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Designing Slim (Sustainable Living in Malaysia), A Development Process Model for Rural Communities

Mereka bentuk Kehidupan Mampan di Malaysia, Model Proses Pembangunan untuk Masyarakat Luar Bandar

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ABSTRACT

Making the rural people's living experience more comfortable and relevant through development has always been a priority of the nation. For this research, the areas for development focus on healthier sanitation, higher security, improvement of comfort, increase of knowledge and sustainability; while the aspect of technologies encompasses energy, clean water generation, waste management as well as a living space that is secure, comfortable and yet remains similar to the natural habitat. The purpose of this research is to ascertain the relationships between communities' grassroots needs and the technologies implemented. The second part of the research is to validate available technologies that can be potentially incorporated into a particular community. This study authenticates a past project implemented in a specific kampung in Malaysia on the effectiveness of development through users' account. The prevailing trend is that the development and technologies were not fully utilized due to limited research performed on empathy, which resulted in waste of resources and unmet needs. This births forth the development process model where relationship between needs and technologies is in union. The result of this analysis can be used to determine the customization of technologies on micro architecture as a sustainable development solution. The findings may be useful in meeting rural development needs elsewhere by successively following through the SLiM (Sustainable Living in Malaysia) process model to improve efficiency and solutions delivery.

Keywords: Development process model; empathy; micro architecture; rural development; technologies

ABSTRAK

Menjadikan pengalaman hidup penduduk-penduduk di kawasan pedalaman lebih selesa dan relevan melalui pembangunan sentiasa menjadi keutamaan negara. Untuk kajian ini, aspek pembangunan lebih tertumpu kepada aspek sanitasi yang lebih sihat, keselamatan, keselesaan yang dinaiktarafkan, pertambahan ilmu pengetahuan dan kelestarian; manakala aspek teknologi merangkumi tenaga, penjanaan air bersih dan pengurusan sisa dan ruang hidup yang lebih terjamin, selesa dan hampir menyamai habitat semula jadi. Tujuan kajian ini adalah untuk mengetahui hubungan antara keperluan akar umbi masyarakat dengan pelaksanaan teknologi. Bahagian kedua kajian ini adalah untuk mengesahkan teknologi sedia ada yang berpotensi untuk diselaraskan dalam sesuatu komuniti. Kajian ini juga mengesahkan pelaksanaan projek lepas yang dijalankan di sebuah kampung khusus di Malaysia berhubung dengan keberkesanan pembangunan melalui akaun pengguna. Trend semasa menunjukkan pembangunan dan teknologi tidak dimanfaatkan sepenuhnya disebabkan oleh kekangan kajian yang terhad yang dijalankan berdasarkan empati dan akhirnya mengakibatkan pembaziran sumber dan keperluan-keperluan yang tidak dipenuhi. Ini melahirkan sebuah model proses pembangunan di mana hubungan antara keperluan dan teknologi disatukan. Hasil analisis kajian ini boleh digunakan untuk menentukan penyesuaian teknologi dalam seni bina mikro sebagai penyelesaian untuk pembangunan lestari. Penemuan-penemuan ini mungkin berguna untuk memenuhi keperluan pembangunan luar bandar di tempat lain dengan mengikuti model proses kehidupan yang lestari di Malaysia (SLiM) dengan jayanya untuk meningkatkan kecekapan dan penyelesaian yang disarankan.

Kata kunci: Model proses pembangunan; empati; seni bina mikro; pembangunan luar bandar; teknologi

INTRODUCTION

Three generations walking and staying together harmoniously used to represent a typical Malaysian nucleus household. As a community with extended family and friends, they nurtured the land. Very much make full use to what the land very much making full use of what the land may offer in terms of yield (Varma 2003) That perhaps may support close to every stakeholder's daily consumption needs. Little or no chemical were used for the entire planting life cycle process while personal hygiene

and cleanliness were also highly biodegradable. The evidence confirmed that Malaysian were truly once a sustainable lot.

However, these were slowly replaced with industrialization and urbanization. Statistics has shown that in Peninsula Malaysia, our nation has reached 72% of urbanized population in 2010, which equates to more than six million Malaysians living in greater Kuala Lumpur alone. The remaining rural community comprised of mainly retirees that are above sixty-five years old with one or two grandchildren if they are fortunate. It became a common sight where land was left uncultivated and leaving no employment opportunity to the next generation. In the pretext of globalization and progress, many of the younger generations chose living in the vibrant city in exchange with a mundane kampung lifestyle. Many advanced from the old and forgotten generations to live in a pigeonhole they called home, within a vibrant city nevertheless. Not that there were lack of development for these rural area to help retain the people, perhaps the absence of empathy within the life cycle process of a development namely planning, development, delivery and maintenance

This research was carried out to (a) Investigate the factual need of rural area in terms of development and technology input in designing a Sustainable Living in Malaysia (SLiM) development model (b) Appraise the array of sustainable development projects implemented together with its technology rendered, (c) Scientifically design and formulate an integrated micro architecture solution with technologies not limited to the input from findings (b) in meeting the underserved rural needs of (a). The research focused on how to best integrate innovative measures that were well implemented in actual Malaysian scenario to the rural area without (y) negatively affecting the original eco-system (z) in meeting the grass root needs of the people.

