

Analysing Potential Development via NAPIC's Data Visualisation

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Foreword

Data can be used to improve everything in real estate.

Analytics can enhance data presentation and visualisation.

With data driven strategies, it can be used to:

- i. monitor development approval (local authority),
- ii. increase profit (developers & investors), and
- iii. reduce wastage of resources (environment).



Foreword

NAPIC's has taken a footstep in the era of BDA with Data Visualisation; to nurture data driven decision making in real estate.

This presentation is a prototype of a new JPPH product for PRISM 2.0-BDA module.

Focus on the earliest stage of feasibility study; deciding which market to explore (buying real estate).

NAPIC and DOSM data will be used.

Analysing Number of Household (Population)



Data from Department of Statistics Malaysia (DOSM)

Analysing District with Increasing Numbers of Household (population growth)

Table 1.9: Percentage of households by household group, strata and administrative district, Selangor, 2019 and 2022

Daerah pentadbiran Administrative district	2019			2022			Difference										
	Tertinggi 20% Top 20%	Pertengahan 40% Middle 40%	Terendah 40% Bottom 40%	Tertinggi 20% Top 20%	Pertengahan 40% Middle 40%	Terendah 40% Bottom 40%	Tertinggi 20% Top 20%	Pertengahan 40% Middle 40%	Terendah 40% Bottom 40%								
SELANGOR																	
Bilangan isi rumah ('000) Number of household ('000)	324.6	649.2	649.3	355.0	709.9	710.0	30.4	60.7	60.7								
Jumlah/Total	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0								
Bandar/Urban	97.1	95.4	92.4	97.6	96.8	94.0	0.5	1.4	1.6								
Luar bandar/Rural	2.9	4.6	7.6	2.4	3.2	6.0	(0.5)	(1.4)	(1.6)								
<i>Administrative district</i>																	
Gombak	13.5	43.8	11.8	76.6	11.4	74.0	16.9	60.0	10.8	76.7	10.9	77.4	3.4	16.2	(1.0)	0.1	(0.5)
Klang	12.0	39.0	14.8	96.1	15.3	99.3	9.6	34.1	12.7	90.2	19.0	134.9	(2.4)	(4.9)	(2.1)	(5.9)	3.7
Kuala Langat	2.2	7.1	3.6	23.4	4.4	28.6	3.7	13.1	5.6	39.8	4.3	30.5	1.5	6.0	2.0	16.4	(0.1)
Kuala Selangor	2.3	7.5	2.5	16.2	5.2	33.8	2.4	8.5	3.1	22.0	5.5	39.1	0.1	1.1	0.6	5.8	0.3
Petaling	46.7	151.6	32.4	210.3	34.4	223.4	37.0	131.4	29.0	205.9	35.6	252.9	(9.7)	(20.2)	(3.4)	(4.5)	1.2
Sabak Bernam	0.6	1.9	1.0	6.5	2.8	18.2	0.5	1.8	0.8	5.7	2.8	19.9	(0.1)	(0.2)	(0.2)	(0.8)	0.0
Selangor	4.9	15.9	5.1	33.1	3.5	22.7	6.5	23.1	8.4	59.0	2.6	18.5	1.6	7.2	3.3	26.5	(0.9)
Ulu Langat	16.3	52.9	25.8	167.5	18.1	117.5	21.2	75.3	26.8	26.8	26.8	26.8	22.4	1.0	22.8	(3.4)	
Ulu Selangor	1.5	4.9	3.0	19.5	4.9	31.8	2.2	7.8	2.2	7.8	2.2	7.8	(0.2)	0.4	(0.3)		

Note :
Petaling & Klang has the highest number of household, but the growth is actually -ve.

- District with positive growth and highest number of household(hh):**
1. Ulu Langat: + 32,100 hh
 2. Sepang: + 29,500 hh
 3. Kuala Langat: + 24,300 hh

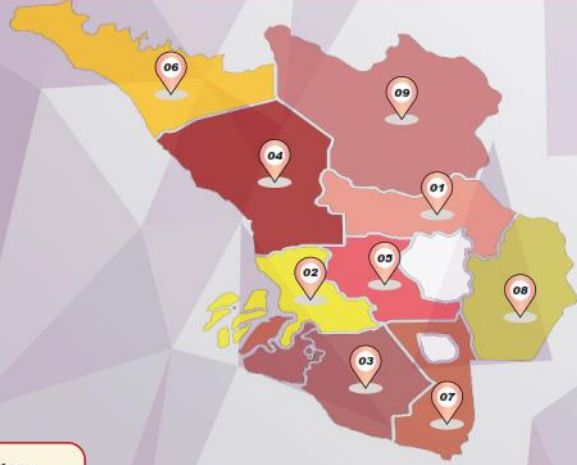
Source: <https://newss.statistics.gov.my/newss-portalx/ep/epDownloadContentSearch.seam?cid=39562>

Analysing Household Income



Data from Department of Statistics Malaysia (DOSM)

PENDAPATAN ISI RUMAH MENGIKUT DAERAH PENTADBIRAN SELANGOR, 2022



■ Pendapatan Isi Rumah Kasar
■ Pendapatan Isi Rumah Boleh Guna

District	Penengah	Purata
01 GOMBAK	RM10,180	RM13,523
02 KLANG	RM8,203	RM10,278
03 KUALA LANGAT	RM10,093	RM11,048
04 KUALA SELANGOR	RM8,375	RM9,410
05 PETALING	RM9,618	RM12,760
06 SABAK BERNAM	RM5,533	RM6,930
07 SEPANG	RM12,608	RM13,673
08 ULU LANGAT	RM8,742	RM11,530
09 ULU SELANGOR	RM6,848	RM8,423

District with highest mean household income:

- Gombak
- Selangor
- Hulu Langat

Chart 3: Mean of Household Gross Income by Administrative District, Selangor, 2019 and 2022

CAGR (%)	2019 (RM)	2022 (RM)	CAGR (%)	
6.4	12,254	Selangor	13,673	3.7
5.1	11,536	Gombak	13,523	5.3
2.2	10,252	Ulu Langat	13,386	8.9
3.9	12,145	Petalang	12,760	1.6
4.5	10,827	SELANGOR	12,233	4.1
7.9	8,375	Kuala Langat	11,048	9.2
4.9	9,980	Klang	10,278	1.0
7.9	7,866	Kuala Selangor	9,410	6.0
7.9	7,598	Ulu Selangor	8,779	4.8
6.7	6,042	Sabak Bernam	6,930	4.6

