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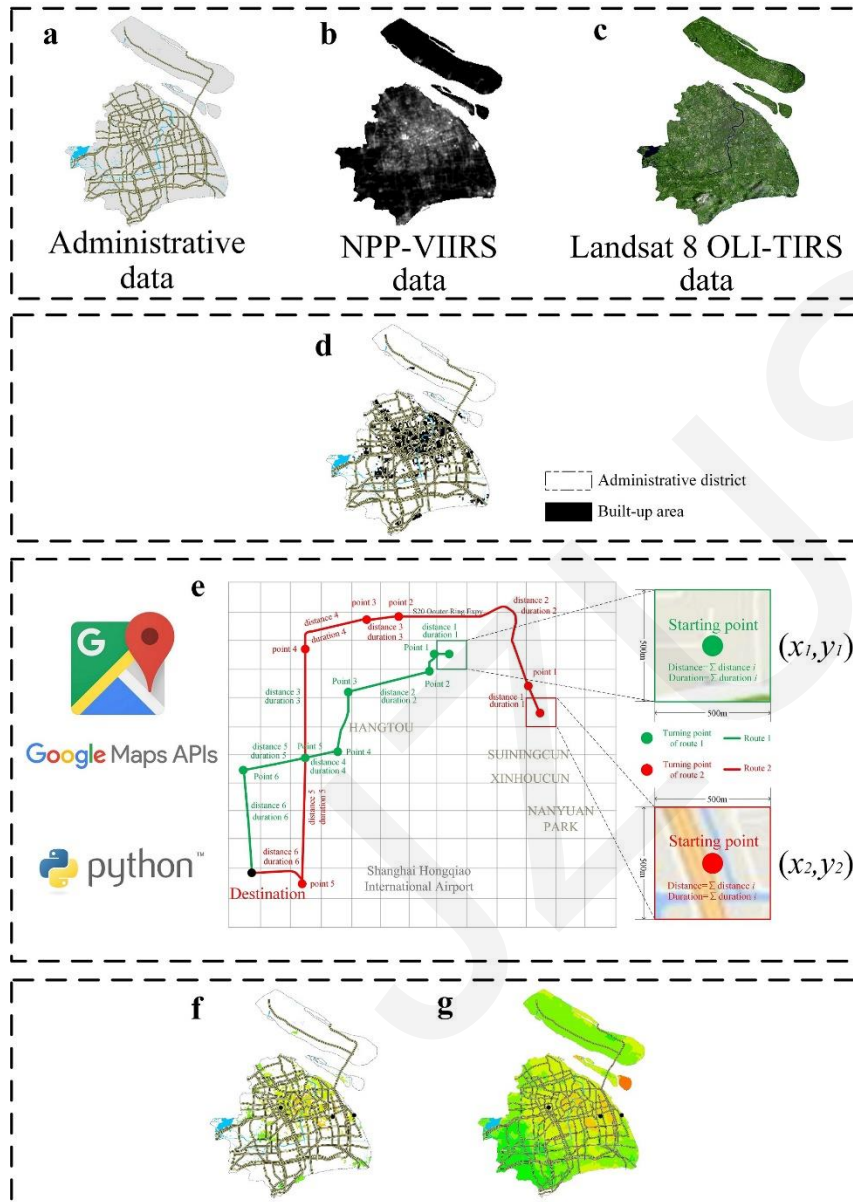
How fast is it to city centers? The average travel speed as an indicator of road traffic accessibility potential

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Key words: traffic accessibility; Google Map API; travel speed; road traffic network; GIS



