

Analyzing Co-Creation in Service Innovation: Assisted Living Experience in Malaysia

Ramlan Jantan

Department of Creative Multimedia, Faculty of Art, Computing & Creative Industry,
Universiti Pendidikan Sultan Idris, Tanjong Malim, Perak, Malaysia.
Email: ramlan@fskik.upsi.edu.my

Ridzuan Hussin

Department of Art, Faculty of Art, Computing & Creative Industry,
Universiti Pendidikan Sultan Idris, Tanjong Malim, Perak, Malaysia.

Abstract

This paper examines a perceived benefit of assisted living experience at Rumah Kebajikan Cheras Baru, Kuala Lumpur, Malaysia. The examination focused on co-creational value and perceived benefit towards elderly system, which service design methodology have been implied to discover a results and feedback from activities that has been applied in old system of managing assisted homes and old folks homes in Malaysia. Existing health care system services available may not be effective in dealing with elderly having chronic diseases and disabilities. Resulted of analyzing have shown that elderly people in Malaysia dependent too much on their family support and government support. This paper examines the previous system of homes nursing and assisted living experience and provides a better system that can really support elderly people sustain and manage their daily life effectively without a provision from the government or private sector nursing.

Keywords Aging, assisted, co-creation, service design, innovation

INTRODUCTION

Estimated the numbers of persons aged 65 and over at Malaysia will be 1.5 million by the turn of century, and 4 million by the year 2025. This paper examined a current situation of assisted homes in Malaysia and what have been done so far. This article discuss on issues of health-care innovation and health-care services, whereby seldom a research embark on issues of care system or a proper services system and even to some point an asset management was not been discuss utterly in Malaysia. The traditional elderly care system still operates on basis information without much effort and no

cost had been putting in this areas to educate a society or to at least given an information updates to elderly in need. One of factor contributed to this lack of information distribution is a Malaysian perception itself towards assisted living. For elderly in Malaysia it's a taboo, unacceptable by society for an elderly to be placed in assisted living homes "Another important point to note is that in collectivist cultures, respect for parents or filial piety is paramount (Triandis, 1995). Sending parents to a nursing home is unthinkable and children who do that are considered to be very bad individuals. In Islamic teaching it is considered a big sin for children not to treat their parents well"(Hassan, Dollard, & Winefield, 2010). Malaysian still believes in 'filial piety' custom, where children should look after their parents. Many elderly designate they would prefer to live independently in their own homes as long as possible. Elderly in Malaysian particularly believe in the ideas of living independently at their homes as long as possible are acceptable and honourable lifestyle to them comparing to live in the assisted living homes which is they felt abandon by their family or children, which was confirmed in research interview sessions. This situation discourage elderly to mingle around with other elderly as part of healthy social interaction only worsen the health of a elderly when isolation came overshadow them with typical health problems and family problems "Alleviating loneliness is especially important for improving the quality of life of older people. Research shows that one in three older people do not speak to a friend or family member for a week or more; one in 10 can pass a whole month without such conversation. As well as reducing quality of life, such isolation impacts on the mental and physical health of older people"(Lewin, Adshead, Glennon, Williamson, & Moore, 2010). This is a time a technology should be an agent to help strengthen the bond that an elderly already innovate without them knowing it. Social responsibility and social interaction that taking over a typical jobs from care taker could be in part and be taken over and augmented by new technology.

The assistive technology could play a big role in augment information found, by promoting the uniqueness of social activities created by an elderly and offers a solution for elderly worse nightmare which is social isolation. Encouragement is needed to educate an elderly in Malaysia that assistive technology and assisted living homes will benefit them in term of social benefits and they could live a life of healthy aging.

This article will take the reader through various territories from a technological perspective for example; one could simply assume that existing system that support elderly are well improving. When talking to elderly as an end user, resulted that technology only a secondary solutions compare to real human to human interaction which given more meaningful and sincerity feeling to them. Elderly prefer a simple assistive technology rather than complex interaction that require them to learn new skills, as new product for assistive technology are lack of user-perceived benefit.