Chart 5: Mean of Household Disposable Income by Administrative District, Selangor, 2019 and 2022

CAGR (%)	2019 (RM)	2022 (RM)	CAGR (%)	
3.6	9,355	Gombak	11,530	7.0
5.3	10,144	Selangor	11,043	2.8
1.9	8,520	Ulu Langat	10,855	8.1
3.6	9,662	Petalang	10,232	1.9
4.1	8,826	SELANGOR	10,008	4.2
7.8	7,115	Kuala Langat	9,290	8.9
5.7	8,299	Klang	8,423	0.5
5.9	6,550	Kuala Selangor	7,789	5.8
5.9	6,326	Ulu Selangor	7,709	6.6
6.7	5,425	Sabak Bernam	6,032	3.5

Percentage of households and household number by monthly household disposable income class and administrative district, Selangor, 2022

Disposable income class (RM)	Administrative district							
	Gombak		Kuala Langat		Sepang		Ulu Langat	
	Household Percentage	Household Number	Household Percentage	Household Number	Household Percentage	Household Number	Household Percentage	Household Number
1,999 and below	0.6	1.4	0.0	0.0	0.0	-	0.2	
2,000 – 2,999	3.8	8.0	1.0	0.9	0.1	0.1	1.4	
3,000 – 3,999	7.4	15.9	6.5	5.4	2.9	2.9	4.8	
4,000 – 4,999	7.5	15.9	10.0	8.4	4.3	4.3	7.8	
5,000 – 5,999	9.3	19.9	10.7	8.9	4.2	4.2	7.1	
6,000 – 6,999	7.6	16.3	8.2	6.8	5.6	5.7	7.0	25.8
7,000 – 7,999	8.6	18.4	10.8	9.0	5.7	5.8	8.7	32.2
8,000 – 8,999	6.9	14.8	9.0	7.5	10.0	10.1	10.3	38.1
9,000 – 9,999	6.8	14.6	9.3	7.7	14.1	14.3	11.8	43.8
10,000 – 10,999	5.7	12.1	8.0	6.7	12.9	13.0	10.1	37.3
11,000 – 11,999	4.6	9.8	5.0	4.1	10.0	10.1	6.3	23.2
12,000 – 12,999	3.9	8.3	6.4	5.4	8.5	8.6	4.9	18.0
13,000 – 13,999	3.4	7.4	2.8	2.3	6.2	6.3	3.1	11.5
14,000 – 14,999	3.2	6.8	2.2	1.9	2.0	2.0	2.6	9.5
15,000 and above	20.7	44.3	10.0	8.3	13.6	13.7	14.0	51.8
Total	100.0	214.1	100.0	83.4	100.0	101.2	100.0	369.9

District with higher income bracket:


1. Sepang
2. Ulu Langat
3. Gombak


Analysing Development Hotspot




Data from NAPIC's Data Visualisation

Data Visualisation

Property Transaction 

Property Status 

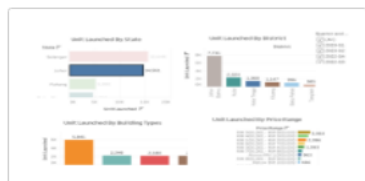
Property Stock 

Property Price and Index 

[Click here to view guideline video](#)

<https://nopic2.jp-ph.gov.my/en/data-visualization>

Property Status



Analytics View New Launches



Analytics View Unit Sold Within 3 Months



Analytics View Unit Sold Within 6 Months



Analytics View Unit Sold Within 9 Months



Commercial Property Market Status Analytics



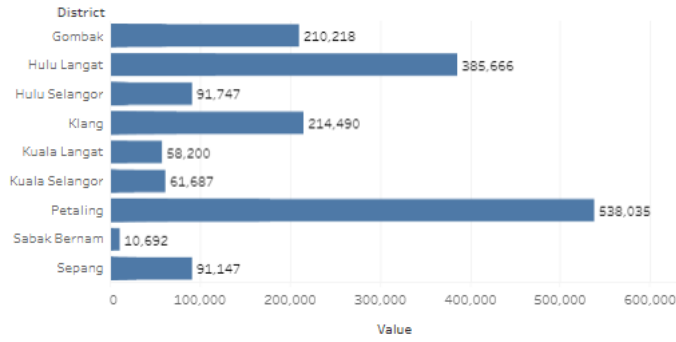
Commercial Property Market Status Table by District

