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Using Geographic Information System for Land Mass Appraisal -- The Application of Standardized Price of Land Appraisal in Shenzhen

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Using Geographic Information System for Land Mass Appraisal -- The Application of Standardized Price of Land Appraisal in Shenzhen

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10th May 2018

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Part 1 — Introduction

Part 2 — Solution

Part 3 — Case study

Part 4 — Conclusions

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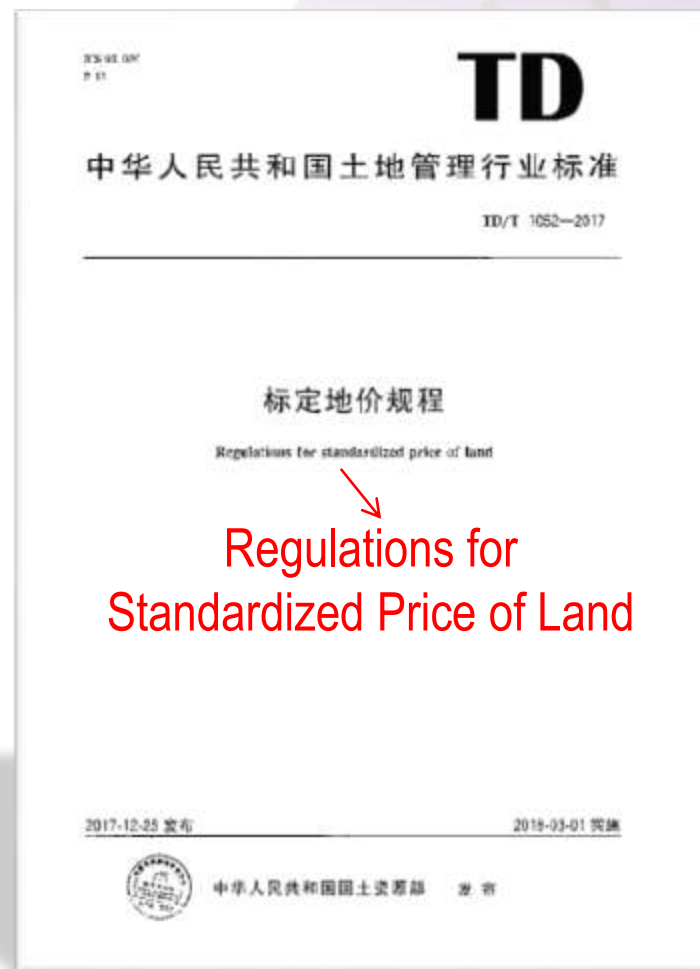


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Introduction

- Standardized price of land
 - land price of standard lots applied to the government management
 - shall be determined and published regularly by Chinese laws
 - can be appraised according to “Regulations for Standardized Price of Land”



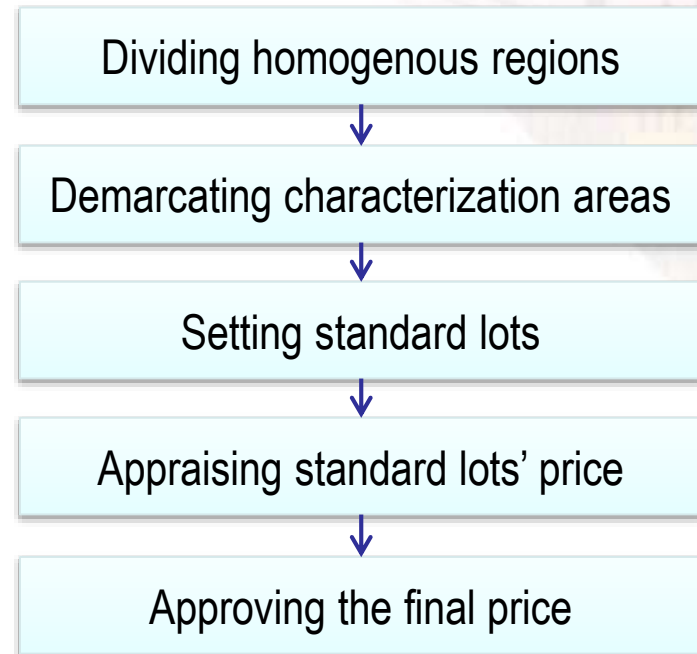
Introduction

- Shenzhen
 - one of the biggest cities in China
 - very close to Hong Kong
 - over 8,000 km from Istanbul
 - nearly 2,000 km² land area
 - above 12 million people



