



SERVICE DESIGN TO ENHANCE PARTICIPATION FOR ELDERLY CLUB BANG KHUN THIAN
GERIATRIC HOSPITAL



By
MR. Raluek INSAMIAN

A Thesis Submitted in Partial Fulfillment of the Requirements
for Doctor of Philosophy DESIGN ARTS (INTERNATIONAL PROGRAM)

Graduate School, Silpakorn University

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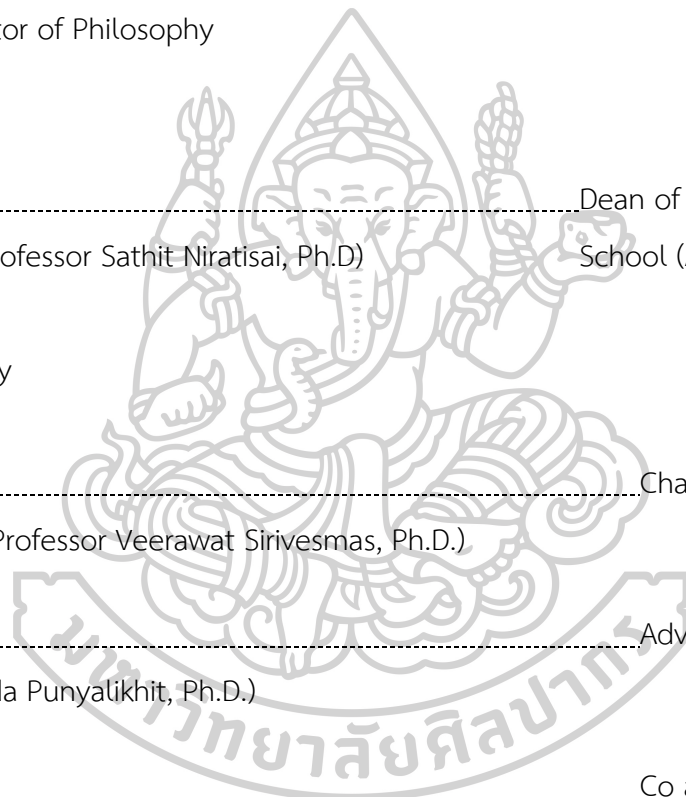
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MR. RALUEK INSAMIAN : SERVICE DESIGN TO ENHANCE PARTICIPATION FOR
ELDERLY CLUB BANG KHUN THIAN GERIATRIC HOSPITAL THESIS ADVISOR :
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This research aims to explore the current situation and characteristics of the elderly club in Bang Khun Thian Geriatric Hospital. Then, analyze the correlation of requirements between the member and elderly club by applying service design to enhance the participation of the elderly club in Bang Khun Thian Geriatric Hospital and create an appropriate guideline or strategy to enhance participation of members in the elderly club Bang Khun Thian Geriatric Hospital. The result of this study is the situation of the elderly club of Bang Khun Thian Geriatric Hospital needs to gain more potential and volume of members by a plan and strategy that will help each level of member develop into higher participation. Club members can divide into three groups. The first group is older people who are enrolled but lack participation and have low expectations in the club. This group should receive assistance and facilitation as needed. They need encouragement to have the opportunity to participate in all activities of the elderly club. The second group is the members who participate in all the Elders Club activities. They should be encouraged to have opportunities to develop leadership potential in club activities. Moreover, they should be cultivated in the skills they need that will cause them to develop a bond and sense of belonging to the club. The third group is members actively involved in the club on a large scale. They should be encouraged to be role models of self-sacrifice for the benefit of others. This honors and inspires other members of the Elders Club, family, and community. The guidelines for developing these three groups of members Operate under five directions of management policy formulation, four strategies for member development, three attributes of activities that drive the club, two sectors of hospital involvement, both elderly club members and staff involved in the operation of the elderly club.



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Chapter 1

Introduction and Background of the Research

1. Introduction and Background of the Research

The emergence of an aging society is becoming a global trend. According to the United Nations, an older person is 60 years old or older, male or female. (Peek, Im-em, & Rattanaorn Tangthanaseth, n.d.) According to world population data, the population over 60 accounts for 12.3% of the total population, and this number is anticipated to rise to 22% by 2050. The United Nations has estimated that 2001-2100 will be the century of the elderly.

Even while the presence of the old or increasing longevity is a sign of successful economic achievements in nutrition, personal hygiene, health care, education, and well-being, each country's aging society experience differs due to diverse economic and societal factors. (United Nations Population Fund, 2021) Therefore, the aging society presents economic and social challenges and thus requires good policy management in each country to help people, families, and communities live happily. (United Nations Population Fund, 2021) Furthermore, the degree to which a society is aging varies per country. The United Nations has categorized the level of entry into an aging society into three tiers:

1. Aging society refers to a society or country in which more than 10 percent of the population aged 60 years or more or more than 7 percent is aged 65 and over.

2. Aged society refers to a society or country where more than 20 percent of the population is aged 60 years or more or more than 14 percent of the population aged 65 and older.

3. Super-aged Society refers to a society or country with more than 20 percent of the 65 years population or above.

A survey and comparison of the number of elderlies from different continents studied the aging society situation in 2018. Europe had the highest number of older people, as North America and Asia. The African continent has not yet entered an aging society. Compared with the 2050 forecast of the aging of the elderly, the study also found that the rate of aging in the next thirty years in Asia will be twice as high, the highest of all continents studied, as shown in Table 1.

Table 1 Rates of increase in the number of elderly people by continents

Continents	Number of older people aged 60 and above, 2018 (percent)	Projected number of older people aged 60 and above, 2050 (percent)
Europe	25.0	34.0
North America	22.2	27.0
Asia	12.5	24.0
Africa	4.8	10.0

Source: (Baramizi Group, 2020, pp. 2020–2021)

When exploring the situation of the elderly in Asia, out of the top 5 countries with an elderly population, the top 3 countries: Japan, South Korea, and Singapore, are already entering the Aged Society. In addition, Japan is the country with the largest elder population in the world. Thailand and Vietnam are entering the Aging Society. Moreover, the forecast of the elderly population in the next 20 years, Japan, South Korea, Singapore, and Thailand will enter the Super-aged Society, and Vietnam will become a country with the Aged Society. In addition, the data from the National Statistical Office shows that Thailand has become an Aging Society country since, with the elderly population accounting for 10.3 percent of the country's population, and the country is expected to become an Aged Society completely around and will be the Super-aged Society in 2032. This is due to the lower birth rate and longer life expectancy or lower mortality. (Peek et al., n.d.) After comparing the increase in the elderly population around the world, there emerges an urgent need for Asian

countries to accelerate the preparation for the aging society, presenting a critical and challenging issue for each country's government to deal with, as shown in Table 2.

Table 2 The rate of increase in the number of elderly in the top five Asian countries

Country	Percentage of elderly aged 65 and above, 2020	Predicted percentage of older people aged 65 and above, 2040
Japan	29.0	34.0
South Korea	16.0	31.0
Singapore	15.0	30.0
Thailand	13.0	26.0
Vietnam	8.0	17.0

Source: (Baramizi Group, 2020, pp. 2020–2021)

The World Health Organization (World Health Organization, 2002) has proposed an indicator that will demonstrate the quality of life of the elderly. The organization established criteria for using the quality-of-life indicators as a conceptual framework for improving the quality of life for the elderly, called Active Aging. The criteria used to measure the active aging of the aging society consist of 3 pillars: 1. Health 2. Participation 3. Security

To determine the level of the Active aging, the World Health Organization uses determinants that include 1. Health and social services 2. Behavioral determinants 3. Personal determinants 4. Physical environment 5. Social determinants 6. Economic determinants and Cross-cutting Determinants, which are factors that affect other factors, include the Gender factor, which determines social status, and the culture factor, which determines an individual society's attitude, perspective, and treatment towards the elderly. The concept is used as a guideline in many countries and has been adapted to suit differing contexts.

The National Statistical Office has introduced the Active Aging Index of Thai Elderly (AAI), which the Ministry of Digital Economy and Society has been using to determine the status of active aging of the elderly in Thai society. (National Statistical

Office, n.d.) The index has set a 4 Composite Index and Indicators for each as follows:

1. Health: includes self-assessment indicators of physical fitness, happiness, ability to perform daily tasks and movement, vision, hearing, and exercise.
2. Participation: includes indicators of employment, participation in senior group/club activities, participation in village and community activities, and caring for people in the household.
3. Security: includes indicators of sufficient income, homeownership, housing conditions, and safe living conditions.
4. Enabling Environmental: includes indicators of ICT utilization and literacy.

According to the literature review, numerous research projects in Thailand have focused on resolving the issues associated with an aging society by using the Active Aging Index as the conceptual framework's criterion. The World Health Organization and relevant Thai authorities, such as the National Statistical Office, adhere to these requirements. (National Statistical Office, n.d.) Thailand had the highest result in the Health Index, followed by the Security Index and Enabling Environment Index. However, it has been found that the country had the most negligible influence on the Participation Index. (Figure 1) When comparing at the provincial level, it was found that the elderly in Bangkok had the least scores on the Participation Index compared to other provinces. (Figure 2) Rossarin Gray (Gray, 2019) also advises that to achieve Successful Aging, social participation, and healthy behavior. (exercise, smoking, alcohol consumption, and a balanced diet) should be promoted.

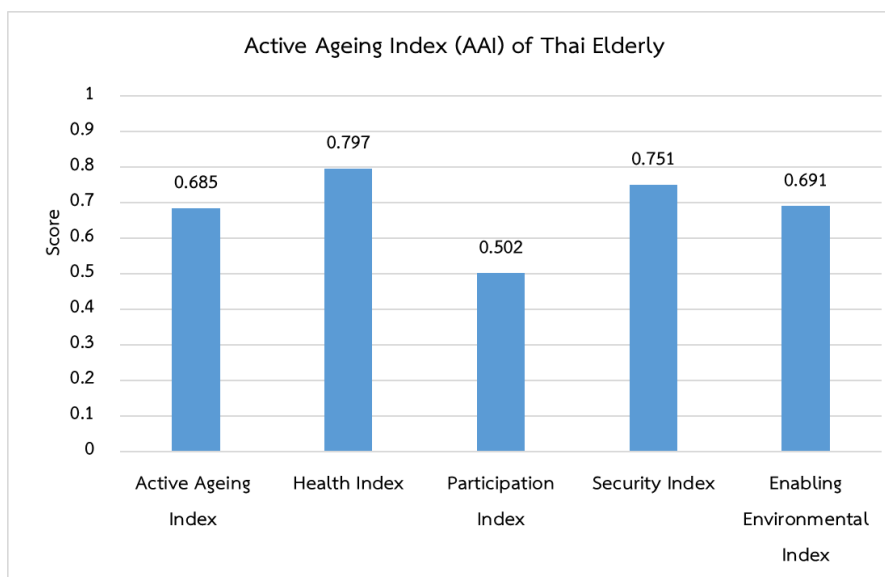


Figure 1 The results of Thai elderly Active Aging assessments by various indexes.
Source: (National Statistical Office, n.d.)

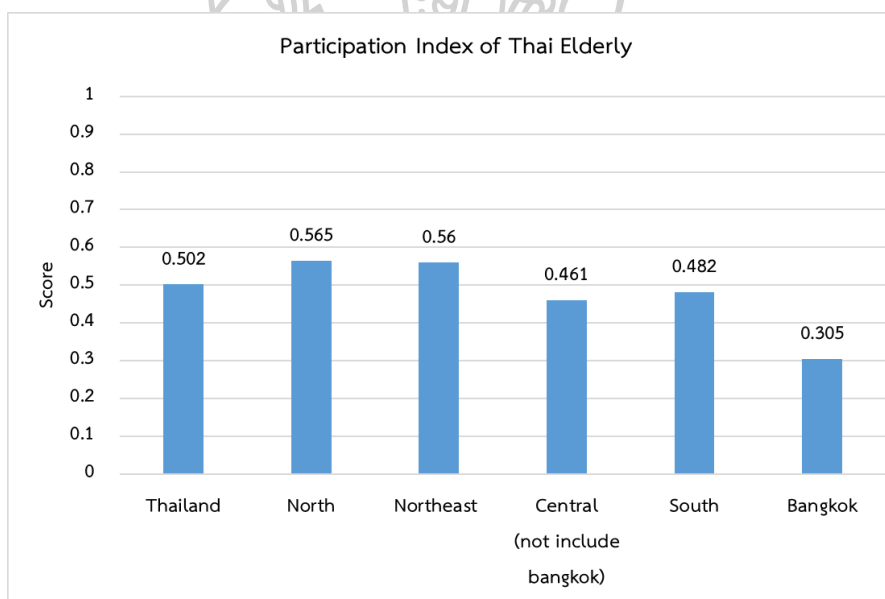


Figure 2 The results of the Thai elderly Active Aging in Participation index by regions.
Source: (National Statistical Office, n.d.)

The elderly's participation in society should be emphasized because it is a crucial factor behind active aging to engage in social activities and maintain community relationships regularly. Those relationships will help sustain and improve quality of life and satisfaction with one's status. Moreover, active aging can postpone or delay natural aging's degenerative processes. Socially active elderlies are generally more physically and mentally healthy than isolated people. Thus, there needs to be programmed to encourage and enable older persons to join clubs and engage in community affairs actively and regularly. (Foundation of Thai Gerontology Research and Development institute, 2016) Moreover, older people need to spend time participating in activities and social events. It is also a crucial indicator of competence related to good health and well-being. Therefore, promoting social activities and participation will lead to better health for the elderly—social participation and security in living. (Punyakaew, Hsu, Lersilp, & Putthinoi, 2021a)

The Bangkok Metropolitan Administration manages Bang Khun Thian Geriatric Hospital. Its operational goals are to provide medical and health promotion services, illness prevention and control, and specialized care for the elderly. The hospital strives to improve the elderly's health, safety, well-being in life and property, and contentment with family, community, and society. ("Bang Khun Tian Geriatric Hospital," n.d.) The hospital's aims align with the World Health Organization's Active Aging guidelines for the elderly. Additionally, the hospital complies with the National Statistical Office's Thai Elderly Active Aging Index by emphasizing the importance of fostering elders' participation in society in Bangkok, which includes a service practice guideline focused on promoting active aging for the elderly at Bang Khun Thian Geriatric Hospital. The researcher recognized the critical nature of evaluating the design of these services given by the Bang Khun Thian Geriatric Hospital in order to aid in promoting participation eligibility for older patients who utilize these services.

2. Background and significance of the problem

In 2005, 10.4 percent of Thailand's total population was aged 65 or older, making it a country that already qualifies as a senior community. It is expected to transform into an Aged Society in 2024 and a Superaged Society in 2032. Through relevant agencies such as the Department of Older Persons, the government has developed standards and rules that expedite preventive activities and planning (Ministry of Social Development and Human Security). Numerous institutions, including the Thai Gerontology Research and Development Institute, the Thai Health Promotion Foundation, and other associated ministries, have done research to resolve these issues in their areas of competence. The strategy taken by each agency to resolve the issue is consistent with the composite Active Aging criteria. For example, public health agencies have concentrated on resolving issues related to the health composite index; human security and welfare agencies have concentrated on resolving issues related to the security composite index, including the participation composite index.

Additionally, their works have aided Thailand in addressing the issue of an aging society. As a result, it has proven advantageous to analyze the elderly's situation using the National Statistical Office's Active Aging Index. However, it was recognized that a particular composite index, such as the composite participation index mentioned above, needed to be pushed and managed more efficiently. If the concerns surrounding the participatory composite index are rectified, the Active Aging Index's average will increase. The researcher's goal is to enhance Thailand's aging society's predicament, enhancing the elderly's quality of life.

3. Objectives of the research

3.1 To explore the current situation in the Bang Khun Thian Geriatric Hospital elderly club.

3.2 To analyze the correlation of requirements between the members and the elderly club by applying service design to enhance participation in the Bang Khun Thian Geriatric Hospital elderly club.

3.3 To create an appropriate guideline or strategy to enhance members' participation in the Bang Khun Thian Geriatric Hospital elderly club.

4. Definition of Terms

Elderly - The United Nations has defined the elderly (older person) as a female or male person who is 60 years old or above. (Peek et al., n.d.) In 2018, there were 11.7 million people aged 60 and above in Thailand, accounting for 17.6 percent of the total population.

Active Aging – The concept of Active Aging has been presented by the World Health Organization (World Health Organization, 2002) as a conceptual framework for the improvement of the quality of life of the elderly by establishing the criteria using global indicators of elderly quality of life as a means of demonstrating the quality of life of the elderly. The criteria used to measure the active aging of the aging society consists of 3 pillars: 1. Health 2. Participation 3. Security. In addition, having Active Aging, according to the concept of the World Health Organization, is also a result of determining factors (Determinant) from both the elderly self and the condition of society. Determining factors that affect Active Ageing contains; 1. Health and social services 2. Behavioral determinants 3. Personal determinants 4. Physical environment 5. Social determinants 6. Economic determinants. Moreover, Cross-cutting Determinants affect other factors, such as the Gender factor, which determines social status, and the Culture factor, which determines each society's attitude, perspective, and treatment towards the elderly. Many countries have adopted the concept as a guideline and adapted it to suit their

unique context. The National Statistical Office was tasked with preparing the Active Aging Index of Thai Elderly (AAI). The Ministry of Digital Economy and Society has been tasked with determining the status of active aging of the elderly in Thai society (National Statistical Office, n.d.) It has set a 4 Composite Index: 1. Health 2. Participation 3. Security 4. Enabling Environment. In this study, the National Statistical Office's conceptual framework was used as a guideline because it is the most suitable for the context of Thai society, and the data obtained from the study of the National Statistical Office came from the study of the elderly population of Thailand.