EMPATHY AND TECHNOLOGIES FOR SUSTAINABLE RURAL DEVELOPMENT

Development needs vary from one community to another and very much depend on the environment, culture and knowledge that conveniently shape community desires. An absolute resolution in meeting the needs do not, should not and will not endure as desires evolve through time and space. Thus, the gap persists when solution derived from parties that have little or no understanding of users' immediate needs. Empathy is not sympathy, as active action is required to help bring solution in meeting these underserved needs (Form & Cities 2013). Empathy looks beyond selling a product, products or services. It has a clear engagement with users and reaching users' experience is the ultimate goal to the solution provider (Maibom 2009).

In this new millennium, technologies were commonly used to help bring about the perception to achieve sustainable development in which many falls in the category of green washing (Nair, P.V. Ranjith, & Tyagi 2011). These are commonly seen among piecemeal projects with minimal empathy resulting unmatched environment of use and unraveled knowledge of use. People or profit remains the debate for the longest time. Vendors or technology providers generally choose the latter going for highest profitability. The incorporation of technologies requires contextualization, localization as well as smart integration with local environment as a formula.

Sustainable development or sustainable rural development is about the complementary effort between contextualized smart integrated technologies and the rate of utilization with minimal waste in delivering solution to meet users' needs. In the end users' opinion, the utilization rate speaks a lot about knowledge transfer and needs met. However, it is seldom a factor for consideration to solution providers as their profit goal has already been met once the solution in the form of product or service is delivered. Thus, to balance up the equation, prudence and efficiency is a factor where waste should be minimized in order to achieve sustainable development.

S(r) D = [(C x SIT) x UR] – W = user's needs met
Sustainable "rural" Development = (Contextualization x Smart Integrated Technologies x Utilization Rate) – Waste = user's needs met

Equation 1. Sustainable Development

FRAMING OBJECTIVES AND OPTION: COMMUNITY LIVING

The saying "no man is an island" is so true indeed and living with others makes sustainability achievable. Community living promotes sharing of resources, upholds better security and foster better waste management. Community living in a

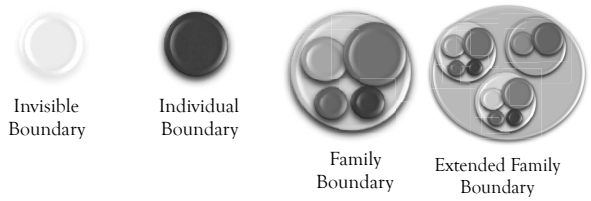
harmonious way requires commitment and a great amount of tolerance in establishing the five basic boundary components (i) boundary (ii) nucleus family (iii) shared resources towards efficiency (iv) waste management (v) sustainability

PICTURE 1. Five basic components of community living

MICRO ARCHITECTURE

Home is an evolving living spatial; it changes in form and functionality depending on the phases of life for a particular user or group of users. Tearing down the multi facades of architecture, a home is a shelter or a mere canopy over the head protecting its inhabitants from excessive heat, rain and cold. To achieve comfort, the living spatial slowly evolves into a variety of domain boundary namely bedroom, living room, washroom, hall, kitchen, study, powder room, store room etc.

Micro architecture centered upon the "form follow function" design application in meeting needs and evading wants. The design principles cut through the fuss and went right into providing sufficiency for day-to-day life's needs. Through research findings from empathy, the sustainable development focuses on the life cycle needs of rural dwellers in the light of community living. However, one of the most contentious points of dispute falls on boundary. The need of having an individual boundary is no longer valid to most rural dwellers due to ample land that is left uncultivated compared to any urban setting. On the contrary, most urbanites view parking lot itself as a significant boundary for dispute especially those who owns a transportation vehicle. Thus, the best place to start is to establish a boundary based on the concept of invisibility, individual, family, extended family and community needs.



PICTURE 2. Boundary analogy

The depletion of natural resources and the rapid deforestation due to development promotes the need for radical thinking in prudency. It is not about over organized systems that build mega structure powered by an air-conditioning system to help cool down the building. An efficient living unit should be small as it has a lower need to cool down the building through cross flow ventilation (Varma 2003).