Products and service are mostly design to help enhancing a supervision of elderly health problems and reduce the coast and time of care takers. But,

instead these products only appear as health products only and elderly still believe in human to human interaction which involves feeling and humanity.

This paper presents a vision on how a simple communication and interactions are more acceptable rather than complex assistive products that could be introduced to the system in a coming year. "The more complexity there is in the market, the more that something simpler stands out" (Maeda, 2006). Authenticity and uniqueness of Malaysian custom and beliefs are essential for this research whereby Augmented information data that gathered could benefit both parties and increase context awareness between elderly and design/technology products for elderly. A design approach is proposed as guidance for user context awareness and enhancing user perceived benefit by the end user and are used as guiding factors.

PROBLEM STATEMENT

"As older persons also generally require more care than the general population, the government has provided elderly-friendly facilities that include housing, transportation, recreation facilities, appropriate restrooms, and lifts and ramps in public areas. The provision of old folk homes or nursing homes for the purpose of long-term care will soon become a necessity, as the ageing phenomenon becomes more prevalent in Malaysia" (Malaysian Institute of Economic Research (MIER), 2008). As an older person needs more assistance that we forgot to improvise them with a cultivated environment that encourages independent living among our elderly. Do we have suitable medical and healthcare services that cater specially for the elderly? Do we have a system that allows the elderly to continue contributing gainfully to society? This paper's observation and mapping of user everyday routine at one of assisted homes in Malaysia indicate that elderly dependent too much on management agenda and activities. With so much lacking on service design that contributes to elderly healthy activities during everyday routine, elderly tend to be in a passive situation "The older persons group need not be left behind in the wake of development and this group must be given the opportunities and space to participate in development (Abdul Rashid, 2009). An interview with participants concludes that more activities we demand by elderly to ensure a healthy life and to enrich their golden life. Part of its social activities were least most voted activities by demand from most of the interviewed participants. Yet, the management was lack of funding from the NGO neither the governments "As this strategy is a new element in older persons issues, there are various hurdles in its implementation. The hurdles include inadequate funds, lack of trained staff to implement the program and ineffective inter-agencies cooperation" (Abdul Rashid, 2009). A simple activity such as morning exercise which requires an elderly to practice a traditional Malaysian dance bound elderly together whereby these dance effectively socialize interact a new comers with old members with laughter and smiling faces. Although, a trip or an outfield are mostly demanded by elderly,

but a simple social activities are good enough to fill their daily life routine. A simple activities such as “wearables”, meaning worn by objects such as tables and chairs rather than people, whose goal is to stimulate interpersonal communication”. (Moggridge, 2007), considering a good concept to be adapt by assisted homes without needs to spend on large sum of expanses. Encouraging an elderly to react and practice “stimulate interpersonal” amongst them will ensure an elderly as an active actor designing theirs ways of living. This is where an asset management plays a most crucial in developing a dependent life for elderly. This paper further discuss into source of management/marketing at the mentioned assisted homes and evidence found proved that lack of communication within the staff and the elderly bridging the gap of interactions. Elderly tend to listen and follow order from the management staff and without any suggestion from staff or care giver elderly are more likely feeling blues and lonely and most of the time. Although, in western world an interactions with technology are most encourage by a care taker, but a result shown from a few research data proven that elderly are most likely prefer not to shared personal things with care taker. Contrary with Malaysian elderly they are most likely love to share personal things such as stories, experiences and even family matters to visitors and friends to lessen their burden or stress or just changing stories to each others. Malaysian elderly are more open to personal things rather than keep it to theirs self which is differ to elderly in western world. Rare opportunities like this should be taken seriously by management to enhance an elderly capability of being independent living. Somehow or rather a lack of technology and lack of effective management sacrifices all the rare opportunities for an elderly to mingle amongst them with healthy social activities.