Solution

- Four kind of uses
 - residential use, commercial use, office use, industrial use
- Appraisal process
 - divided into five major steps
 - based on Geographic Information System(GIS) and a lot of data





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Case study – Step 1

- Dividing homogenous regions
 - divided into more than five thousand basic units
 - ranked and merged into a number of homogenous regions



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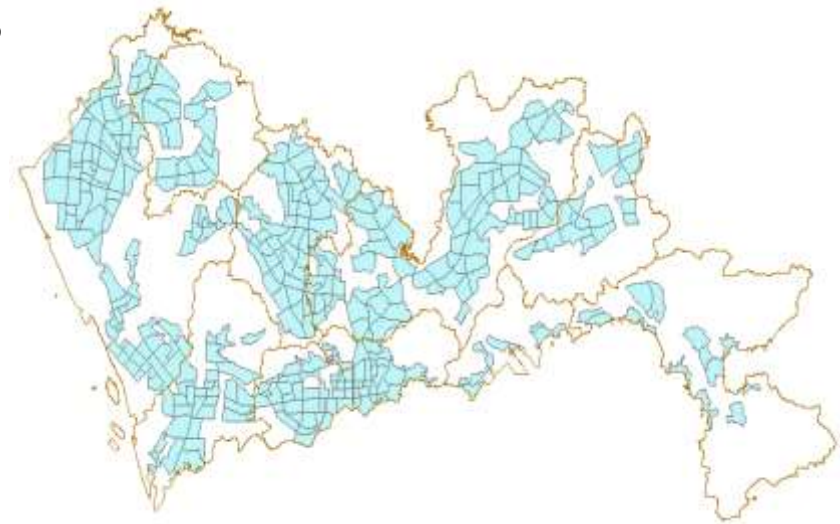
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Case study – Step 2

- Demarcating characterization areas
 - demarcated by GIS techniques on the basis of homogenous regions
 - nearly five hundred characterization areas for residential use in Shenzhen



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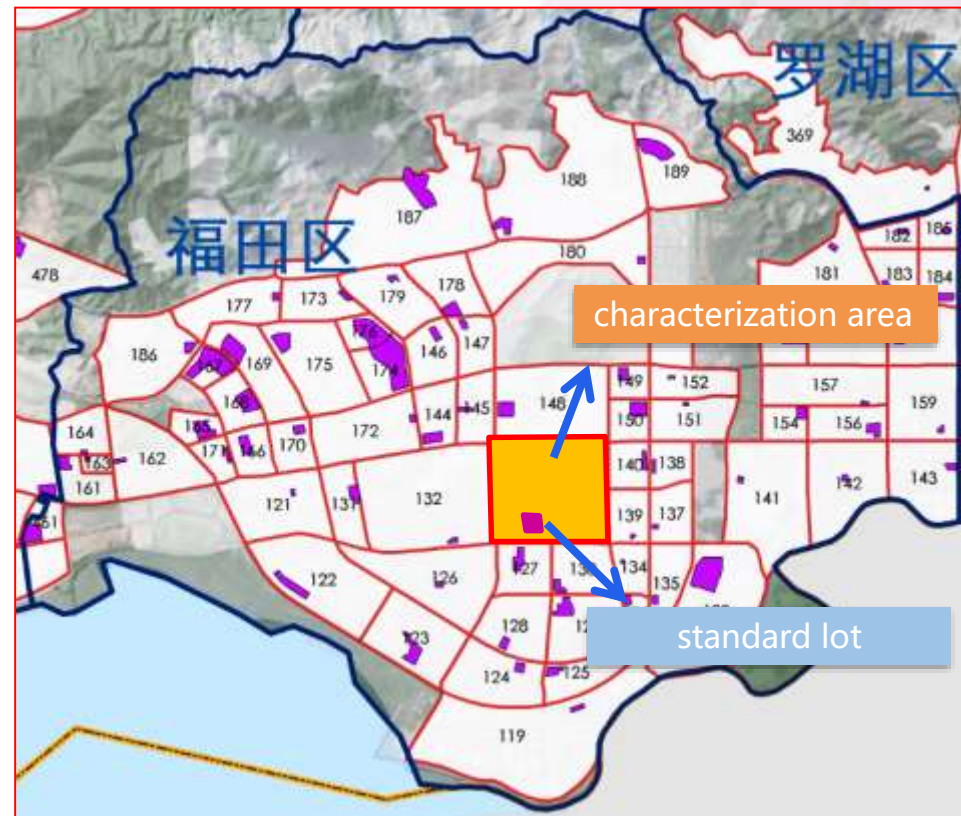