Participation – The World Health Organization and the National Statistical Office's methods for defining and indexing Active Aging utilize determining factors that correspond to the context of different areas and conditions. The participation index is one of the composite indexes that both organizations have chosen. This study used the National Statistical Office's participation composite index, which consists of 4 indicators: employment, participation in elderly clubs/groups, participation in village/community activities, and taking care of people in the household. This study concerns services in the Bang Khun Thian Geriatric Hospital elderly club. Therefore, the indicator of joining clubs/elderly groups has been chosen as a measurement tool for service design.

Service Design - is the activity of designing and planning to manage people, resources, structure, and communication to improve the quality of service and the interaction between users and service providers. In this study, the services examined were those involved with the Bang Khun Thian Geriatric Hospital elderly club.

5. The question of the research

5.1 What are the solution suggestions to problems about the research involved in the state of participation composite index in the Thai context, and what are the essential operation, conditions, and situation of the services in Bang Khun Thian Geriatric Hospital?

5.2 What is the status of participating in the elderly club of Bang Khun Thian Geriatric Hospital?

5.3 What services will enhance the participation of the elderly in the elderly club of Bang Khun Thian Geriatric Hospital?

5.4 How should the service be designed to enhance the eligibility of the participation of the elderly club of Bang Khun Thian Geriatric Hospital?

Being active aging will improve the quality of life for the elderly at the individual and societal levels; participation also impacts other composite indexes of Active Aging. For example, participating in activities will help keep the elder healthy. Participating in club activity about profession helps the elder earn money and also technology literacy skills.

Active Aging also has economic benefits; Demographic Dividend No. 2 Active Aging helps reduce dependency by earning income and improving health through participation in senior club/group activities. Improving the participation composite index of active aging will help enhance the overall status of the Active Aging Index, which will reassure that Thailand can ensure a good condition of the society withal entering the aging society. Furthermore, the researcher expects to develop regulation suggestions for other departments or the private sector providing services for the elderly to improve the quality of service delivered to the elderly and fulfill their satisfaction with life.

The Thai government's policies towards the elderly are outlined in the 2nd National Plan on the Elderly. (The National Committee on the Elderly, The Ministry of Social Development and Human Security Thailand, 2010) The government sector has long-term strategies and measures to ensure the development of the elderly in 4 collateral areas: Health, Income, Accommodation, Safety, and Access to Information. And the operation guideline for businesses serving the elderly can be classified into four groups: 1. Health promotion, disease prevention, and recovery 2. Leisure and tourism services 3. Treatment and rehabilitation 4. Elderly care services. (The office of small and medium enterprises promotion (OSMEP), 2009) Beyond government guidelines and strategies to support the elderly from the public sector, there are still opportunities to study how to help older people achieve the Active Aging Index, which could lead to more comprehensive care for the elderly and a higher quality of

life for the elderly. The measures for developing the elderly in health insurance and types of health promotion services, disease prevention, and recovery as a government agency are the primary missions of Bang Khun Thian Geriatric Hospital. This study will also help the government increase the competitiveness of the private sector in the service of the elderly.

6. Scope of the research

This research aims to produce a guideline for designing services to increase the participation composite of the Index of Active Aging for seniors in clubs/groups. This study gathered data from individuals involved in all facets of the service, including interested officials responsible for providing services at clubs/elderly organizations and stakeholders. Observation, interviews, and document collecting are used to collect data on studies linked to the participation composite index of Active Aging. This project aims to provide solutions, solutions, and theories for use in the design of data collecting and activities associated with establishing measurement services, including summarizing and assessing the outcomes of service design activities.

The theory used in this study is the User-centered Design, Service Design, Design Thinking, and Co-Creation. The aim is to include stakeholders in the creation and development of the service design together. It is also consistent with the topic of study that focuses on participation.

7. Dissertation Structure

The overview of this research consists of 5 chapters: Chapter 1 discusses the content, introduction, origin, objectives of the investigation, problem summary, keywords, scope of the study, the importance of research, and keywords. Chapter 2, Literature reviews, include content related to the situation and reflections about the elderly, guidelines for solving problems of aging society both in the global, international, and Thai contexts concerned with Active Aging, design theories and concepts including User-Centered Design, Service Design, Design Thinking, and Participatory Design (Co-Creation). Chapter 3, Research methodology, outlines the

data collection method and activities to design services to enhance the composite participation index. Chapter 4 Summarizes the results obtained from the activities to guide the design of services to improve the participation composite index. Chapter 5 creates a guideline to design services that enhance the composite of participation for Bang Khun Thian Geriatric Hospital.



Chapter 2

Literature Review

1. Situation of the ageing population

By 2020, there are expected to be 727 million individuals aged 65 or older, or 9.3 percent of the global population. By 2050, this figure is predicted to reach about 1.5 billion, accounting for around 16 percent of the world's population (United Nations Population Fund, 2021). Declining birth rates and increases in life expectancy are fueling this remarkable phenomenon. The United Nations has classified aged people into three levels:

Level 1 "Aging society" A population in which the proportion of those ages 60 years or older exceeds 10% of the total (or a population in which 7% are age 65 years or older).

Level 2 "Aged Society" A population in which the proportion of those ages 60 years or older exceeds 20% (or a population in which 14% are age 65 years or older).

Level 3 "Super-aged society," is A population in which the proportion of those ages 60 years or older exceeds 28% (or a population in which 20% are 65 years or older).

While the global population is aging, various parts of the world are aging at varying rates. The "elderly proportion" or percentage of the elderly population (60 years and older) varies significantly among areas. Europe has the most significant old population, at 25%, followed by North America and Asia, at 22.2 and 12.5 percent, respectively. Africa's countries have an elderly population of only 4.8 percent. Furthermore, Asia's rate of aging will quadruple in the next thirty years, making it the fastest-aging continent, as seen in Figure 3.

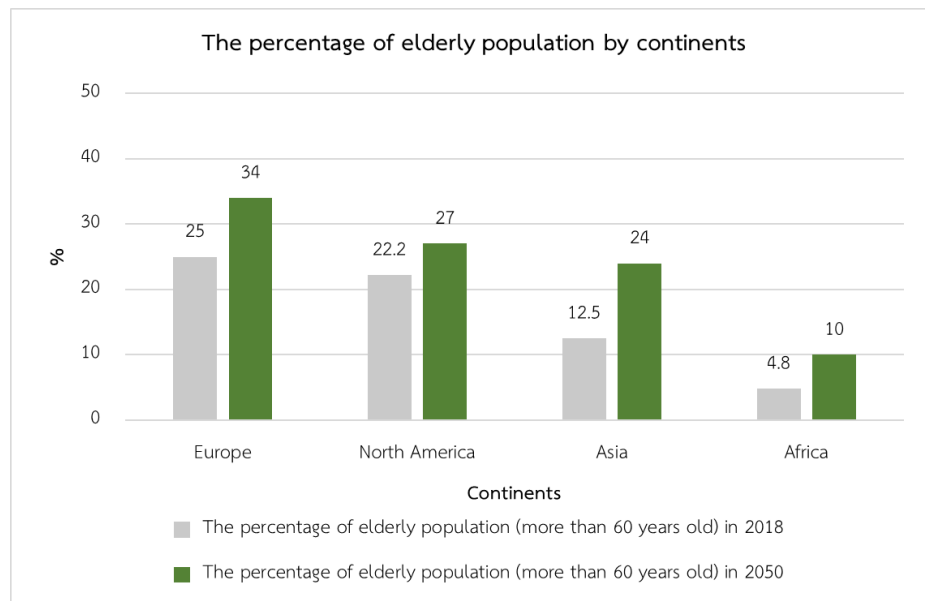


Figure 3 The percentage of elderly population by continents

Source: (Baramizi Group, 2020, pp. 2020–2021)

In 2020, Japan had the world's highest proportion of the elderly population at 29.0%, classifying it as Level 3, "Super-aged society." Among the top 5 Asian countries with the highest elderly proportion, Thailand ranks fourth with 13% of the population elder (Figure 4). (Baramizi Group, 2020) The Report of the Population Projections for Thailand 2010-2040 shows Thailand will become an "Aged Society" by 2024, with the proportion of the elderly population exceeding 14%. And in 2032, it will become a "Super-aged society," with more than 20% of the population being older. (Office of the National Economic and Social Development Council, 2019)

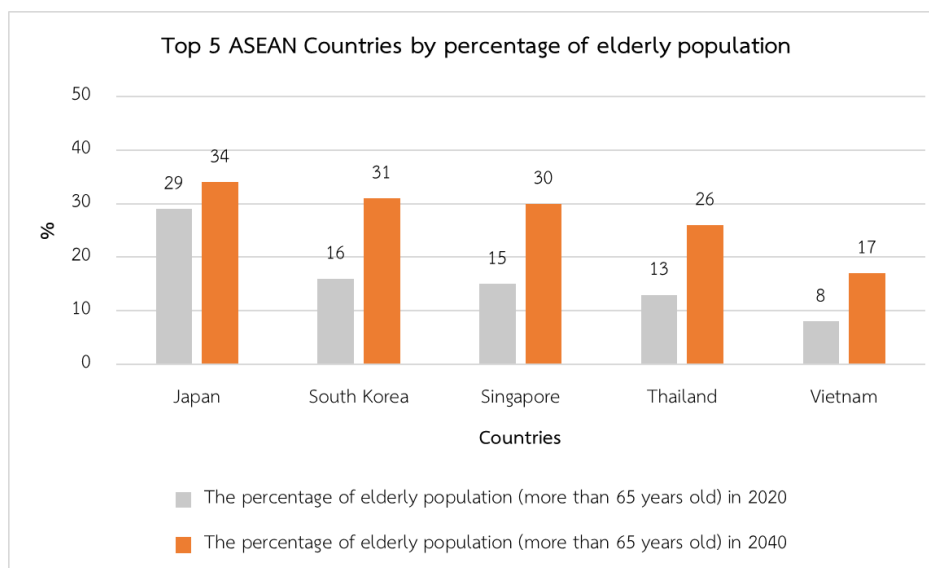


Figure 4 Top 5 ASEAN Countries by percentage of the elderly population

Source: (Baramizi Group, 2020)

Thailand's population data in 2020 and population projections in 2040 (Table 3) show that the population will decline from 6.7 to 6.3 million people while the number of Thai elderly will increase from 1.2 to 2.0 million. The proportion of working-age to elderly will be halved (43:12, 37:20 million people).

Table 3 Thailand's population data in 2020 and population projections in 2040

Population classification	Thailand's population data in 2020	Thailand's population projections in 2040
Thailand's population	6.7 million people	6.3 million people
Working age	43 million people	37 million people
Thai elderly	1.2 million people	2.0 million people
Childhood	11 million people	8 million people
Working age: Thai elderly	3.6: 1	1.8: 1

Source: (Office of the National Economic and Social Development Council, 2019)

2. Activities and welfare to promote the wellbeing of the elderly in the United States, Japan and Thailand

Elderly care emphasizes the social and personal requirements of senior citizens who need assistance with daily activities and healthcare but who desire to age with dignity. It is an important distinction because the design of housing, services, activities, and employee training should be truly customer-centered. It is also noteworthy that much of global elderly care falls under the unpaid market sector. (Wikipedia, 2021)

Elderly activities and welfare in the United States, Japan, and Thailand are summarized for this study. The reason for the selection of these countries is to draw comparisons among elderly care in the leading country in technology, the country with the highest elderly population proportion in the world, and Thailand.

2.1 The United States

A federal system provides retirement benefits for health and social insurance, and each state can carry out projects independently, independent of the federal government. In addition, private agencies participate in the activities and elderly care. (Technical promotion and support office 1-12, Ministry of Social Development and Human Security, 2015)

The "Department of Health and Human Services (DHHS)" is an agency responsible for health and social services for the elderly operating under the Older Americans Act, simplifying the administration in this area. (Ministry of Social Development and Human Security, n.d.)

- The state and local governments provide services and welfare for the elderly, including travel, home, and legal services.
- They established a service center and a lunch service center for the elderly.

- There are local measures for hiring the elderly who can still work.
- Encouraging training and research for various knowledge about the elderly.
- The federal Medicare system consists of two parts: part A, "Hospital insurance," is basic health insurance for seniors aged 65 years and older who can receive certain forms of healthcare free of charge when they are admitted to a hospital or nursing home. Part B, "Medicare insurance," is a program that pays for treatment (Part A does not), such as physical therapy, occupational therapy, or home services. Seniors aged 65 years and older have to purchase additional insurance.
- There is a center for the elderly such as multipurpose senior centers, adult day care services, caring assistance, homemaker services, food delivery, transportation, phone tracking service, emergency assistance services, "Personal Emergency Response Systems (PERS)," and volunteers. There are "formal volunteers" from institutions and organizations and "informal volunteers" including family members, friends, and neighbors. The American value of independence, making most senior citizens not live with their children, is a factor that makes them need more proper care.
- Maryland has a Department of Aging with a "Senior Assisted Group Home Subsidy Program," which helps low-income and middle-income elderly people with housing and meal preparation.
- Illinois Department of Public Health has a support program for dependent patients providing 16 rooms, at least one meal, and a community activity area. In addition, medical care and bathing services are also provided.
- NGOs (Non-Governmental Organizations) in New Jersey have "Dexter House," an affordable two-story house for the elderly who can still help themselves.

The long-term integration of the elderly care system in the United States includes some intriguing operational techniques, such as a comprehensive network,

information exchange between relevant departments, individual care plan, assessing the environment in the community, providing rehabilitative services at home, proactively for the elderly, intermediate care for dependent patients who can care for themselves, and preparing their families for elderly caregiving. (Technical promotion and support office 1-12, Ministry of Social Development and Human Security, 2015)

2.2 Japan

Japan has a comprehensive action plan to support an aging society in the public and private sectors, including welfare, health, employment, learning, and participation. It identifies critical areas as follows. (Junthothai, 2020; Technical promotion and support office 1-12, Ministry of Social Development and Human Security, 2015)

- Law service for the elderly.
- Establishment of a pension system.
- Employment measures for the elderly
- Employment insurance law until the age of 65
- There are health care services at home in the Long-term, providing knowledge and skills in caring for the elderly such as the "Gold Plan" project and "Public Long-Term Care Insurance Law."
- The "Ministry of Health and Social Welfare" and the "Ministry of Labor" consolidated for better operation for the elderly.
- There is an agency to care for the elderly directly: Health and Welfare for the Elderly
- Social service as a dependency group is a rental housing service for the elderly with amnesia symptoms. The elderly cook by themselves and eat together under the supervision of staff.

Long-term care and system for the elderly in Japan are as follows

- The government requires all citizens to have health insurance with companies and local governments for long-term care.
- "Care Plan" is an individual care program; experts analyze each individual to determine the appropriate treatment.
- Day Service Center takes care of living necessities, for example, house cleaning, cooking, and bathing services; using the insurance budget of 90%, the elderly pay by themselves 10%.
- Long Term Care (LTC) provides care for health and disability problems by screening participants from local staff, doctors, academics, and public health. There is a health counseling center and health development.
- The government subsidizes the cost of treatment, making it accessible for the patient.
- Other long-term care programs include home helper services, short-term facilities, health care needed (everyday needs), short-term facilities with nursing care, health care and welfare necessities rental services, and benefits for house alteration for improving living function and safety conditions.

Case studies on urban development for the elderly in Japan, for example

- In Kuriyama City, there is a training program for young people to serve and take care of the elderly, such as helping repair the house and providing shelter.
- Uni Town has organized tourism by asking the elderly to explain the herb gardens to attract tourists, and Uni Town has housing projects and "Excellent Countryside Housing."
- Okinawa City is the city with the healthiest and longest life. There are activities of the elderly club, bookstores about eating like Okinawa, herbs and health food stores that have been researched and certified, and appropriate environmental management. Okinawa City also encourages young people to set up "Butsudan" so that the descendant recall and respect their ancestors.

- Other cities encourage older people to take part in their community, such as attending Japanese theatres, seniors working in museums or historical places, taking care of the antique shops, and introducing exciting places. In addition, some cities have an "Elderly-Friendly City Indicator" that understands the living of the elderly and the convenience of transportation.

Japan realizes the importance of humanity. Therefore, specific media for the elderly include news, training courses, recommendations about the disaster, elderly rights, physical and mental health care, and volunteer channels. There are requirements that the media must be easily accessible, the information and messages must be clear, and the text must be visible.

In addition, businesses and stores have developed designs for the elderly, such as marking the vitamin bottle cap clearly in red, making bite-size pieces of cakes, providing an environment with proper lighting, climbing ladders to easy-to-reach products on shelves, and using older presenters to encourage the elderly with a healthy and good character.

2.3 Thailand

Thailand has developed plans and policies to promote good living and society. Currently, there are plans related to the elderly, such as the 12th National Economic and Social Development Plan, the 2nd National Elderly Plan, and the 20-Year National Strategy Framework. (Technical promotion and support office 1-12, Ministry of Social Development and Human Security, 2015; Thatawakorn, 2019) The projects established in Thailand by both the public and private sectors are as follows (Table 4).

Table 4 Examples of activities and projects relating to the elderly in Thailand.

