 14.8% respectively from the total value. Private sector projects value rose by 33.4% to RM101.3 billion (2011: RM75.9 billion) and the public sector projects showed a decrease of 24.0% to RM17.6 billion (2011: RM23.2 billion). As the economy continued to grow, more private investment activities took place and developers embarked on new construction projects. This is in line with the government's aim to push the private sector as the main driver of the economy. In terms of numbers, private sector secured 5,380 projects (2011: 5,607 projects) compared to 1,860 public sector's projects (2011: 1,921 projects).

Major contribution to Malaysian construction projects came from the implementation of 7 mega infrastructure projects each costing more than RM1.0 billion amounting to RM19.2 billion. Most of the projects are the Entry Point Projects (EPP) Economic as follows:

1. Underground works for Lembah Kelang Mass-Rapid Transit (MRT) in Kuala Lumpur worth RM8.3 billion  
Award date : 30 March 2012; Expected completion date : 31 December 2016
2. 1x1000MW coal-fired power plant in Johor worth RM4.8 billion  
Award date : 1 March 2012; Expected completion date: 1 March 2016
3. Fourth lane widening for PLUS highway worth RM1.4 billion  
Award date : 6 July 2012; Expected completion date: 5 July 2015

4. System works for Lembah Kelang Mass-Rapid Transit (MRT) in Kuala Lumpur worth RM1.4 billion  
Award date : 10 October 2012; Expected completion date : 31 July 2017
5. Viaduct guideway for Lembah Kelang Mass-Rapid Transit (MRT) Package V4 in Kuala Lumpur worth RM1.2 billion  
Award date : 18 May 2012; Expected completion date : 18 May 2017
6. Viaduct guideway for Lembah Kelang Mass-Rapid Transit (MRT) Package V1 in Kuala Lumpur worth RM1.1 billion  
Award date : 18 May 2012; Expected completion date : 31 December 2016
7. LRT Ampang Line (AMG) extension works in Kuala Lumpur worth RM1.0 billion  
Award date : 31 July 2012; Expected completion date : 31 March 2016

In 2012, infrastructure projects registered a value of RM42.6 billion (2011: RM32.4 billion), followed by non-residential projects at RM38.4 billion (2011: RM35.0 billion), residential projects at RM31.3 billion (2011: RM24.6 billion) and social amenity projects at RM6.6 billion (2011: RM7.0 billion). The project value had clearly been boosted by the infrastructure projects (35.8%) and led by the private sector with a share of 27.9% due to the high-value projects awarded under the sub-category of utilities and transport. Meanwhile, non-residential projects tendered a rise of 9.7% in 2012, mainly contributed by industrial and commercial subcategory.

**Table 3.1 Value and Number of Construction Projects by Sector and Type**

Sector and Type of Project	Value (RM)			
	2010	2011	2012	1H 2013
<b>Total Private Sector</b>	<b>71,417.60</b>	<b>75,882.58</b>	<b>101,253.29</b>	<b>33,818.01</b>
Residential	21,862.20	23,793.52	29,991.90	9,379.11
Non-Residential	29,255.66	32,257.67	35,282.12	17,055.60
Social Amenity	3,056.08	2,764.05	2,776.98	999.58
Infrastructure	17,243.66	17,067.34	33,202.29	6,383.72
<b>Total Public Sector</b>	<b>19,530.32</b>	<b>23,163.33</b>	<b>17,614.82</b>	<b>6,782.56</b>
Residential	1,340.19	838.15	1,314.74	755.41
Non-Residential	2,921.08	2,741.78	3,098.69	571.34
Social Amenity	5,868.31	4,243.34	3,838.87	1,377.18
Infrastructure	9,400.74	15,340.06	9,362.52	4,078.63
<b>Grand Total</b>	<b>90,947.92</b>	<b>99,045.91</b>	<b>118,868.11</b>	<b>40,600.57</b>

Sector and Type of Project	Number			
	2010	2011	2012	1H 2013
<b>Total Private Sector</b>	<b>5,439</b>	<b>5,607</b>	<b>5,380</b>	<b>1,793</b>
Residential	2,024	2,088	1,929	643
Non-Residential	2,207	2,259	2,199	685
Social Amenity	265	263	197	86
Infrastructure	943	997	1,055	379
<b>Total Public Sector</b>	<b>1,873</b>	<b>1,921</b>	<b>1,860</b>	<b>581</b>
Residential	119	141	187	40
Non-Residential	356	256	318	79
Social Amenity	587	583	628	156
Infrastructure	811	941	727	306
<b>Grand Total</b>	<b>7,312</b>	<b>7,528</b>	<b>7,240</b>	<b>2,374</b>

\*As at 30 June 2013

Source: CIDB Malaysia

### 3.2. Contractor Registration

The number of contractors registered in 2012 increased by 8.9% to 69,786 (2011: 64,094 contractors). The number of registered contractors is expected to be maintained with the implementation of the Continuous Contractor Development (CCD) Programme in which every contractor is obliged to collect a certain number of CCD points based on their registration grade. The programme which was enforced on 1 January 2010 is to ensure that contractors increase their knowledge and be involved in construction related activities.

Total registration of small grade contractors of grade G1 to G3 was greater than the higher grade contractors due to less restrictive conditions of registration and lesser capacity requirement. The number of registered contractors in grades G1 to G3 was 79.4% (55,415) of the total registered contractors (2011: 51,376). The number of medium grade contractors of G4 and G5 accounted for 10.4% (7,239) of total registered contractors in 2012 (2011: 6,503). The number of high grade contractors of G6 and G7 was 9.8% (6,836) of the total registered contractors in 2012. All grades of contractor's registration except for G3 grade increased in 2012 compared to 2011. This was due to the contractors' growing capability and increased opportunities in construction. The number of registered foreign contractors in 2012 showed a significant change compared to 2011.

**Table 3.2 Registration of Contractors**

Grade	Bidding Limit	2010	2011	2012	1H 2013
G1	Not exceeding RM200,000	32,987	32,752	36,399	35,886
G2	Not exceeding RM500,000	8,077	8,187	8,665	8,765
G3	Not exceeding RM1,000,000	10,761	10,437	10,351	9,149
G4	Not exceeding RM3,000,000	2,766	2,686	2,922	2,996
G5	Not exceeding RM5,000,000	3,962	3,817	4,317	4,246
G6	Not exceeding RM10,000,000	1,507	1,398	1,692	1,654
G7	Unlimited	4,533	4,573	5,144	5,299
Foreign	Unlimited	196	244	296	303
<b>Total</b>		<b>64,789</b>	<b>64,094</b>	<b>69,786</b>	<b>68,298</b>

Source: CIDB Malaysia

### 3.3. Construction Personnel

A total of 1,844 architects and 955 quantity surveyors were registered as a professional consultant, while a total of 1,654,000 construction personnel were registered in 2012. As in the previous years, the registration of consultants and construction personnel was balanced and did not greatly vary.



