

CELEBRATING
COMMERCIALISATION
YEAR 2014

iiindex 2014

AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

invention
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exposition 2014

INNOVATEUR
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2014

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UNIVERSITI TEKNOLOGI MARA
MALAYSIA

*Bridging
the valley of death :
advancing the
commercialisation
of research*

RESEARCH BOOK

iiindex2014

AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

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FOREWORD

The Honourable Minister of Science, Technology and Innovation (MOSTI) has launched 2014 as Malaysia Commercialisation Year 2014 (MCY2014) with the theme Science Technology and Innovation (STI) for Wealth Creation. In line with this theme, Invention, Innovation, Design & Exposition 2014 (iidex2014) is an annual exposition organized by UiTM and is the ultimate platform to highlight and commercialise new inventions and innovations. Researchers and inventors will exhibit their products which cater to the needs and wants of the community and the country.

The iidex2014 creates a new dimension by fusing two competitive concepts, a competition among innovative products and a competition to invite Innovateur Wannabes to perform live pitching of their products to the audience. The iidex2014 focuses on comprehensive commercialization and creating opportunities for entrepreneurs to carry out R&D as well as to provide avenue to commercialise their products. Through expositions such as iidex2014, MOSTI hopes to inculcate the culture of commercialisation of new technology designed and created by Malaysians.

I wish to congratulate all the participants of the iidex2014 and this is the opportunity for all researchers to show their ideas and exhibits their products and creativity. Apart from showcasing their products, innovators will have the opportunity to provide a window to the industry for business matching during the exposition.

Tan Sri Dato' Sri Sallehuddin Mohamed
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FORMULATING [H+T] AFFORDABILITY INDEX FOR LOW-COST HOUSING DISTRIBUTION PROCEDURE

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Currently, the calculation of household expenses consists of housing price or rental price and additional of basic living costs with no specific calculation on transportation costs. The calculation of transportation costs need to be done separately from the housing costs because there are many criteria involved and it needs a specific determination to show the results. The combination of both housing costs and transportation costs will define the residents true affordability means. In calculating the truly affordability level, the housing costs and transportation costs were summed up and divided with the household income. In the local context, the use of the traditional measurement of affordability index is not new to the Malaysian Housing industry. In Malaysia, the affordability index is valued as 30% and is still accepted in the financial institution (Zainal, 2010). Ministry of Housing and Local Government (2002) reported that people with income of RM 1500 and below are eligible to buy a unit of low-cost house that is worth between RM 35000-RM 42000. The measures under the low-cost housing development program in Malaysia were controlled by the government where only eligible applicants will be considered for offering a low-cost unit and there will be less pressure for the low-income people to own a house. Obviously, there are two issues to tackle in the preparation to accommodate the lower-income group that is first; a place to accommodate this group of people and secondly is to ensure that the area chosen will not be a burden to the lower-income group especially in paying their transportation costs. Therefore, the list of condition and criteria of eligible nation must also extend to the needs of confirming their working areas as another parameter to include so that the government could offer a suitable area to the right people and thus help them to reduce the cost of transportation. Therefore, this research investigates the role of the transportation element to the residents' affordability through the assessment of accessibility and mobility factors. The specific objectives of this research are to explore the transportation criteria of mobility and accessibility for the usability of the low-cost flat affordability measurement, to examine the distribution of amenities area and to generate site accessibility ranking using spatially proximity analysis and to calculate and determine the residents affordability level in matrix travel cost analysis.