Activities/Projects	Supervising agency
Social Security Fund for later in life promotes savings for workers employed in the private	Ministry of Labor

Activities/Projects	Supervising agency
sector.	
National Savings Fund (NCPO) as a guarantee for retirees.	Ministry of Finance
Government Pension Fund (GPF) or provident fund.	Employment agency or organization
Thaweesuk Fund to encourage farmers to save money for welfare.	Bank for Agriculture and Agricultural Cooperatives
Monthly Allowance paid to the elderly	Department of Local Administration
Elderly Care Fund.	Office of Promotion and Protection of the Elderly
Legal counseling.	Ministry of Justice
Fares and Vehicle Assistance.	Ministry of Transport
They waived entrance fees in places operated by the government.	Ministry of Transport and Ministry of Natural Resources and Environment
Universal health coverage.	National Health Security Office
Volunteer Care for the Elderly Project.	Village Health Volunteer community volunteers
Non-formal education for the elderly according to their needs and interests.	Non-Formal and Informal Education Center for Special Target Group. Ministry of Education
Knowledge and skills-building programs about using computers and the Internet for the elderly with fees	Computer education club
Nursing homes	State Welfare House (21 locations)
The Elderly Welfare Fund is managed by the elderly to enable participation and decision-making.	Community Organization Development Institute (Public Organization)

Activities/Projects	Supervising agency
<p>The elderly fund supports corporate programs for the elderly or organizations working on the elderly to protect, promote and support the elderly to have potential, security, and good quality of life.</p>	<p>Department of Older Persons and Ministry of Social Development and Human Security</p>
<p>Setting up the elderly club.</p>	<p>Elderly Network</p>
<p>Establishes a multipurpose center for the elderly.</p>	<p>Office of Promotion and Protection of the Elderly</p>
<ul style="list-style-type: none"> - Establishes 12 social welfare development centers for the elderly such as Ban Bang Khae. - Establishes a social service center for the elderly (Day Center), such as an emergency house. 	<p>Department of Social Development and Welfare</p>
<ul style="list-style-type: none"> - Field visits to learn about the elderly activities in other areas. - Publishes elderly's indigenous knowledge of the to be disseminated (Thai dessert, basketry, Meditation, Thai cloth bag.) - Traditional activities - Supports activities to help the elderly, such as the Merit Building Project with a Smile 	<p>Sub-district Administrative Organization, Municipality, the village headman</p>
<ul style="list-style-type: none"> - Health Screening Program - Home Care - Care Giver program that provides care for the elderly and chronic patients. Caregivers can be doctors, nurses, or relatives as appropriate. -Health and care education, home visits, and encouragement 	<p>Tambon Health Promoting Hospital, Village health volunteers, and Volunteer for Social Development and Human Security</p>

Activities/Projects	Supervising agency
<ul style="list-style-type: none"> - The project to improve the environment and facilities. - Potential development and knowledge enhancement project - Project to empower wisdom and community products - The exhibition of various wisdom products - Arts and culture shows (in various fields of art such as painting, sculpture, dance, music, visual arts, composition, and folk play) - Registration of the indigenous knowledge of the elderly - Helping the elderly who suffer from problems and crises 	<ul style="list-style-type: none"> - Provincial Social Development and Human Security Office. - Community Organization Development Institute.
<ul style="list-style-type: none"> -Provides knowledge about growing herbs and vegetables to promote careers for the elderly. 	Provincial Agricultural Office
<ul style="list-style-type: none"> - Provides knowledge about career, acquiring knowledge in various fields, monitoring, and evaluating results 	Office of the Non-Formal and Informal Education.
<ul style="list-style-type: none"> - Developing a system to collect, categorize, and disseminate the elderly intelligence database. 	<ul style="list-style-type: none"> - Community Radio Broadcasting Tower creates a community database. - Ministry of Education has created information about who has wisdom. - The Ministry of Culture has created the National Artist Profile. - Public Health Organized Information Members of Brain Club

Activities/Projects	Supervising agency
	<ul style="list-style-type: none"> - Office of the Court of Justice prepares senior judge information -The Office of the Attorney General collects the information of the Senior Prosecutor.
<ul style="list-style-type: none"> - Distributes goods produced by elder groups - Promotes and expands employment opportunities for the elderlies - Organizes an area for an OTOP Center 	<ul style="list-style-type: none"> - Cooperation between government agencies, the private sector, social networks, local government organizations. and companies

Source: (Technical promotion and support office 1-12, Ministry of Social Development and Human Security, 2015; Thatawakorn, 2019)

The obstacles and limitations in promoting the elderly to participate in Thailand's projects can be divided into three categories. (Thatawakorn, 2019)

1) Problems and obstacles from the elderly:

- Closemindedness
- Having the burden of taking care of their children, homes, and shops
- Needing to earn money to support themselves and their dependencies
- Lack of awareness of the activities
- Those living in remote areas are concerned about transportation and the accompanying attendant.

2) Problems and obstacles from supporting agencies:

- Government agencies are discontinuing their assistance.
- Many agencies' professional training is redundant, raising the project cost
- Lack of market distribution
- The budget is uncomprehensive
- Lack of staff to manage documents and publicize information

- Lack of a platform that gives the elderly the opportunity to showcase their talent
- 3) Problems and obstacles from various regulations.

3. Active Ageing Index of Thai Elderly

World Health Organization (WHO) has presented the concept of Active Aging, which indicates the well-being of the elderly, intending to improve the quality of life for older adults around the world. (World Health Organization, 2002) Autonomy and independence are important goals for the elderly in the policy framework for Active Aging. The term Active Aging refers to 3 areas of well-being.

1. Health
2. Participation
3. Security

Active aging index: AAI is a composite index derived from four sub-indexes (National Statistical Office, n.d.) In terms of "Health," there are six related indicators. "Participation" has four indicators. There are four indicators for "Security," and in "Enabling Environmental," there are two indicators, as shown in Table 5.

Table 5 Active aging index: AAI for measuring Thai elderly.

Health	Participation	Security	Enabling Environmental
<ul style="list-style-type: none"> - Self-assessment of physical health - Mental health - Ability to perform daily activities and movement - Vision - Hearing - Exercise 	<ul style="list-style-type: none"> - Having a job - Participation in group activities and elderly clubs - Participation in village and community activities - Household care 	<ul style="list-style-type: none"> - Income sufficiency - Homeownership - General living conditions - Safe living conditions 	<ul style="list-style-type: none"> - Use of ICT equipment - Literacy

Source: (National Statistical Office, n.d.)

The active aging index and four sub-indexes range from 0 to 1; if the index value approaches 1, the elderly have a better quality of life. However, if the value is near 0, they have a relatively low level of living ability.

Using the criteria for the Human Development Index (HDI) of the United Nations Development Program, the elderly quality of life can be divided into three levels as follows

A 0.000 – 0.499 score means a low level

A 0.500 – 0.799 score means an average

A 0.800 – 1.000 score means a high level

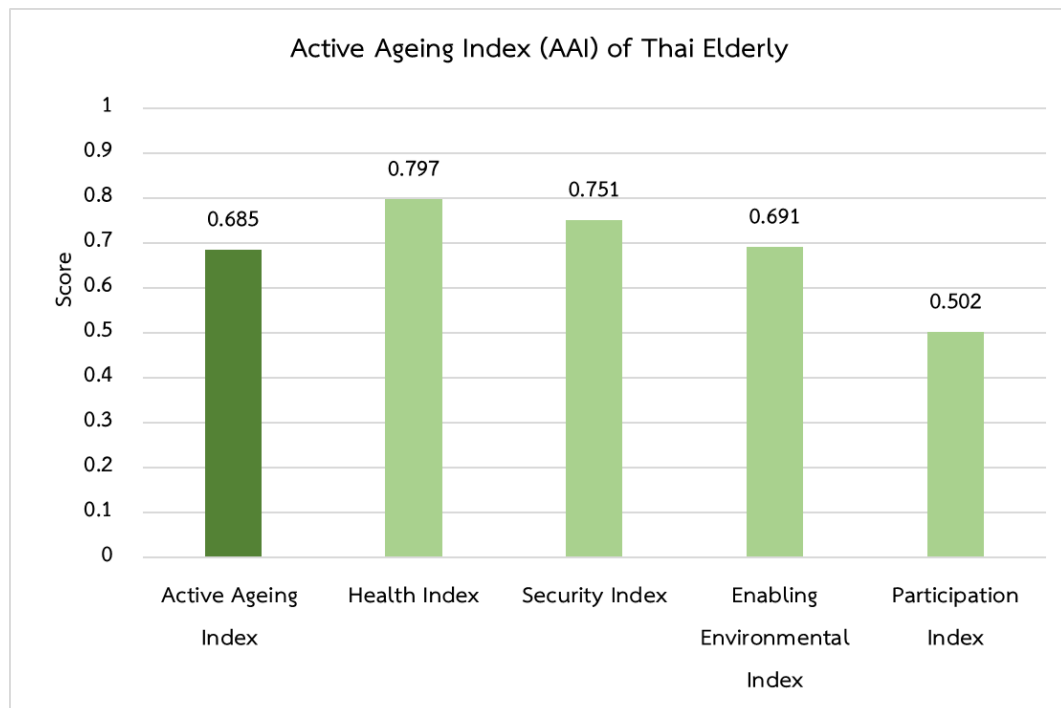


Figure 5 Active aging index and four sub-indices of Thai elderly.

Source: (National Statistical Office, n.d.)

The result of the study showed that the AAI of the Thai elderly was equal to 0.685, meaning that the Thai elderly had a moderate quality of living. Moreover, when the four sub-indices are considered separately, the health index had the highest value of 0.797, followed by the security index with a score of 0.751. The enabling environment index scored 0.691, and the lowest is the participation index at 0.502.

Therefore, the participation index for the elderly should be emphasized because participation is a crucial factor behind active aging to engage in social activities and build community relationships regularly. These relationships will maintain and improve quality of life and satisfaction with one's status. Moreover, active aging can postpone or delay the natural aging's degenerative processes aging. Socially active elderlies generally have better physical and mental health than their isolated peers. Thus, there needs to be a program to encourage and enable older

persons to join clubs and engage in community affairs on an active and regular basis. (Foundation of Thai Gerontology Research and Development institute, 2016)

Participation Index classified by regions of Thailand found that the north had the highest participation index of 0.565. The northeast is 0.560, the south has a score of 0.482, the central region is 0.461, and Bangkok, with the lowest score of 0.305, as shown in Figure 6.

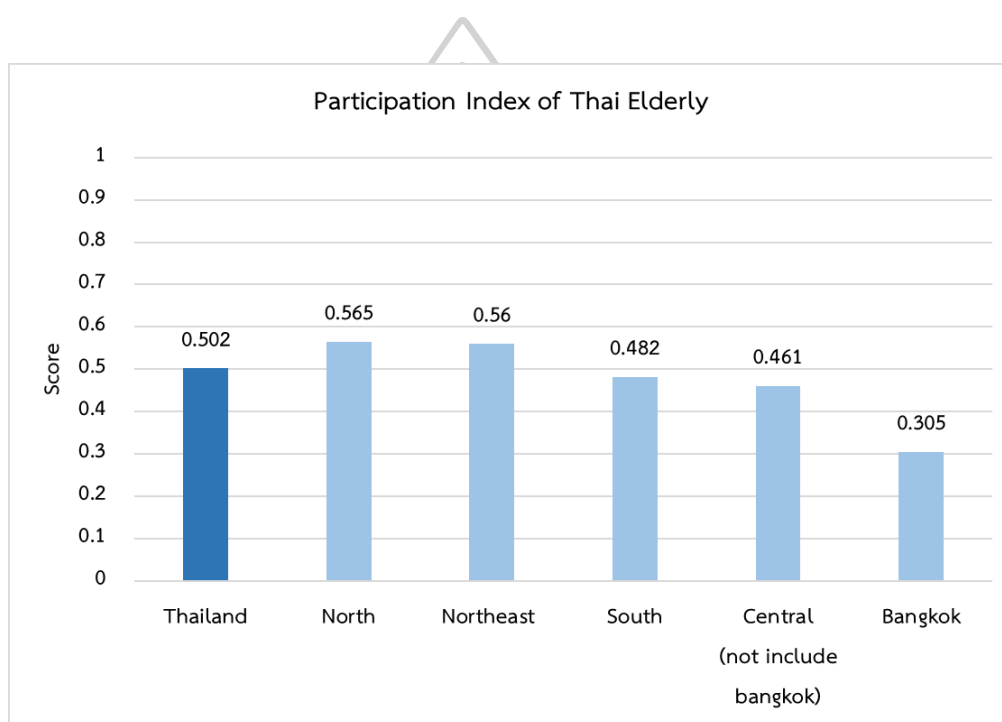


Figure 6 Participation Index Classified by regions of Thailand

Source: (National Statistical Office, n.d.)

Participation concept

In the report on the nature of operations and activities of the Elderly Club, the processes and characteristics of the participation concept were reported in 4 steps to achieve cooperation from citizens or members (Yodpet, Sombat, Sarobol, & Thanikarn Sakdaporn, n.d.)

1) Participation in decision-making and planning activities

It is a decision to implement the activity from the beginning, consisting of initiating decisions, operational decisions, finding solutions, deciding how to use the resource, and co-ideation and proposals.

2) Participation in activities

It is participation since the plan's implementation, administrative involvement, unity, resource support, persuasion, joint investment or donation, material property, labor protection of rights and benefits, joint work as planned, coordination as a member or director, and joint public relations.

3) Participating in benefits

Participating in benefits whether they are material benefits, social benefits, or personal interests, there are both benefits and disadvantages that must be managed appropriately.

4) Participation in assessments

It is to control and examine the implementation of activities by formulating criteria for assessing projects or activities. Members work together to monitor and evaluate performance, then follow up on the progress of the activity plan, including following up on problems and obstacles and joint meetings to propose opinions on how to improve the operating guidelines. The results of the assessment are used to determine further planning options.

4. Research on the active ageing of the Thai elderly in participation

As described in Sections 2.4.1 and 2.4.2, the researcher has examined the research on the participation behavior of the Thai elderly and summarized the information on the role of the elderly in the community, relationships, strategies to promote participation, factors to be considered in accessing activities of the elderly, and psychosocial variables to promote empowerment in the field of participation. However, it was also found that active aging was related to the choice of activities

and the time spent, and it was found that the elderly often spend time doing activities alone. Therefore, the researcher also studies depressive illness in the elderly in section 2.4.3. In addition, according to current data, 40% of the elderly have access to online media, so the researcher studied service activities and technology for the elderly because good services and appropriate technology media make the elderly happy (Section 2.4.4).

4.1 Research on the model of relationship enhancement and promoting active aging of the Thai elderly in participation

The Second National Plan on the Elderly (2002-2021) emphasizes health care and the development of community participation. The plan explained that participation would help promote and drive active aging in other indexes as well. The study of the Community Participation Model of Health Promotion for the Elderly in Bangphlat District, Bangkok Metropolis (Wongwiseskul, Sukcharoen, & Payomyong, 2017) found that the lifestyle of the elderly has six aspects, including relationships, daily routines and exercise, health responsibility, food consumption and nutrition, stress management and spiritual development (Self-worth) are all moderate. Therefore, to improve the quality of life of the elderly by investigating their actual needs with their participation. It was discovered that the elderly wished to increase their participation in community care for the elderly. Examples include changing pathogenic behaviors and disease risk screening, desiring a healthy role model, and promoting active aging. The elderly desire to dedicate themselves to being a valuable resource for other seniors, but the community lacks the necessary understanding and guidelines.

The study also found that the role of the elderly in their community is to be a volunteer and committee who acts as a facilitator for organizing health services and encouraging other older adults to participate in the activities. Therefore, the creation of active aging begins with developing these leaders and strengthening the skills necessary to be accepted and become a good role models.

Then, leaders and other seniors can participate in planning activities to pass on or receive knowledge. This research recommends using the SWOT-Analysis PDCA and AIC Models in the evaluation. The results of the research also found that the factors of the elderly health promotion model through community participation were:

- Directors and volunteers are familiar with the roles and processes of participation.
- There are helpful sources for organizing activities, such as community health centers, elderly clubs, temples, and government agencies.
- Public relations strategy, assessment, knowledge enhancement, and strategies to create service consciousness

A study of the results of participating in Pak Kret District's organizing activities. Nonthaburi Province (Thoucharee, Rattana, Pornsiri, Jongnimitphaiboon, & Boonsirichai, 2019) to study the model for enhancing the relationship of the elderly through 3 activities: dance for health, health massage, and making herbal compress. The results are divided into different aspects as follows.

- Participation in operations; It was found that the elderly were most likely to participate in the presentation of guidelines and planning. Followed by active participation, solving the coordination and monitoring problems, the elderly public relations were the least involved.
- In terms of activities, the duration and manner are appropriate. It is an exciting activity because it encourages the participation of the elderly. However, the elderly participated in the planning and preparation of activities to a lesser extent.
- Opinion of the elderly in organizing activities: This activity was most beneficial to physical and mental health. They were followed by activities suitable for the target group and activities that achieved their objectives. For the involvement of the elderly with the relevant agencies, the score of this activity was the least.

However, older people focus on activities that develop physical, mental, emotional, and inspiration to enter society rather than a focus on the conservation and inheritance of Thai wisdom. Therefore, it is vital to communicate the activity's objectives with the target audience. In this regard, strengthening community relations still requires encouragement, assistance, and understanding of each other to promote participation potential.

Access to activities of the elderly studied the factors from both the organizers of the event and the participants as follows : (Faramnuayphol, 2014)

- The event organizer or service provider must demonstrate the importance of this event. There is a clear and easy understanding of the process. Resource constraints and contributing factors such as policy, system, and management should be considered. Ongoing activities should be adjusted and improved for the service or activity. As well as motivating the participation should find appropriate methods for the target groups.
- The factors that participants or service recipients will reach to engagement are the need to know their rights, public relations, and how the activity affects the participants. Restrictions such as money, transportation, time, availability, and participants made constructive comments.

