



Singapore Building Inventory Database - Analysis & Classification

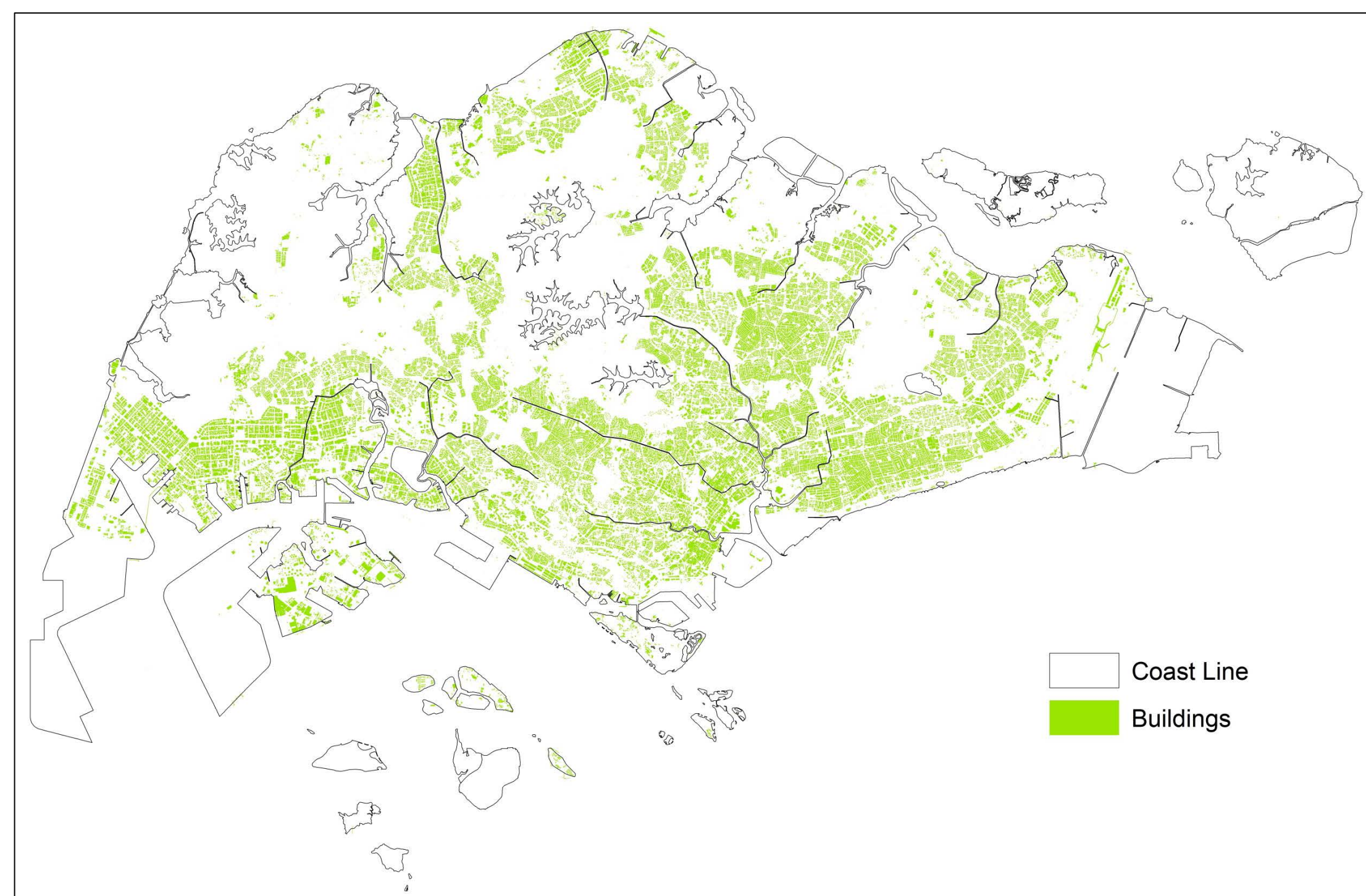
The Institute of Catastrophe Risk Management at Nanyang Technological University, Singapore has collected building inventory data of Singapore. The digital database is in ArcGIS shape file format containing detailed building footprint information and associated building attributes. The data was last updated in year 2005. ICRM did a detailed analysis & classification of buildings to incorporate in its earthquake models in order to find out the potential zones where buildings are more susceptible to earthquake shaking.