**Table 3.3 Registration of Local Professional Consultants by Type**

Type of Professional Consultant	2010	2011	2012
Architect <sup>1</sup>	1,744	1,782	1,844
Quantity Surveyor <sup>2</sup>	859	911	955
Engineer <sup>2</sup>	4,784	6,841	N.A

Source:

<sup>1</sup> Board of Architects Malaysia<sup>2</sup> Board of Quantity Surveyors Malaysia

Note : N.A – Not Available

**Table 3.4 Registered Construction Personnel by Type**

Category of Worker	2011		2012	
	Local	Foreign	Local	Foreign
General Worker	617,409	320,016	664,652	367,427
Skilled Construction Worker	154,612	8,398	155,317	8,174
Site Supervisor	113,417	1,077	116,406	1,382
Construction Manager	82,415	3,853	86,844	4,333
Administration Personnel	221,768	2,559	246,190	3,386
<b>Total</b>	<b>1,189,621</b>	<b>335,903</b>	<b>1,269,409</b>	<b>384,702</b>

Source: CIDB Malaysia

### 3.4. Construction Productivity

Value-added per employee in the construction sector rose significantly by 15.0% to RM22,799 per worker in 2012 (2011: RM19,817 per worker). The increase in productivity is expected to continue in the future as the execution of several mega projects in 2012 and more key projects identified under the Entry Point Projects (EPP) initiatives in 2013.

**Table 3.5 Value-Added Per Employee**

	2010	2011	2012
Construction Sector Value- Added (RM million)	21,459	22,464	26,531
Construction Sector Employee ('000 persons)	1,082.7	1,133.6	1,163.7
<b>Value-Added Per Employee (RM)</b>	<b>19,820</b>	<b>19,817</b>	<b>22,799</b>

Source: Central Bank of Malaysia Annual Report 2012.

### 3.5. Construction Cost

#### 3.5.1. Tender Price Index

Building construction tender price indices showed an overall increase compared to the base year in 1980. In 1H 2012, tender price index showed an increase of 2.2% compared to 2H 2011 (411.36 point). In 2H 2012, the index added 8.83 points to make the tender price index rose to 429.32 points. The tender price index will continue to rise in line with the rising prices of building materials.

**Table 3.6 Building Construction Tender Price Indices (1980 = 100)**

Period		Tender Price Indices
2010	1H	410.18
	2H	398.59
2011	1H	408.49
	2H	411.36
2012	1H	420.49
	2H	429.32

Source: Average Cost per Square Meter for Building Work by Public Works Department

#### 3.5.2. Average Price of Major Construction Material

In 2012, the average prices for major building materials such as cement, sand aggregate, ready mixed concrete and brick rose slightly between 0.2% to 2.2% (2011: between 1.6% to 13.3%). For steel base materials such as steel bar and BRC A10, the average price for both materials decreased between 0.4% to 0.1%. Diesel as one of the main raw material showed downward price trend starting from mid-2012. The highest average price for diesel has been recorded in March 2012 at RM3.29 per litre and it continued to decline by 19.5% to RM2.65 per litre in December 2012.

**Table 3.7 Average Prices of Major Construction Materials in Malaysia (RM)**

Category of Material	Unit	2010	2011	2012
Cement	5 kg Bag	15.87	16.44	16.76
Sand	Tonne	24.99	25.79	23.60
Steel Bar	Tonne	2,402.30	2,568.56	2,561.76
BRC A10	m <sup>2</sup>	18.72	19.35	18.93
Aggregate	Tonne	33.93	34.49	33.56
Ready Mixed Concrete	m <sup>3</sup>	254.88	262.48	253.11
Brick	Unit	0.32	0.36	0.37
Diesel (Industry)	Litre	2.47	3.07	3.00

Source: CIDB Malaysia

### 3.5.3. Construction Industry Wage Rates

#### **Construction General Worker Wage Rates**

Average daily wage rates for most categories of local skilled construction workers increases ranging from 0.1% to 5.3%. Among the categories of skilled construction workers experiencing a rising in minimum and maximum wage rates are concreter, carpenter - joinery and painter – building meanwhile, average minimum and maximum wage rate for skilled scaffolder - tubular experience a decrease. The highest maximum wage rate is earned by local skilled construction who works as a plumber-reticulation (RM125.03 per day) meanwhile; a bricklayer earned the lowest minimum wage rate (RM71.36 per day). Most of daily wage rates for local semi-skilled worker increased to an average of 0.3% to 13.3%. Among the categories of semi-skilled construction workers experiencing a rising in minimum and maximum wage rates are general construction worker - building, roofer and plumber - reticulation. The highest maximum wage is earned by local semi-skilled construction workers who works as a building wiring installer (RM115.75 per day) meanwhile, a general construction worker - building earned the lowest minimum wage rate (RM42.23 per day). In Malaysia, foreign construction workers earned lower wages than local construction workers.

**Table 3.8 Average Daily Wage Rate for Construction Worker in Malaysia  
(RM per day)**

Category of Worker	Minimum / Maximum Wage	Local Worker				Foreign Worker			
		Skilled		Semi-Skilled		Skilled		Semi-Skilled	
		2011	2012	2011	2012	2011	2012	2011	2012
General Construction Worker - Building	Minimum	-	-	39.92	42.23	-	-	36.08	36.38
	Maximum	-	-	63.50	71.39	-	-	56.48	59.75
Concretor	Minimum	66.93	70.53	53.10	55.50	58.53	58.87	46.31	48.38
	Maximum	102.94	105.80	85.90	87.30	90.11	92.43	72.28	75.00
Barbender	Minimum	74.67	77.81	57.61	58.07	61.77	60.95	44.91	46.05
	Maximum	105.92	104.94	83.19	84.14	83.44	85.61	67.02	71.19
Carpenter-Formwork	Minimum	79.13	80.99	61.09	62.95	64.88	66.10	51.29	56.13
	Maximum	109.45	110.28	88.08	91.06	91.61	91.89	77.47	81.19
Bricklayer	Minimum	70.59	71.36	48.86	50.72	52.93	56.49	41.56	42.62
	Maximum	101.63	102.94	80.36	79.53	82.40	85.57	68.22	66.46
Roofer	Minimum	81.46	81.51	61.90	66.93	67.81	69.89	49.91	53.85
	Maximum	115.19	115.53	90.81	92.44	101.15	98.08	81.56	80.56
Carpenter - Joinery	Minimum	84.36	86.16	66.44	70.41	71.04	73.59	54.23	56.91
	Maximum	119.17	121.19	100.26	98.72	107.34	103.72	86.11	87.14
Steel Structure Fabricator	Minimum	79.86	82.66	63.71	69.78	72.04	73.07	52.57	58.52
	Maximum	128.99	119.44	102.21	99.11	108.75	106.11	88.71	85.93
General Welder	Minimum	72.44	76.31	60.67	66.78	66.00	69.37	51.32	57.38
	Maximum	122.45	117.22	94.44	93.60	103.64	104.17	84.01	85.76
Plumber - Building & Sanitary	Minimum	75.98	78.52	59.63	60.63	63.51	64.53	47.83	49.09
	Maximum	112.42	111.67	89.60	90.03	94.22	95.22	75.82	78.86
Plumber - Reticulation	Minimum	81.47	81.38	63.31	71.73	67.33	70.51	50.69	60.35
	Maximum	119.57	125.03	103.27	105.25	105.70	108.58	88.83	91.81
Building Wiring Installer	Minimum	-	-	71.97	82.16	-	-	60.53	69.23
	Maximum	-	-	116.44	115.75	-	-	107.84	105.97
Electrical Wireman PW2 (RM Monthly)	Minimum	1,783.33	1,797.06	-	-	1,280.28	1,343.63	-	-
	Maximum	2,998.00	3,005.73	-	-	2,400.01	2,432.39	-	-
Electrical Wireman PW4 (RM Monthly)	Minimum	2,336.23	2,441.89	-	-	1,730.83	1,759.71	-	-
	Maximum	3,655.85	3,609.61	-	-	2,882.63	2,909.74	-	-
Scaffolder - Prefabricated	Minimum	74.81	77.88	57.94	59.12	60.69	62.38	48.17	51.68
	Maximum	110.64	110.03	94.69	92.73	96.33	97.34	82.79	83.97
Scaffolder - Tubular	Minimum	75.76	72.64	59.02	59.99	60.46	63.72	48.50	50.88
	Maximum	109.78	102.50	84.59	88.00	94.36	95.53	75.96	78.47
Plasterer	Minimum	77.52	77.96	56.18	59.63	58.54	58.83	46.12	44.55
	Maximum	111.70	105.66	89.73	89.97	89.81	91.89	78.67	80.86
Tiler	Minimum	81.64	82.91	61.27	63.17	65.73	67.42	48.67	50.83
	Maximum	115.06	117.34	93.86	93.14	95.47	96.97	79.60	84.11
Painter - Building	Minimum	70.06	72.33	53.06	54.40	57.30	59.39	45.65	46.43
	Maximum	104.18	105.54	83.27	85.31	85.98	89.56	69.08	72.08
General Construction Worker - Civil	Minimum	-	-	52.86	52.03	-	-	43.74	44.97
	Maximum	-	-	76.97	80.11	-	-	67.84	71.06