In addition, five strategies from this research were summarized from the application of the Ottawa Charter to promote participation in health activities of the elderly (Thoucharee et al., 2019) as follows;

- Strategy 1 Build Healthy Public Policy
- Strategy 2 Create Supportive Environments
- Strategy 3 Strengthen Community Action
- Strategy 4 Develop Personal Skills
- Strategy 5 Reorient Health Services

4.2 Active aging in participation and contributions of the elderly to society

The study of the interaction between former psychological characteristics and variables in situations; related to active aging promotion behavior in terms of the overall dimensions and sub-dimensions of older individuals with a variety of biosocial characteristics. Psychosocial factors have eight factors related to 3 causes of human social behavior: former psychological characteristics, situations, and characteristics based on various situations (Kanokaon Netchu & Narisara Peungposop, 2019), as shown in Figure 7. The sample group consisted of older people who were members of senior clubs in fifty district offices in Bangkok.

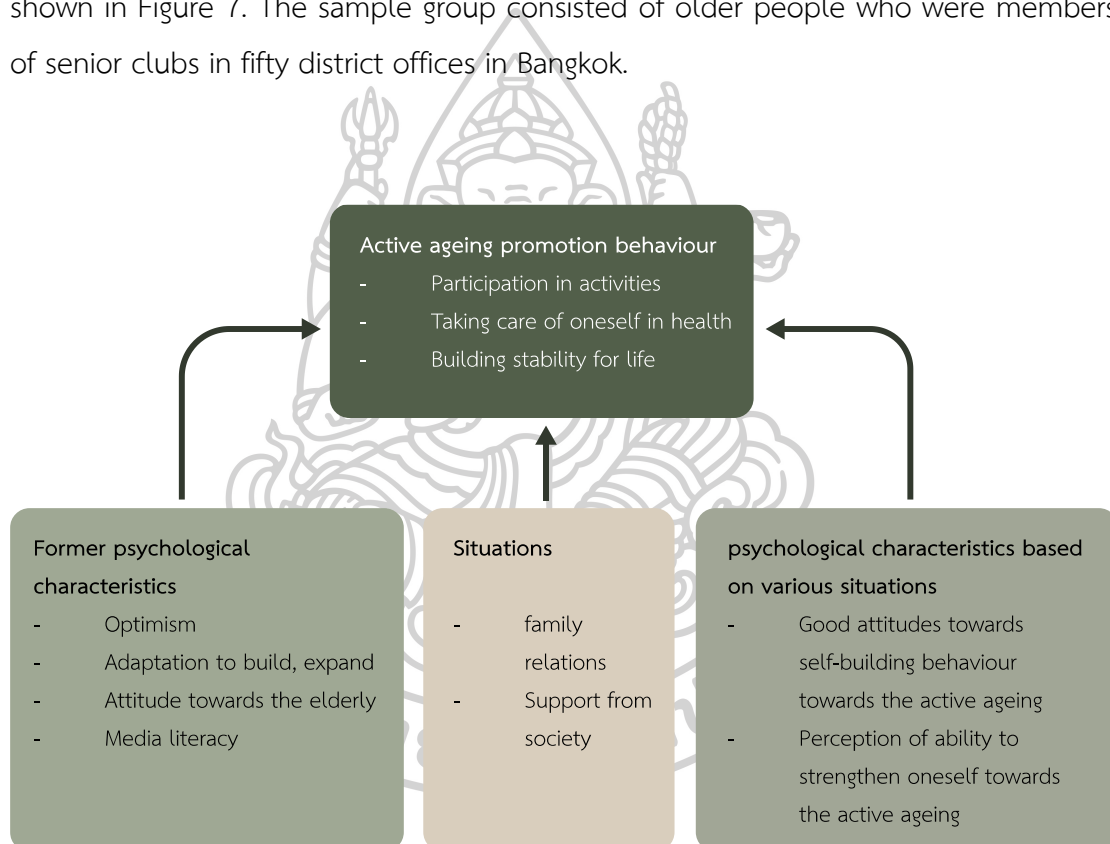


Figure 7 Psychosocial factors related to active aging promotion behavior of elderly

Source: (Kanokaon Netchu & Narisara Peungposop, 2019)

Table 6 indicates that psychosocial factors could predict active aging promotion behavior of the elderly in activity participation by 34.5%, and the "support from society" is the most critical factor. This support comes from the state, the

private, the hospital, and the community regarding resources, budgets, minds, emotions, and the feeling that the elderly are a part of society.

Active aging in overview, psychosocial factors were able to predict active aging promotion behavior 27.7% by "optimism" is the most important supporting factor. They were followed by "perception of ability to strengthen oneself" and "good attitudes towards self-building behavior" towards active aging. Therefore, providing knowledge, understanding, and confidence to the elderly that they have sufficient potential to enter active aging can benefit society, encouraging the Thai elderly to live and have more positive energy.

Table 6 The score of psychosocial factors related to active aging promotion behavior of the elderly in Thailand

Factors	Active aging in participation	Active aging in health	Active aging in security	Active aging in an overview
Ability to predict behavior	34.50 %	28.60 %	27.70 %	43.40 %
1. Support from society	.285	.144	.156	.123
2. Perception of the ability to strengthen oneself toward the active aging	.246	-	.178	.222
3. Optimism attitude	.138	.345	.268	.258
4. Good attitudes toward self-building behavior toward the active aging	.128	.160	.298	.221
5. Attitude towards the elderly	.111	.192	.178	-
6. Family relations	.142	-	-	-
7. Media literacy	-	-	.140	.079

8. Adaption to build, expand	-	.178	-	-
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Source: (Kanokaon Netchu & Narisara Peungposop, 2019)

Note: A high score indicates that a factor is essential. Furthermore, that was no score, as the research presented the six highest scores.

Inactively aging, there is still some exciting research that focuses on developing the potential of the elderly to contribute to society (Thatawakorn, 2019). In the interview of Dr.Vichai Chokvivat and Professor Siriphat Yodphet, they said that the development of the elderly in active aging begins with understanding the definition of the characteristics of the elderly as follows:

- The elderly can take care of themselves as well as the other
- Have good health for body, mind, intelligence, society, and spirit.
- Participation in society, relationships, and contribution to society
- Stable confidence

The factors that are affecting the potential development of the elderly in active aging

- Inspiration.
- Environment.
- There is a system for recognition and reward.
- There is reinforcement and encouragement.

Guidelines for developing the potential of the elderly in active aging are as follows:

- Promote exercise, take care of both physically and mentally, do activities that benefit society, and receive information through technology.
- Prepare everyone to be aware of a careful lifestyle in elderly age. This lifestyle is not dangerous for health, has more savings, and promotes technology usage in the perception of information.
- There is social welfare with an emphasis on elder human rights and a change in attitude from charity to equality.

4.3 Study of time-consuming patterns of the elderly with aging. The expansion of the potential of the elderly living isolated and the depression in the elderly.

Nowadays, in addition to the increasing number of older adults, it is also found that most elders are living alone. Most of them are older adults living in the urban and Bangkok areas. The reason the elderly live isolated lies in the death of their spouse, being single from the beginning, or their children working outside the area. In Thailand, the living status of the elderly over 60 can be classified as in Table 7.

Table 7 shows the living status of the elderly over 60 years of age

the living status	2010 data (%)	2020 data (%)
Single	3	6
Married	91	80
Divorced/Separated/Widowed	6	15

Source: (Nielsen Consumer Media View, 2020)

A study of the research on the use of the time of the elderly (Punyakaew et al., 2021a) using a sample group of 140 older adults. In Chiang Mai Province, the research found that the elderly spend time doing activities alone, 80.9%, and doing activities with others 19.1%. The location also plays a part in doing activities. 89.2% do activities at home, and 10.8% are outside. Furthermore, when classifying activities, it was found that the elderly chose activities that generate productivity 38.7%, that activity provides physical rehabilitation 34.4%, and that activity delivers satisfaction 26.9%, as shown in Figure 8.

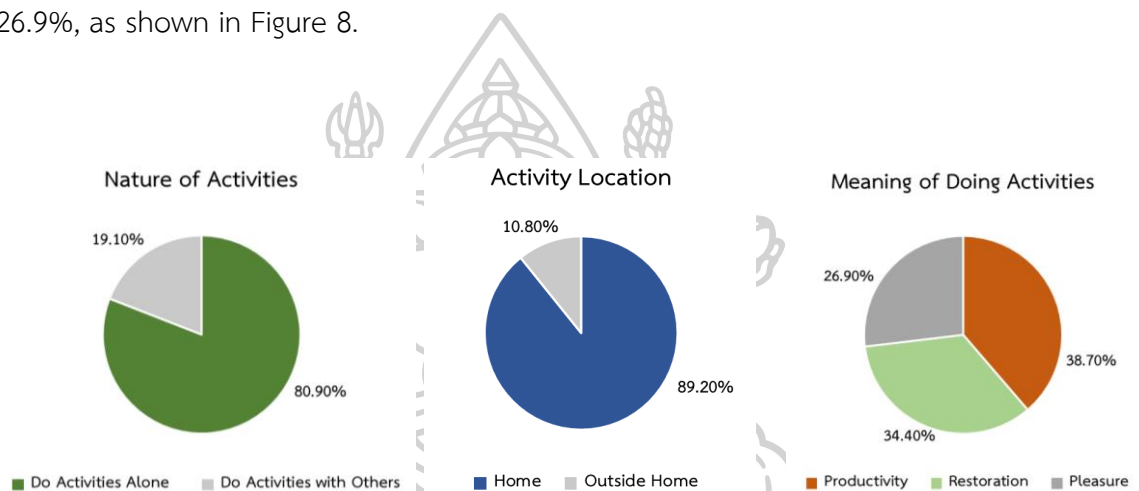


Figure 8 Nature of activities, activity location, and meaning of doing activities of the elderly.

Source: (Punyakaew et al., 2021a)

The activities the elderly spent the most time on were sleep and rest, minor time-consuming activities, as shown in Figure 9. In addition, the nature of the activities that the elderly spent time on was related to the behavior of the elderly to study whether the elderly with intermediate, high and low energy spent time in each activity distinctly or not. The results indicated that the elderly with high, moderate, and low energy spent little time socializing and education, as shown in Figure 10. Therefore, encouraging the elderly to socialize and penetrate an education will help to enhance the active aging of the Thai elderly.

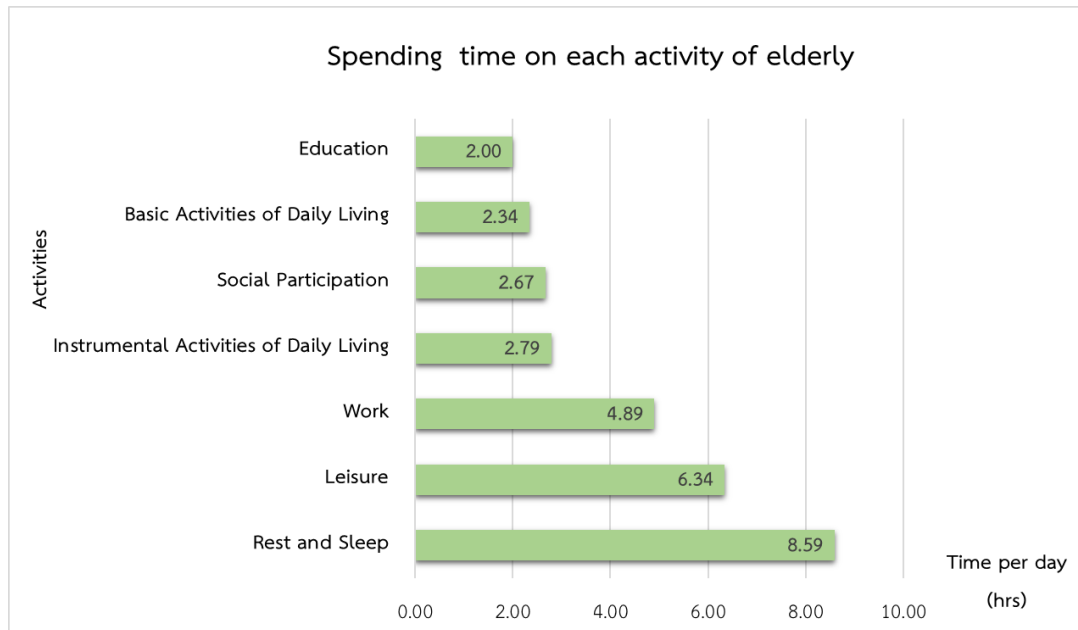


Figure 9 Illustrates the spending time on each activity of the elderly.
 Source: (Punyakaew, Hsu, Lersilp, & Putthinoi, 2021b)

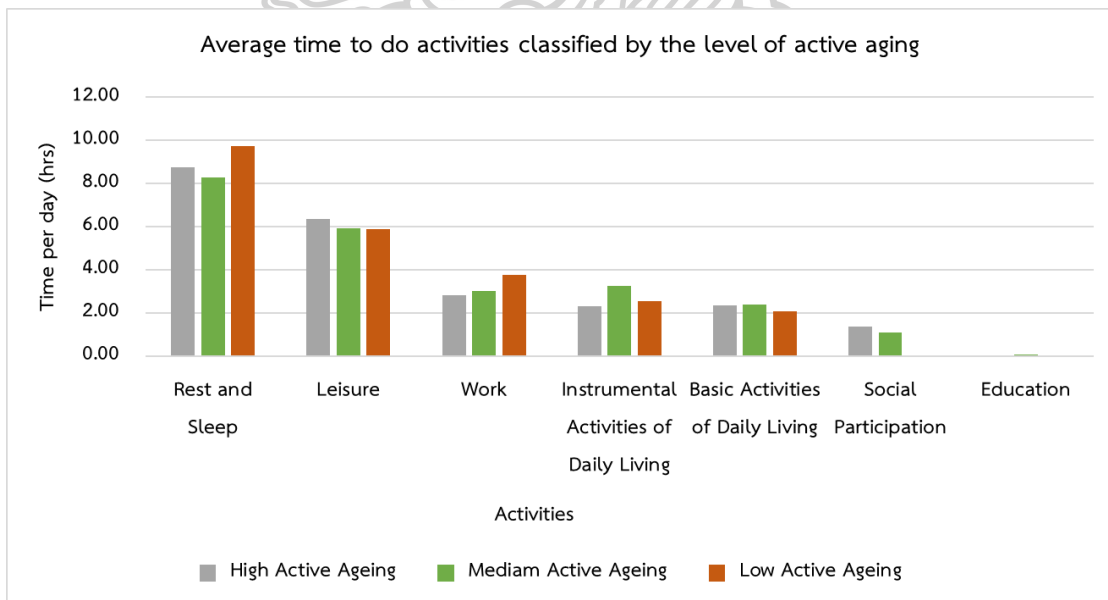


Figure 10 Average time in doing activities classified by the level of active aging.
 Source: (Punyakaew et al., 2021b)

The more elderly lived isolated, the more researcher examined the factors influencing depression in the elderly (Yoelao 2015). As a result, it was found that two variables directly influenced depression among the elderly: 1) the original factor - the situation of the elderly (Situation Personality Illness and genetics descending order) with a positive influence coefficient (.78). 2) Social support variables (information, opportunities, benefits network, the object, and the emotional descending order) with a negative co-efficient effect (-.24).

The original factor - the situation of the elderly had a more significant influence than social support. In addition, caregivers directly impact elderly depression, especially their attitude towards caring for the elderly and elderly care skills.

Therefore, the growth of the potential of the elderly living alone with the concept of ongoing aging (Wiphanun Muangsakul, 2015) requires promotion at individual, family, community, and country levels as follows:

In terms of the individual level is to promote self-care following disease and illness. It is constantly encouraging elders to do various activities themselves. In addition, there are also social groups online and offline to avoid being alone.

The family level is that the family respects the elderly who live alone and should have visited them.

The community level has an opportunity to have a space for activities or multicultural together to generate income.

At the national level, the government must plan for all units to support the elderly society living alone in a concrete way, especially in health and revenue.

4.4 The research of service business development guidelines to support active aging and utilization of information technology for the elderly in Thailand

The situation of the elderly in Thailand, as mentioned above, makes it necessary to plan for the aging society. In particular, the service business is one of

the global interests, as 48.81% of the global employment is in services, while Thailand has a service employment rate of 46%. Therefore, this research study believes that developing the elderly service business can strengthen gross national income and enhance the quality of life of the elderly. Nevertheless, the service is not sufficient and comprehensive in the elderly lifestyle.

Services for the elderly can divide into health enhancement services, leisure activities, maintenance, and care services. When considering the service needs of the elderly (Booranavitayaporn, 2019) can be divided into:

1) Physical service

Older adults need services that promote good health; homes are clean and safe, hygienic consumption, and quality sleep. The service business is seen in hospitals, home health care, and housing services.

2) Psychological service

Most psychological services are in the hospital business with specialized brain and psychological expertise. However, it also has good environmental services, relationship services, and elderly network-building services through activities that focus on mental and emotional development and advise reducing repetition and stress in the elderly.

3) Social needs service

Services in this field include life insurance, income insurance, health insurance, professional service, legal services, and organizing activities for participation in the community and society.

However, all physical, mental, and social factors should be incorporated into service management because it will enable the elderly to live well and care for themselves, following the World Health Organization's Active Aging concept, which consists of three factors:

1) Health service

Health service provides comprehensive accommodation services, such as food, exercise, health check, and living care. In addition, home medical services. It should increase because seniors continue to increase and live isolated at home.

2) Participation service

Participation in business ideas is directly related to the quality of life of the elderly. Businesses interested in this field contain training to increase knowledge or various skills, organize self-care activities of the elderly, and learn social network services with guidance and consultation in online and offline groups.

3) Security service

This service business will focus on technology systems, suitable media, and innovations that support access to resources for the elderly to become self-sufficient, such as information communication and traveling and transportation services to facilitate the elderly using modern technology.