• Singapore Buildings

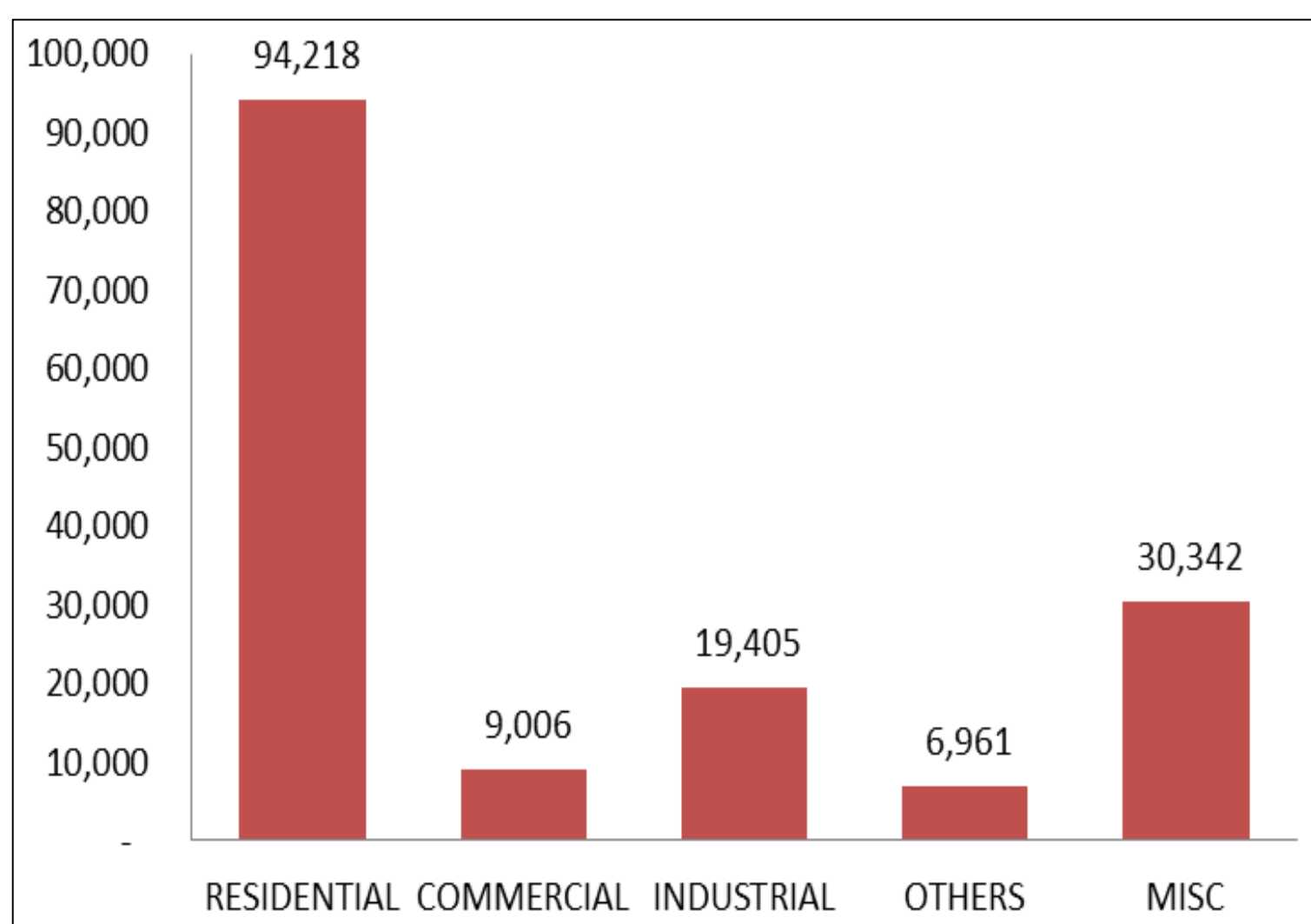
- Vintage 2005
- Total Number of Buildings (159,932)
- Storey Distribution (1 – 66 Storey)
- Year of Built (1937 – 2003 Year)

• Building Occupancy Classification

- Occupancy: Residential, Commercial, Industrial, Others & Miscellaneous
- Miscellaneous excluded from the analysis



