The Application of Social Innovation in Designing an Aged Care Centre in Malaysia

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Outline

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Background

- Social innovation can be defined as “new solutions (products, services, models, markets, processes etc.) that simultaneously meet a social need (more effectively than existing solutions) and lead to new or improved capabilities and relationships and better use of assets and resources.
- Over the last decade social innovation has been applied to sustainability and to encourage sustainable living as a lifestyle and behaviour change.
- Social innovation is community-driven and ensures that institutions, enterprises, non-profit organizations and networks of collaborative persons are able to find common platforms to work together.
- These initiatives propose viable solutions to complex problems e.g., social cohesion, urban regeneration, healthy food accessibility, water and sustainable energy management and, at the same time, they represent working prototypes of sustainable ways of living.

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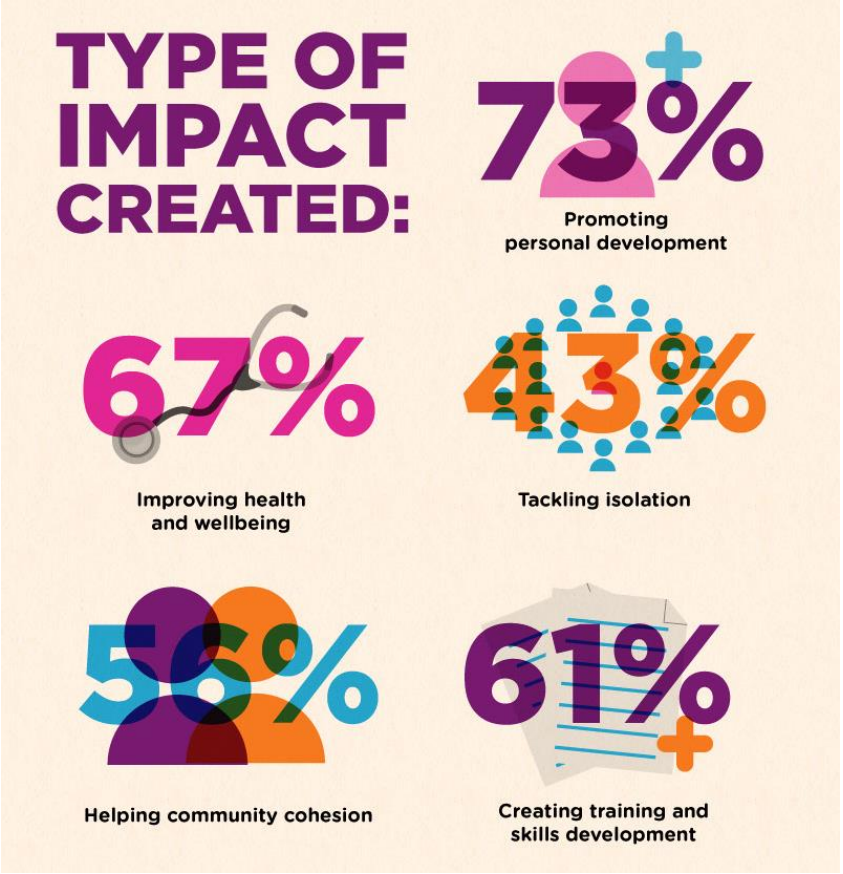
Social Innovation Characteristics

- **Novelty**: Social innovations are new to the field, sector, region, market or user, or to be applied in a new way;
- **From ideas to implementation**: Social innovation focuses on implementation and application of new ideas, rather than just inventing new ideas;
- **Meets a social need**: Social innovations are explicitly designed to meet a recognised social need;
- **Effectiveness**: Social innovations are more effective than existing solutions – they create a measurable improvement in terms of outcomes; and
- **Enhances society's capacity to act**: Social innovations empower beneficiaries by creating new roles and relationships, developing assets and capabilities and/or better use of assets and resources.



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Living Labs

- Living labs are platforms like a building or a community for user-centred products before they are commercially available. As living labs usually involve partnerships, they are appropriate mechanisms for social innovation.
- Such partnerships can involve government agencies, companies and research institutes to pool their research on built environment and city management, urban mobility, IT and info-communications, public safety, waste and water management and clean energy.
- Members of communities are furthermore invited to contribute and shape the tested product.