The use of information technology to promote services, welfare, and activities is a growing interest in the elderly to make themselves modern elderly, following the world and increasing active aging. A current study of 2020 data found that the elderly have 40% access to online media (The Standard 2020), and the study of research on behavioral use of technology that affects the happiness of the elderly in Bangkok. (Office of the Permanent Secretary, Ministry of Social Development and Human Security n.d.) presented the research results of Asst.Prof.Dr.Veeranat Rojanaprapa that the elderly who use technology on average 2 - 4 hours per day will be happy elders. However, each usage time should be more than 2 hours. *Home* is the place where elders use the highest technology. The used devices are tablets rather than smartphones due to their large screens and easy mobility. However, three main problems should be considered when using technology with the elderly: physical, psychological, and economic factors. In addition to technical equipment, the Internet is for the government to prepare for the elders.

The study of the behavior of using information technology for any rights and access to elderly welfare also found that the elderly needed to use information technology in various welfare, as shown in Table 8.

Table 8 shows essential activities to use information technology for the various welfare of the elderly.

Welfare	Most of the need to use information technology	Reason
Education	E-learning (Followed by Google Search, YouTube, Facebook, and Line)	<ul style="list-style-type: none"> - It offers resilience and convenience that learners can access course content anytime and place. - Learners will be free to research and learn their interests. - Learners can decide on the timing, place, and critical points of study content
Health	Health Alert Information Straps (Followed by Mobile Application, Website, Google Search)	Older grown-ups can take better care of themselves, and their children can always follow the directions of the elderly while they go to work.
Residence	Social map (Followed by the Web site, Facebook, and Mobile Application about residence)	Social Map answers who, where, what problems, what to want, and when will get to it. In addition, the word map also points to the area coordinates address status and can be utilized to assist.
Income and having a job	-	Older people think that most older careers do not need technology.
Recreation	YouTube	It is a recreation channel that is easy to operate and convenient to search. They wanted the layout to have large text, clear sound, and be effortless to find. There is also a reliable source of information and moderators, and a

Welfare	Most of the need to use information technology	Reason
		certification organization.
Justice	Do not need all four channels (Website, Google search, Mobile Application about laws and rights, Facebook)	Having more consultation with family
General social services	Use a state benefit card	There is an incentive form of money.

Source: (Office of the Permanent Secretary, Ministry of Social Development and Human Security, n.d.).

5. Research Methodology Framework in Design Thinking

5.1 Service Design

Service Design is essential in the modern era, both in marketing, clubs and associations, and government organizations. Producing products and innovations that genuinely understand users has become more general and considered helpful in the past. Nonetheless, from now on, the use of technology and AI will be able to assist in the production of similarly high-quality goods. Therefore, in the service sector, the user experience attracts users, and it is a point of judgment for customers or participants to become loyal customers or brand members. Dr. Kritinee Pongthanalert's book "Makoto Marketing" illustrates a clear picture of the service. For example, an electrical appliance shop that offers installation, instruction, repair, and relocation services because some products have heavyweight. The results demonstrated that older adults in Japan buy many products from this shop, although the price of electrical appliances is much higher than in other stores.

Furthermore, an additional example of this case, Omatsuri Japan Leader's service, was initially established to help the community by preserving the festival

from its fading, making the participants happy and impressed by genuinely understanding people, both the community and the participants. When attendees feel the intention through the festival's details, they love the experience. On the other hand, although companies with capital can organize their events for advertising, they do not understand the context of individual communities. The community has its uniqueness and strength but does not know how to express it excitingly. Therefore, Omatsuri supports both parties for management services, event design, and public relations until they succeed in service.

However, service designers always ask one question: "How will this service work help customers?" so the service design is valuable in the experience and running in the right direction. (Pongtanalert, 2021) Service Design is rooted in Design Thinking and is a human-centered service improvement method and new service design through a collaborative approach, engaging customers and the service delivery team. Service design helps organizations gain genuine discernment from end to end and see the service from the customer's point of view. It is a serviced-design approach that balances customer needs with business necessities and aspires to create a smooth, quality, holistic service experience and meaningful. (Stickdorn, Hormess, Lawrence, & Schneider, 2018)

Service design is for service work and improvement and creates innovation, including designing the product and the experience. The service is distinguishable from selling a product that wants to build a long-term relationship and create value through experiences with service users. Therefore, both frontstage and backstage service providers and users are variables in service creation. (Thailand Creative and Design Center, 2014)

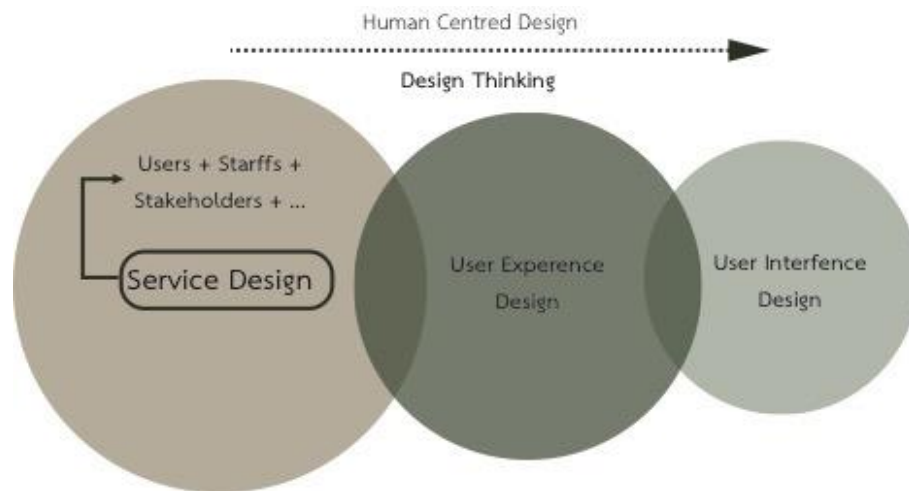


Figure 11 Design Thinking and Service Design.

Source: (Pongharnyuth, 2021)

5.1.1 Service Design Process

The service design process consists of four steps: (Stickdorn et al., 2018) research, ideation, prototype, and implementation. Each step will help answer the research questions, lead to information, find a way to create the value of work in the form of both abstract and concrete, create a service experience, give feedback, and share their opinions. Then, all four steps can repeat (iteration) when the designer deems additional information needed, as shown in Figure 12.

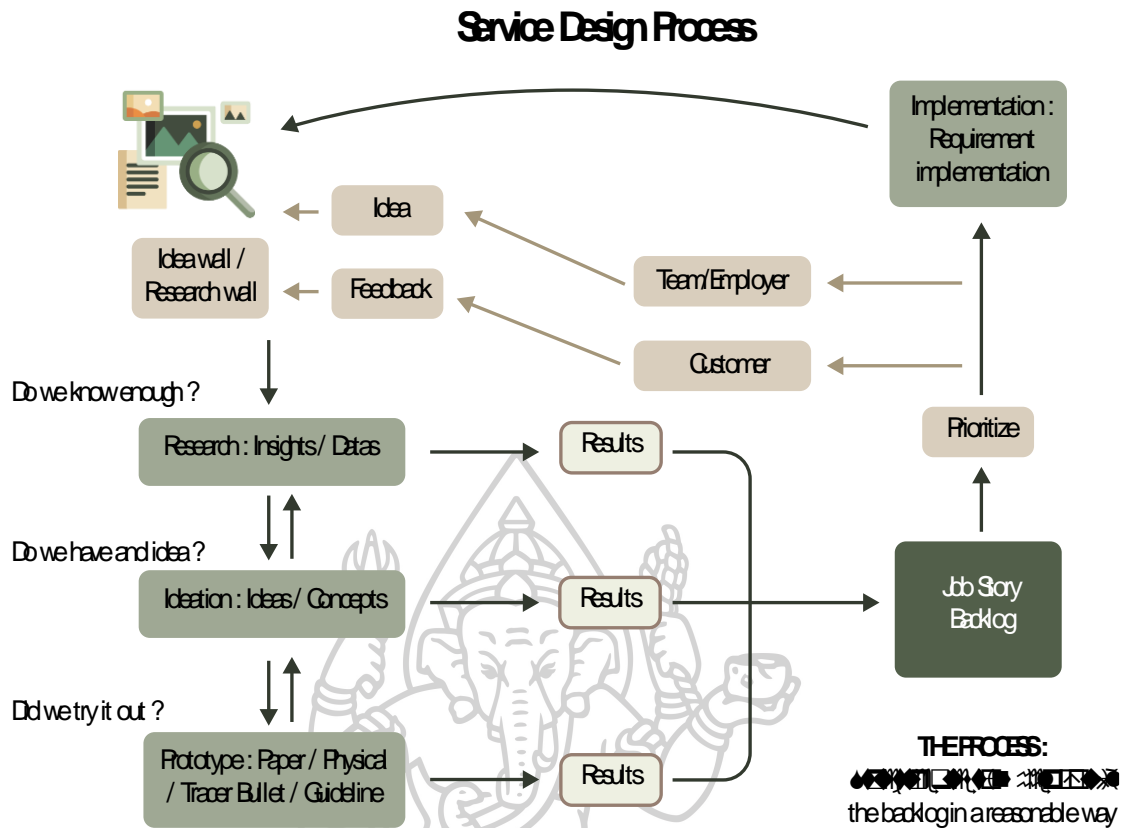


Figure 12 Service Design Process.

Source: (Stickdorn et al., 2018)

1. Research (Exploration)

After the research topic, objectives, scopes, and research inquiries have been completed. For example, it can begin with research studies in statistical data, innovation, marketing, interviews, and other related (Raw Data) to connect to a holistic view (Data visualization) such as Personas, Journey map, Empathy map, System map, User stories from interviews. Then, the data is analyzed for insights to ensure that the designers have quality data that can be used in work. However, to gain an in-depth understanding of the problem or need, it is necessary to think analytically and collect details to discover more before defining the problem and finding a solution with time. In addition, iterative research loops can be performed to get designers moving in the right direction.

After obtaining the above information, it is interpreted to determine the actual problem or need, which must be analyzed and unpacked precisely. For example, the Convergent Principle or Point of View (Stanford Center for Professional Development Courses. 2021) consists of user needs and insight.

- Users must be specific in describing additional characteristics such as "An old man living alone" or "Nepali mother living in a remote village,"

- Need indicates goals and triggers. Any research should state as a verb, such as "an old man living alone wants to reach for a book" or "a Nepali mother living in a remote village wants her premature child to survive.", which will make the sentence to be more precise. Being aware is the verb used to create opportunities, not solutions.

- In-depth interprets what is obtained or from the initial survey data. In-depth follows "because," for example, "An old man living alone wants to reach for a book because he is lonely/he wants to learn/he has no topic to discuss with his grandchildren" or "A Nepali mother living in a secluded village wants any babies who born prematurely survive because they cannot afford to take them to the hospital." By writing the in-depth sentence, the designer must interpret it well from the subtext words and comprehend the users' emotions. Thus, the sentence obtained from the point of view is "User...(adj.).....need.....(verb).....because...(in-depth)..."

2. Ideation

Ideation is creating a service concept, from defining a real problem or need to choosing an idea to create a prototype. Creating this concept must be a design with group participation as a stakeholder. (Co-creation) will divide this ideation process into four steps.

1) Planning Ideation

Designers must strategize in order to elicit conceptualization from participants. It began with participants using the research findings to define the boundaries or leading inquiries to convey their views using the phrase "How might we...?" or "Point of View (POV)." At this step, designers must identify tools that inspire participants' thoughts by allowing them to view a little picture (Split the task), such as concept cards. Following that, provide an example of an innovative and enticing service that enables participants to generate their opinions in large numbers regardless of quality or feasibility. Finally, iterating the concept is necessary until the designer determines it is appropriate (Set stopping criteria) and can identify the group's outcome.

2) Idea Generation

Idea Generation encourages participants to generate as many ideas as possible from the above planning. Warm-up and proper timing will help keep participants bored and energized. As planned, the designers were to keep in mind any biases that may arise due to the different contexts of the participants. Use the Divergent principle that does not depend on any context but focuses on the number of concepts. The tools used in this research were to utilize. "Yes, and...." questions, create a Touchpoint Card/Idea Card, create a Constrain and The Analogues Tool to entitle participants to open their perspectives.

3) Idea Selection

The conceptual decision-making process is based on the Convergent principle, narrowing the picture for greater clarity. It starts with implicit and categorized concept groups that can be done immediately (Quick). Following are ideas made to meet customers' needs (Breakthrough) and concepts that satisfy customers without telling them directly (Delight), called the QBD concept grouping.

Next, participants select ideas by voting on parts B and D. One person can vote for two in columns B and D, except column Q, which can be applied immediately and can act, then receive feedback through simple prototypes. After voting, bring a highly rated score and exciting ideas in the comments to choose the final idea or combine appropriate ideas. It must be considered that this final concept satisfies the actual needs of users and service providers. Further, there is also a question of any practical possibility that can be provided.

4) Idea Documentation

Any ideas not used as alternatives to prototypes should be kept on the Idea Wall for further work because this information makes a checkback and explores the source of the idea. However, other concepts can be modified or incorporated to enhance the effectiveness of the prototype. In the feedback process, suggestions can also relate to these data. This information should therefore be stored.

3. Service Prototype

Service Prototype applies the concepts gained from the past to create prototypes, test them, and accept opinions from stakeholders and others to analyze and enhance the service according to work purposes and respond to customer satisfaction. The process of creating a Service Prototype consists of

1) Design on the purpose

Understand and decide to create a prototype based on the purpose of exploration evaluation or communication

- Create a Service Prototype to explore, used when creating new options and methods.

- Create a Service Prototype to evaluate, used when you want to understand how to create a future experience for people.

- Create a Service Prototype to convey and present used to see the main points of the work from the target audience to comment. The presentation is a strategy that must show the value of convincing and inspiring critical stakeholders.

2) Designing your prototyping question establishes questions to understand what makes a Service Prototype successful and the required factors. The process starts with 1. You are encountering the value 2. The look and feel you want to express 3. The prototype has flexibility and the needs of users, organizations, and businesses, expanding or increasing efficiency. 4. Integrate all three aspects to achieve satisfaction with the experience. Shown is shown in Figure 13.

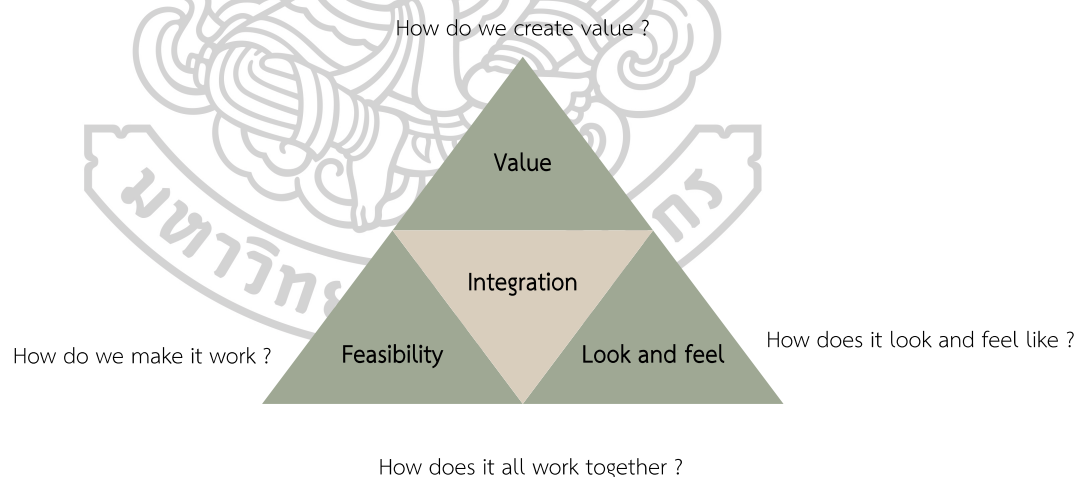


Figure 13 Service Prototype Questions.

Source : (Stickdorn et al., 2018)

3) Assess what to make or build by creating a Service Prototype; it can be divided into five types: Figure 14 - Figure 18.

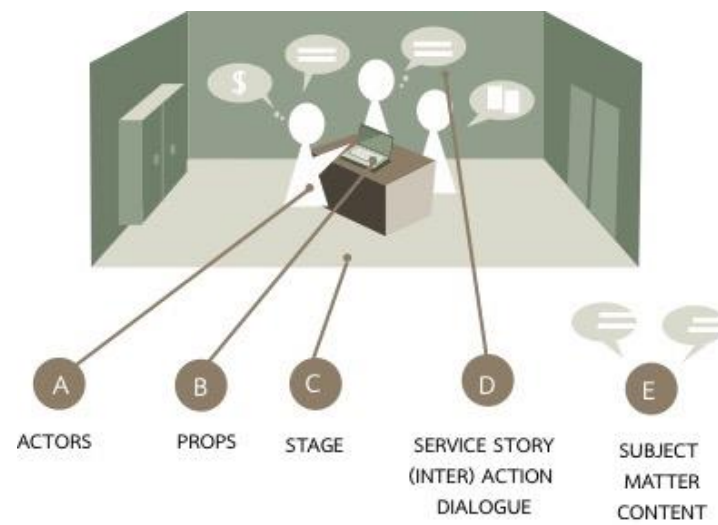


Figure 14 Prototype of (inter) action.