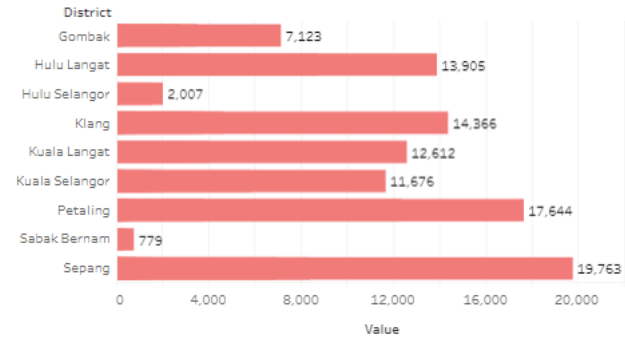


Property Stock Report

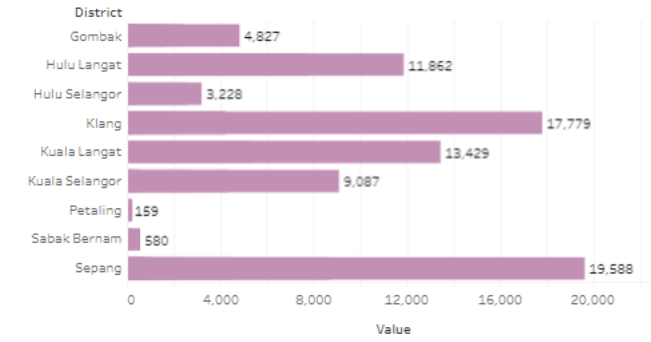
Existing Stock



Incoming Supply



Planned Supply

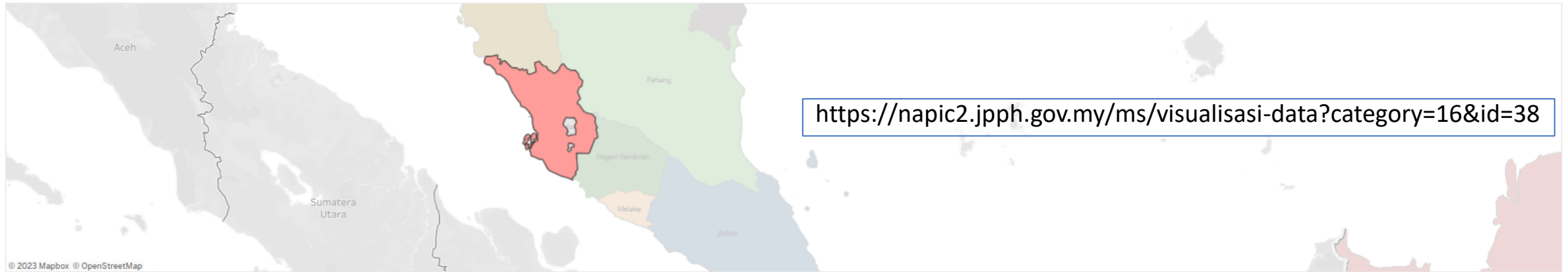


Review Period

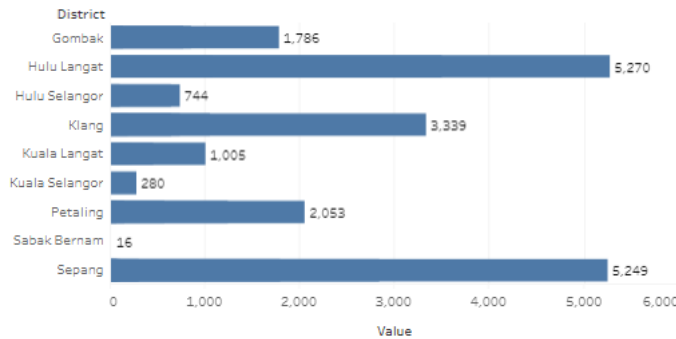
Q1 2023

- State
- Johor
 - Kedah
 - Kelantan
 - Melaka
 - Negeri Sembilan
 - Pahang
 - Perak
 - Perlis
 - Pulau Pinang
 - Sabah
 - Sarawak
 - Selangor
 - Terengganu
 - W.P. Kuala Lumpur
 - W.P. Labuan
 - W.P. Putrajaya