Source: CIDB Malaysia

### **Construction Machine Operator Wage Rates**

The average daily wage for most categories of local skilled machinery operators increases in the range of 0.1% to 6.8%. Among the categories of skilled operators experiencing a rising of minimum and maximum wage rates are mobile crane, tower crane and slinger / dogger operators. Among the categories of skilled operators who experience a decrease of minimum and maximum wage rates are off road truck, backhoe loader and roller operators. The highest maximum wage is earned by local skilled operator who operates tower crane (RM113.39 per day) meanwhile a roller operator earned the lowest minimum wage (RM46.40 per day). Most category of local semi-skilled machinery operator experienced a decreased in average daily wage rate ranging from 3.8% to 0.3%. Among the categories of semi-skilled operators experiencing a decrease in minimum and maximum wage rate are rigger pile, off-road truck and wheel loader operators. Among the categories of semi-skilled operators who were experiencing an increase of minimum and maximum wage rate are tower crane operators. The lowest minimum wage is earned by semi-skilled operator who operates wheel loaders (RM36.78 per day) meanwhile tower crane operator earned the highest maximum wage rate (RM81.65 per day). In Malaysia, foreign construction machinery operator earned lower wages than the local construction machinery operator.

**Table 3.10 Average Daily Wage Rates for Construction Machinery Operator in Malaysia (RM per day)**

Category of Operator	Minimum / Maximum Wage	Local Worker				Foreign Worker			
		Skilled		Semi-Skilled		Skilled		Semi-Skilled	
		2011	2012	2011	2012	2011	2012	2011	2012
Excavator	Minimum	54.62	56.27	-	-	44.83	44.45	-	-
	Maximum	85.04	85.63	-	-	77.67	72.00	-	-
Pile Rigger	Minimum	50.67	52.51	39.27	38.47	46.21	46.54	35.26	34.67
	Maximum	85.08	83.65	66.89	65.60	78.54	76.05	60.63	61.08
Off Road Truck	Minimum	50.82	50.23	38.05	37.57	44.59	44.60	35.36	34.30
	Maximum	79.82	78.88	61.15	60.82	70.82	71.43	57.48	58.64
Backhoe Loader	Minimum	53.57	51.58	-	-	46.01	42.39	-	-
	Maximum	88.14	80.81	-	-	78.91	70.95	-	-
Roller	Minimum	48.37	46.40	36.32	37.60	44.51	43.69	33.77	32.84
	Maximum	85.64	83.57	62.09	61.10	72.83	74.01	56.04	57.57
Roller / Compactor	Minimum	47.49	49.61	36.70	36.58	44.96	44.69	33.81	34.01
	Maximum	81.89	81.19	63.57	62.32	73.21	74.24	57.18	60.26
Scraper	Minimum	49.39	51.66	38.51	38.75	46.69	47.04	35.44	35.84
	Maximum	80.86	81.37	64.02	62.07	75.64	74.66	61.11	62.09
Motor Grader	Minimum	47.89	51.17	-	-	44.23	43.60	-	-
	Maximum	83.34	83.33	-	-	74.48	76.83	-	-
Wheel Loader	Minimum	49.16	48.14	38.15	36.78	44.28	45.03	34.48	33.78
	Maximum	85.77	85.82	65.14	64.93	77.53	75.24	59.44	59.87
Paver	Minimum	51.21	52.16	39.78	40.35	47.38	48.43	35.08	35.61
	Maximum	81.43	84.52	64.58	63.88	76.02	75.03	60.49	61.41
Mobile Crane	Minimum	63.51	65.13	45.17	46.57	59.09	60.66	40.44	40.94
	Maximum	99.43	103.43	77.83	77.47	90.70	91.05	65.53	66.96
Crawler Crane	Minimum	62.85	65.22	46.68	48.54	59.09	59.24	41.64	42.15
	Maximum	99.30	100.00	73.57	71.92	90.59	88.12	66.66	67.56
Tower Crane	Minimum	64.83	69.22	46.25	52.35	57.26	62.16	40.53	41.17
	Maximum	111.02	113.39	80.73	81.65	101.62	98.82	72.37	74.27
Forklift	Minimum	50.11	51.55	36.32	38.04	44.32	44.39	33.56	31.81
	Maximum	79.12	75.69	62.24	59.90	73.02	70.10	56.09	56.10
Slinger / Dogger	Minimum	45.74	47.83	36.07	36.87	42.79	43.34	34.24	33.37
	Maximum	77.98	81.17	60.63	60.60	73.26	71.39	58.61	58.98

Source: CIDB Malaysia

### **IBS Installer Wage Rates**

IBS installer in Malaysia comprises of only local workers. Average daily wage rate for most of skilled IBS components installer increases ranging from 0.4% to 10.6%. The highest maximum wage is earned by an IBS precast concrete installers (RM151.17 per day) meanwhile, a system formwork installer earned the lowest minimum wage (RM68.50 per day). Most categories of IBS semi-skilled components installer experience an increase of average daily wage rate ranging from 4.8% to 9.3%. The highest maximum wage is earned by an IBS precast concrete installers (RM100.50 per day) meanwhile, a roof truss installer (light gauge steel) earned the lowest minimum wage (RM53.17 per day).