LITERATURE REVIEW

Research area is consisting of elderly home and connects to local clinic or retirement village that set up by government and basically monitoring this elderly people from far. Including is a support from government nurses that will visit the elderly to do their update on an elderly health as part of ‘visiting programmed’ run by government since 1997. Mainly this system only works for urban area and not even to rural area. Elderly in rural area still depended on their family to look after them, and in some cases an elderly live alone far in a rural area with really bad condition in term of hospitality and health condition.

Malaysian government has been monitoring the situation and already planned solutions that will cover these matters. But mostly whatever that the government deployed is rather slow move and un-effectively. Lack of facilities improvement and not enough doctors or health care expert also contribute to this problem. Malaysian government also has deployed a plan to build assisted living homes close to urban area.

MIMOS Smart Home System (Bestari Home) is a Malaysian government joint venture programme with semi-government sector under the division of

Prime minister Malaysia. The projects already been approved as a test pilot with commercial implementation for 230 units of terrace houses in Johor state. This Smart Home system using a combination of Power line carrier, Radio frequency (RF) and Internet technology to access and control your home. In general, MIMOS Smart Home System provides users with security, convenience and energy management features, as well as having added benefits for disabled individuals.

Existing assisted technology such as Smart Home System in Malaysia, still require a basic maintenance that definitely will require a much of cost to do the maintenance and the installation. However, "when talking to end users, however, acceptability of new assisted living technology appears to be low. Many issues including usability problem, lack of user-perceived benefit, and user-perceived complexity of new technology reflected in low acceptability scores of existing assisted living solutions" (Martijn H. Vastenburg Marieke Vermaas, David V. Keyson, 2008) elderly in Malaysia prefer an extensive person-to-person communication rather than human-machine interaction. More rather, an activity involve human-to-human interaction are more preferable by elderly at Rumah Kebajikan Cheras Baru, Kuala Lumpur, Malaysia, based on observation result. "This work is part of the SIGAAL project [26,27], which aims at reducing loneliness among elderly people, by providing services that allow, for low cost, maintaining or even strengthen social links and detecting emerging vulnerabilities of the elderly". (Gilliot, Phung-khac, & Beugnard, n.d.) claim that elderly needed an activities and merely not a high cost activity but instead a low cost activity can be a antidote for loneliness. Strengthen social links will ensure elderly are keen to participate in activity naturally without hesitation.

THEORY

Theoretical framework that has been adapts and develops for this paper is referencing from a thesis on service design marketing and design management emphasis on Service- Dominat Logic and service innovation. The referred thesis argued on management side of service design and respectively combining two different fields are design and marketing. Emerging these two different fields under a new framework model and a based on service design practice in literature. "The framework presents service design through five characteristics, as an 1) interdisciplinary practice, using 2) visualization & prototyping, and 3) participation as means for developing the design object, seen as 4) transformations, and 5) value creation (Edman & Johansson, 2011). This framework leads to an understanding of service design practice as a continuously repositioning activity". These theoretical frameworks are the latest framework that has been developed into a model based on a collective description of service design by an expert in design management and marketing for service innovation.