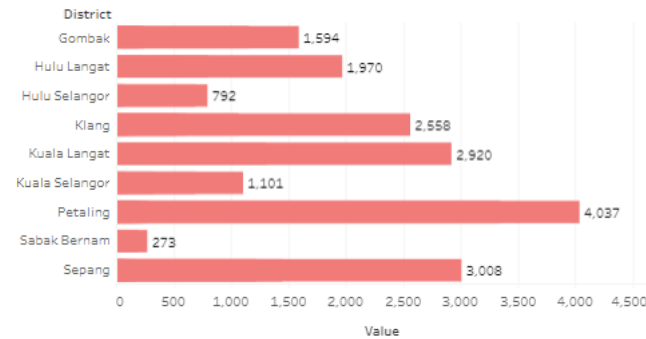
State



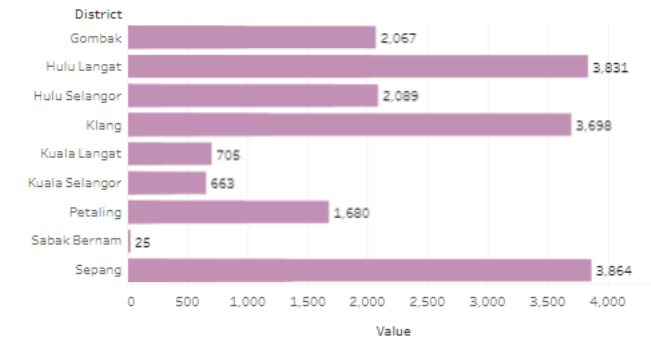
Completion



Starts

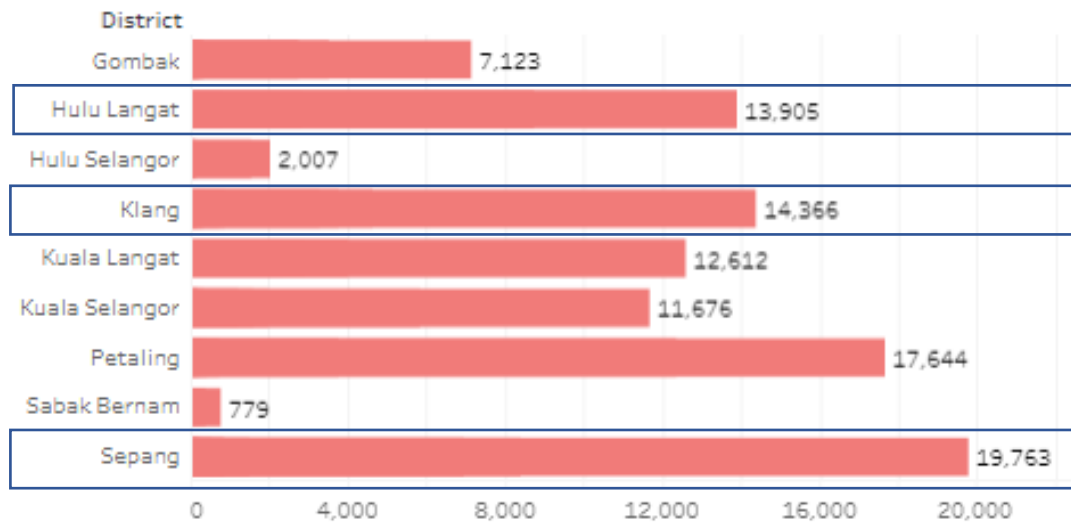


Pre Planned Supply

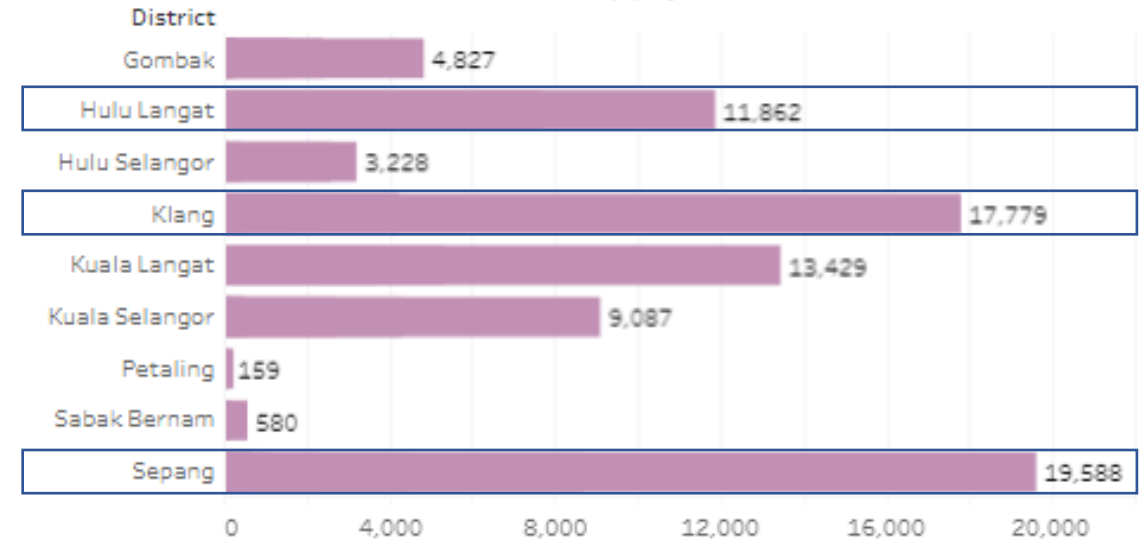


Future Supply

Incoming Supply



Planned Supply



**Future Development
Hotspot:**

1. Sepang: 39,351 units
2. Klang: 32,145
3. Hulu Langat: 25,767

Determining Potential Market



Data from NAPIC's Data Visualisation

Demography Score Matrix

District with positive growth and highest number of household(hh):

1. Ulu Langat: + 32,100 hh
2. Sepang: + 29,500 hh
3. Kuala Langat: + 24,300 hh

Future Development Hotspot:

1. Sepang: 39,351 units
2. Klang: 32,145
3. Hulu Langat: 25,767

District with higher income bracket:

1. Sepang
2. Ulu Langat
3. Gombak

District with highest mean household income:

1. Gombak
2. Sepang
3. Hulu Langat

No.	Criteria	HULU LANGAT	SEPANG	KUALA LANGAT	GOMBAK
1.	Positive growth population	1	2	3	4
2.	High income bracket	2	1	4	3
3.	High mean household income	3	2	4	1
4.	Development hotspot	2	1	3	4
	Total Score	8	6	14	12

Note :

With lowest score, Sepang and Ulu Langat will be considered as a high potential area.

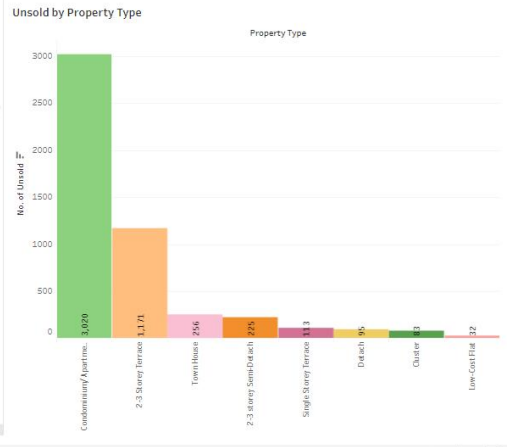
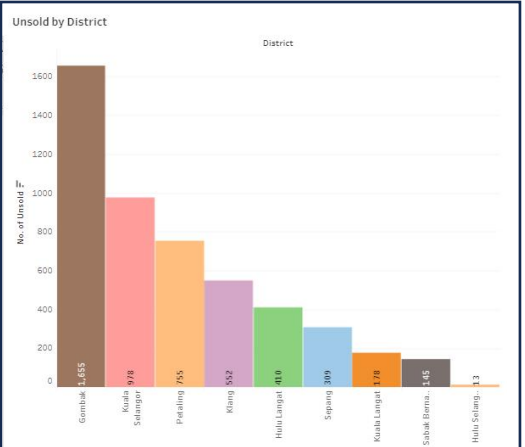
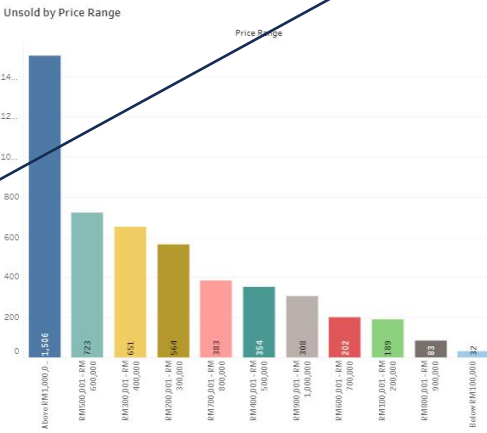
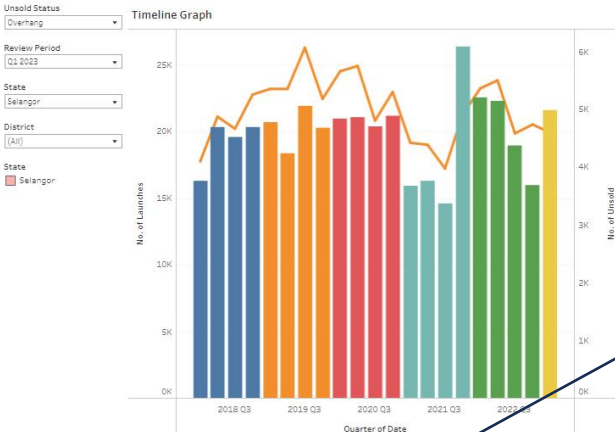
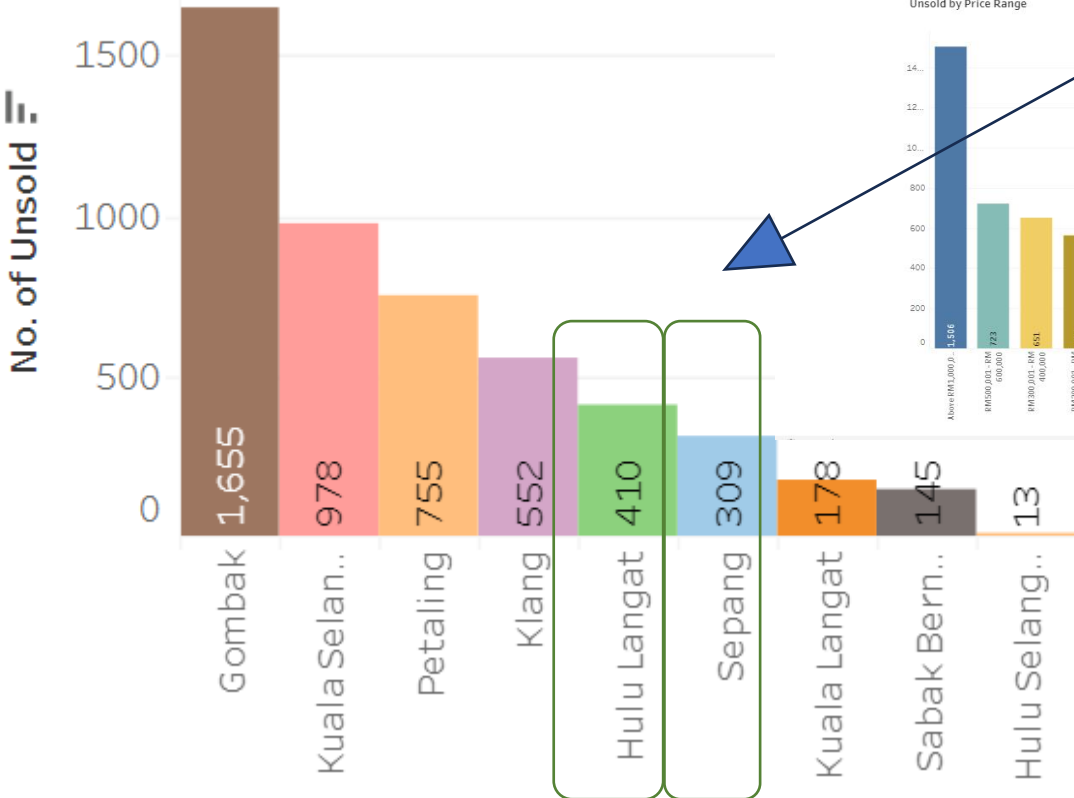
Measuring Overhang Severity



