NP5003

A RESILIENT WALKING CITY CONTRIBUTES TO A LOW CARBON CITY

RESEARCH QUESTION:

Are there key urban place characteristics that improve walkability, resilience and provide direction for urban intervention?

Future cities will increasingly face wicked problems relating to climate change and oil vulnerability. Reduced CO2 emissions, minimum health impacts, and planning cities for resilient oil vulnerability are important tasks for planners and designers. Planning for 'resilient walking neighbourhoods' could be one part of the solution for all these problems.

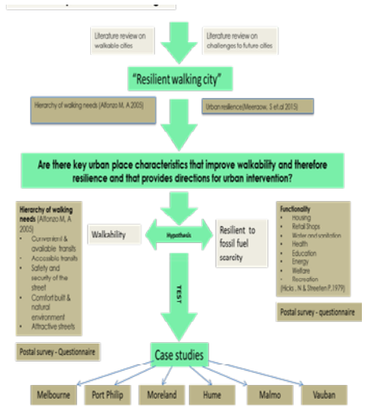

Figure 1: Research design and methodology

METHODOLOGY:

Working on resilience is multifaceted and complex. At the simplest level, qualitative and quantitative analyses are used in different parts of the same study. Many researchers believe the best way to gain a deeper understanding of the issues and the experience is to use mixed methods. . Therefore this research uses mixed methods. The analysis will be undertaken by developing values referring to seminal literature regarding practices for urban place characteristics and measures of neighbourhood walkability and functionality (resilience to reach basic needs via walking).The results of the walkability and resilient neighbourhood study will be matched with the results of a postal survey. This research is still in initial stages.

RESULTS: WALKABILITY (INDICATIVE)

Neighbourhood 1 Four streets	Convenient transit (5Marks)	Accessibility (5 Marks)	Safety and security (5 Marks)	Comfort (5Marks)	Attractiveness (5Marks)	Total (100 Marks)
Woodland Avenue (25)	5	5	5	5	5	25
Gordon Street (25)	3	5	2	4	4	18
Melville Road(25)	2	4	4	3	2	15
Graham Street (25)	3	5	1	2	5	16
Walkability						74

Table 1 - Hierarchy of walking needs and sample results

WALKABLE FUNCTIONALITY AS AN ASPECT OF RESILIENCE: (INDICATIVE)

Neighbourhood 1	House 1	House 2	House 3	House 4
Retail shops(food)	500	250	1000	750
Educational (Primary & secondary)	300	500	500	50
Health	1000	500	250	750
Welfare	500	1000	400	50
Recreation	250	50	500	500
Total distance	2550	2300	2650	2100

Table 2: Functionality of the neighbourhood (resilience to reach basic needs via walking)

Analysis of walking related values with best practice literature seeks to define the most walkable neighbourhoods in the case studies and also could find more resilient neighbourhoods which utilise few to no fossil fuels. These case studies show the existing resilience in neighbourhoods for fossil fuel scarcity. Therefore, the urban place characteristics, which represent the most walkable and most resilient neighbourhoods, can be taken as examples to improve other neighbourhoods towards less fossil fuel dependent scenarios.

CONCLUSION: INDICATIVE VALUES

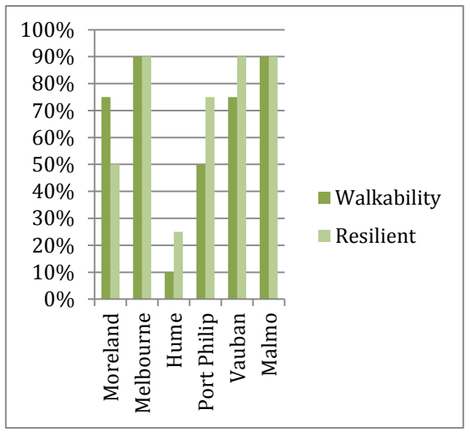

Figure 2: Sample research result

ANTICIPATED IMPACTS:

Climate change, oil vulnerability, traffic congestion, health problem and obesity are just some of the issues related to high usage of automobiles in the past few decades. Planners and designers can be the proactive in addressing these problems. Are we doing the right thing? We misinterpret or ignore human requirements and their basic needs. We are not too late; this is an opportunity to change the world.

'Resilient walking cities'

This research result will help to develop neighbourhoods for less fossil fuel dependent scenarios.

Planners and designers can understand the level of resilience of Melbourne neighbourhoods for fossil fuel scarcity. The results will reveal the level of resilience for oil scarcity. These results can be used to redevelop or improve key urban place characteristics towards 'walking resilient neighbourhoods'. It will make future cities more resilient to oil scarcity and could lead to low carbon living.

Further information:

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