Service-Dominant-Logic

Edman (2011) arguably that designers should be close to user in perspective of value creation instead of “However, the notion of design thinking differs in the design and management discourses” (Morelli, 2009), and “Instead, in the concept of design-driven innovation Verganti (2008) argues that designers should not be close to the users, but propose new meanings (Edman & Johansson, 2011). A propose new meanings here described as user as an active ‘actor’ instead of passive user and designers helping by enhancing user experiences by providing a platform or a scenario in a system where communication are essential as part of service design itself. Service-Dominant Logic, a theory developed by Vargo and Lusch, (2004, 2008) proposed a new alternative view disputed that instead of separating products and services an alternative way of seeing a merging of these two, on value creation by proposing a perspective that’s combined and create a new logic call Service-Dominant-Logic. We as an active user or consumer integrate our knowledge and capabilities into co-creation of value. This new stand and understanding of service changed a conceptual position from being a ‘passive’ consumer into a co-creation value. “However, Service-Dominant logic is highly conceptual, lacking the tools and methods for how to realize these features in practice”. (Edman & Johansson, 2011). Enormously agreed with Edman, K. W. (2011) statement this paper have develop a partially co-creation concept to go with consumer as an active role determining where they want the information or services to be at or what type or certain level or needs that they require. After all designers are turning into technology expert and also turning into an anthropologist. Logically, designers participation into involving a consumer as a active user are considering as designing a new perspective for user to integrate any given information.

Design Management & Co - Value Creation for Service Innovation

This paper is focusing on design management (DM) area to enhance user capabilities to create a new perspective in design and for a real life situation by creating their own ways of living. This paper further continue with issue of social activities/shared communications as an integral part of engineering the (DM) design management for this research, where bout in this paper an asset management/ a logistic play a big role as a platform to ensure a customer or user play their role as an active ‘actor’ creating new ways of living. This believes would lead into a Service/Marketing Management section, and service innovation will be prevailed.

(Edman 2011) argument on “The conceptual framework encompasses areas of design research, including design thinking, service design and design management. These areas are related to management research, with a specific focus on service marketing/management, including Service-Dominant logic and service innovation. The thesis includes an interdisciplinary literature review with a specific focus on how user involvement is conceptualized in service design and service management respectively, and develops a conceptual

framework of service design based in descriptions of service design practice in the literature.”(Edman & Johansson, 2011), describing on her theories on how design service marketing/management was involve in shaping the conceptual framework for design management (DM), with perspectives on design itself. She also claimed that design management responsible to manage and integrate design functions in organizations. This paper found out that design management (DM) are most essential framework to shape the direction of research into other 2 (two) most efficient framework which will be a major contribution. “In addition, there has been growing interest in two different ways of exploring other aspects of the relation of design and management. The main stream of design management research continues to be interested in how to integrate and manage design functions in organizations” (Edman & Johansson, 2011). Edman (2011), suggested design management (DM) is a process or an application to ensure a management of design was successfully been conduct with proper empirical data. To this extend this paper discussed an opportunity that have been found to augment assisted living services in Malaysia especially on managing the asset management of assisted living in Malaysia. “Design management (DM) is truly situated in the middle of the intersection of design and management, drawing on practice and theories from both sides. Both design thinking and design management relate more to general management theories than service management theories”. (Edman & Johansson, 2011).

METHODOLOGY

The paper is based on qualitative research embed with service design, and descriptive types of qualitative research. 2 (two) method have been applied which is first method is a field work observation, for data collection. Observer as a participant and data collected focusing on activities and interactions observations towards elderly behavior or change of behavior. Respondent activities have been recorded and have been analyze to identify change of behavior amongst selected group of respondent. Data collected also in a form of photograph taken on site and video recorded focusing on respondent and selected group activities and interactions amongst respondent. Visualize information resulted from recorded videos and photos taken have been segregate in two (2) form of behavioral categories which is one (1) is elderly with active mode, and second category is elderly with passive mode. Diagrams from these two categories then have been analyzed and initial categories consist of 4 to 5 elderly were then having been reviewing again and again. Profile of participants /biographical data have been created based on age, gender, type of disease if any, and disabilities if any. Techniques of user scenario from service design method have been applied to strengthen the data validity. Second qualitative method applied for this research is an interview, whereby types of unstructured interview have been conducted into a small group of participants. Service design method of research instruments were

then embeds into this descriptive qualitative research. Service design method was chosen to measure the effectiveness of interactions between participants at the assisted homes to their environment, communication and system of daily routine. Resulted of this instruments were carefully analyze and data collected have shown an impressive discovery of real life situations or moment of truth.