**Table 3.9 Average Daily Wage Rate for Local IBS Installer in Malaysia  
(RM per day)**

Category of IBS Installer	Minimum / Maximum Wage	Skilled		Semi-Skilled	
		2011	2012	2011	2012
IBS Precast Concrete	Minimum	79.83	85.17	64.83	65.17
	Maximum	150.00	151.17	109.17	100.50
IBS Lightweight Panel	Minimum	72.67	80.33	59.83	63.33
	Maximum	130.17	130.67	104.17	97.67
Lightweight Block wall	Minimum	64.33	71.00	50.33	55.00
	Maximum	99.17	98.17	80.00	74.50
System Formwork	Minimum	65.17	68.50	51.83	54.33
	Maximum	98.33	107.83	80.83	87.33
Roof Truss (Timber)	Minimum	62.33	69.33	50.17	54.33
	Maximum	109.00	97.33	79.17	76.67
Roof Truss (Light Gauge Steel)	Minimum	65.67	69.17	50.17	53.17
	Maximum	110.00	105.67	85.67	76.67

Source: CIDB Malaysia

### 3.6. Export and Import of Construction Work and Consultancy Services

#### 3.6.1. Annual Export and Import of Construction Work

In 2012, Malaysian contractors managed to secure 5 foreign projects worth RM1.6 billion (2011: 9 projects, RM8.5 billion) and all of the projects came from Middle East countries. The largest construction projects undertaken by Malaysian companies in foreign countries were the Second Package of Batinah Highway in Oman (RM1.0 billion) and Civil Engineering and Electromechanical Works for Al-Zuhour Water Project in Baghdad, Iraq (RM267.0 million).

Comparatively, a total of 64 foreign contractors from 12 countries secured 129 construction projects in Malaysia worth RM12.3 billion (2011: 118 projects, RM18.1 billion). Contractors from Japan (22 contractors, 39 projects) and Singapore (12 contractors, 26 projects) are the most involved. Among the largest construction projects awarded to foreign contractors in 2012 are 1000mw Coal Power Plant Project at Tanjung Bin, Johor (RM4.8 billion) awarded to Switzerland contractor and Klang Valley MRT: Electric Train System Works at Kuala Lumpur (RM1.4 billion) awarded to German contractor.

**Table 3.11 Value and Number of Export of Construction Services**

Value (RM million)				
Sector and Type of Project	2010	2011	2012	1H 2013
<b>Total Private Sector</b>	<b>3,879.1</b>	<b>8,536.2</b>	<b>1,644.0</b>	<b>1,525.0</b>
Residential	3,304.1	86.5	-	1,035.0
Non-Residential	100.4	-	215.0	165.0
Social Amenity	-	-	-	-
Infrastructure	474.6	8,449.7	1,429.0	325.0

Number				
Sector and Type of Project	2010	2011	2012	1H 2013
<b>Total Private Sector</b>	<b>23</b>	<b>9</b>	<b>5</b>	<b>4</b>
Residential	7	2	-	1
Non-Residential	7	-	2	2
Social Amenity	-	-	-	-
Infrastructure	9	7	3	1

\*As at 30 June 2013



Source: CIDB Malaysia

**Table 3.12 Value and Number of Import of Construction Services**

Value (RM million)				
Sector and Type of Project	2010	2011	2012	1H 2013
<b>Total Private Sector</b>	<b>10,557.4</b>	<b>16,446.3</b>	<b>12,159.4</b>	<b>7,166.5</b>
Residential	838.4	701.6	451.6	35.2
Non-Residential	6,189.9	7,759.4	4,822.5	6,344.6
Social Amenity	0.7	9.3	3.0	1.2
Infrastructure	3,528.4	7,976.1	6,882.3	785.5
<b>Total Public Sector</b>	<b>316.2</b>	<b>1,610.7</b>	<b>144.9</b>	<b>0.0</b>
Residential	-	-	-	-
Non-Residential	-	-	144.9	-
Social Amenity	-	-	-	-
Infrastructure	316.2	1,610.7	-	-
<b>Grand Total</b>	<b>10,873.6</b>	<b>18,057.1</b>	<b>12,304.4</b>	<b>7,166.5</b>

Number				
Sector and Type of Project	2010	2011	2012	1H 2013
<b>Total Private Sector</b>	<b>109</b>	<b>118</b>	<b>129</b>	<b>19</b>
Residential	8	7	13	2
Non-Residential	81	88	92	12
Social Amenity	1	3	2	1
Infrastructure	19	20	21	4
<b>Total Public Sector</b>	<b>1</b>	<b>6</b>	<b>1</b>	<b>0</b>
Residential	-	-	-	-
Non-Residential	-	-	1	-
Social Amenity	-	-	-	-
Infrastructure	1	6	-	-
<b>Grand Total</b>	<b>110</b>	<b>124</b>	<b>129</b>	<b>19</b>

\*As at 30 June 2013  
Source: CIDB Malaysia

**Table 3.13 5 Major Project Secured by Malaysian Contractors in Foreign Market in 2012**

	Country	Type of Project	Value (RM million)
1.	Oman	Infrastructure	1,004.0
2.	Iraq	Infrastructure	267.0
3.	Saudi Arabia	Infrastructure	158.0
4.	Qatar	Non-residential	134.0
5.	Qatar	Non-residential	81.0

\*As at 30 June 2012  
Source: CIDB Malaysia

**Table 3.14 5 Major Projects Secured by Foreign Contractors in Malaysia in 2012**

	Country	Type of Project	Value (RM million)
1.	Switzerland	Infrastructure	4,768.3
2.	German	Infrastructure	1,365.1
3.	German	Non-residential	936.3
4.	Korea	Non-residential	555.9
5.	Korea	Non-residential	538.5

\*As at 30 June 2013  
Source: CIDB Malaysia

### 3.7. Construction Industry Outlook for 2013 / 2014

In 2013, the Malaysian economy is expected to grow moderately by 4.5 - 5.0%. Under the 2014 Budget, the government has targeted the construction sector to grow by 10.6% in 2013 and 9.6% in 2014. The 10th Malaysia Plan 2011-2015 (10MP) targeted Malaysian economic to grow by 6.0 % and the construction sector at 3.7% in 2014.

Construction sector prospects for 2013 and 2014 is promising which is driven from the implementation of projects under EPP, 10MP, Government Transformation Programme (GTP) and EPP regional economic corridors and also from the demand of residential sector. Since the formulation of ETP in 2010, construction projects value continue to increase each year from RM90.9 billion in 2010 to RM118.9 billion in 2012. The construction sector seems to have not been affected by the weakening global environment but showing a sustainable and dynamic domestic economy. The success of ETP came from the government support and private sector collaboration. Private sector has begun to experience transformational role in generating economic growth when the private sector increased their function significantly. Malaysian Government is expected to continue in adopting business-friendly policies by supporting accommodative incentives and will keep on improving the welfare of the people in line with the philosophy of 'no party will be marginalised from the mainstream of development'. The main factors to boost construction demand will remain strong at least by the year 2020. Public mega project is still in its initial stage, FDI investment is expected to continue growing, export demand is forecasted to recover and household income which continues to increase will provide a solid foundation for the Malaysian economy to continue its growth and give good prospects for the construction sector.