Data from NAPIC's Data Visualisation

Property Sales Performance – Unsold Sales Status

Unsold by District



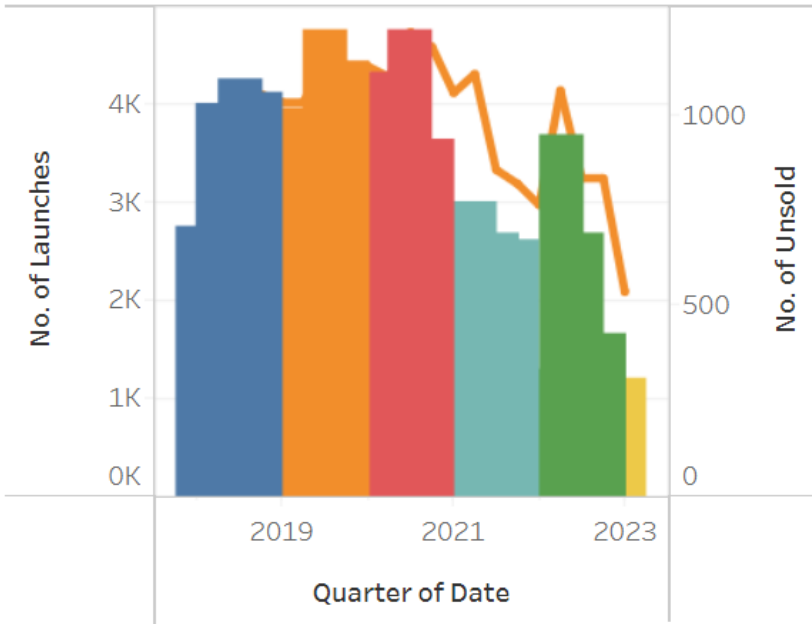
<https://naptic2.jpoh.gov.my/ms/visualisasi-data?category=17&id=205>

