

# Quantifying Potential Anthropogenic Resources through Hot Spot Analysis

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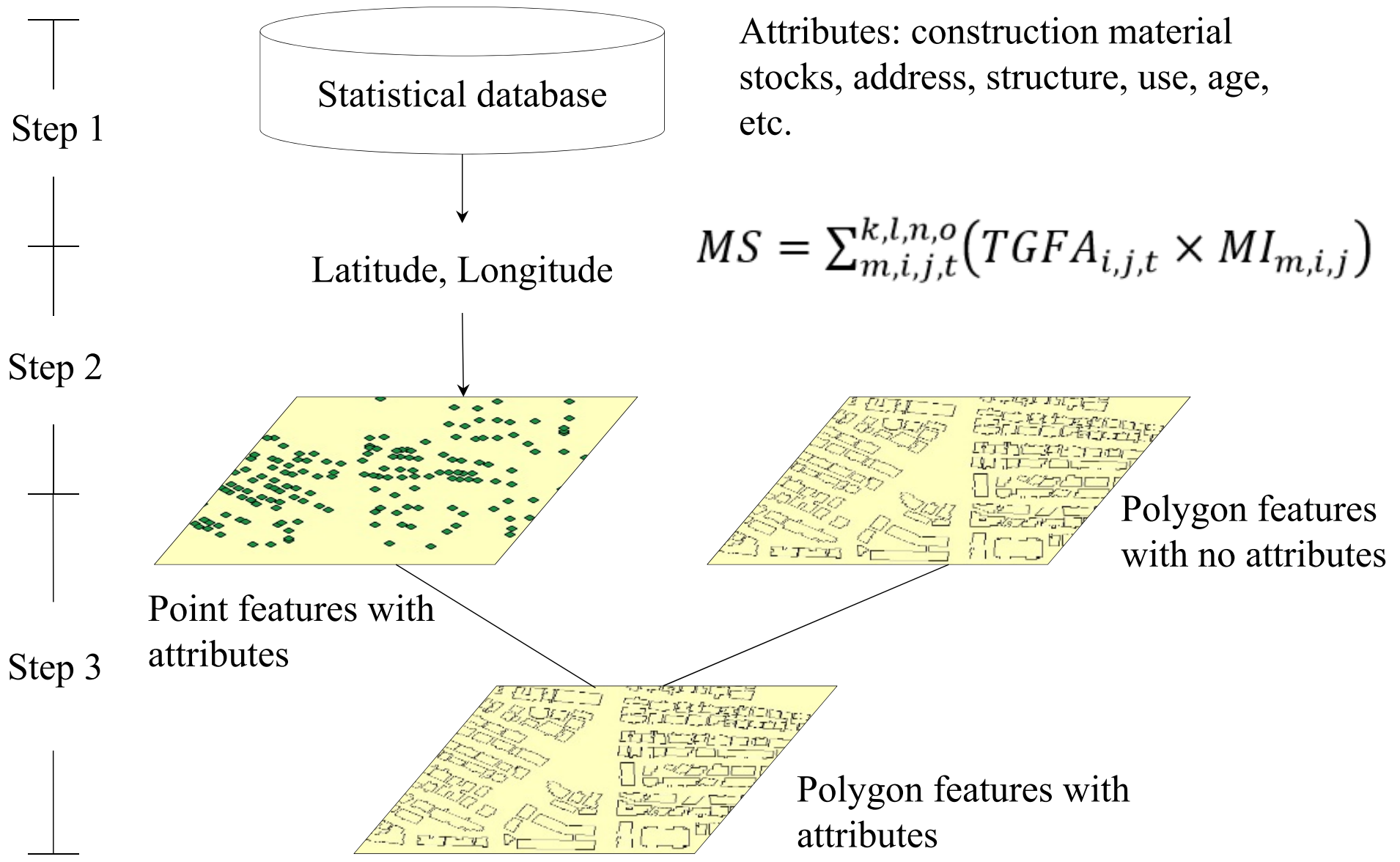
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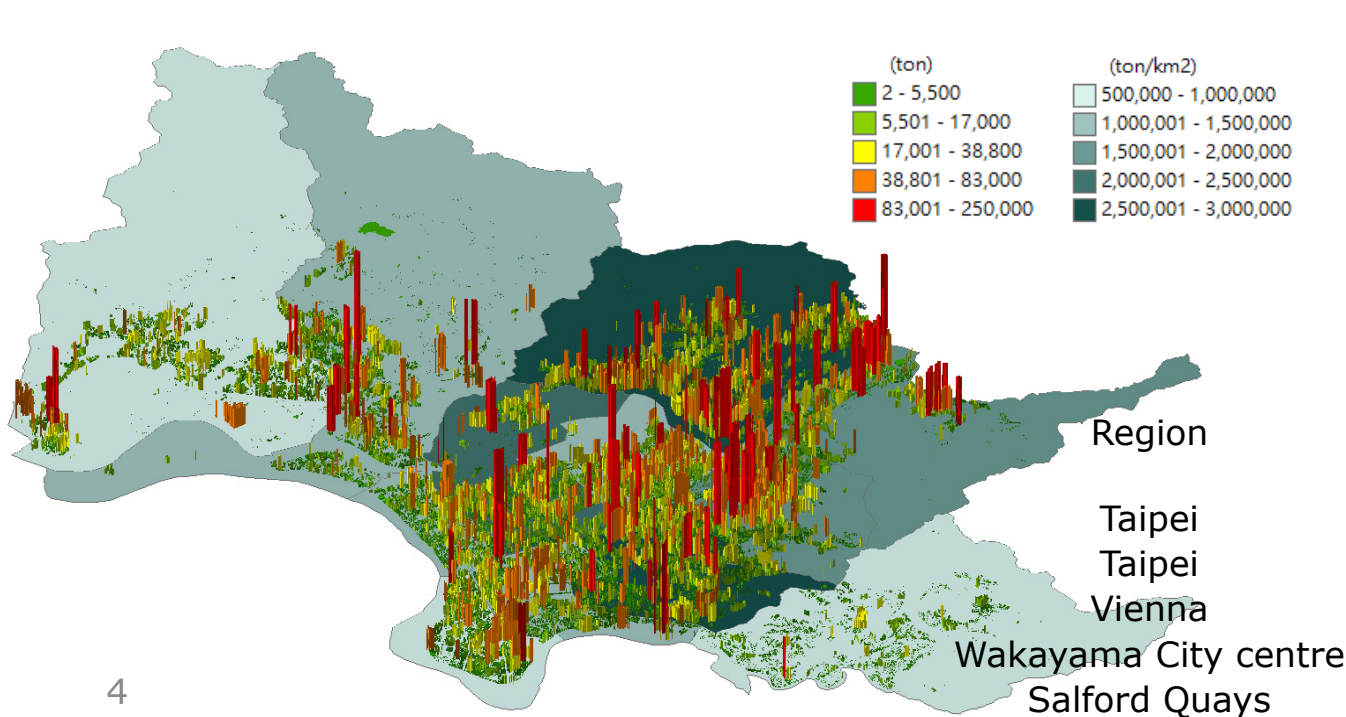
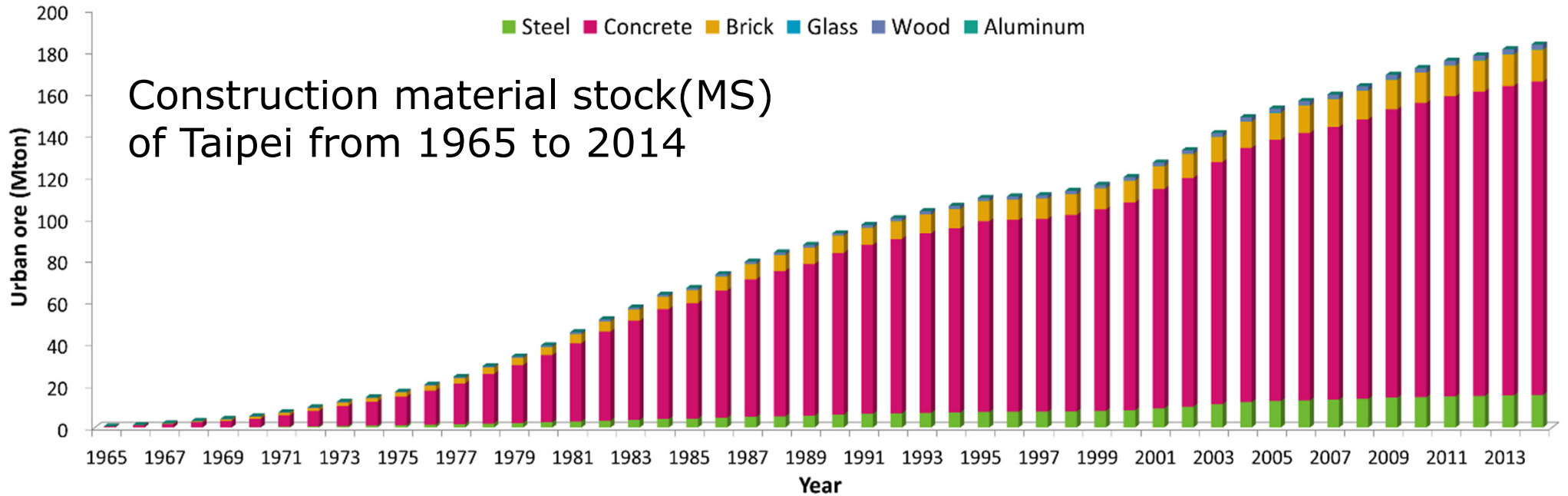
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- Today's stock is tomorrow's waste and can serve as a future resource
- There is still little known about the materials that have been stocked in the city and the potential locations for extraction
- Estimates the amount of material stocks in Taipei City from year 1965-2014 by analyzing data of the buildings through statistics and geographical information systems (GIS)