Projections made by CIDB are based on rough prediction, limited source and information from mainstream and economic reports from various parties and CIDB's experience. With the implementation of the EPP, GTP, 10MP and EPP regional economic corridor, value of construction projects for 2013 is expected to be at RM110.0 billion and in 2014, the value will reach RM115.0 billion. The contribution of government projects in 2013 is estimated at 14.3% and 15.4 % in 2014. In 2014, it is predicted that the world economy will recover which encourages trade and investment will continue to grow. Furthermore, Malaysian economy has opened up vast domestic market either through free trade agreement (FTA) or more domestic economic sector to be liberalised.

# Greater Kuala Lumpur/Klang Valley – The Spillover Benefits to the Economy

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## 1. BACKGROUND TO ETP AND NKEA

On 10<sup>th</sup> June 2010, the Prime Minister of Malaysia, Dato' Sri Najib Tun Razak unveiled the Tenth Malaysian Plan. This comprehensive blueprint charts the development of government reformations and the ambitious New Economic Model for the next five years. The Plan contains new policy directions, strategies and programmes aimed at delivering the desired outcomes for all Malaysians.

The Tenth Malaysian Plan resulted in the birth of the Government Transformation Programme (GTP) on 28<sup>th</sup> January 2010, to address government transformation in seven key areas which were the highest concerns of Malaysian citizens through surveys - Fighting Corruption, Reducing Crime, Reducing Poverty, Improving Access to Education, Improving Rural Basic Infrastructure, Improving Urban Public Transport and Improve Cost of Living.

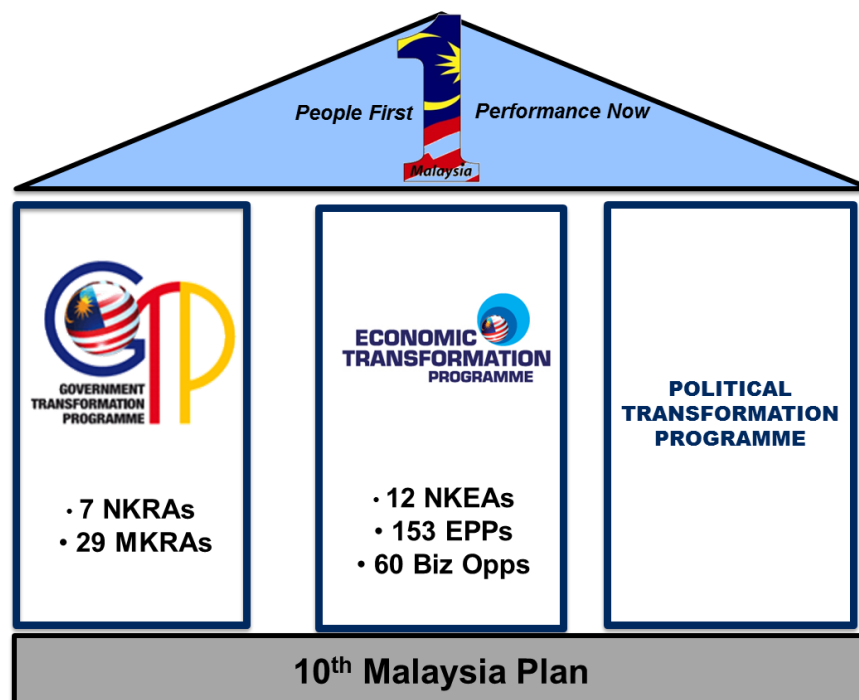


Figure 1. Formation of GTP and ETP under 10<sup>th</sup> Malaysia Plan

Six months after launching the GTP, came the Economic Transformation Programme (ETP). It is a comprehensive plan to propel Malaysia's economy into a high income economy. ETP aims to lift Malaysia's Gross National Income (GNI) to US\$523 billion by 2020, and raise GNI per capita from US\$6,700 to US\$15,000, meeting the World Bank's threshold for a high income nation. It was expected that 92% of the total ETP investment would originate from private sectors in Malaysia's top 11 National Key Economic Areas (NKEA) – Wholesale and Retail, Oil and Gas, Electrical & Electronics, Tourism, Education, Healthcare, Palm Oil and Rubber, Financial Services, Communication Contents and Infrastructure, Business Services and Agriculture.

The twelfth NKEA, which is the Greater Kuala Lumpur/Klang Valley (GKL/KL) came about when there was an apparent need to drive urbanization. As seen in countries like China, Japan, Italy, US and UK, urbanization drives economic growth. As competition among cities is becoming more intense, it is vital for the government to improve the capital Kuala Lumpur competitiveness and liveability aspects viz. infrastructure, healthcare, education, cultural and safety so that it will continue to attract business, investment and visitors in the future.

For the purpose of conference topic, this paper will focus on the activities within NKEA GKL/KV of the Economic Transformation Programme.

## 2. IMPLEMENTATION OF EPPs UNDER NKEA GKL/KV

When the ETP was first launched, it had 131 Entry Point Projects (EPPs) from the twelve NKEAs, which later expanded to 153 EPPs in 2012. They are called EPPs because these projects are catalytic with set objectives to deliver investment, jobs and GNI. These are high impact projects, matched with specific ideas and actions, to spur growth of the NKEAs. Some involve large infrastructure investments while others have a more direct effect on the output of their sectors and on the life of Malaysians.

GKL/KV's aspiration is to be one of the top economic and most liveable cities in the world by 2020. Hence, all the efforts on the EPPs are focused into 4 categories of initiatives to achieve the twin aspirations:

Category	Description
Magnet	<ul style="list-style-type: none"> <li>• Make Kuala Lumpur the hub for multinational companies (MNCs)</li> <li>• Attracting the best and brightest talents within and out of Malaysia</li> </ul>
Connect	<ul style="list-style-type: none"> <li>• Enhance connectivity to regional and global economic hub.</li> <li>• Enhance public transport to achieve 40% modal share by 2020</li> </ul>
New Places	<ul style="list-style-type: none"> <li>• Urban renewal in targeted locations to enhance value of real estate and improve liveability among city dwellers</li> <li>• Increase shaded areas and public parks</li> <li>• Improve connectivity along heritage trails and build iconic infrastructure</li> </ul>
Enhanced Services	<ul style="list-style-type: none"> <li>• Create easy pedestrian access throughout the city</li> <li>• Ensure effective use of resources such as energy, water and land</li> </ul>

Table 1. Four categories under NKEA GKL/KV

There are 9 EPPs which are directly addressing the categories above. The combined 9 EPPs are expected to generate RM 190 billion of incremental GNI and facilitate population growth from 6 million to 10 million by 2020.

### i. Rationale for Development (or EPP)

Based on the 4 categories, EPPs were carefully selected and deliberated based on GNI impact, jobs creation and investment. Table 2 explains detailed rationale of each EPP under NKEA GKL/KV.