Potential Development

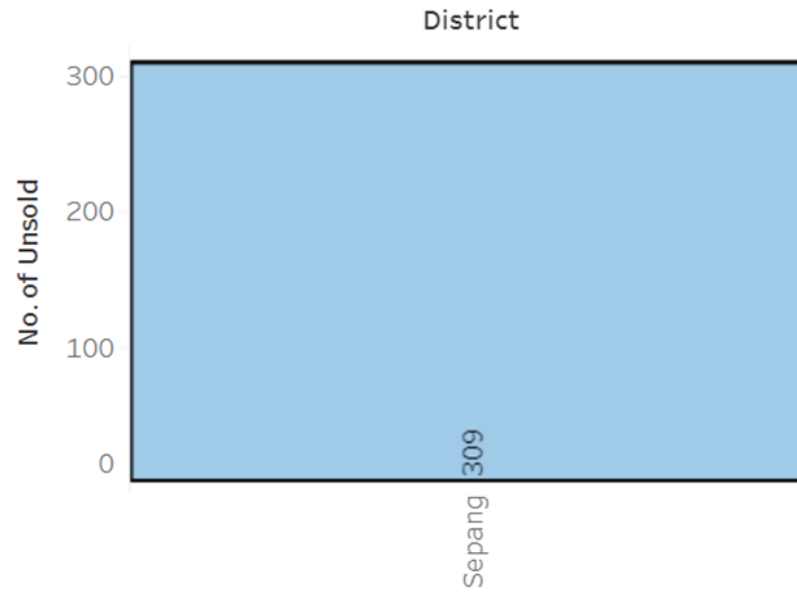


Data from NAPIC's Data Visualisation

Timeline Graph



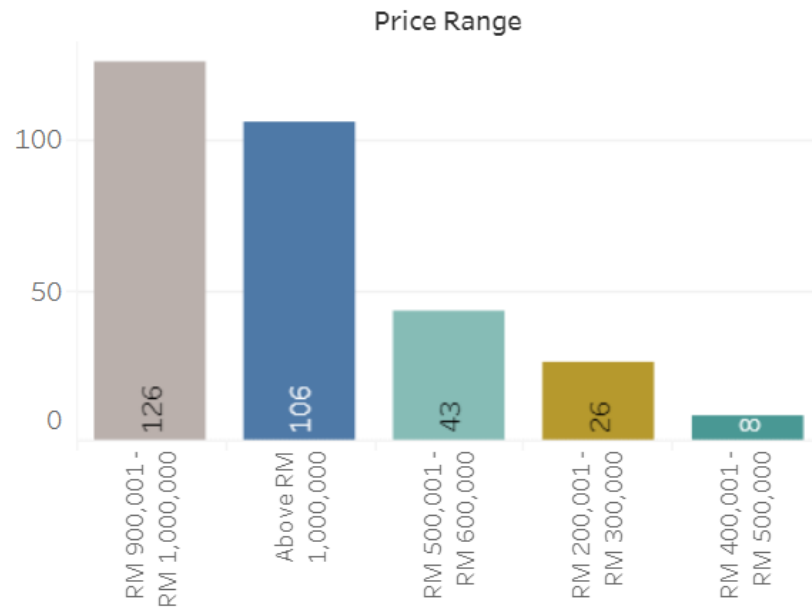
Unsold by District



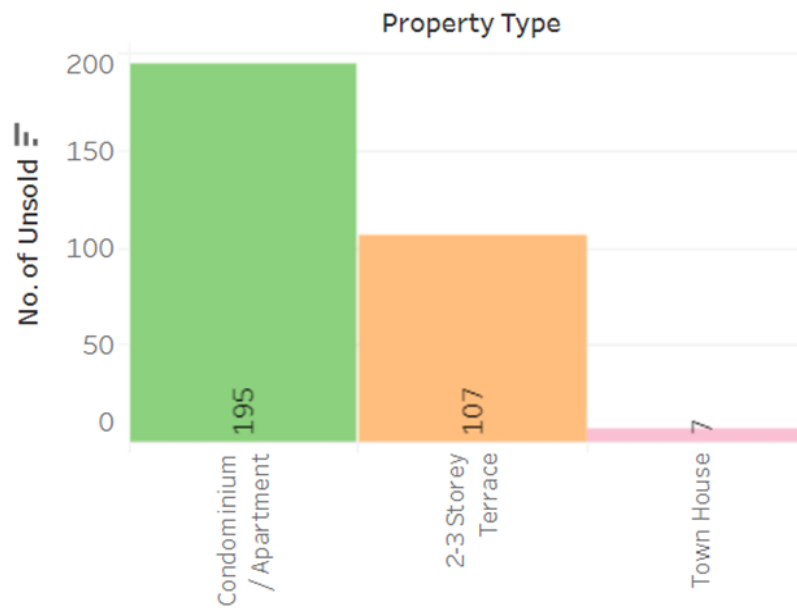
Selangor

- Number of overhang in the downtrend. Good absorption and less competition. Moderate excessive unsold units:

Unsold by Price Range



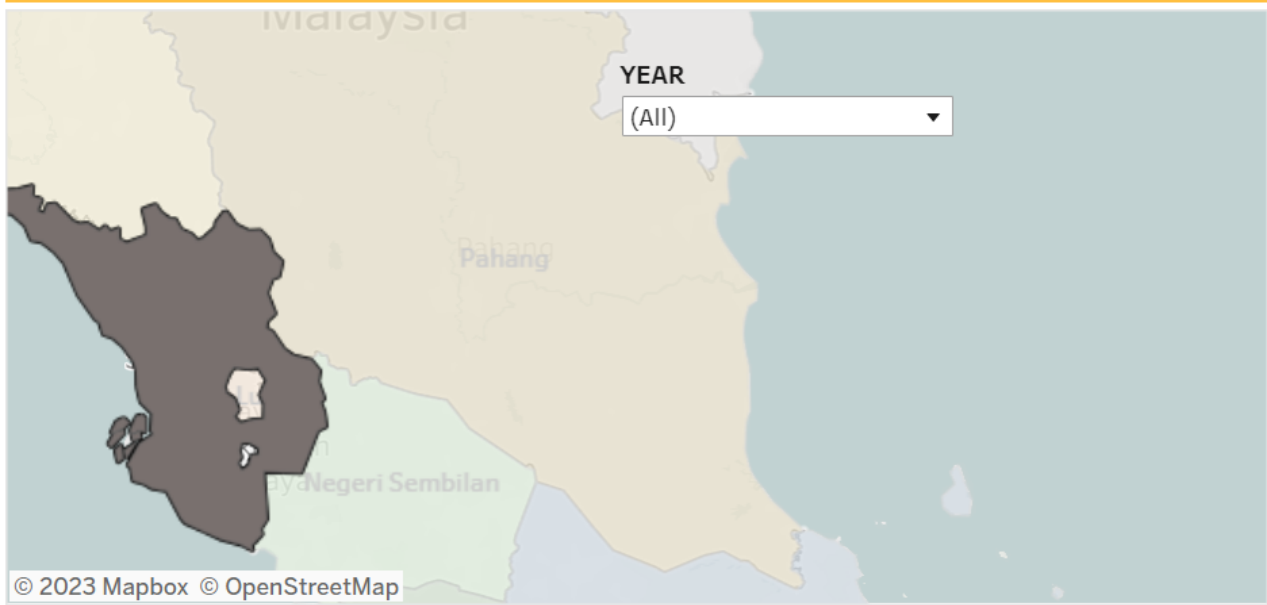
Unsold by Property Type



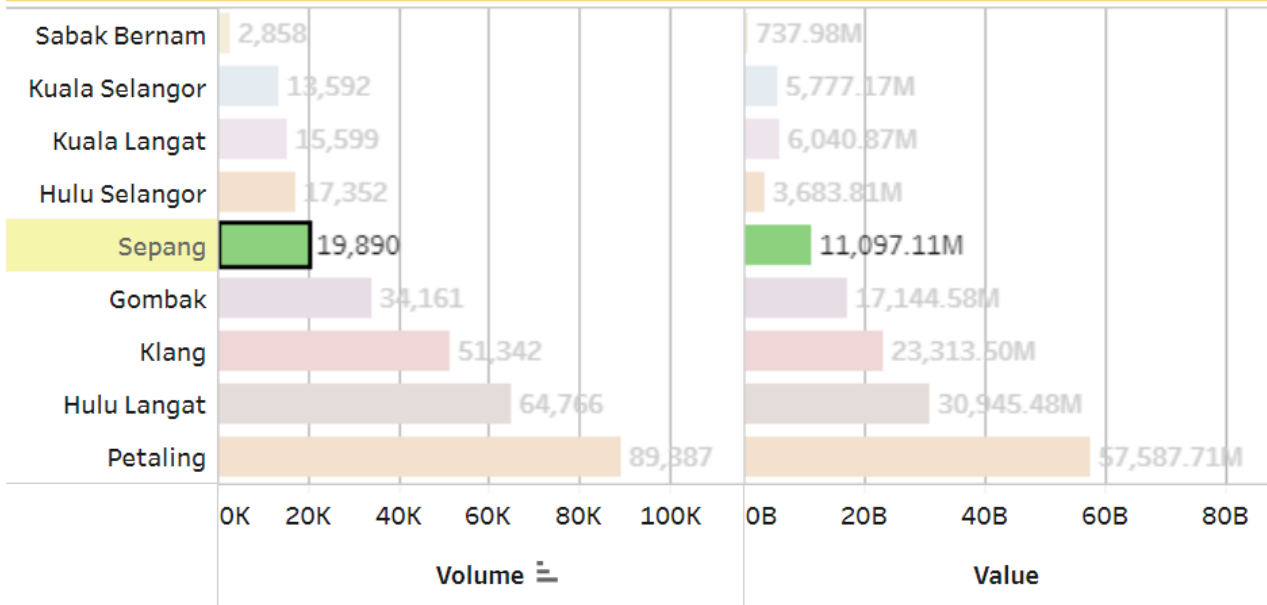
Avoid:

- RM900k & above.
- Condominium/Apartment & 2-3 storey terrace.