OPPORTUNITY AND CO-CREATION VALUE

Mass Customization

Developed countries such as United Kingdom already facing with mass customization ideas, and controlled by political core values. Struggle to personalize to meets the needs of public political party in United Kingdom for example assigning personalization concepts where public are able to choose what they like. Unfortunately, without co-creation where customer's participation is almost void a personalization for public services failed to supply customers with effective public services. Argument on this issue seldom were discuss from lower management to top management and so call from top to down management bureaucracy was still dominate the public choices for public services. Until a theory of double devolution were recognized and take part on revolutionize the public services. "Choice has become the primary mechanism by which this government is seeking to personalise services. It is seen as a means of enabling greater user autonomy, and a way of engaging people in the creation of outcomes" (Sophia Parker, 2006). "Double devolution; The commitment to devolving power from the centre to the local has been part of the reform agenda since 1997. More recently, the notion of 'double devolution' – where power is devolved from the town hall to the neighbourhood – has become popular in policy-making circles, further emphasizing a commitment to create flexible, responsive services appropriate for specific communities and localities" (Sophia Parker, 2006). Research further discuss on these matters to bring out the effective solutions for managing the assisted living homes In Malaysia by tackling the issue of management. Started from the asset management, this research believes by fostering information to be shared by others such as local governance and local communities will create service innovations effectiveness.

Genuine Partnership Working

Starting with peoples themselves and creating participations for co-creational value and co-design will ensure an effective personalization towards effective service innovation techniques. The ideas of genuine partnership working between local assisted homes together with non government bodies or any commercial business sector or party will ensure a win-win situation for commercialization. Furthermore, data collected from touchpoint and channel to mapping of stake holder maps reveal that most of assisted homes in

Malaysia equipped with management asset. Only the ideas are to augment the information gathered and fostering the information to be shared by others in term of generating a joint partnership for business purposes. It sector and network have been advancement in development for assisted living for the past few years back in western civilization. Whereby, implementing of IT and multimedia are most encouraging issues so far. A drawback for developing countries such as Malaysia is was still left behind in term of collaborating IT and multimedia into our old folk's homes and assisted homes. Due to financial problem and lack of awareness into these sector contributed to slow moving of elderly development in Malaysia. Extended challenges for these research is to revolutionize an old system that consist of already existed building blocks of core values from local government in which no implementation of co-design and co-creational value in existing systems. A business model or a shared communication models should be build to ensure a collaboration of genuine partnership programmed is a success story. Based on existing asset management value at most assisted homes in Malaysia which normally consist of a management building, activities area, nursing homes and mini garden a platform for joint management should be created. Platforms where small businesses can be perform or rented by any businesses need to be build and personalize, to be synchronize with co-design and co-creational value whereby a question of who are you? What do you want or need? Or how can we help must be answer and implement. Participation of elderly as a user is essential to ensure an elderly benefit from this model or ideas. "Staff are expected to challenge those systems and processes that are not supporting them in their drive to develop intimate relationships with customers – and this kind of challenge is actively sought out and encouraged. By demanding a focus on the interface, every element of the system is held to account for the part they have to play in maintaining that focus. Service design approaches seek to build in systems of mutual accountability flows to achieve this" (Sophia Parker, 2006). Sophia Parker 2006 argued that a mutual accountability to create an ultimate services between public services and small businesses or non government organizations can lead to greater services for personalize public services. Furthermore, research believes a participation of small businesses will generate income for assisted homes itself. Looking at a case studies between fiat Multipla (please refer to *Designing Interaction*, Bill Moggridge, pages- 41) and local communities, a partnership models successfully engage peoples or user to participate in a car pool campaign and rented services involving Fiat Multipla unique car collaboration with local communities. LiveIWork London, a design firm responsible for consulting design services for FIAT, designed a blueprint of user participations involving Fiat Multipla car as a transportation that can be rented and car pool for sustainable practice. In Malaysia, for example an involvement from car manufacturers involving in rented services for elderly to commute to desired places can be starting points of genuine partnership working. Not only a car manufacturer gaining a public awareness about their new products, they also automatically advertise and promote their products as a mutual accountability for CSR, Corporate Social Responsibility.