<b>EPP</b>	<b>Description</b>	<b>Owner</b>	<b>Rationale</b>
EPP #1	Attract 100 world's top MNCs	Invest KL	<ul style="list-style-type: none"> <li>• Bring 100 MNCs by 2020</li> <li>• Promote GKL/KV as an investment destination</li> <li>• Proactively reach out to target companies to create awareness of opportunities</li> <li>• Provide one-stop relocation service</li> <li>• Conduct effective post investment management to retain and help MNCs</li> </ul>
EPP #2	Attract high-skilled immigration	Talent Corp	<ul style="list-style-type: none"> <li>• Create large number of jobs, and building local “eco-system”</li> <li>• Development of detailed talent attraction program</li> <li>• Attracting qualified and skilled Malaysians living abroad</li> <li>• Retaining foreign talents.</li> </ul>
EPP #3	Connect to Singapore with High Speed Rail	SPAD	<ul style="list-style-type: none"> <li>• Connecting SEA's two largest economic agglomerations</li> <li>• Stimulating growth in intermediate Malaysian cities</li> <li>• KL CBD to Singapore CBD connection in 90 minutes</li> </ul>
EPP #4	Mass Rapid Transit: An integrated urban rail system	SPAD	<ul style="list-style-type: none"> <li>• Backbone of rail transportation system for GKL/KV</li> <li>• Unlocking development value of spaces</li> <li>• Unleashing productivity of workers</li> </ul>
EPP #5	River of Life	JPS & DBKL	<ul style="list-style-type: none"> <li>• Revitalise the Klang and Gombak rivers into an economic engine</li> <li>• Heritage and cultural heart of <i>1Malaysia</i></li> <li>• Catalyst to enhance liveability in the heart of Greater KL</li> </ul>
EPP #6	Create a greener KL	DBKL	<ul style="list-style-type: none"> <li>• Achieving 14m<sup>2</sup> green space per person to achieve a top-20 ranking in liveable city indices</li> </ul>
EPP #7	Establish iconic places	DBKL	<ul style="list-style-type: none"> <li>• Creating unique and iconic attractions in the city to increase level of community interest and touristic economic activities.</li> <li>• Identify and leverage existing landmarks to enhance KL’s distinct identity and heritage.</li> </ul>
EPP #8	Pedestrian Network	DBKL	<ul style="list-style-type: none"> <li>• Integrate major developments in KL such as MRT and River Of Life</li> <li>• Improve connectivity within CBD for pedestrians</li> </ul>
EPP #9	Solid waste management	JPSPN	<ul style="list-style-type: none"> <li>• Prolonging and reducing usage of sanitary landfills</li> <li>• Increase recycling rate</li> <li>• Facilitating a proper system for construction and demolition waste disposal</li> </ul>

Table 2. Rational of each EPP under GKL/KV



### iii. Area Covered by Development Projects

Greater Kuala Lumpur and Klang Valley is a regional conurbation comprising two Federal Territories and eight municipalities. Figure 2 is an illustration of the boundaries of NKEA GKL/KV, which starts from city centre of Kuala Lumpur and across 9 other local authorities.

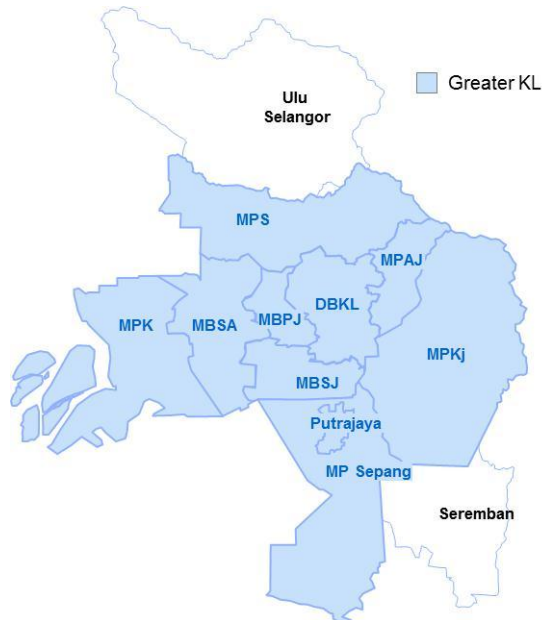


Figure 2. Boundaries of GKL/KV

These areas were selected with the following criteria:

- a. Focus on highest density and highest GNI contributing areas
  - i. Kuala Lumpur city centre
  - ii. Administrative capital in Putrajaya
  - iii. Main concentrations of commercial and industrial clusters in Selangor
- b. Adheres to traditional jurisdictional boundaries for ease of administrative oversight and implementation coordination
- c. High branding value by focusing on a narrower geographical scope (i.e. scarcity value)
- d. Includes major connectivity hubs to link Greater KL to the world (e.g. KLIA)

Amongst all the NKEA GKL/KV projects, EPP#3 – High Speed Rail will be the only project which stretches beyond GKL/KV boundary. Starting from Kuala Lumpur city centre, the High Speed Rail track cuts across Selangor state to Seremban (Negeri Sembilan). From there, it will continue south bound to Ayer Keroh (Melaka), Muar, Batu Pahat and Iskandar Region in Johor. Finally, the track will cross international boundary into the Singapore CBD. The project encompasses four Malaysian states as well as Singapore.



Figure 3. Proposed High Speed Rail Alignment across 4 States and Singapore

#### iv. Cost of Development Projects

EPP	Development Costs
1	Operational Expense at US\$5 mil/year
2	Operational Expense at US\$3 mil/year
3	Estimated cost - US\$ 13.3b
4	Estimated cost - US\$ 10b for Line 1
5	Estimated cost- US\$ 1.4b
6	Estimated cost- US\$ 6.3m
7	Estimated cost - US\$ 75m
8	Estimated cost- US\$ 19m
9	Not more than US\$ 5m

Table 3. Development Cost of 9 EPPs

## vi. Project Development and Milestones

Figure 4 depicts overall target of all the EPPs under NKEA GKL/KV by 2020. Also, up to date achievement from each EPP ranging from civil activities to trees planting and from secured MNCs to relocation of talents outside Malaysia. Please check Greener KL 300,000 trees (or 100,000 trees) ?