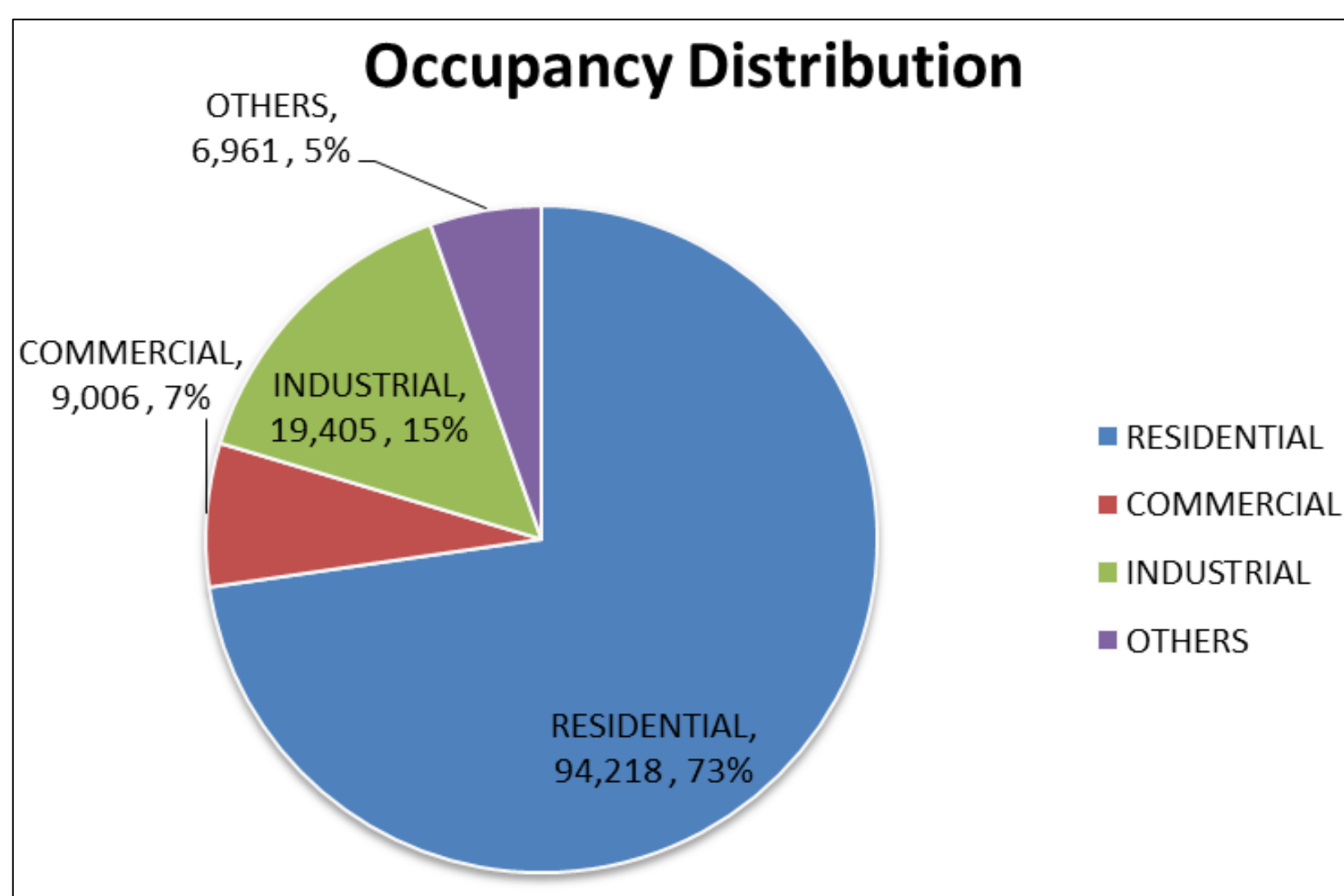
Spatial Distribution



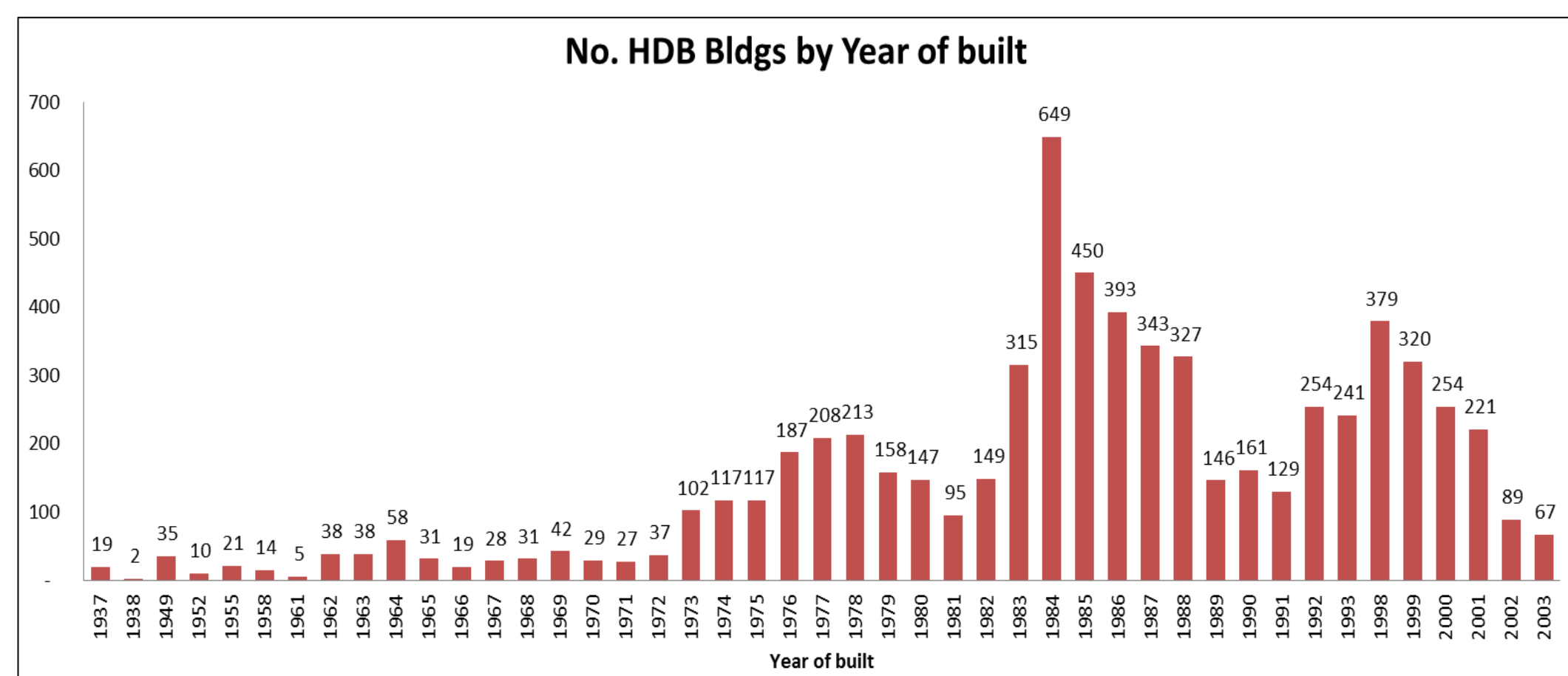
Occupancy vs. No of Building Statistics

Storey	No. of Bldgs			Floor Area(Mi.Sqm)		
	HDB	Non-HDB	Total	HDB	Non-HDB	Total
(1-2)	971 (1%)	84,500 (99%)	85,471	1.68 (4%)	44.88 (96%)	46.56
(3-4)	1,705 (5%)	29,929 (95%)	31,634	11.14 (19%)	46.60 (81%)	57.74
(5-10)	1,043 (25%)	3,181 (75%)	4,224	13.02 (25%)	38.20 (75%)	51.23
(11-20)	6,152 (85%)	1,116 (15%)	7,268	99.00 (81%)	22.67 (19%)	121.67
(21-30)	630 (69%)	289 (31%)	919	13.32 (47%)	14.91 (53%)	28.23
(>30)	1 (1%)	73 (99%)	74	0.31 (2%)	12.37 (98%)	12.68
	10,502	119,088	129,590	138	180	318

Number of Buildings and Floor Area Statistics



Occupancy Distribution



HDB Buildings: Year of Built (1937 – 2003)

Results and Observations of Singapore Building database:

- 92% of buildings is in (1 – 2) and (3 – 4) storey categories which are extensions and commercial establishments
- (5 – 10), (11 – 20) and (21 – 30) storey buildings are mostly residential
- (>30) storey buildings are high-rise & super high-rise buildings

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