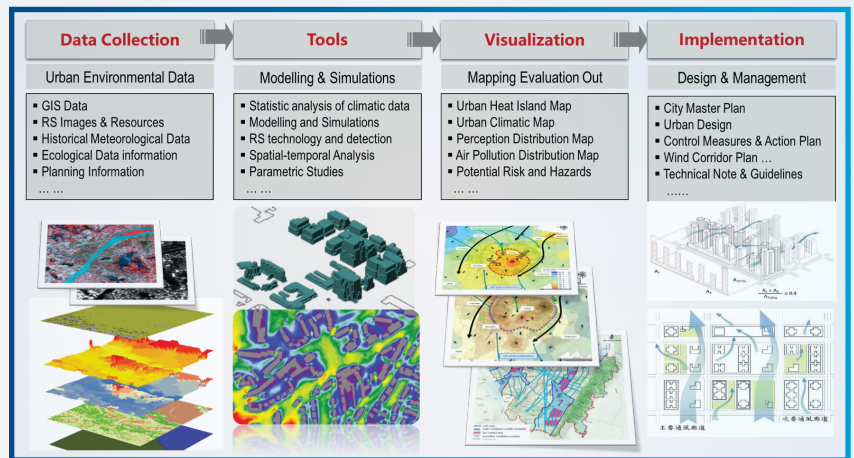


## Quality Urban Form 劃出未來

### Urban Ventilation Assessment and Wind Corridor Plan for Chinese Cities

#### 中國城市通風環境評估與通風廊道規劃

This is a pioneer study in the world to investigate and quantify effects of major planning and development proposals on urban ventilation. It is a cross-disciplinary collaboration to link urban form and building design parameters into urban ventilation considerations. Based on remote sensing and geographic information system techniques, it has developed scientific protocols to assess potential wind dynamics and create wind corridors. The workflow adopts a three-step approach and recommends two major urban ventilation corridor plans and two secondary urban ventilation corridor plans to local planners and policymakers.



The scientific evidence and findings of urban ventilation assessment could be used to optimise the design, height and disposition of buildings as well as urban morphology and to assist planning professionals to make a better decision at multi-scale levels.

Rapid urbanisation in China has deteriorated the urban environment. In recent years, the Central Government and local municipalities have introduced urban climatic evaluations into town planning and design practices, in particular to create urban ventilation corridors at city level. The methods and techniques developed in the study have been adopted in the formulation of master plan, urban design and wind corridor plans of over 40 Chinese cities.

這是全球在探討並量化主要規劃和發展計劃對城市通風影響的先驅研究，亦是一項跨學科合作，將城市形態、建築設計參數和城市通風考慮聯繫起來。透過遙感探測和地理資訊系統技術，制訂了科學規程以評估風流通潛力及創造通風廊道。工作流程採用三步法，制定出兩個主通風廊道規劃方案和兩個次級通風廊道規劃方案予城市規劃師和決策者。

科學證據和研究結果可以用於優化樓宇設計、高度和布局及城市形態，協助規劃師在不同規模及層面上作出更好的決策。

中國急速的城市化發展使城市環境狀況惡化。近年來，中央人民政府及地方省市透過在城鎮規劃和設計實踐中引入城市氣候評估，在城市層面建立城市通風廊道。此研究提倡的方法和技術已應用於中國40多個城市的總體規劃、城市設計及通風廊道規劃當中。

#### Gist of Adjudicators' Comments:

- Building on the experiences obtained from similar studies in Hong Kong, the cross-disciplinary collaboration is a pioneering attempt in Mainland China to investigate and quantify urban ventilation effects of major planning and development proposals.
- The submission sets out a standard method for conducting urban ventilation assessment and creating urban ventilation corridor plans, which would contribute significantly to the alleviation of adverse urban heat island effects in the existing and new development areas. It has also demonstrated how urban ventilation assessment can be incorporated into the master plans at regional, city and neighbourhood levels.
- The assessment tool can readily be followed in other places, thus helping to promote sustainable, green and healthy cities in China and elsewhere.
- The study vividly demonstrates the importance and merits of bridging academic research and planning practice. It sets an excellent example of how a locally developed planning assessment tool can be 'exported' to other cities, which is worth commending and should be encouraged.

#### 評審意見撮要：

- 基於香港類似的研究經驗，此跨學科合作是中國大陸在研究和量化規劃及發展計劃對城市通風影響的開創性嘗試。
- 項目對進行城市通風評估和製定城市通風走廊圖則訂定了準則，大大舒緩現有和新開發城市中熱島效應的負面影響。研究亦展示如何將城市通風評估套用於區域、城市及社區層面的規劃藍圖。
- 評估工具易於應用於其他地方，有助在中國和其他地方推廣可持續、綠色和健康的城市。
- 研究實在地展示了學術研究與規劃實踐結合的重要性和優點，為如何將本地開發的規劃評估工具應用到其他城市樹立了一個很好的範例，值得讚揚及應予以鼓勵。