Advantages of the Living Lab Approach

- Living labs are situated in a real urban context.
- Living labs represent a specific form of experimentation, whereby processes of innovation and learning are formalized and enable the co-production of knowledge and ideas with the users.
- Participation and co-design with stakeholders such as residents and users is at the core and appears in all stages of the living lab approach
- A clear owner is crucial for a living lab to be effective, although a fine balance exists between steering and controlling.
- Evaluation of the impacts of a living lab is important to feed back the results, and revisit and refine the goals over time.

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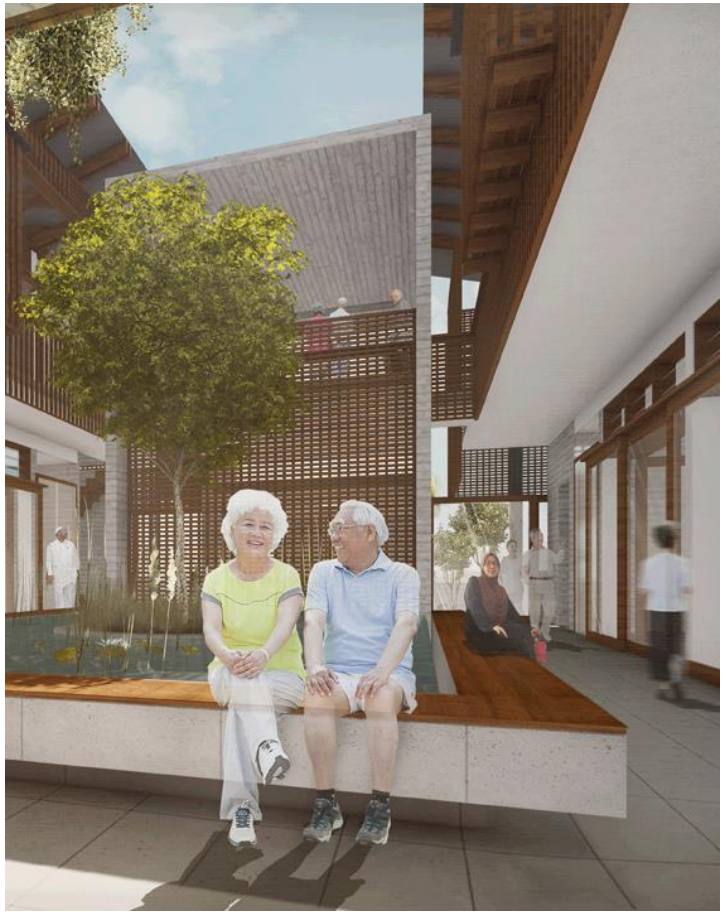
Case Study

- A living lab case study is used to demonstrate how identifying and analysing community needs is fundamental to the design of a community care centre for the aged.
- The centre incorporates assistive technologies, access design and care features as well as sustainable design such as urban gardening, rainwater harvesting, waste recycling and energy efficiency.
- The building is also designed for intergenerational use as it is intended to have other users of different ages so that the elderly will be encouraged to interact with them



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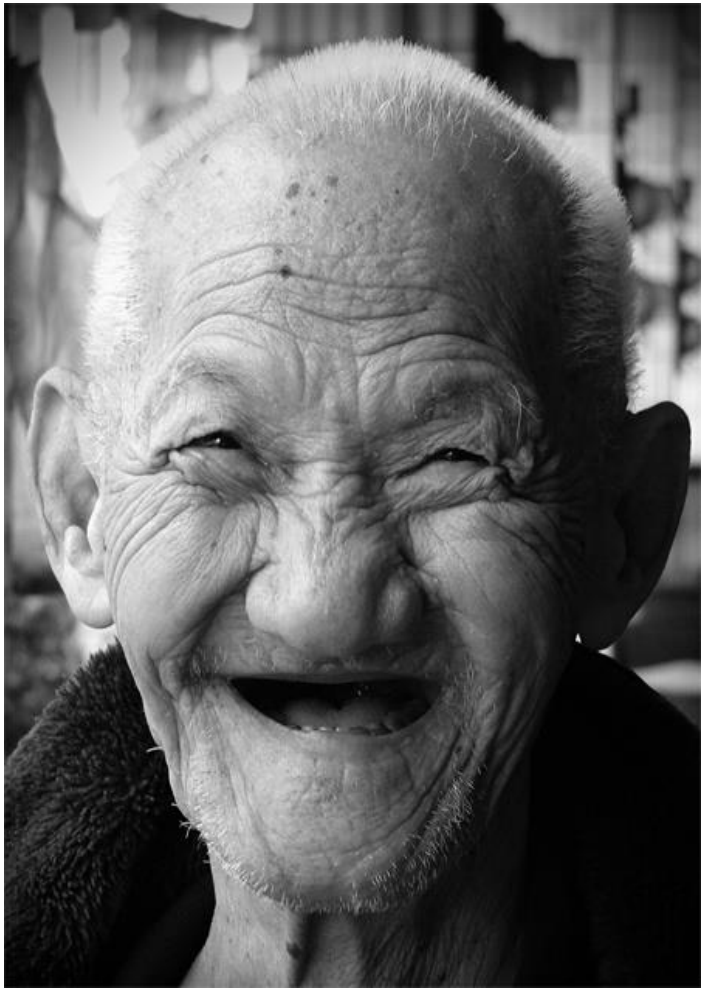
Ageing populations