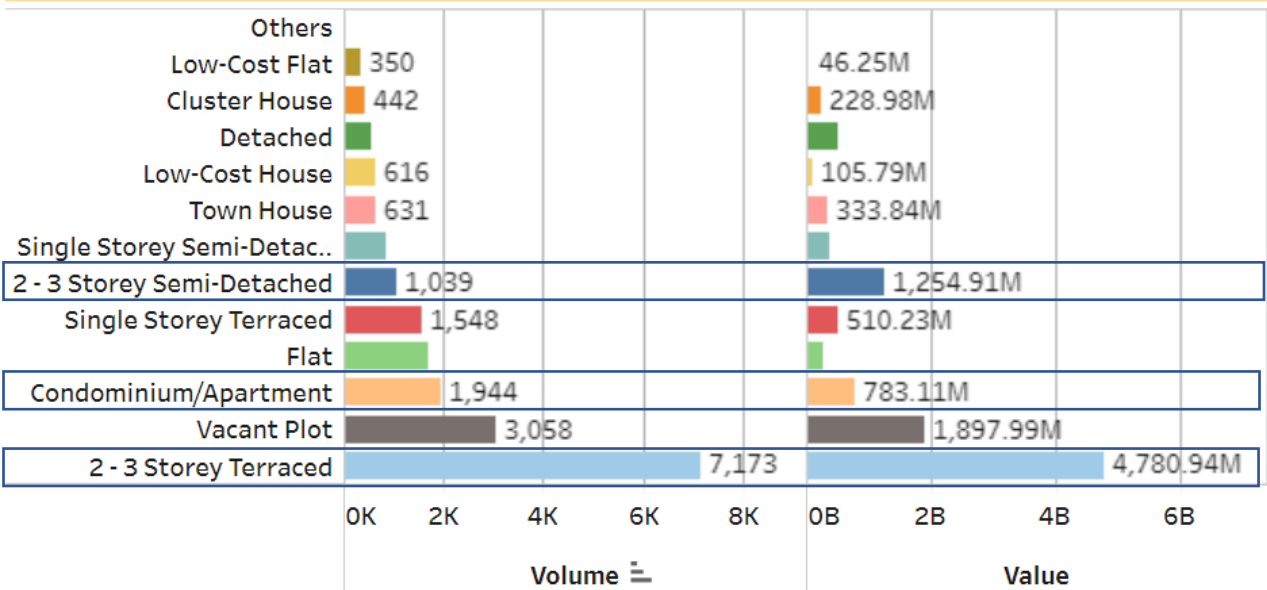
Residential Transactions By States



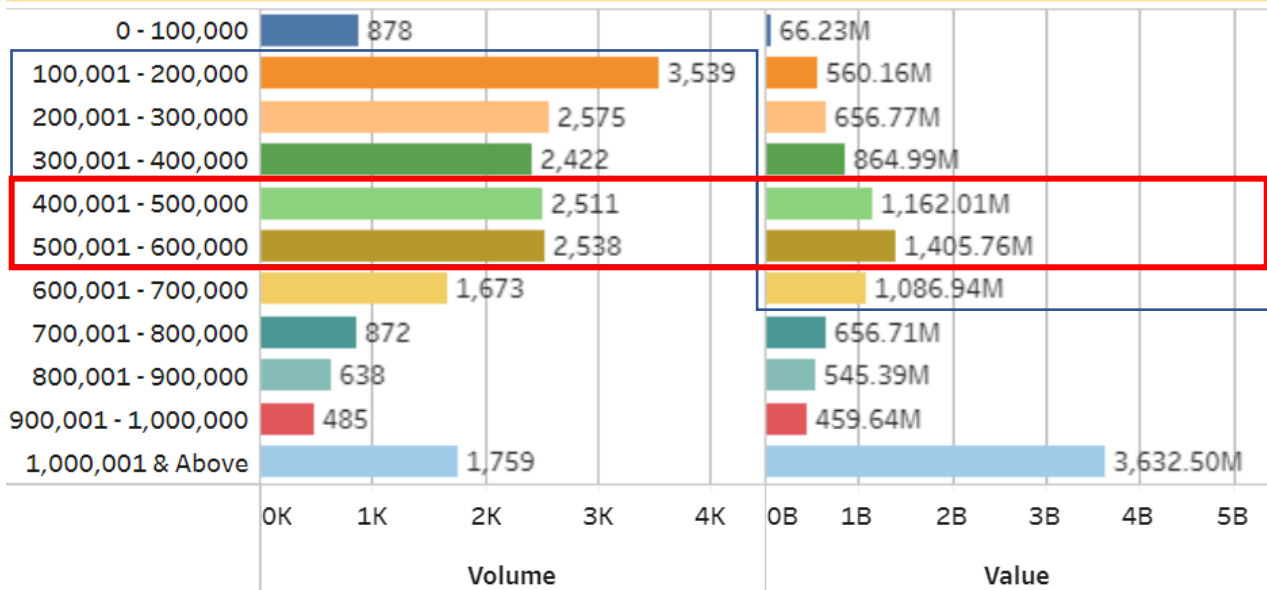
Residential Transactions Volume by District



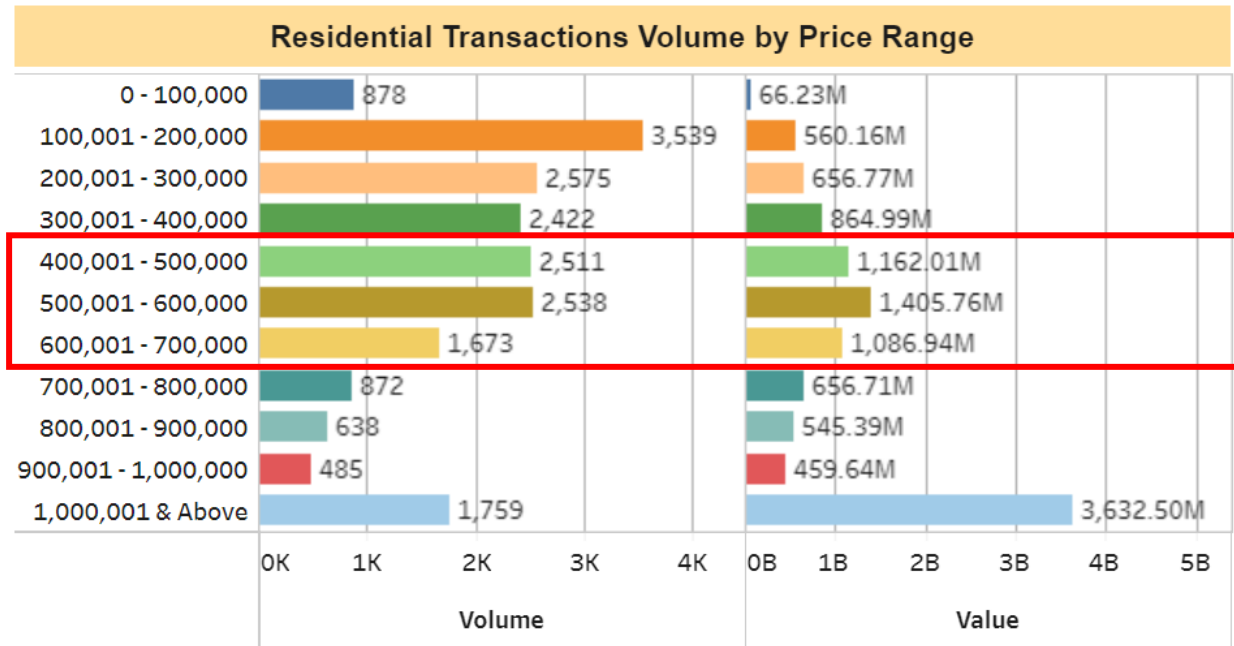
Residential Transactions Volume by Types



Residential Transactions Volume by Price Range



Disposable income class (RM)	Triple Income Housing Affordability (RM)		Sepang	
			Household Percentage	Household Number '000
				101.17
1,999 and below	0	71,964.00	0	0.00
2,000 – 2,999	72,000.00	107,964.00	0.13	0.13
3,000 – 3,999	108,000.00	143,964.00	2.91	2.94
4,000 – 4,999	144,000.00	179,964.00	4.27	4.32
5,000 – 5,999	180,000.00	215,964.00	4.18	4.23
6,000 – 6,999	216,000.00	251,964.00	5.64	5.71
7,000 – 7,999	252,000.00	287,964.00	5.69	5.76
8,000 – 8,999	288,000.00	323,964.00	9.97	10.09
9,000 – 9,999	324,000.00	359,964.00	14.13	14.29
10,000 – 10,999	360,000.00	395,964.00	12.85	13.00
11,000 – 11,999	396,000.00	431,964.00	9.98	10.10
12,000 – 12,999	432,000.00	467,964.00	8.48	8.58
13,000 – 13,999	468,000.00	503,964.00	6.22	6.29
14,000 – 14,999	504,000.00	539,964.00	2.01	2.03
15,000 and above	540,000.00	above	13.55	13.71
Total			100	101.18



Verdict:
Based on the analysis from both DOSM and NAPIC data, Sepang was deemed as a district with the highest potential. Referring to the disposable income class and previous history of demand record, condominium, 2-storey terrace, and 2 storet semi-d priced between RM 400k – RM700k was highly sought after. Via Data visualisation and BDA, this simple analysis done in minutes.



Terima Kasih

Conclusions

1. Data Visualisation and BDA certainly helped valuers, property investors and researchers in giving more accurate, timely information.
2. NAPIC will take advantage of the newly announced Central Database Hub (PADU) to provide a more comprehensive BDA & AI module in PRISM 2.0.
3. Imagine:
 - The AI assistant can provide zoning, no. of units allowed, parking requirements, maximum building height, and plot ratio, helping uncover a property's true potential (HBU).
 - With ChatGPT, marketing too will become more direct to the potential buyer based on their profile.