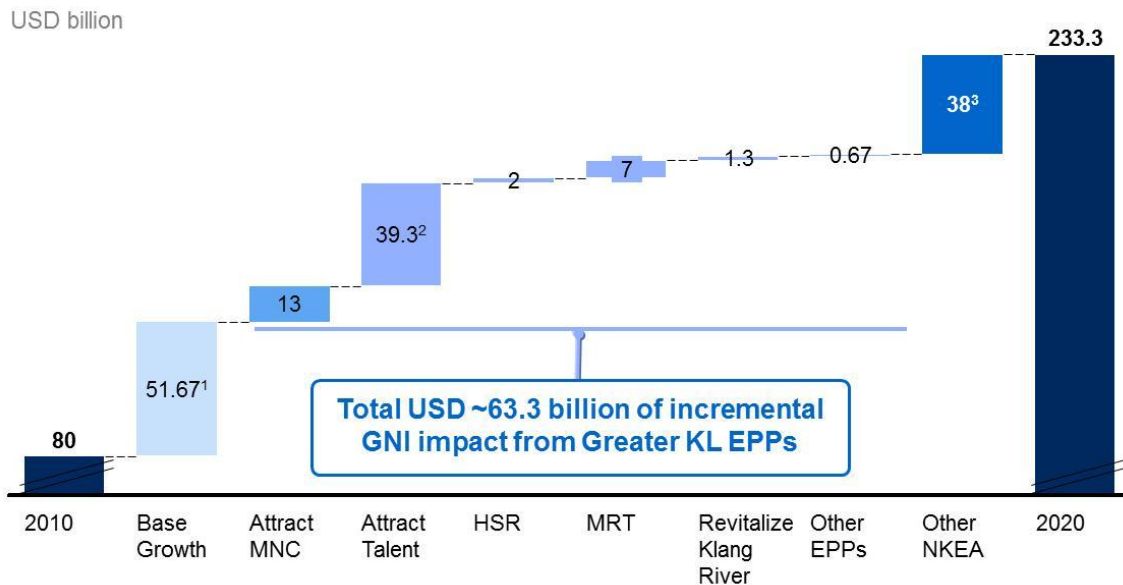
Achievements/Milestones		2020 Target
	<b>MNC Attractions</b>	<ul style="list-style-type: none"> <li>Secured 26 MNCs located in GKL/KV from 2011 - 2013</li> </ul>
	<b>Talent Attractions</b>	<ul style="list-style-type: none"> <li>1,971 persons have been relocated o Malaysia under TalentCorp's programmes in 2012</li> </ul>
	<b>Mass Rapid Transit</b>	<ul style="list-style-type: none"> <li>Elevated works progressing on schedule</li> <li>All 10 TBMs are in Malaysia</li> </ul>
	<b>High Speed Rail</b>	<ul style="list-style-type: none"> <li>Completed Phase 1A and 1B</li> <li>Commencing Phase 2A with G-to-G agreement</li> </ul>
	<b>River of Life</b>	<ul style="list-style-type: none"> <li>Cleaning the river is on going</li> <li>Beautification work in two phases started in 2012</li> </ul>
	<b>Greener KL</b>	<ul style="list-style-type: none"> <li>Approximately 300,000 trees planted by DBKL</li> <li>On going effort in obtaining private sector support</li> </ul>
	<b>Iconic Places</b>	<ul style="list-style-type: none"> <li>Green Icon, TAR Heritage Park completed in 2012</li> <li>Restoration and upgrading of Medan Pasar and Masjid Jamek completed in 2013</li> </ul>
	<b>Pedestrian Network</b>	<ul style="list-style-type: none"> <li>Upgraded 42km of uncovered pedestrian walkways.</li> </ul>
	<b>Solid Waste Management System</b>	<ul style="list-style-type: none"> <li>Setting up construction waste facility</li> <li>Setting up Anaerobic Digestion facility</li> </ul>
		<ul style="list-style-type: none"> <li>100 MNCs or more</li> <li>GKL/KV as an investment destination</li> </ul>
		<ul style="list-style-type: none"> <li>Create large number of jobs, and building local "eco-system"</li> <li>Target 500,000 through the attraction of foreign talent (overseas Malaysians or expatriates)</li> </ul>
		<ul style="list-style-type: none"> <li>Develop an integrated urban rail system GKL/KV</li> </ul>
		<ul style="list-style-type: none"> <li>Operational of Malaysia's first High Speed Rail from KL-SG</li> <li>Connecting SEA's two largest economic agglomerations</li> </ul>
		<ul style="list-style-type: none"> <li>Revitalise the Klang river into an economic engine</li> <li>Water quality Class IIb</li> </ul>
		<ul style="list-style-type: none"> <li>Achieving 14m2 green space per person to achieve a top-20 ranking in liveable city indices</li> </ul>
		<ul style="list-style-type: none"> <li>Create unique and iconic attractions in the city to increase level of community interest and touristic economic activities</li> </ul>
		<ul style="list-style-type: none"> <li>Providing comfortable pedestrian walkways to integrate major developments in KL such as MRT and River Of Life</li> </ul>
		<ul style="list-style-type: none"> <li>A proper system for construction and demolition waste disposal to be in place</li> <li>Increase recycling rate</li> </ul>

Figure 4. Milestones and Targets of NKEA GKL/KV EPPs

## 4. IMPACT TO THE ECONOMY

### i. GNI Contribution

Collectively, initiatives under NKEA GKL/KV are projected to propel GNI contributions of US\$ 63.6 billion. This will be achieved by the contribution of EPP#1 (MNC Attraction), EPP#2 (Talent Attraction), EPP#3 (High Speed Rail), EPP#4 (Mass Rapid Transit), EPP#5 (River Of Live) and other smaller contribution by other EPPs as shown in Figure 5 below.



1 Assume base GNI per capita of US\$ 13,333 in 2010, annual GNI growth rate of 4.5%, and average population of seven mln

2 Double counts with labour components of all other Greater KL initiative across all NKEAs

3 Other NKEA GNI impact (including EPPs, Business opportunities and multiplier impacts) that directly contributes to Greater KL's GNI

SOURCE: Lab analysis

Figure 5. NKEA GKL/KV GNI Contributions

Along with the base growth and GNI contributions from other NKEAs (ie. Healthcare, Tourism, Wholesale & Retail and etc), it is projected that Greater Kuala Lumpur area will have a total GNI value of US\$ 233.3 billion by 2020. GNI contributions NKEA GKL/KV EPPs will come in various forms such as construction from infrastructures, creating jobs opportunities, foreign investments, increment of property values and time savings from improved productivity.

### ii. Property Development

As NKEA GKL/KV strives towards in achieving its twin aspirations of being one of the world's top economic and liveable cities, the following three scenarios are expected to materialize:

1. Population in GKL is expected to increase to 10 million due to business growth, economic expansion and jobs creation. This will result in high growth in property development with the demand of all kinds on projects such as residential building, office blocks, commercial hubs and industrial parks.
2. Increment of property prices due to higher land value from improving liveability. Contributing factors are from better public transportation system, more greener areas and enhanced basic services like water, sewerage, drainage and solid waste.
3. High impact projects like the Mass Rapid Transit, River of Life and other infrastructure projects over a long period will continue to drive the market.

An eminent example of the mentioned property impact can be seen in Figure 6. The property market along MRT Line 1 alignment has seen increment of per square foot prices since the launching of the project. It is expected that it will increase minimally at 40% and as high as 58% once the project is completed in 2016.