There is no one size fits all solution (Slack 2007). The needs of a basic adobe or a home vary from one community to another, very much depending on the environment, culture and knowledge that conveniently shape the desire. An absolute resolution in meeting the needs do not exist, while the gap persists when the solution is derived from parties that have little or no understanding of their needs. Over the years, extensive studies were made prior to development where numerous dialogues techniques with villages' chief were used to help better understand the hearts' cry (Chamberlain, Crabtree, & Davies, n.d.). Some of the catalytic developments were those of Federal Land Development Authority (FELDA), Rubber Industry Smallholders Development Authority (RISDA) and many more (Yasin & Ngah 2011).

MEANS & MEASURES FOR IMPLEMENTATIONS: SLIM DEVELOPMENT MODEL

A revised strategy must be in place to address each individualistic needs of a particular community development. However, this does not prevent the establishment of a development process model. By combining the findings for the research, the

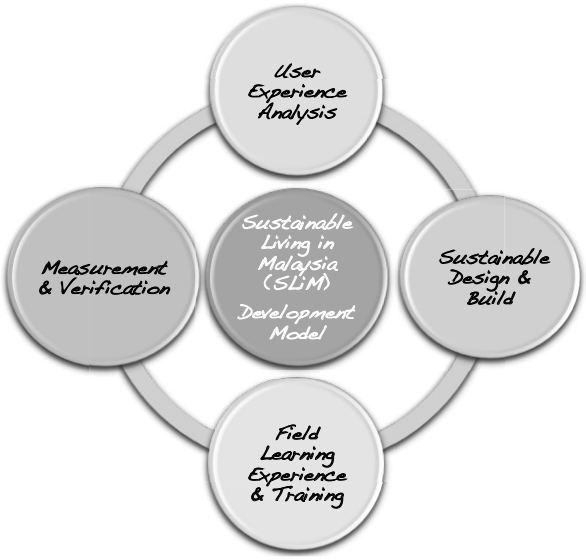
Sustainable Living in Malaysia (SLiM) development model was birthed to help drive consistency in achieving sustainability where knowledge, people and planet thrive.

SLiM is a version 1.0 basic expandable model, designed based upon the Malaysian context where establishing or rather restoring the cultural values and community living is the ultimate goal. Starting with empathy by understanding grass roots is needed as a genesis to enhance user's experience. It is a simple roadmap to where they are leading the stakeholders through to a process in embracing sustainability by using SLiM.

Sustainable design and build evaluates the socio-environment, ecological structure as possible resources right down to the waste management. Technological input is vital and the process is to evaluate explicit technologies application to enhance the sustainability value with minimal waste to triumph sustainability as Equation 1 clearly spells out.

To sustain the development, an element of continuity has to be established where the local community has to be empowered. Hence, this is covered as one of the key processes in the SLiM model. It is aspired for solution implementers to appoint local contractors, which comprises of inhabitants to have transference of knowledge. It also provides job opportunities for the local communities throughout and beyond the period of development.

The final portion of the process can be summarized in a word, accountability. The sustainable development shall reach a complete cycle only when stakeholders provide their reference on the outcome to the entire process. In view of the life cycle methodology, the final process is not a one off approach. Periodic audits will be conducted as a continuous improvement process to the existing project and possible spill over best practices to be implemented for future projects using the SLiM development model, perhaps version 2.0 and beyond.



PICTURE 3. SLiM Development model

CONCLUSION

Sustainable development speaks a lot about whether or not one is able to sustain the development. Science plays a critical role in providing research findings to help shape the thought process among policy makers, thus helping stakeholders to be more able in tackling the interdisciplinary complex issue of sustainable development through science, knowledge and skills.

However the challenge remains high as the life cycle process is rather long and involves many parties. Perhaps the analogy of the anatomy may explain a little better on the complexity of the subject. The knowledge, know-how and skills are mainly provided through the academia. Research findings from the brain provides scientifically acquired processed data that policy makers may phrase the problem better or even take a step closer in attempting the solution. The policy on the other hand brings forth the soul or heart of the matter in driving the agenda. Finally when the brain and heart is aligned, the hand will be able to perform its duty in achieving the goal.

The extended mega urban region, EMUR need not be a threat to rural area provided the latter has equal or better allure to the Malaysian communities. The morphology of the rural areas had seen its negative impact through lower Asian cultural mannerism and respect of elders among the younger generations in the urban area. Hence, the need to make rural areas relevant in the twenty first century remains a

priority in salvaging the culture and identity of who we are as a nation. The research findings are not intended to remain in the field science level where transmission into an applied science is envisioned. It has to be a collaborative action disposition between the academia, private sectors and the public sectors.

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