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Case study – Step 3

- Setting standard lots
 - there is one and only one standard lot in each characterization area
 - nearly five hundred standard lots are set for residential use in Shenzhen





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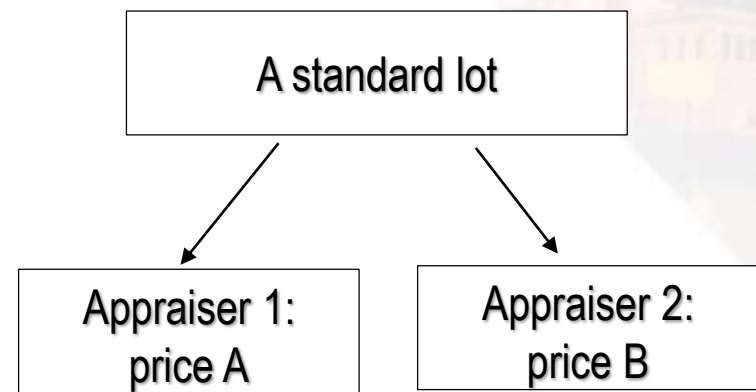
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Case study – Step 4

- Appraising standard lots' price
 - each standard lot price was appraised by two appraisers independently



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Case study – Step 5

- Approving the final price
 - the results appraised by two different appraisers were examined and approved by government

If $\frac{|priceA-priceB|}{priceA \text{ (or priceB)}} < 20\%$, the advisable price is $(price A + price B) / 2$

If $\frac{|priceA-priceB|}{priceA \text{ (or priceB)}} \geq 20\%$, the advisable price *should be considered and reappraised*

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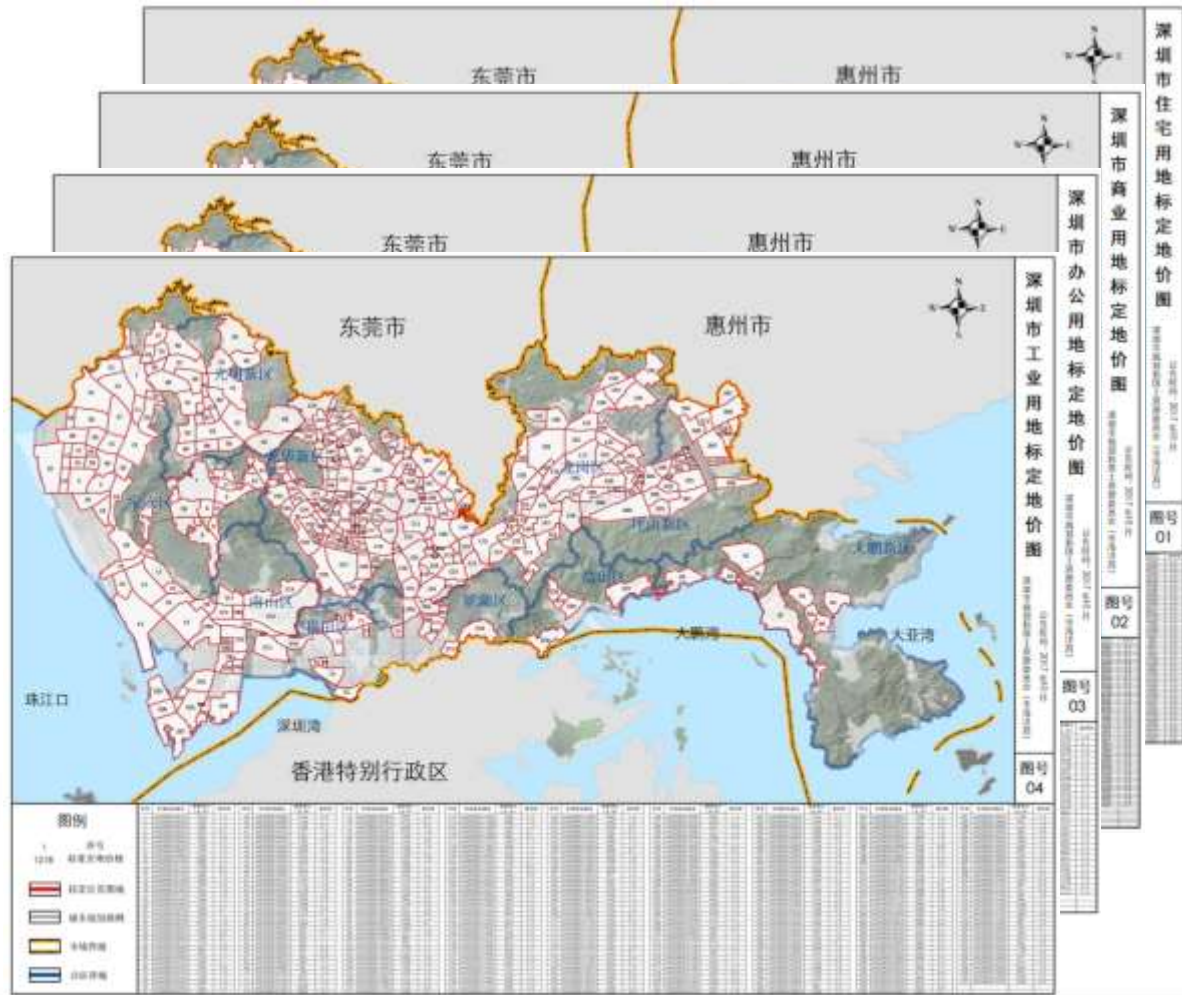
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Conclusions