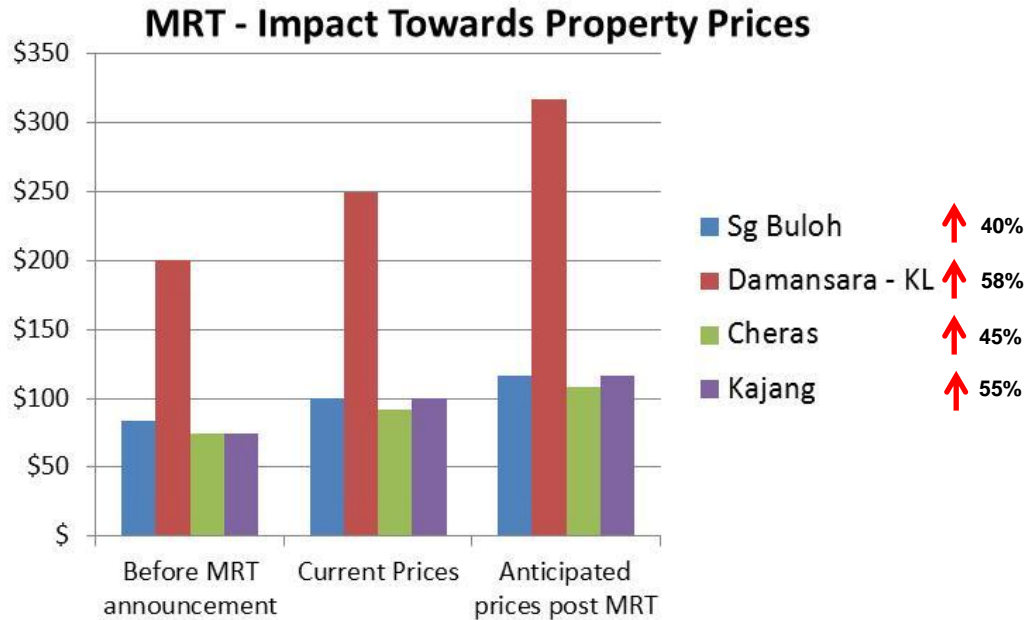


Figure 6. Impact of Property Prices by MRT (Price Per Square Foot)

NKEA GKL/KV initiatives will enable a comprehensive development plan for around Kuala Lumpur and Klang Valley area instead of ad hoc planning that allows developers to just add on in a piecemeal fashion. GKL/KV will be a better planned metropolis with the larger suburban serving the needs of the city centre.

Regeneration of old areas, improvement of existing critical locations and urban renewal initiatives will increase the development value, while at the same time ensuring the newly redeveloped areas blend in with the existing landscape.

A proper comprehensive plan will have to take into consideration of various factors including population growth, job creation (ie. industrial and commercial), transportation requirement, utilities, drainage and recreational parks.

### iii. Jobs Creation

Meanwhile, the EPPs under NKEA GKL/KV are expected to create more than 300,000 jobs by year 2020 as shown in Figure 7. InvestKL, the implementing agency under EPP#1 is mandated to market GKL to world's top MNCs to set regional headquarters. This EPP will contribute most of the job opportunities for a sustainable timeframe. The next set of job creation comes from infrastructure and civil related projects such as High Speed Rail, Mass Rapid Transit and River of Life.

Category	Description	Job (Thousands)	Key driver of job creation
<b>Total Greater KL</b>		<b>317</b>	
<b>1 Greater KL as a magnet</b>	EPP1 MNC Attraction	234	<ul style="list-style-type: none"> <li>MNCs shifting regional HQs to GKL</li> <li>Increase in operations and capital investment in GKL by targeted anchor tenants</li> </ul>
	EPP2 Talent Attraction	1	
<b>2 Greater KL connect</b>	EPP3 High Speed Rail	29	<ul style="list-style-type: none"> <li>Direct operations of HSR</li> <li>Growth in supporting O&amp;M industry and equipment vendors</li> </ul>
	EPP4 Mass Rapid Transit	20	
<b>3 Greater KL new places</b>	EPP5 River of Life	17	<ul style="list-style-type: none"> <li>Commercial activities along the river</li> <li>River cleaning/maintenance services</li> </ul>
	EPP6 Greener KL	3	
	EPP7 Iconic places	13	
<b>4 Greater KL enhanced services</b>	EPP8 Pedestrian walkway	0	
	EPP9 Solid waste management	0	

Figure 7. Estimated Jobs Contribution from EPPs

## 4. ISSUES AND CHALLENGES IN IMPLEMENTATION AND MITIGATION

The issues related to NKEA GKL/KV EPPs can be grouped into two major categories. The physical and structural issues are more towards construction related problems such as land acquisition, uncharted utilities and so on. While the civil and social issues are leaning towards human related factors. Table 4 and Table 5 in the following sections will detail out the related issues and some of the mitigation done to address them.

### i. Physical and Structural

Issues	EPP Projects	Mitigation
1. Land acquisition across two local authorities	MRT, River of Life	Mutual agreement, public outreach and communication initiatives need to be carried out to acquire land where projects are developed.
2. Squatters relocation along affected project area	River of Life & Iconic Places	Illegal occupying on project site, thus delaying construction works. Community outreach/assist in relocation exercise to address this
3. Difficult/unexpected ground/soil conditions	MRT	Detailed geophysical and borehole investigation is being undertaken and appropriate ground treatment will be placed. The Variable Density Tunnel Boring Machine (first in the world) will be converted from slurry mode to Earth Pressure Balance mode at the appropriate location.
4. Presence of underground utilities which are not mapped out especially in 'older' areas	MRT, Iconic Places & River of Life	Carry out detailed underground utility location/detection. Relocation of existing utilities (if necessary). Map out new corridor for proposed utilities including electronic marking of utility
5. Limited knowledge of technology to be used in new mega projects	MRT & High Speed Rail	Engage with consultants and continuous efforts in reviewing case studies and experience of other countries
6. Traffic congestion – Construction works causing narrowing of busy roads	MRT	Active notification to the public through media and public engagement by project implementers

Table 4. EPPs Physical and structural issues



### iii. Civil and Social

Issues	EPP Projects	Mitigation
1. Managing public perception, communication and buy-in as public is more educated and more vocal	MRT, High Speed Rail, River of Life, Iconic Places	Educate on social economic impact, jobs creation, improving connectivity and increasing KL's competitiveness
2. Managing multi-disciplinary projects which require extensive inter-agency coordination and cooperation	MRT, River of Life, Iconic Places	Provide a governance structure which can track and monitor progress. Identify gaps and provide solution to issues and conflicts
3. Lack of specific talent required by MNCs to operate Regional HQ in Kuala Lumpur	MNC & Talent Attraction	Collaboration between Invest KL and Talent Corp to establish a program to create talent with "specialized" skills for new services industries and traditional "commoditized" skills (eg. O&G industry)
4. Lack of support towards investors in service based industries	MNC Attraction	Provide comprehensive "hand-holding" for investors. Some of the activities involved are workshops and labs between investors, regulator, stakeholders, local partners and authorities to identify gaps
5. Limited knowledge of <b>High Speed Rail</b> technology	High Speed Rail	SPAD engaged with consultants and continuous efforts in reviewing case studies and experience of other countries with operational HSR network. This process will educate SPAD about emerging HSR technologies to identify suitability and assimilate for Malaysian purpose
6. Maximizing the value of land to recoup government investment	High Speed Rail, MRT & River of Life	Economic Impact Study is being undertaken to determine best use and highest return of gazetted land

Table 5. EPPs Civil and social issues

## 5. CONCLUSION

Since the inception of Government Transformation Programme (GTP) and Economic Transformation Programme (ETP), Malaysia has been progressing steadily to achieve the targeted high income nation by 2020. One of the National Key Economic Area (NKEA) driving towards that target is the Greater Kuala Lumpur/Klang Valley (GKL/KV). The carefully chosen nine Entry Point Projects (EPPs) are expected to drive urbanization of GKL/KV to become one of the world's top economic and most liveable cities. These EPPs are projected to bring in GNI of US\$ 63.3 billion, while creating over 300,000 jobs. In parallel, residents of GKL/KV are expected to experience increment of property values, improved connectivity, enhanced services, more greener spaces and emerging of brighter talents.