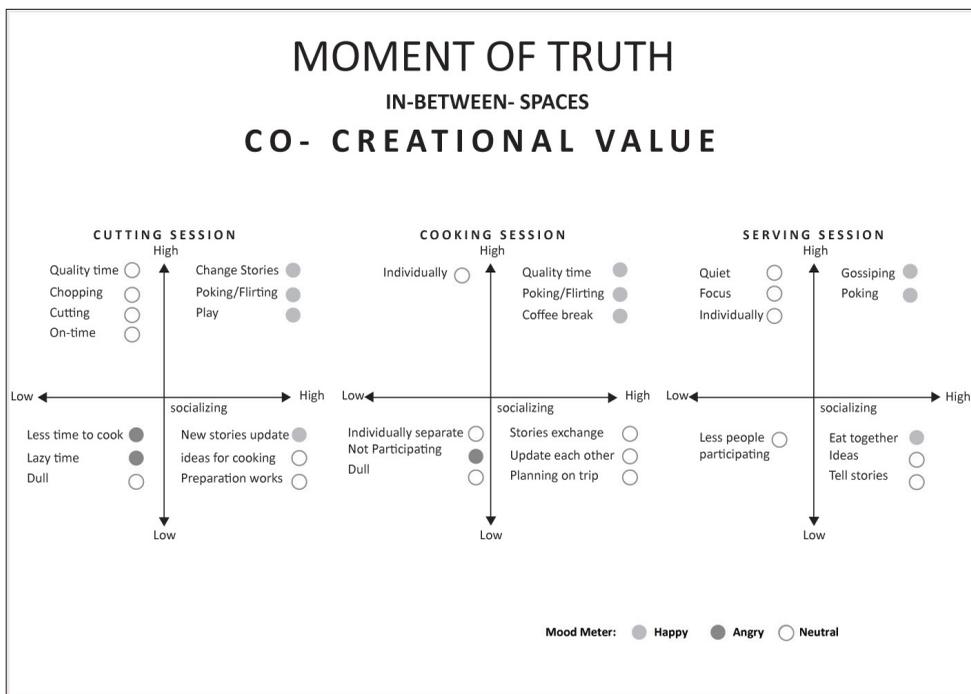
“What kinds of data sharing and people-centred knowledge management systems are needed to underpin these more fluid, federating forms of support? Where are the opportunities to learn from the most innovative technological developments in this area?”(Sophia Parker, 2006). From the statement above an argument of people-centered knowledge management are needed and well apply to ensure a great service design innovation will be created. From this involvement people or a user and even a third party can gaining information of what might happens or what should be happen. “What task or action that should be taken and what kind of measurement instruments that need to be applied. Just to make sure a people-centered knowledge can be study, and understood and to be learn by all. “service design’s model of change is focused on creating a system able to continuously adapt, reconfigure and, most importantly, learn from itself”(Sophia Parker, 2006).

In-Between-Spaces

From a genuine partnership to federating, to privatization there is always ways of improvement and a new metrics of customer behavior measurement are proposed. There are a lots of information that can be learn and a system services are also learn from itself development. For a system to learn from its self there is a merit in investigating in-between-spaces and try to deploy an innovative approach from insights such as a small organization to a big organizational development. In-between-spaces are a small spaces that represent a big organizational in term of wider scope. But one must study and learn from small spaces a predicament, a circumstances situation that might evolve around the in-between-spaces. A customization of user involvement and satisfaction were meant to study and analyze so that a lesson learn could lead us to something that we were not expected. A result could lead to frustration but sometimes leads to simple solution but can be apply to larger organizational development as we call it mass-individualistic customization.