- The final results of Shenzhen's Standardized Price of Land in residential use, commercial use, office use and industrial use.



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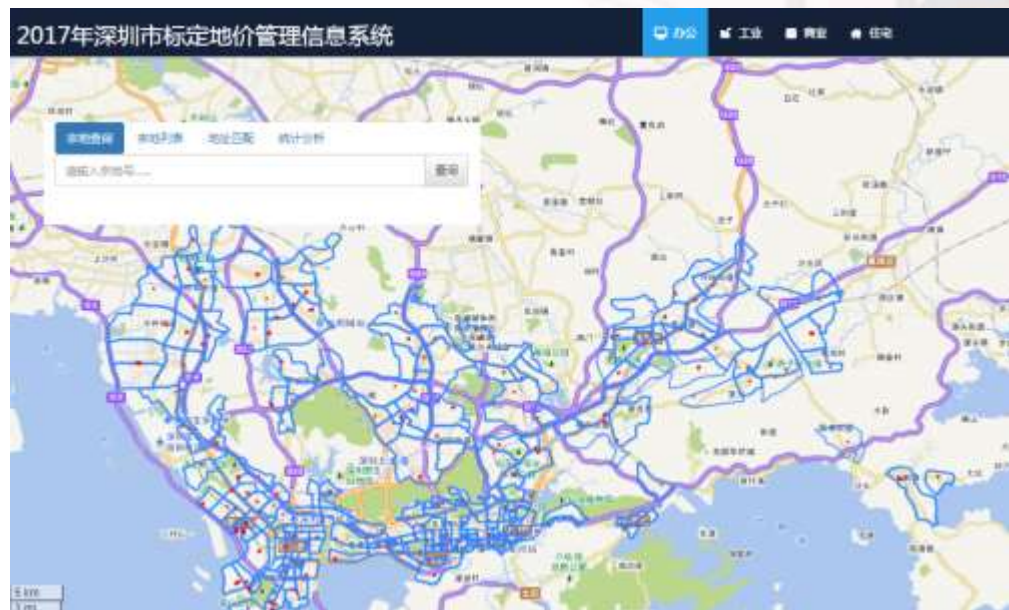
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Conclusions

- Moreover, a web based management platform has been developed to promote the application of Shenzhen's Standardized Price of Land



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Website platform



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Thank you!



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