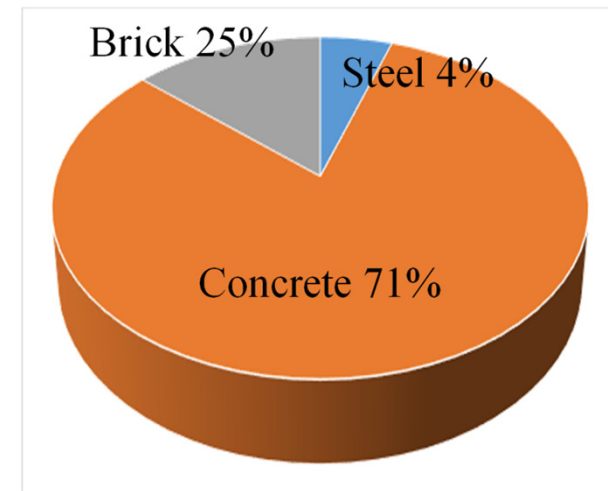




	ton
Steel	15,547,791
Concrete	150,077,279
Brick	15,275,986
Glass	204,805
Wood	2,203,355
Aluminum	63,833
<b>Total</b>	<b>183,373,050</b>

Region	Year	MS (ton)	per capita MS (ton/cap)	Density of MS (ton/km2)
Taipei	2014	183,373,050	68	1,506,080
Taipei	2004	148,534,544	57	1,219,944
Vienna	2013	380,000,000	210	960,226
Wakayama City centre	2004	11,361,000	247	1,118,000
Salford Quays	2004	3,142,000	111	418,000

# Zone I in Da'an District



- Cold Spot - 99% Confidence
- Cold Spot - 95% Confidence
- Cold Spot - 90% Confidence
- Not Significant
- Hot Spot - 90% Confidence
- Hot Spot - 95% Confidence
- Hot Spot - 99% Confidence

District	Total number of buildings	Number of buildings [referring to the use of buildings]	Average building age [yr]	Total gross floor area [m <sup>2</sup> ]	Total amount of construction MS [ton]	Steel [ton]	Concrete [ton]	Brick [ton]
Zone I (0.1 km <sup>2</sup> )	185	177	42	108,914	181,061	8,712	144,655	27,695
Zone II (0.6 km <sup>2</sup> )	147	136	43	118,814	194,892	7,509	138,877	48,506

# Conclusions and Recommendations

- Up to year 2014, 186 Mton of construction materials were accumulated in Taipei, and the per capita total building material stock was 68 ton
- Time is a priority consideration in urban ores exploration
- Quantitative data of urban ores with high spatial and temporal resolution
- Dynamic material flow model