- Globally, according to the United Nations , the population of persons aged 60 and above is projected to double to more than 2 billion by 2050 or 21% from 11.7% in 2013.
- By 2047 the number of older persons is expected to surpass the number of children for the first time.
- Not only are the numbers of older persons increasing substantially, they are also living longer lives due to higher standards of living and advancements in healthcare.
- Asia stand to face the biggest growth in their ageing population, as one in four Asians will be over the age of 60 by the year 2050.



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Problems Associated with Ageing

- The elderly are more prone to chronic diseases, sleep disruption, psychological problems and cognitive decline.
- Healthcare models will have to be reconfigured to cater for the aged who have spent a lifetime of modern living with all the associated stresses.
- Housing will be another challenge as homes designed for the young and active become difficult for the elderly to cope with.
- Moving to aged care homes is a possibility but affordability will be an issue. Other problems include physical and psychological degeneration.
- Even with extended retirement ages, there will come a time when people can no longer work and rapidly deteriorate through emptiness and boredom.

Intergenerational living

- As children age and they cannot afford means of renting or owning their own homes so they spend their adulthood living with ageing parents.
- Home sharing is where an older person offers accommodation to a younger person at a reduced rate in exchange for some support with basic tasks such as shopping or gardening.
- Co-housing is the development of private households with shared facilities that invoke a sense of community.

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Intergenerational Concept for a Community Centre in a Suburban Setting

- The centre was designed specifically with the local community in mind, after a study of the demographics and lifestyle patterns in the area and identifying any gaps or needs not being fulfilled from the perspectives of a wider community.

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Factors

- **Inclusivity**. The community centre will be designed to meet the basic needs of the local community regardless of age, beliefs and social standing. These include a safe environment, modern technology, adequate facilities and open spaces.
- **Active**. The community centre will provide products and services that the community need or want like classes, activities and assistive tools. These will be provided at a discount through sponsorship.
- **Adaptability**. The centre will be able to adapt to the changing needs of the community over time through regular stakeholder focus groups.
- **Sustainability**. The centre will be a showcase for sustainable living that the community members can adapt and apply in their own homes such as urban gardening, waste recycling and energy efficiency.

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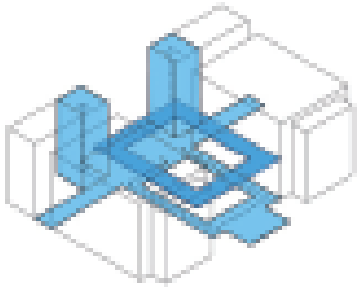
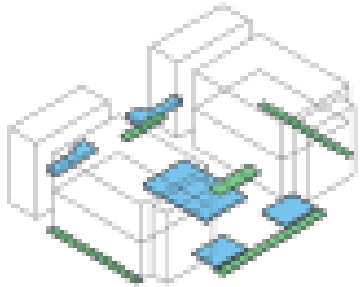
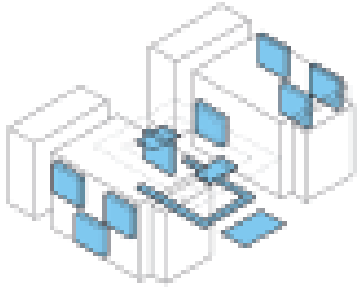
Design Features

- Broad space typologies of activity space, office, amenity and service spaces and circulation in combination with passive strategies.
- Modular structure using structural simplicity and open span functional areas that offer flexibility depending on the particular program requirements whether for elderly or non-elderly use.
- Security and safety would be ensured in all public spaces and the courtyard acts as a spine to allow easy movement and clear way for the elderly and non-elderly community.
- Utilitarian functions are located each end of the pavilions for vertical circulation, amenities, offices, stores and plants etc.
- Technological advances through internet communication allow for remote access for people to online specialist counselling and medical care.