Source: (Stickdorn et al., 2018)

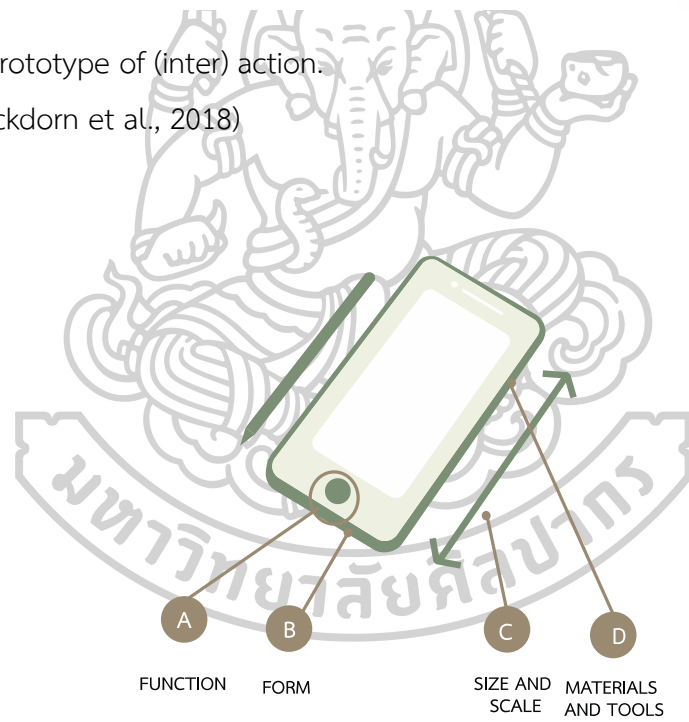


Figure 15 Prototype of physical objects.

Source: (Stickdorn et al., 2018)

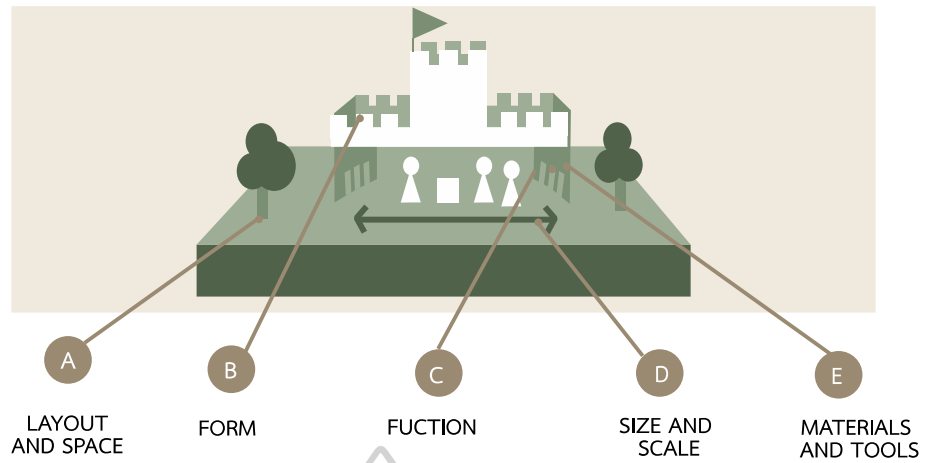


Figure 16 Prototype of environment, spaces, and architecture.
 Source: (Stickdorn et al., 2018)

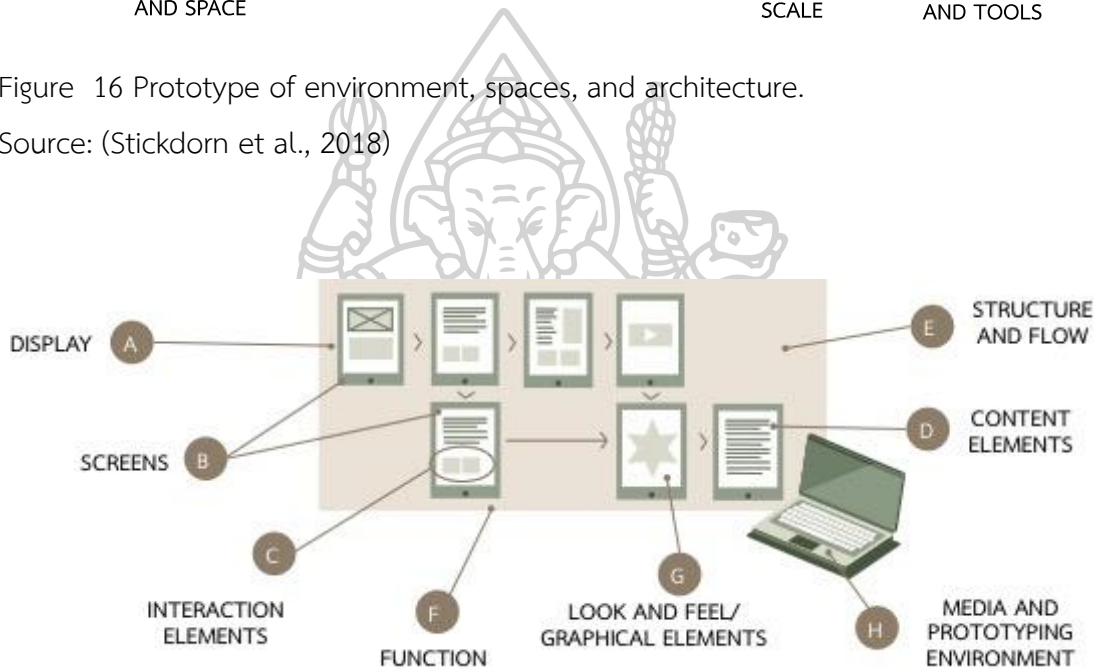


Figure 17 Prototype of digital artifacts and software.
 Source: (Stickdorn et al., 2018)



Figure 18 Prototype example of ecosystems and business value.

Source: (Stickdorn et al., 2018)

4) Planning prototyping begins with the target group, which is the person who wants the test. The team then plans to create the roles of facilitator, observer, researcher, and operator. At the same time, the Service Prototype is thought, built, and tested, where one can take on as many roles as they earn.

However, when creating a Service Prototype, it is crucial to consider simplicity, efficiency, and possibility. Accordingly, it is necessary to find a sweet spot to create it. The choice of location and time is planned because it cannot be delivered ineffectively in summer if it is the winter service. The last step is to receive suggestions for improvement, find out how to track and show it to users to understand and access the experience.

5) Running prototype sessions are the implementation phases consisting of pre-installation phases, implementation phases, and feedback phases.

6) Data synthesis and analysis are used, analyzed, and connected to respond to past procedures.

7) Visualizing prototype data is the visualization that creates a way concretely info collecting aging obtained, including the source. The designer must demonstrate the data in a report, story, or plan.

4. Implementation

This step is the implementation of the prototype that has been prepared and usable. The condition is in; there will be a sample product if it is a product. If it is a service, it needs to have a policy as a guideline or plan to implement. Product or service management has the roles as follows:

- The production usage and distribution cannot be detached from the relevant services.
- A mix of products/services/solutions should be developed for multi-channel benefits.
- The transition from a manufacturer to a service organization is challenging. For example, something must represent an organizational change, including business plans. In addition, there are oppositions to customers and new strategies such as differentiating and using new approaches to make the service stand out in the market.

Implementation must consider the balance of user experience, technology, and business management. The management process includes:

1) The Imagination phase explores current business models and strategies to determine the methods and the new methods are? The challenge is to find the area and ways to use innovation to create value for your future customers. However, a deep understanding of industry data, corporate business, and customers are still required.

2) Definition phase, at this stage, the concept and prototype must be examined further, including testing and revision. Prepare an overview of future methods and combine concepts.

3) The realization phase is planning, concept development, system design, testing, refining, and production.

4) Support/Use phase is a step that considers the delivery of services to customers, time consideration, and markets to promote products and services. To illustrate:

- In the beginning, there must be a channel for advice and get feedback to make customers or service users confident in the experience that they will receive

There must be more communication channels during the rising market, develop and improve.

- A stable market has to be assessed to maintain its benefits and not be overly complacent by thinking about impressive new products and services.

When the market is down, costs must be reduced but maintain the old customer by adding repairs and maintenance. However, we should be careful about expenses.

5) Retire/Dispose phase is called the "end of life," which uses the customer's touchpoint from the journey map as a guideline to recommend products and services, including eliminating useless processes and replacing them with good service.

A 7P (Thailand Creative and Design Center 2014) principle is used to help design operations through the Service Design process to make the design more comprehensive and direct. At present, it is necessary to consider another issue. "Using Technology"

7P for service work consists of

1. People: the meaning is to build confidence through the person who relates in service, and part of this work is to understand the person, their emotions, feelings, needs, lifestyle, and culture.

2. Process: to create a system for convenient service.

3. Physical: Evidence is the design of details impressive, such as a welcome drink, sign language on aprons and coffee mugs for deaf and hard of hearing customers, and the design of the place to impress, such as lighting suitable for the elderly.

4. Product: in this work, the designer refers to the various activities in the elderly club.

5. Price: refers to the budget for participating in the event or used in operation.

6. Place: the convenience of the place, such as the location, the size of the event space

7. Promotion to encourage participation in activities, and various benefits, including public relations.

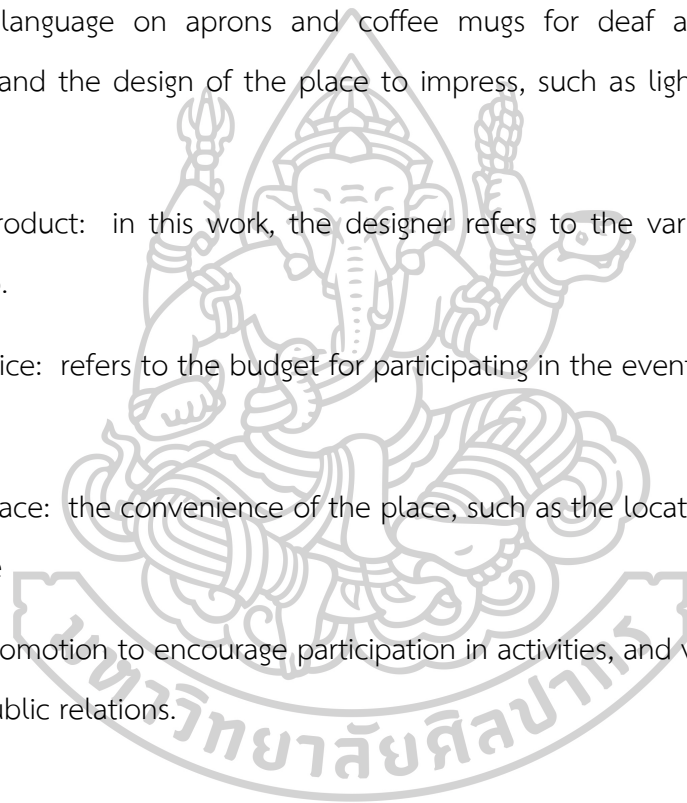




Figure 19 Service Design with 7P

Source: (Thailand Creative and Design Center, 2014)

5.1.2 Inclusive Service Design

Service Design and Inclusive Service Design are the development of better designs. Still, there are also differences as defined by the study of Aceves-Gonzalez, Cook, and May in 2014 (Meroni & Sangiorgi, 2016). The study display that Service Design is user-centric, which examines or understands people's experiences as users, stakeholders, service providers, communities, or humanity in a broader sense. Therefore, they will interact, including practices and inspiration for designing new services. However, the Design Council (2008) explains that product and service design is challenging because of different abilities, needs, and desires. Therefore, Inclusive Design principles have been applied to deliver better products and services. Therefore, Inclusive Service Design is a general approach to design. Therefore, designers are confident that their services will meet the needs of the broadest range of users regardless of age or ability. In addition, Persson et al. (2015) emphasized that Inclusive Service Design must consider the diversity of both people and the environment within reasonable limits by creating an environment that will allow

everyone to participate equally. Therefore, a design process is required to accommodate diverse users. (Huan, Arvola, & Holmlid, n.d.)

To describe this principle, the Umbellar Model and the Segmented Pyramid (Hosking, Waller, & Clarkson, 2010) describe the diversity of people at different skill levels, as shown in Figure 19 (based on data from a Microsoft survey in 2003). The pyramid depicts variability in population capacity. The lower part of the pyramid is 21%, representing those with no barriers—the next 16% represents those with the slightest difficulty and 37% with few problems. Moreover, the top 25% of the pyramid represents severe obstacles. Inclusive Service Design attempts to cover every part of the pyramid.

The branched ribs refer to the service actors who are critical in maintaining the Inclusive Service Design. Each rib of the umbrella rib type of the actor's expression with various dashed lines reflects the dynamic nature of service design. The umbrella's ribs are the critical service actors in maintaining the inclusive service design. They support the whole umbrella. Each umbrella's rib represents one type of actor with a diverse dashed line, reflecting the dynamic nature of actors who play a vital role in the service design. Many resources flow dynamically among diverse actors by the umbrella's canopy. The canopy represents a resource that flows through various actor characteristics, and stretchers are technologies that facilitate the upper group of the pyramid. Therefore, the objective of Inclusive Service Design is to solve the difficulty below the top. At the same time, assistive technology can address the specific needs of people at the top of the pyramid. As Waller et al. (2015) explain, Inclusive Design cannot respond to the entire population's needs by designing a single product or service. (Huan, Arvola, & Holmlid, 2020)

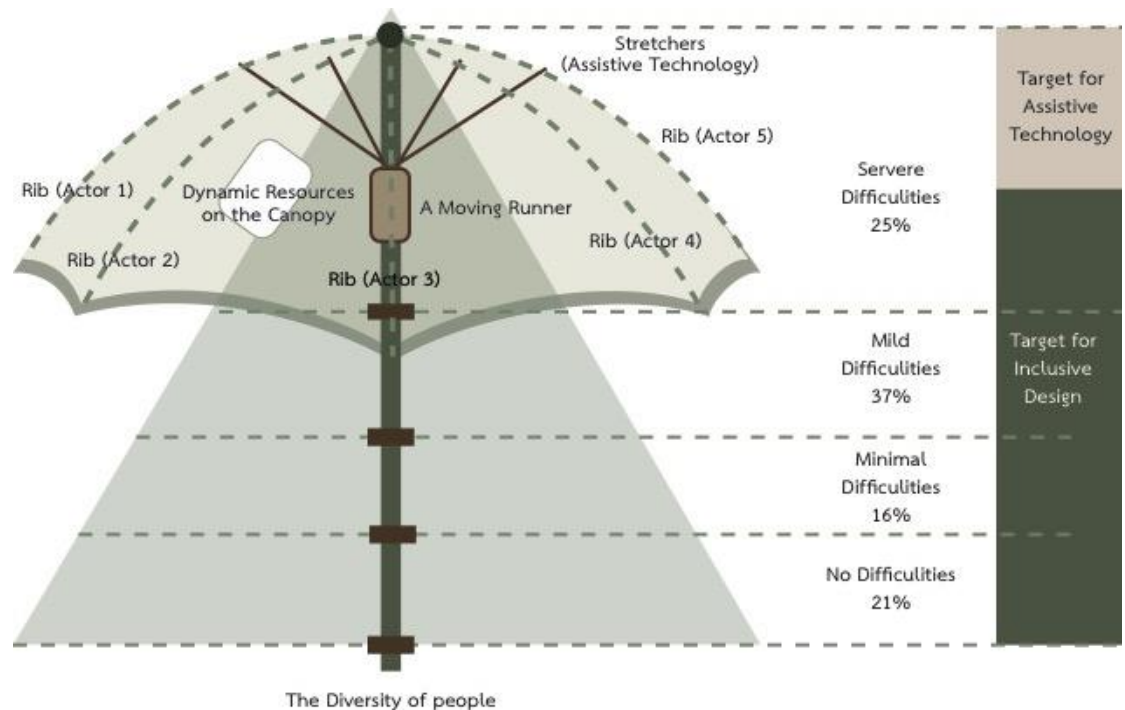


Figure 20 An umbellar model based on based pyramid form

Source: (Hosking et al., 2010)

Researchers believe that Inclusive Service Design affects a wide range of people involved with various public and private agencies. Policy criteria and frameworks are often considered to support or be linked by such services. There are seven aspects of the policy criteria, and the policy framework consists of 6 aspects (Boossabong & Chamchong, 2020) as follows:

Policy criteria

1. Equality means creating a policy that considers equality and reduces inequality in 7 areas, namely reducing inequalities in politics, economy, society, culture, environment, space, and knowledge.

2. Equity is to support what each group needs to receive. This is not necessarily equal depending on the context and situation the group was impacted

by, such as vulnerable groups or a group that encountered a disaster must be taken into account first.

3. Justice should play a significant part in creating justice and eliminating injustice. It means prioritizing assisting someone first as reason and a source provided.

4. Ethics holds the principles ready to be audited, honest, and transparent without conflicts of interest.

5. Sustainability is the significance of living life and long-term sustainable development for recipients to be self-reliant. It needs to be harmful to health, society, and the environment.

6. Human right is to respect, protect and promote the rights and freedoms of all. Therefore, do not discriminate on race, language, religion, skin color, ability, or status.

7. Democratic values in democratic systems may need further development, but it is considered a value that cannot be ignored—meaningful participation in which opinions and consultations are held.

Inclusive Policy Design Framework from UNESCO, various dimensions must be taken into account (Boosabong & Chamchong, 2020); Multidimensional, Rational, Intersecting risks and drivers, Dynamic, Multi-layered contextual, and participation.

