

Running in The City

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Benefits of Running

Short-term running improves **brain activity** and **cognition**
(*Frontiers in Aging Neuroscience*)

Aerobic exercises boosts your **spirits** AKA Runner's High
(*Journal of Experimental Biology*)

Improves **sleep** by reducing apnea, anxiety and depression
(*Journal of Adolescent Health*)

Reduces high blood pressure
(*American Heart Association*)

On average increases **lifespan** by 3 years



The Problem

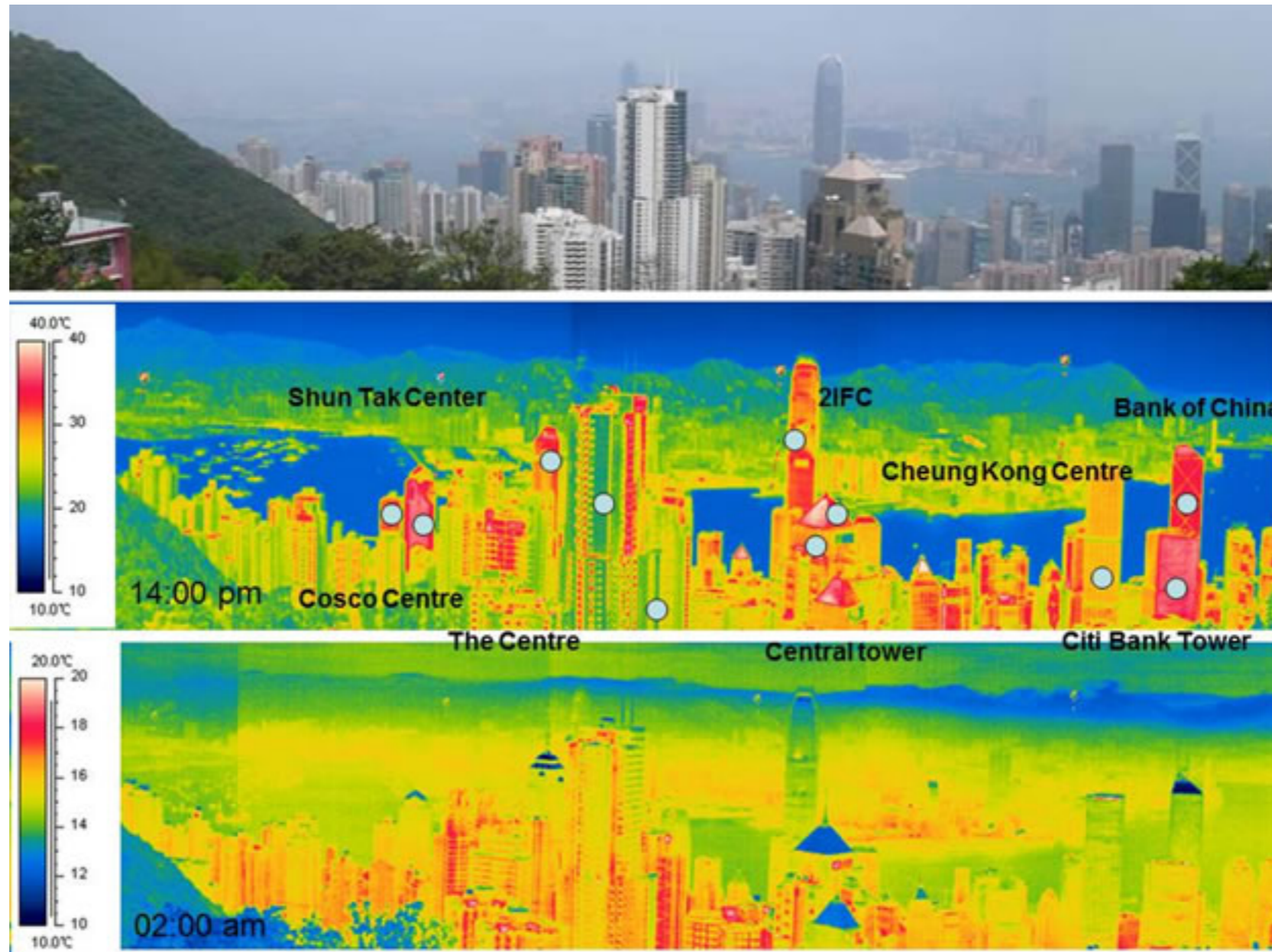


Ideally people run in **parks** or areas surrounded by **natural vegetation**

This is not true in cities where they are surrounded by **built spaces**.



