i-SPiKE 2023

INTERNATIONAL EXHIBITION & SYMPOSIUM ON PRODUCTIVITY, INNOVATION, KNOWLEDGE & EDUCATION

"Optimizing Innovation in Knowledge, Education and Design"

EXTENDED ABSTRACT

e ISBN 978-967-2948-56-8

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eISBN 978-967-2948-56-8

Published by:
Universiti Teknologi MARA (UiTM) Cawangan Kedah,
Sungai Petani Campus,
08400 Merbok,
Kedah,
Malaysia.

CATEGORY: ASC ACADEMIC INVENTOR

Assalamualaikum warahmatullahi wabarakatuh,

First and foremost, I would like to express my gratitude to the organizing committee of i-Spike 2023 for their tremendous efforts in bringing this online competition a reality . I must extend my congratulations to the committee for successfully delivering on their promise to make i-Spike 2023 a meaningful event for academics worldwide.

The theme for this event, 'Optimizing Innovation in Knowledge, Education, and Design,' is both timely and highly relevant in today's world, especially at the tertiary level. Innovation plays a central role in our daily lives, offering new solutions for products, processes, and services By adopting a strategic approach to 'Optimizing Innovation in Knowledge, Education, and Design,' we have the potential to enhance support for learners and educators, while also expanding opportunities for learner engagement, interactivity, and access to education.

I am awed by the magnitude and multitude of participants in this competition. I am also confident that all the innovations presented have provided valuable insights into the significance of innovative and advanced teaching materials in promoting sustainable development for the betterment of teaching and learning. Hopefully, this will mark the beginning of a long series of i-Spike events in the future.

It is also my hope that you find i-Spike 2023 to be an excellent platform for learning, sharing, and collaboration. Once again, I want to thank all the committee members of i-Spike 2023 for their hard work in making this event a reality I would also like to extend my congratulations to all the winners, and I hope that each of you will successfully achieve your intended goals through your participation in this competition.

Professor Dr. Roshima Haji Said
RECTOR
UiTM KEDAH BRANCH

WELCOME MESSAGE (i-SPiKE 2023 CHAIR)

We are looking forward to welcoming you to the 3rd International Exhibition & Symposium on Productivity, Innovation, Knowledge, and Education 2023 (i-SPiKE 2023). Your presence here is a clear, crystal-clear testimony to the importance you place on the research and innovation arena. The theme of this year's Innovation is "*Optimizing Innovation in Knowledge, Education, & Design*". We believe that the presentations by the distinguished innovators will contribute immensely to a deeper understanding of the current issues in relation to the theme.

i-SPiKE 2023 offers a platform for nurturing the next generation of innovators and fostering cutting-edge innovations at the crossroads of collaboration, creativity, and enthusiasm. We enthusiastically welcome junior and young inventors from schools and universities, as well as local and foreign academicians and industry professionals, to showcase their innovative products and engage in knowledge sharing. All submissions have been rigorously evaluated by expert juries comprising professionals from both industry and academia.

On behalf of the conference organisers, I would like to extend our sincere thanks for your participation, and we hope you enjoy the event. A special note of appreciation goes out to all the committee members of i-SPiKE 2023; your dedication and hard work are greatly appreciated.

Dr. Junaida Ismail
Chair
3rdInternational Exhibition & Symposium Productivity, Innovation, Knowledge, and Education 2023 (i-SPiKE 2023)

FRAMEWORK FOR A SUSTAINABLE SMART RETIREMENT CITY: A LOCAL PERSPECTIVE

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ABSTRACT
The world's population aged 60 and older is projected to increase to 4 billion by 2050. By 2030, 15.3 percent of Malaysia's population will be over 60, a number that is expected to rise. To enhance the lives of the elderly, the government should construct a retirement city framework. Through in-depth interviews with retirees and theme analysis, this research presents a sustainable smart retirement city framework that takes into account five key areas: smart living, smart people, smart infrastructure, smart economy, and smart environment.