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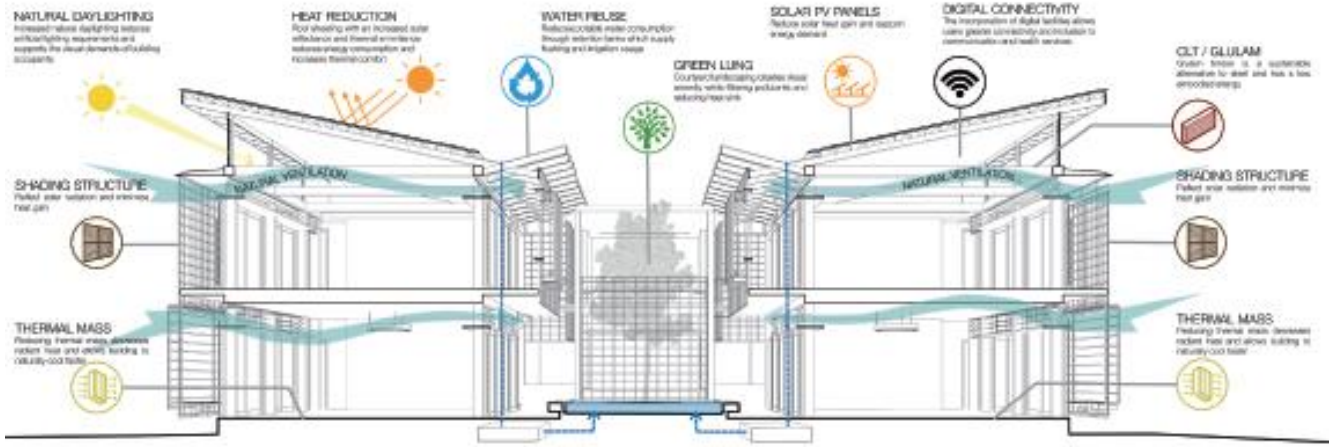
Sustainability

- Features such as natural diffused daylighting and thermal massing, renewable energy such as solar panel and solar air cooling systems, and rainwater collection and harvesting are incorporated.
- A roof garden serves as an edible food source using rainwater for irrigation and food waste for compost. The centre furthermore utilizes intelligent building systems and real-time software to verify building performances.
- Use of durable, resilient and low maintenance materials, innovative and sustainable building technologies (including glue laminated and cross laminated timber technologies) together with low energy demonstrate that the building could be a leading exemplar as a zero carbon footprint building



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Discussion

- Social innovation lies in tackling three issues simultaneously:
  - Creating an intergenerational centre for sharing of knowledge and well-being;
  - Active ageing to enrich the quality of life for the elders
  - Sustainable design to lower the footprint of the building and at the same time provide an educational tool to highlight a sustainable lifestyle.
- The architectural design is a creation taking traditional ideas interwoven with more contemporary ones.
- The application of the modular approach is key to the design as it allows flexibility for the different age groups and their interests, while at the same time does not neglect the needs of the elderly and the potential for active ageing.

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Areas to Explore

- More community outreach to assess the needs of the non-elderly users – the original idea was that the centre could be used for elderly and very young i.e. toddlers so that it becomes a one-stop shop for families to leave their dependents there during the working day.
- The modular design needs to be refined to allow interchangeability of units for different purposes.
- The active ageing element provides an opportunity to try out new assistive technologies that can help elders still maintain a level of mental and physical ability to be able to socialise and contribute.
- Further research needs to be done on what types of technologies are available, particularly leveraging on ICT and smart building and personal technologies.

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Conclusions

- Social innovation is the commercial application of ideas and technology towards improving societies.
- Linking social innovation with a living lab allows the idea to be taken to a live demonstrable example which can be replicated to achieve greater impact.
- An example of this is how to provide for ageing populations. Use of an intergenerational approach could be a social innovation, coupled with active ageing carried out in a sustainable built environment. A case study is used to demonstrate this effect.
- Further research, in particular on user needs, is recommended.

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Thank You

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