The Problem



Built surfaces like concrete, asphalt and steel have **high thermal inertia** and can get very hot and **will affect the performance and health of urban runners**

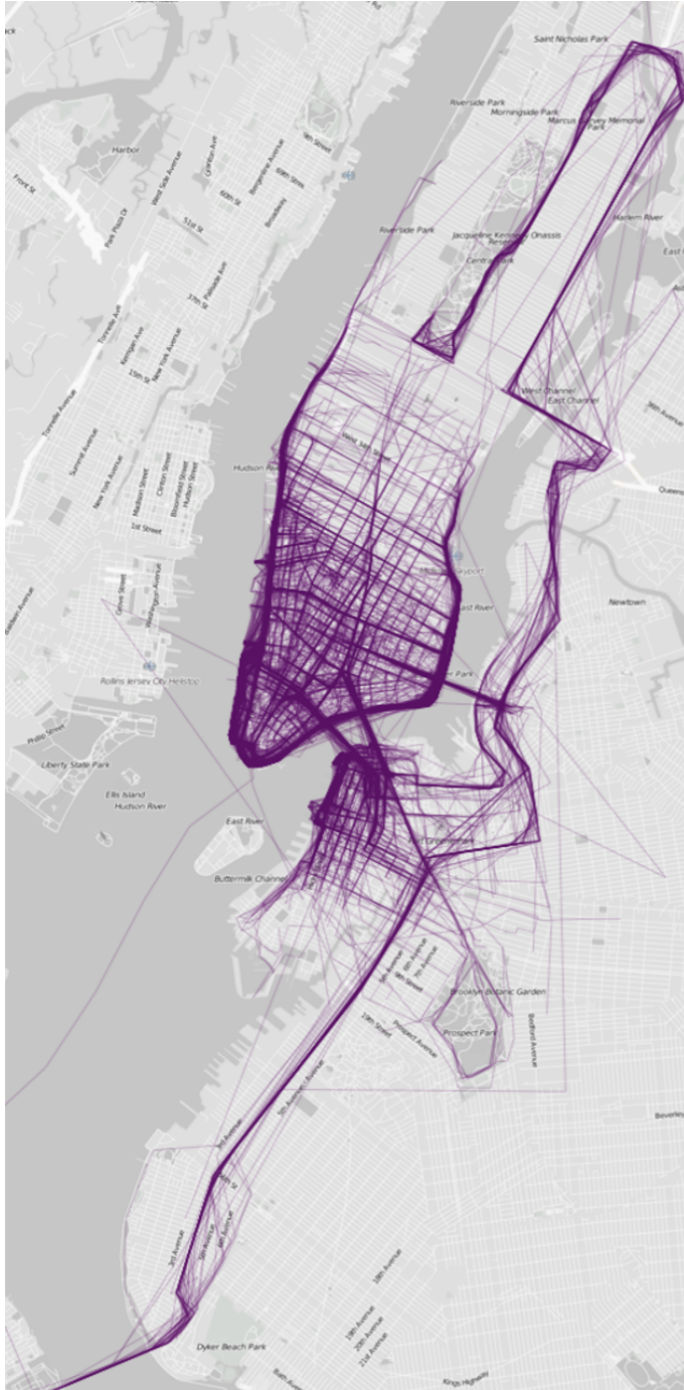
Our Goal

How does urban environment affect the performance of runners?

Correlation between **physiological performance** variables and **thermal comfort** parameters



Method



Multiple **5K** runs along various routes in the city.



Heart Rate

Oxygen Intake

Ground Contact Time

Cadence

Recovery Timer

Complete **physiological performance**

Capture the hygrothermal changes in the immediate urban environment

Expected Outcome

Correlation of various physiological performance with meteorological parameters

Mapping runners performance in various routes

Comparison with human energy balance models.

(Students will use a suitable programming language & mapping software to achieve the objectives)