METHODOLOGY



1. Data preprocessing

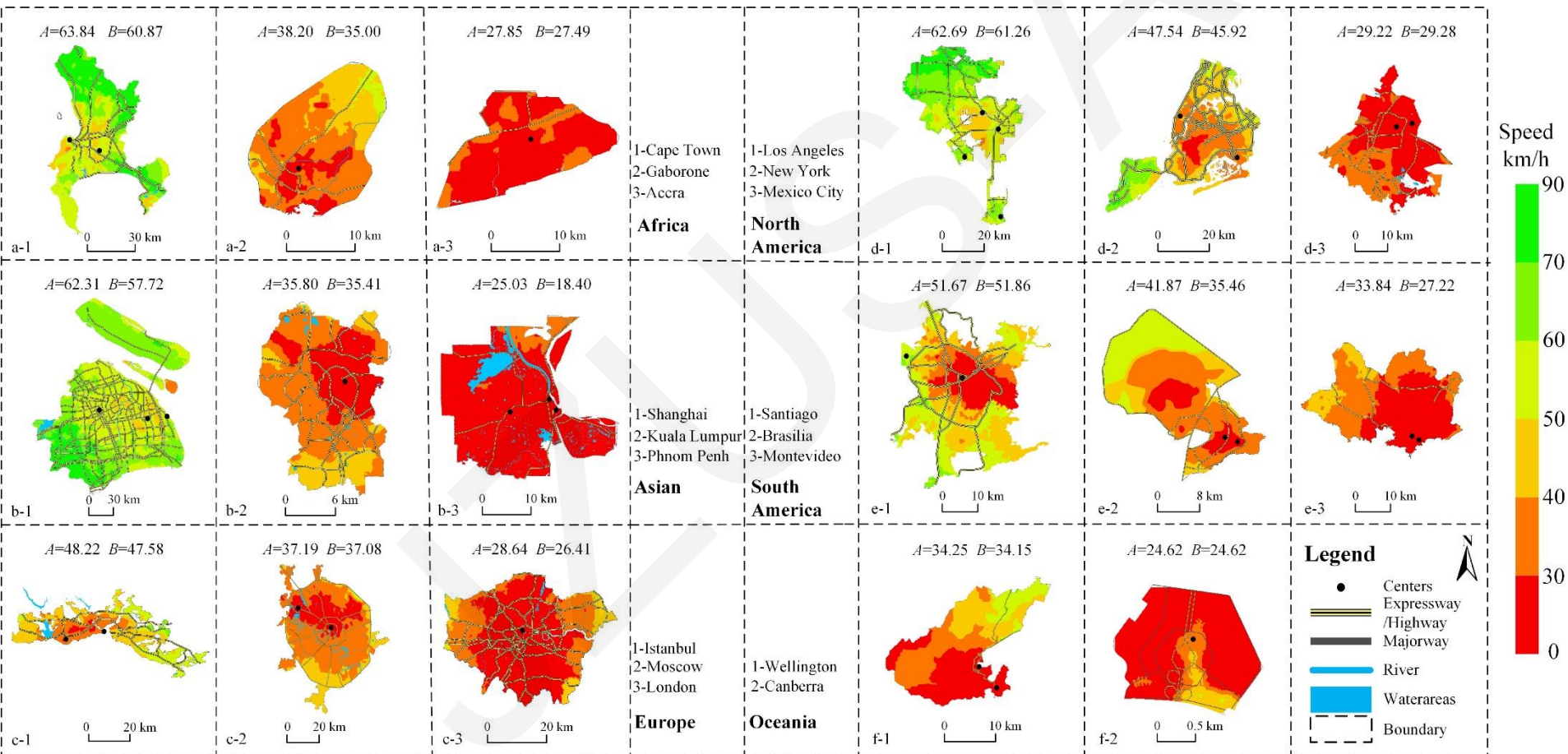
2. Selecting the starting points and the destinations