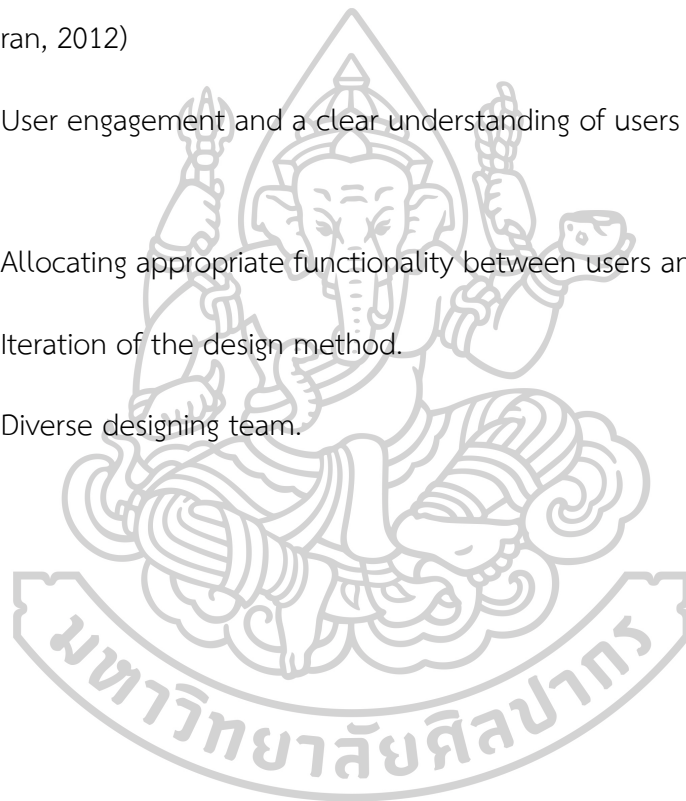
5.2 User Center Design (UCD)

User Center Design (UCD) focuses on the user and operations first. The primary key is to determine the propriety of the relationship between the end-users, system operation, and maintenance. Human design principles are based on the user's psychological and physical requirements. However, it does not focus on the system's functionality in areas users do not experience. UCD is also used as an agile solution and iteration that enables end-users, stakeholders, and operational leaders to design

products and services to interact with humanity. The validity of the hypothesis is tested by using a rapid prototyping process, getting feedback, and iterating, fixing, and improving that to make the design suitable for the user's actual needs. (Cowen, Lemon, & Gill-Hesselgrave, 2014)

ISO 13407 outlines four human-centered design activities: needs gathering, needs identification, design, and evaluation. Like ISO 1999, UCD is an iterative process, shown in Figure 20: Identify four critical principles as follows: (Devi, Sen, & Hemachandran, 2012)

- 1) User engagement and a clear understanding of users and their actual needs.
- 2) Allocating appropriate functionality between users and systems.
- 3) Iteration of the design method.
- 4) Diverse designing team.



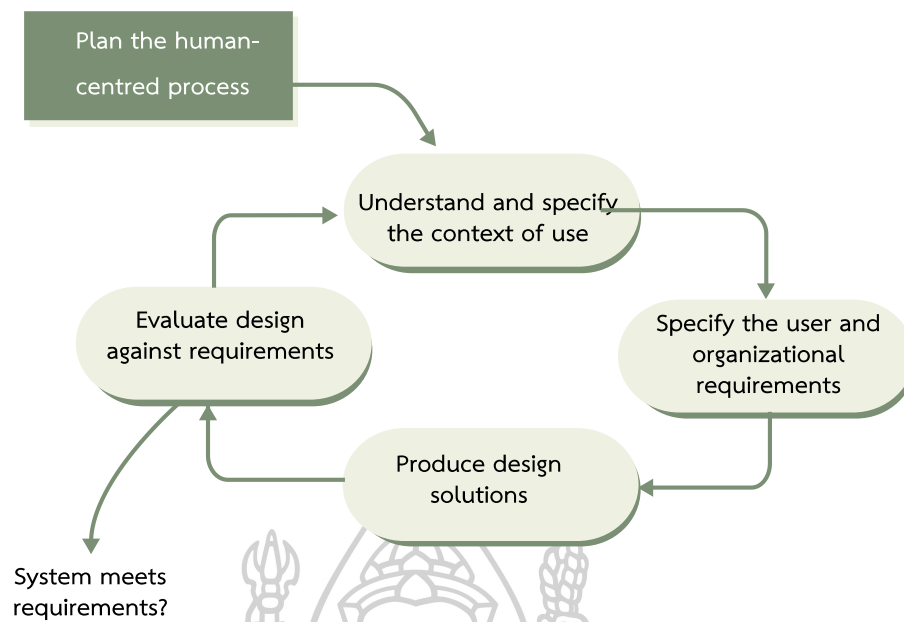


Figure 21 User-centered design process

Source: (Devi et al., 2012)

However, this process requires the user to participate in each step. There are several methods, such as empirical, Inspection, inquiry, profiling, test, participatory design, walkthrough, Expert Review, and Heuristic Evaluation, as shown in Figure 21. These methods are grouped based on 1) Based on the data gathered with direct interaction with the end-user, 2) Based on user requirements, design, and implementation 3) and functional dependencies such as Tool Support and Designer/Expert Skills. Designers can select the appropriate method according to the nature of the work. (Devi et al. 2012)

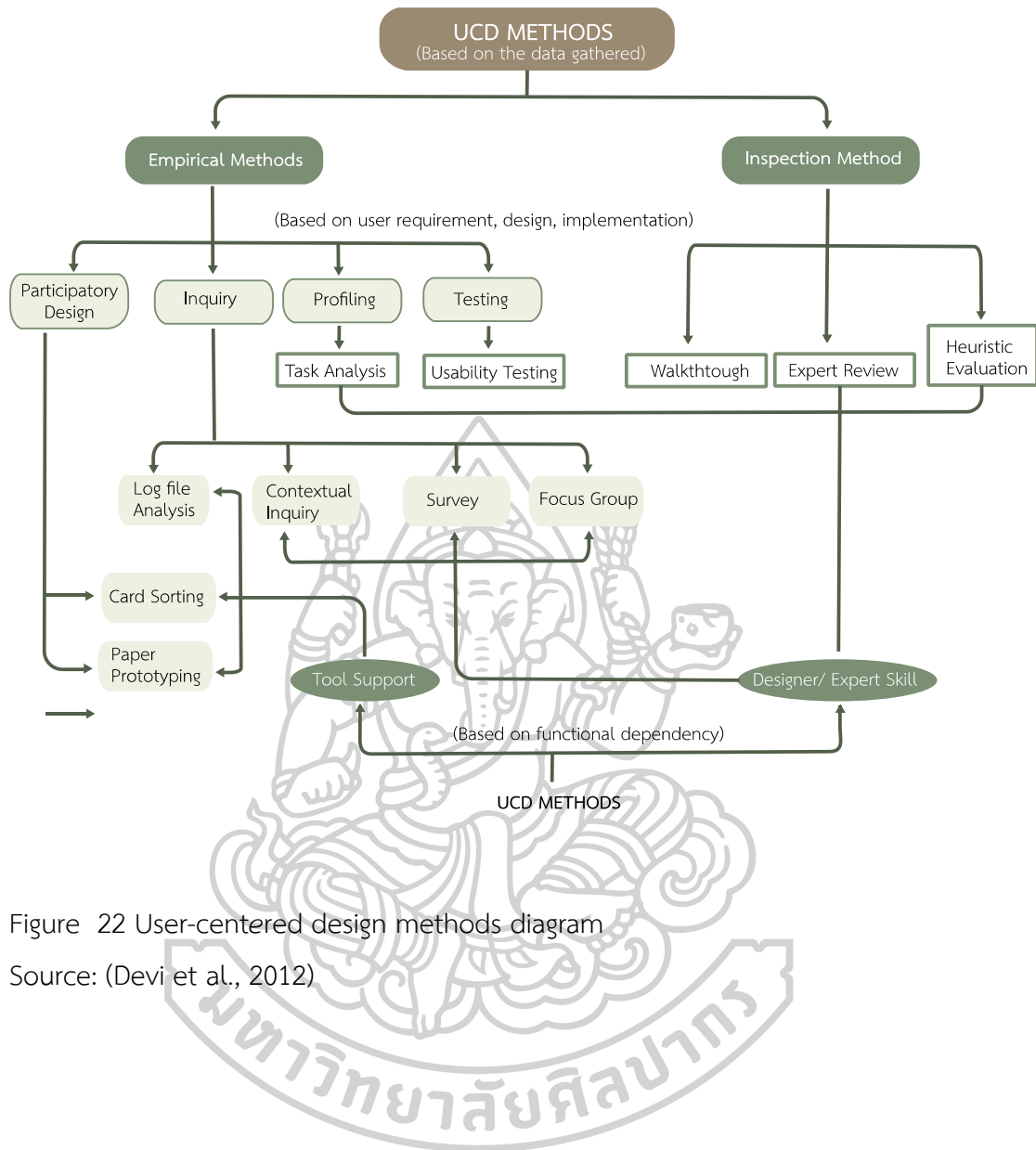


Figure 22 User-centered design methods diagram

Source: (Devi et al., 2012)

Chapter 3

Research Methodology

To solve these problems with the elderly issues, ones would have adopted several formats and methods. Being an older person with active aging comprises many factors and dimensions. Even the criteria used to measure the effects of being a perfect older person must have multifaceted components such as health, social participation, and security aspects. (World Health Organization, 2002) Furthermore, Thailand has also developed and added indicators enabling the environment index, which is an indicator that is suitable for its social conditioning factor of the country. (National Statistical Office, n.d.) Research studies on elderly issues both globally and nationally showed that the method used in the research was considered mixed methods. Therefore, the researcher also applies this approach in the current study. The objectives of this research are: 1) To explore the current situation and characteristics of the elderly club in Bang Khun Thian Geriatric Hospital; 2) To analyze the correlation of requirements between its members and the elderly club by applying service design to enhance participation in the elderly club in Bang Khun Thian Geriatric Hospital, and 3) To create an appropriate guideline or strategy to enhance participation of members in the elderly club of Bang Khun Thian Geriatric Hospital.

1. Research Methodology Approach

This research aimed to study an in-depth understanding of the participation situation of the Bang Khun Thian Elderly Club and encourage more members to participate. After that, the elders develop into volunteering, leading to active aging and benefiting society. This research uses Qualitative Research (QR) as an approach to collect primary and secondary data in parallel with Participatory Action Research (PAR) under the design thinking process that focuses on the design from the accurate

understanding of users until the researcher can come up with the concept and deliver a solution (Guidebook) to be used as a pilot to achieve valuable and sustainable participation of the Bang Khun Thian Elderly Club.

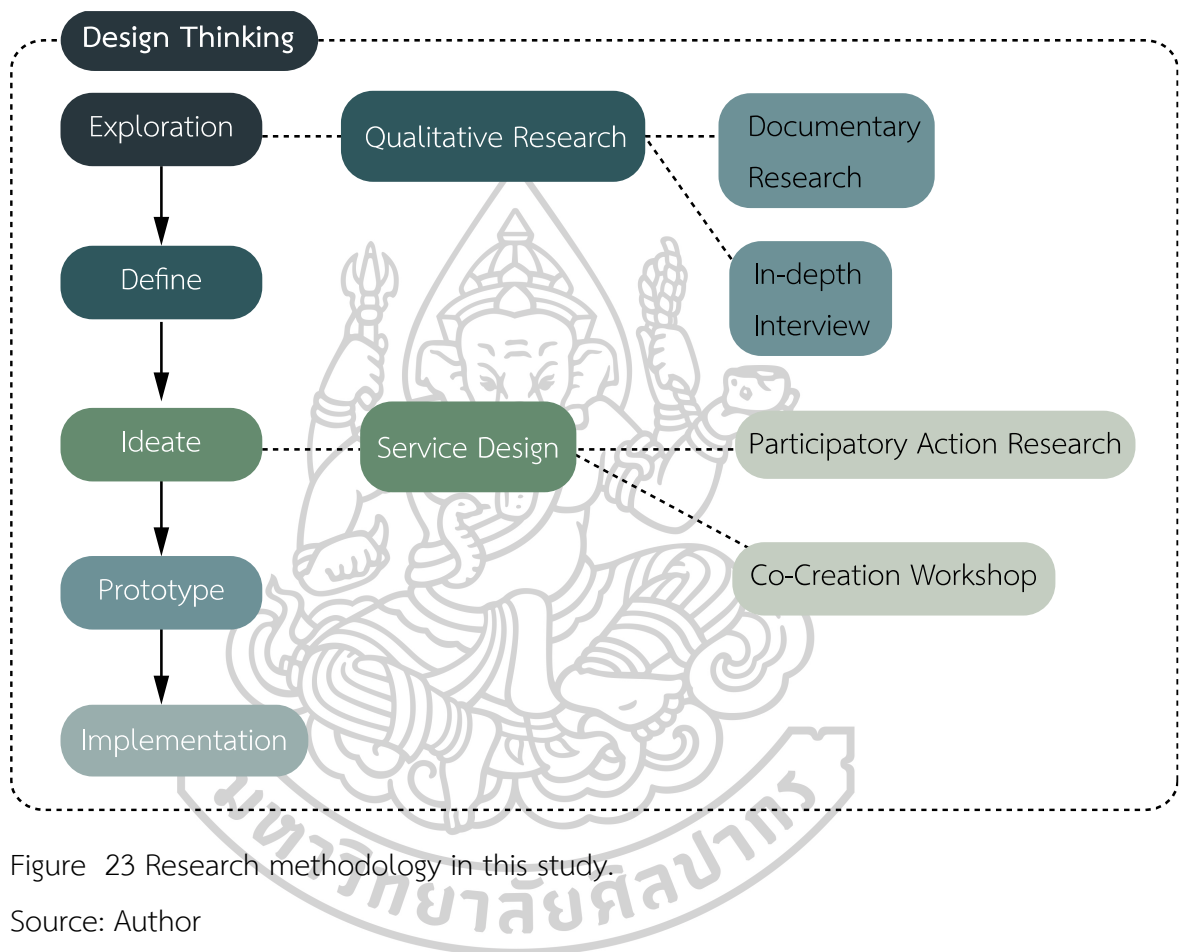


Figure 23 Research methodology in this study.

Source: Author

1.1 Qualitative research

Qualitative research is research on human and social complexity. The information obtained will relate to feelings, values, ideology, social context, culture, and relationships. The researcher must be the one who interprets and analyzes these data. (Bhurisarn, 2013)

The collection of qualitative research data in this study focuses on a particular target group. The data is an insight to get information on many aspects to understand behavior, culture, environment, operations, processes, feelings, concepts, experiences, duties, and relationships in the club to look for real problems and needs to further research. The study will first divide the data collection into secondary data from the document and seek primary empirical data from in-depth interviews and observation.

The data study from the document is meant to study the annual report for the past 2-3 years of the Bang Khun Thian Geriatric Hospital and case studies on older adults who are volunteers in Thailand and overseas under different contexts and as individuals to look for connections and common points to create hypotheses and boundaries for further compiling of other information in this study.

The data study from in-depth interviews with experts, service providers, operators, and members of the elderly club, by this means, provides information on experiences, thoughts, feelings, attitudes, and connotations. During the interview, there will be an understanding of the context through observation which cannot be understood from the documents. This method is flexible from the hypothesis set because during the data collection, and there will be critical additional issues or problems that can be used to adjust the assumptions.

The qualitative research implementation of this study has a guideline, as shown in Figure 24.

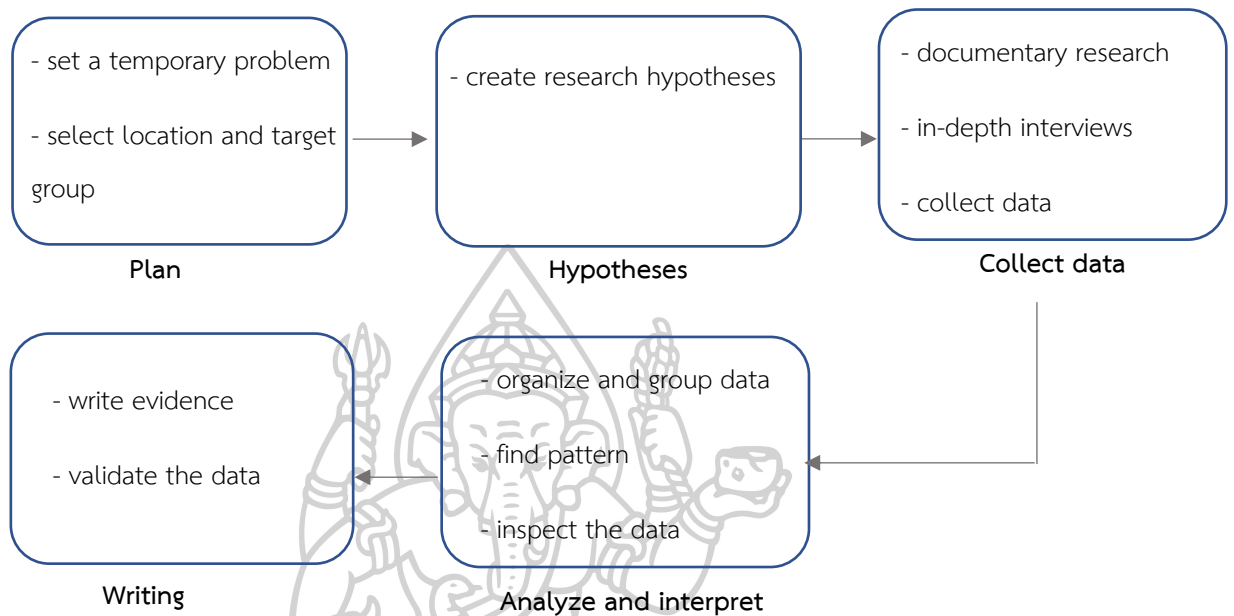


Figure 24 Qualitative research in this study.