Keywords: Sustainable; Ageing; Retirement; Smart Retirement City

INTRODUCTION

The proportion of elderly people in Malaysia is projected to reach around 15.3 percent by 2030. The government must have a proper strategic plan to provide for the needs and wants of this ageing population so that they can live happily and continue to contribute to the development of the country as their proportion grows. The government of Malaysia needs a retirement city framework to adequately address the concerns of its citizenry aged 60 and up who are primarily in their retirement years. The Ministry of Urban Well-being, Housing, and Local Government (Kementerian Kesejahteraan Bandar, Perumahan dan Kerajaan Tempatan, or KPKT) announced in February 2017 that one of its plans for this aging population is to open a community center for senior citizens in urban settlements by the year 2040. In the future, this hub will serve as a place for them to connect and socialize, and many will choose

to make the city their permanent residence rather than their original village (Samadi Ahmad; Owens, 2017).

The Malaysian Ministry of Housing and Local Government (KPKT) announced their intentions to build affordable housing for the elderly and those with disabilities in June 2017. The goal of this program is to get ready for the increase in "Old Community" members that is predicted for the year 2025. Minister Zuraida Kamaruddin argued that the country needed to make advance measures to deal with its aging population, particularly in terms of providing infrastructure, welfare, health, and knowledge to minimize costs. Zuraida also asserted that many advanced nations, like Japan and the United States, have taken action to solve the plight of the elderly. In the United States, a comprehensive plan for such a metropolis is still in its infancy. Amsterdam, London, Stockholm, Barcelona, Singapore, New York, King Abdullah Economic City, Masdar, Chicago, Rio de Janeiro, and Songdo are only some of theother "smart cities" that we need to compete with (Angelidou, 2017). Therefore, in general, the purpose of this research is to propose a framework for Sustainable Smart Retirement City in Malaysia, particularly in Kedah, Malaysia.

METHODOLOGY

The seniors' preferences and requirements for development of smart retirement city in Kedah is the focus of this qualitative investigation. Purposeful sampling was used, and in-depth interviews were performed with 13 retirees who fell into three broad categories: former public servants, former workers in the private sector, and former business owners. Interviewswere recorded, transcribed, and coded using thematic analysis with the help of Nvivo software to obtain the data.

FINDINGS

There are three parts to the demographic profile: informant status, gender, and race. Each of the informants is at least 55 years old. Former government personnel (GS), private sector employees (PS), and self-employed individuals (SE) were the three groups into which informants were divided. The characteristics of the sources are shown in Table 1.

Table 1: Demographic Profile of Informants

GS = Former Government Employee
PS = Former Private Sector Employee
SE = Former Self- Employed

1.	PS1	Former Private Employee	Female	Malay
2.	PS2	Former Private Employee	Female	Malay
3.	PS3	Former Private Employee	Male	Malay
4.	PS4	Former Private Employee	Male	Malay
5.	GS1	Former Government Employee	Male	Malay
6.	GS2	Former Government Employee	Male	Malay
7.	GS3	Former Government Employee	Male	Malay
8.	GS4	Former Government Employee	Male	Malay
9.	GS5	Former Government Employee	Male	Malay
10.	SE1	Former Self- Employed	Male	Chinese
11.	SE2	Former Self- Employed	Female	Chinese
12.	SE3	Former Self- Employed	Female	Indian
13.	SE4	Former Self- Employed	Male	Malay

(Source: Field Study, 2022)

Data acquired from the field are summarized in Table 2, which displays the demographic profileof informants.

Table 2: Summary of Demographic Profile of Informants

No.	Items	Levels	Counts	Percentage (%)
1.	Gender	Male	9	69.2
		Female	4	30.8
	Total		13	100
2.	Race	Malay	10	76.9
		Chinese	2	15.4
		Indian	1	7.7
			13	100
3.	Status	Former Government Employee	5	38.4
		Former Private Sector Employee	4	30.8
		Former Self-Employed	4	30.8
	Total		13	100

Table 3 highlights the summary of requirements for a sustainable smart retirement city framework in Kedah by informants.

Table 3: Summary of requirements for a sustainable smart retirement city framework

No.	Informants	Need	Don't Need	Not Sure
1.	PS1	√		
2.	PS2	√		
3.	PS3	√		
4.	PS4	√		
5.	GS1			√
6.	GS2	√		
7.	GS3	√		
8.	GS4	√		
9.	GS5	√		
10.	SE1	√		
11.	SE2			√
12.	SE4	√		
13.	SE5	√		

Table 4 is a summary of the preferences and needs for a sustainable smart retirement city in Kedah, Malaysia, which can be used to learn more on the local context, preferences, and needs for such a framework.

Table 4: Summary of preferences and needs for a sustainable smart retirement city.