3. Crawling route data

4. Calculating the speed

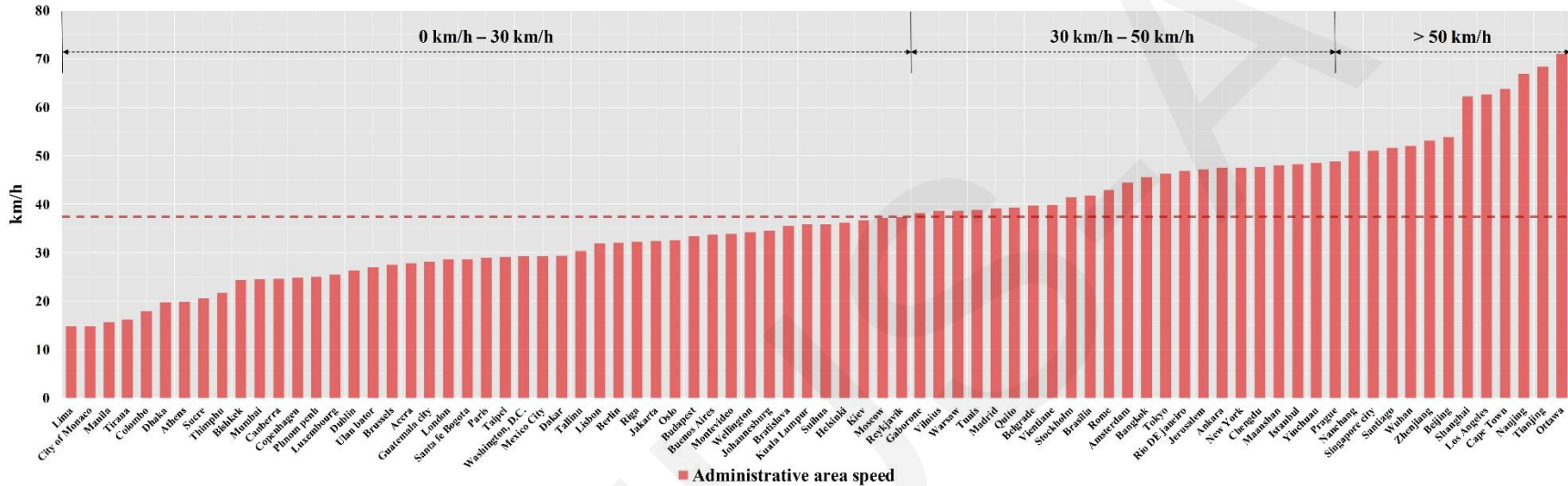
RESULTS AND CONCLUSIONS

- Travel speed distribution in representative cities

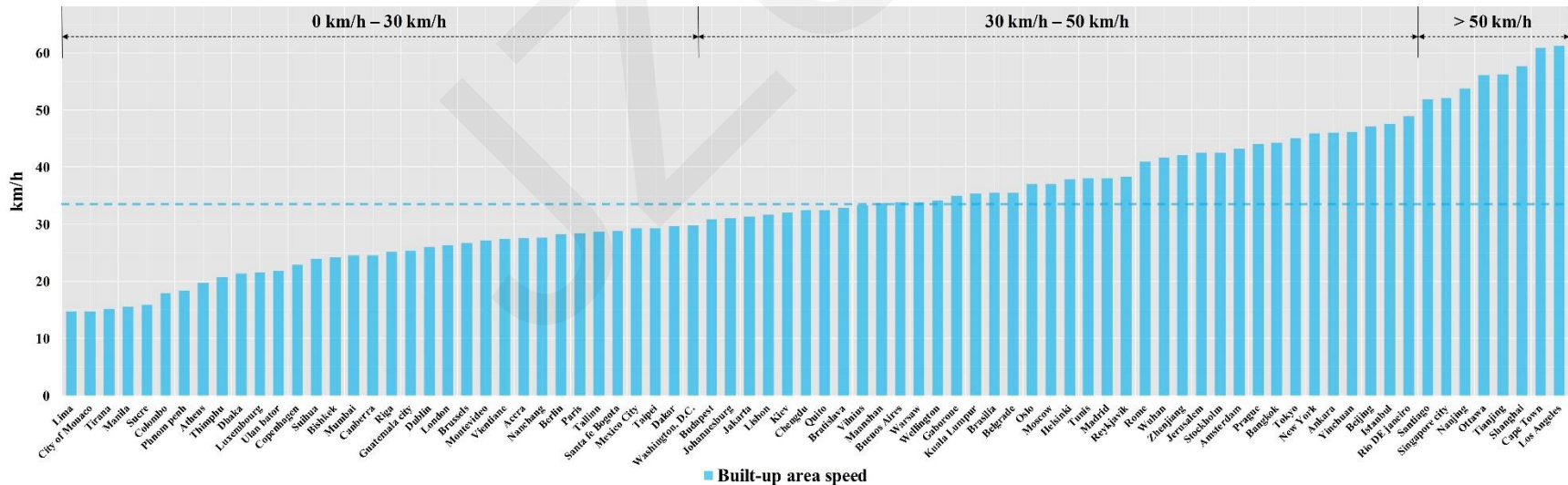


RESULTS AND CONCLUSIONS

Average travel speed statistics in the urban administrative district



Average travel speed statistics in the urban built-up areas



RESULTS AND CONCLUSIONS

1. The mean average travel speed in the urban administrative district (A) is 37.56 km/h, the mean average travel speed in the urban built-up areas (B) is 34.30 km/h. The speed is consistent with the road infrastructure level, the vehicle flow and regional development level.
2. The results show that the selected indicators can effectively determine the spatial differentiation of road accessibility potential. The travel time and travel distance obtained by the proposed method can be used as the geographic data for the analysis of urban roads. Urban areas with high speed have good accessibility potential, whereas areas with low speed have poor accessibility potential.
3. This method offers a new possibility of analyzing traffic accessibility using Internet data and Geospatial methods. It may be able to quantitatively analyze issues in transport geography. The city speed results and rankings might serve as an international dataset.