Figure 1 Explain a co-creational value and co-design existed amongst elderly at assisted living homes where research has been conducted. Moment of truth “Service designers work with users to understand the critical moments of truth of a service experience – the moments shape peoples’ perceptions and responses. The points at which a person most depends on a provider are often the very points at which the provider performs least well – and it’s at these moments that someone, disheartened and frustrated, may walk away from that service never to return” (Moritz & Mager, 2005) for the assisted homes services is a normal routine activities where an elderly at mentioned assisted homes cooking together during lunch time. This is a moment where almost all elderly participated and socializing while prepared lunch. Preparation for cooking routine acquires an hour or two, from pre-preparation for instance chopping meat and cutting veggies to cooking process. Socializing meter or metric at this moment was excellent as every elderly enjoyed their cooking quality time together. This is where people-centered-knowledge can be studied and the system itself is continuously adapted by elderly and learns from itself.

An in-between-spaces where communication existed and from small scale organizational can be apply to larger organizational, whereby this spaces can be studied and understood as it's has been a practice for a long time. The system itself survives and evolving giving spaces of interaction and communication and somehow creating a satisfaction amongst the elderly at mentioned assisted homes. *Figure 1* is an interpretation on how a system can be tailor and custom to user needs and expectation. Divided by three section started with cutting session or pre-cooking process where at this time elderly normally planning on what to cook to chopping a meat and cutting a veggies. A socializing metrics indicated that at high socializing metrics such as change stories among an elderly and poking and flirting are indicated happy expression. Meanwhile at low metrics indicated elderly tend to be angry because of less time to produce a good cooked and also sad because of there is a moment of feeling dull and lazy. Secondly, is a session of cooking where at this time elderly spend more time chit chat with friends. Most talk about issues is regarding their family and some health problems issues. Sharing a knowledge and problems are most favorable time for elderly as they discusses an issues of financial, their glory time and things that they a good at. At high socializing metric indicated that elderly are happy with their quality time and at a same time they were playing flirting and poking each other. A coffee break time is their favorite moment where they tend to make jokes and laugh, gossiping for a women and men usually make jokes and fun. One way or another a low socializing metrics indicated that a new comers are tend to felt individually separated from the group and for others they felt sad or angry because of not participating with the cooking group as they struggle with their isolation syndrome.



ANALYSIS & DISCUSSION

This paper has revealed a co-creational value and co-design exist in assisted living homes in Malaysia, but never being documented or discovered before. Simple activities for instance a cooking activity can be a big effort as a moment of truth for critical providers system, and it's doesn't have to be complicated and expensive to create a co-creational value whereby a user participate to design their own ways of living. From this small organizational scale activity can be adapt to larger organizational, involving revolutionize a nation system for assisted living experience. As long as a good activity can be an agent for change and be an antidote for isolation syndrome for elderly then a providers should learn from this case study. A customization of user experience prototype should be structure to ensure a co-creational value that existed in a system can be apply to other assisted homes as well. This action will ensure a more interaction can be find and study depended on how an elderly creating their ways of living for instance a morning exercise activity should be considered a must have activity at all assisted homes in Malaysia as it proven evoke a socializing senses amongst elderly and communication as people-centered knowledge. Temporarily, a genuine partnership working between assisted homes and non government organizations and businesses can be a platform to channel a communication network between local community and assisted homes. Research will embark into extended challenge to better understood customer experiences towards technology driven communication, which hopes are focus on smart homes technology and different level of connecting elderly to outside world and to local community specifically. Opportunity to explore an alternative to shorten a long distance relationship between elderly and their children is always a big exploration for research to be explored. This analysis will extended a challenge to better understood customer experiences towards technology driven communication, which hopes are focus on smart homes technology and different level of connecting elderly to outside world and to local community specifically.

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