No	Requirement	Informants												
		PS1	PS2	PS3	PS4	GS1	GS2	GS3	GS4	GS5	SE1	SE2	SE3	SE4
1	Health services	√	√	√	√	√	√	√	√	√	√	√	√	√
2	Social Participation	√	√	√	√	√	√	√	√		√	√	√	√
3	Community Support	√	√	√	√	√		√		√	√		√	
4	Communication & Information	√	√	√	√			√	√		√	√		√
5	Housing area for senior citizen								√		√	√		
6	Employment	√	√		√				√	√				
7	Transportation	√	√			√	√	√	√					
8	Outdoor spaces	√	√								√			

CONCLUSION

To sum up, it is clear that Kedah requires a model for a sustainable, smart retirement city. The Ministry of Local Government Development in Malaysia identified seven key areas for a smart retirement city concept, and this study was able to narrow those down to five: smart living; smart people; smart infrastructure; smart economy; and smart environment (Figure 1). As a result, one of the takeaways from this study is the recommendation of an informant-based approach. In line with the National Policy for Older Persons in Malaysia, the suggested framework in Kedah can be used by the appropriate authorities to design and create a sustainable smart retirement city. In order to create a sustainable smart retirement city, this study highlights the significance of addressing health services, social involvement, community support, infrastructure, information, transportation, and accessible outdoor areas.

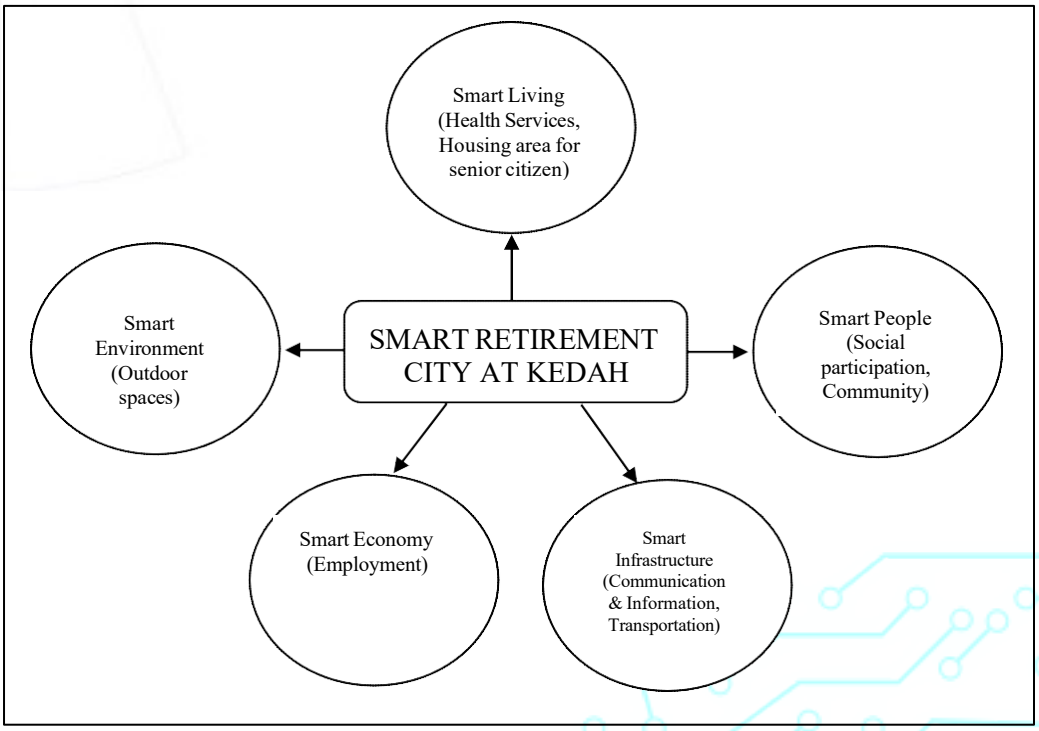

Figure 1: Framework for Sustainable Smart Retirement City in Kedah, Malaysia

ACKNOWLEDGEMENTS

This study was made possible by financing from the Dana Penyelidikan Khas (DPK2021) at the UiTM Kedah Branch (Reference No: 600-UiTMKDH.PJI.5/4/1, 1/2021), and the authors would like to extend their gratitude to the Bahagian Penyelidikan dan Jaringan Industri (PJI).

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e ISBN 978-967-2948-56-8