Source: Author

1.2 Participatory action research

Participatory action research is a research model that comes from the integration of action research and participatory research. In the process of this research, the role of the affected target group will be changed to be a research participant to try to understand the problem with researchers, experts, and other stakeholders, including finding solutions, improving, developing, implementing, and contemplating work together until becoming new knowledge to bring about changes. The cyclical and spiral processes of participatory action research, as shown in Figure 25.

1. Systematizing experience: Collectively organizing and validating experience

2. Analyzing and problematizing: Collectively analyzing and reflecting on patterns, problems, causes, and theories.
3. Contemplating on and choosing action: Considering alternative courses of action and identifying action
4. Taking and evaluating action: Acting and reviewing the course and consequences of motion and change
5. Systematizing learning: Organizing, validating, and sharing new knowledge

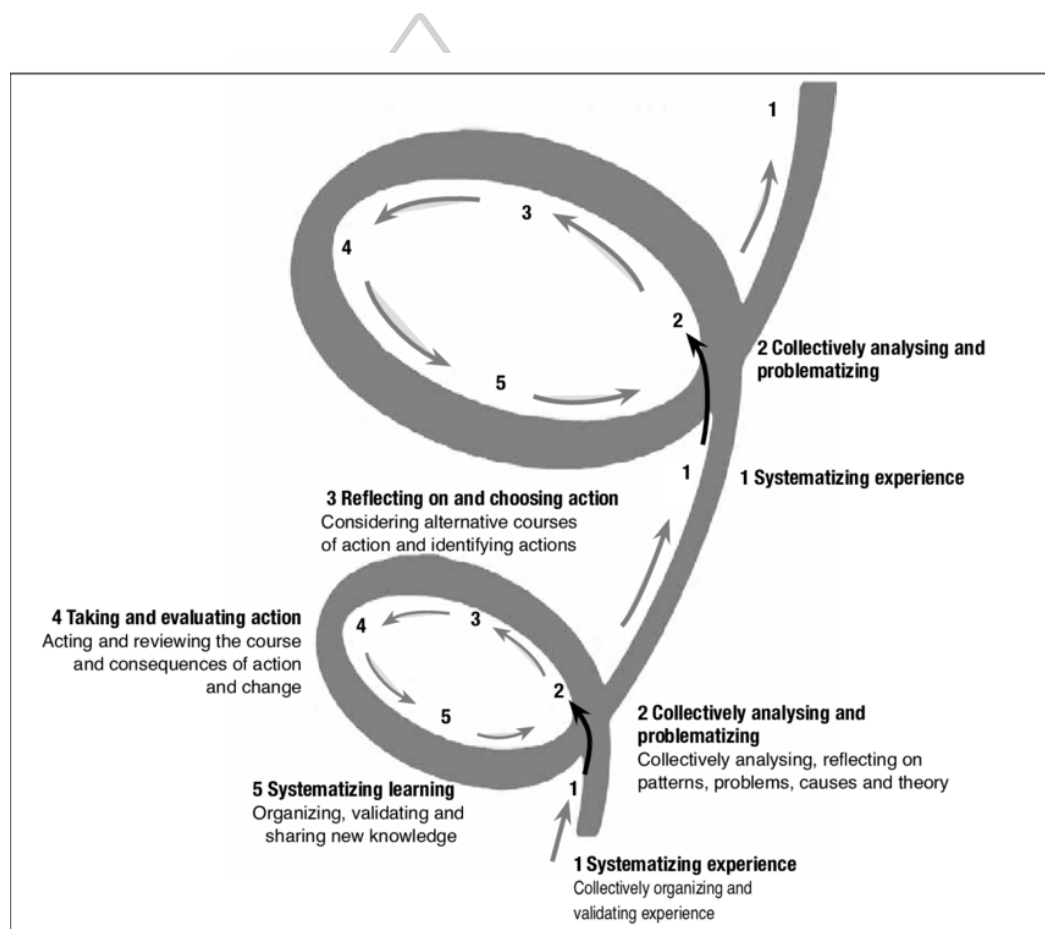


Figure 25 The cyclical and spiral process of participatory action research.

Source: (Loewenson, Laurell, Hogstedt, D'Ambruso, & Shroff, 2014)

1.3 Design Thinking and Service Design

Initially, the design was used to design products and services to enable new tasks and product development. And business competition. From then on, the design was used more in implementing the project, and the design thinking approach was initiated. Design thinking is a way of approaching problems and managing them. Design thinking helps designers to examine and see the real problem, which is an essential part of determining the direction of the solution. Correct design thinking is widely accepted both in academics and business.(Dunne, Martin, & Rotman, n.d.)

Design Thinking became more widely known when it was published in the 2008 Harvard Business Review by David Kelly, Tim Brown, and Roger Martin; which describes the human-centered design and focuses on the collaboration of those involved in creating creative ideas that can be used to solve complex problems in every field of work. When it comes to Design Thinking, it means creative thinking to design from a different perspective. It also includes the needs Inquiring of being human, working together as a team with integrated science, which combines design developments from the past. (Israsaena Na Ayudhaya & Trirattanaphan, n.d.)

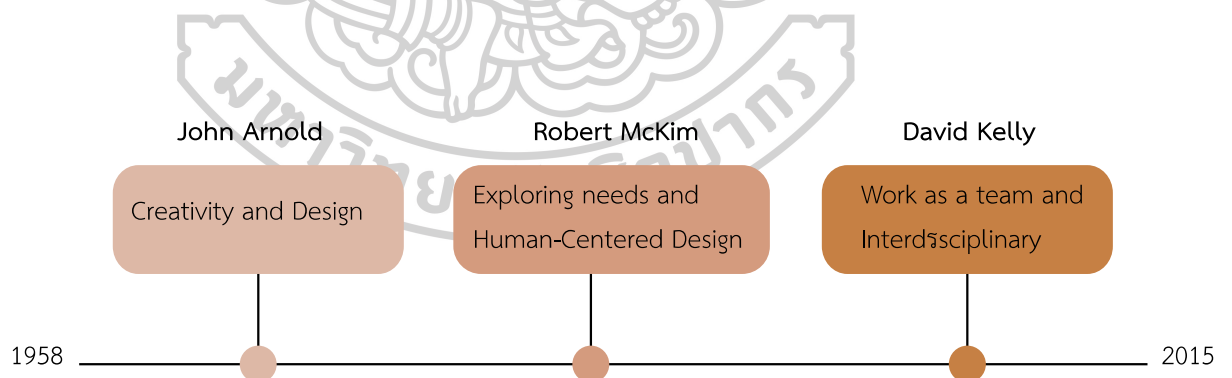


Figure 26 Evolution from Product Design Science to Design Thinking at Stanford University.

Source: (Israsaena Na Ayudhaya & Trirattanaphan, n.d.)

Therefore, in this research, which aims to solve the problem of participation of members of the elderly club to promote the potential of the elderly (Active Aging), the researcher has chosen the science of Design Thinking that is suitable as a guideline design. Because there is an accurate understanding of human needs, that is, the elderly and those who work in the clubs.

This target group is specific and must understand the nature of the individual character. The physical, mental, and environmental constraints encountered and desires would differ from those of working age groups and children in society. Therefore, the general design cannot truly reach its target audience, and there is a risk that the design will be wasted. In addition, the Design Thinking process involves working together as a team of people involved in the design. Therefore, you will get a variety of perspectives to see the problem in many aspects, both vertically and horizontally

This would be different from the design that comes from a single designer. The designed outcomes are more likely to apply to the correct problem consistently. And the workers are ready to adapt to achieve the goals they are involved in designing. The designers, therefore, emphasize participatory action research (PAR) studies, which are part of Design Thinking. PARs focus on education that transforms the target audience into co-investigators and collectively express opinions. This is due to the nature of the work of the elderly club is solely a service. Therefore, it is appropriate to apply the principles and tools of Service Design together with an emphasis on understanding the wishes of service providers, service recipients, and stakeholders through experience and processes that interact with each other to develop services for participation in the club.

2. Process of the research

The design Thinking Process was used in this study to focus on identifying the needs and problems of the users and iterating the process to get the real needs and bring the data to analysis step by step. And return to study again until obtaining the research results. This research was initiated from the study of secondary data and a case study of volunteerism resulting in a set of problem hypotheses. Then apply the Empathy process by conducting in-depth interviews and observing the context of the venue as its primary data. The result is an organized dataset such as Personas, Journey Map and Empathy Map. This data set will be for problem defining (Define), brainstorming ideas for solutions (Ideation), creating prototypes or guidelines, and receiving suggestions (Prototype). After that, deliver the work from the analysis and summarize the results in a format that the researchers designed (Implementation) through participative action research. The researcher has chosen the model of Double Diagram Model to apply under the principles of Service Design and use the Co-Creative Workshop method of working with the target group.

This can be seen in Figure 27 as the Double diamond diagram model that has two sets of enlarged and narrowed steps. The expanded part is to find information or concepts that focus quantitatively to get as much information as possible, called Divergent. Then the data will be analyzed and selected under the available resources or suitability from consideration of the workshop participants, which will use reasons to support together with the Convergent step. Each step will continue to alternate according to the process shown in Figure 27.

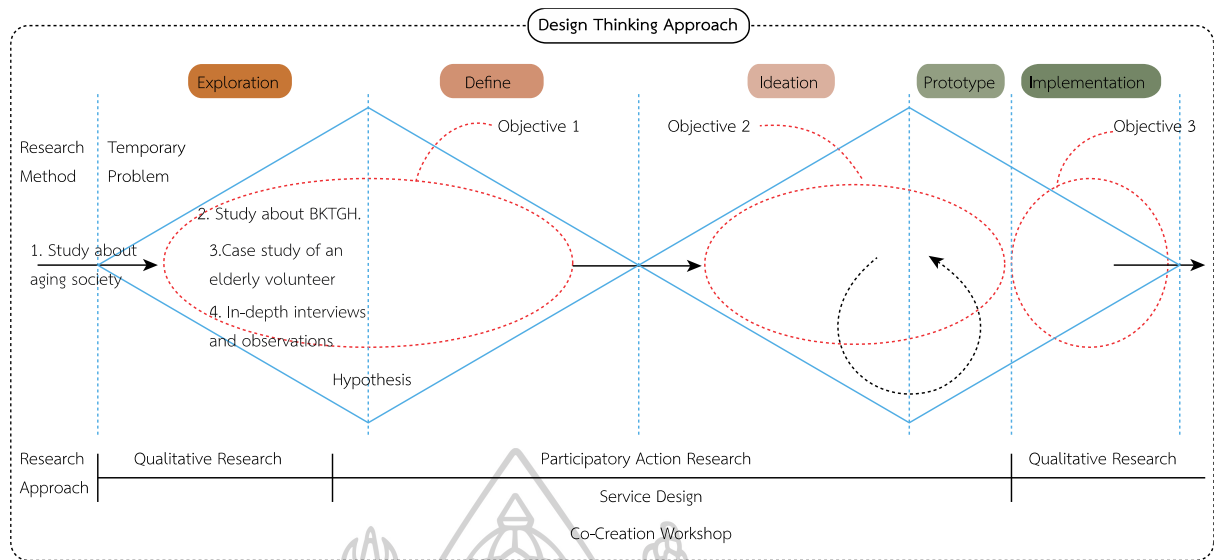


Figure 27 Process of the research in this study.

Source: Author

2.1 Stage 1

The first stage of the research used a qualitative approach as a guideline for implementation. It collects information from documents and personal information, as shown in Fig 28. Information regarding the study area and information on volunteering for the elderly. The personal data was interviewed with four members of the aging club and three hospital staff doctors, nurses, and radiologists. The purpose of collecting each part of the information is as follows:

1. Study of documents Information about the elderly is a study of the situation of the elderly both in Thailand and abroad. Policies and activities that the government and private sectors support the well-being, way of life, and various aspects of the power of the elderly both in Thailand and abroad. To capture the problems that arise as a precursor, However, there may be more than one problem that catches the issue, so we need to find more information for further study. The researcher must analyze which problems are the main problems in that area at that time and the target audience is affected.

2. Information about the selected area of study (Elderly Club, Bang Khun Thian Geriatric Hospital) is information about the purpose of setting up the club. Past performance organized activities number of participants, many members, budget, staff in charge. The researcher conducted a preliminary study from the operation report of Bang Khun Thian Geriatric Hospital for the past 2-3 years to study the context and analyze the data in connection with the initial problem.
3. Data from a case study of elderly volunteers both in Thailand and abroad This is to capture the factors that make the volunteers carry out such activities continuously, sustainably, and see their self-worth. And study the problems and obstacles that the volunteers face. The study of the data in this section brings various issues to find links in the hypothesis of factors affecting the problems set out above. And as a guideline for the study of personal information in the next step.
4. Personal data is in-depth interviews and observations of club members and staff involved, which consists of the elderly members of the club and three staff members to gain an in-depth understanding of the work process, experiences, needs, problems, and obstacles, and observe the mood and gestures during the interview when the interviewer takes to various matters. To collect data and then analyze into situation or needs of the elderly club.

The sample group that is a member of the Elderly Club consists of

1. Mr. Prasert Thaworncharoenwong (61 years old), Club President
2. Mrs. Angkhana Pinthong (60 years old) Treasurer
3. Mrs. Jamphi Chasamrong (56 years old) Club director of the team
4. Mr. Kampol Sanaedussadee (58 years old), Club director of the team

These four parts of the data will be collected, grouped, separated, analyzed, and used to determine the problem of the selected area from the target group or user (Define).

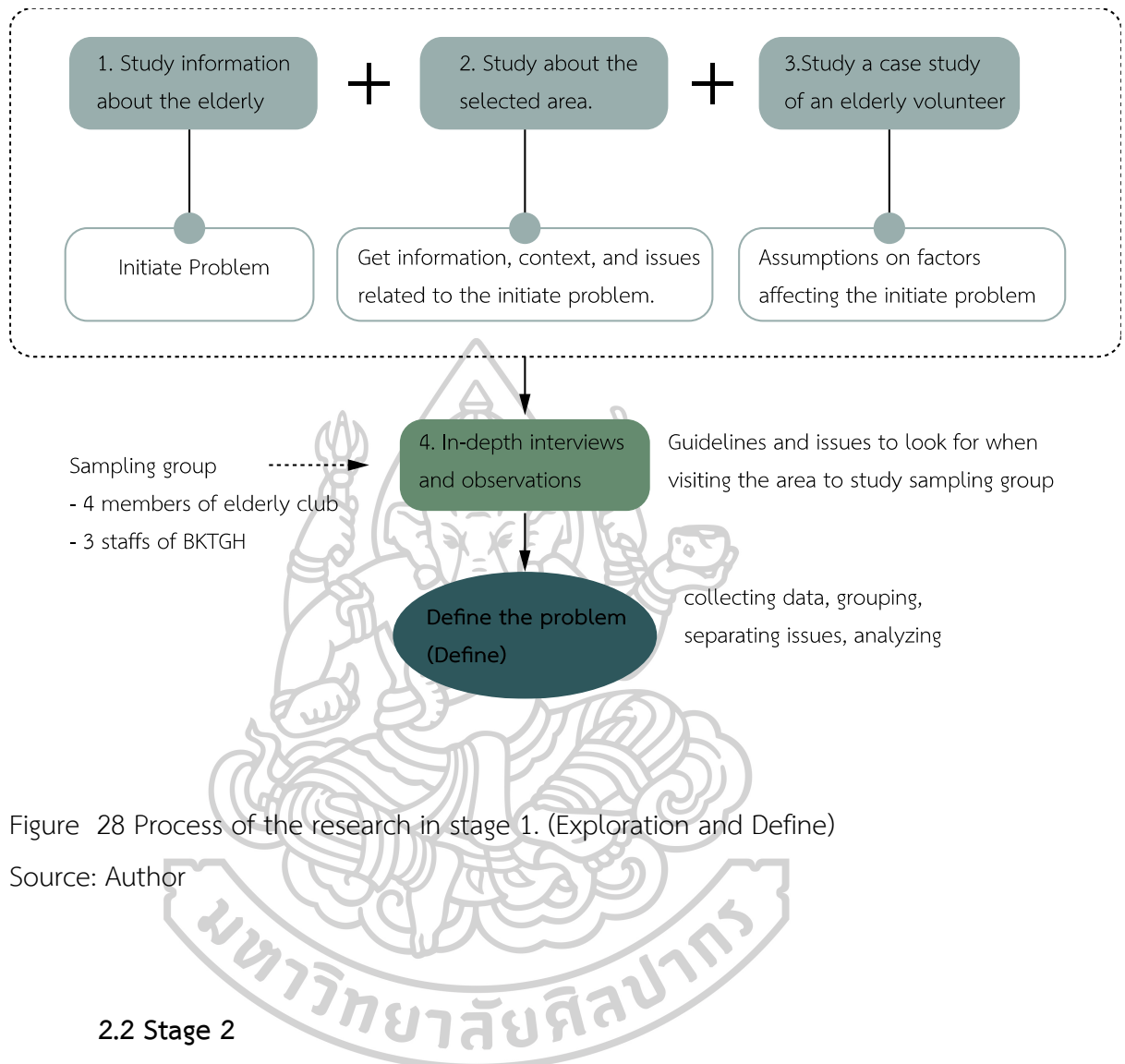


Figure 28 Process of the research in stage 1. (Exploration and Define)

Source: Author

2.2 Stage 2

The second stage of the research was to apply the design thinking approach as a guideline for the study. This is a human-centered approach to design to solve complex problems or find creative solutions. This research was the design of services in the elderly club in Bang Khun Thian Elderly Hospital. The operation process starts by using the results obtained from objective one as a starting problem. to conduct a service design study using the form of participatory action research, a method that emphasizes the involvement of stakeholders to create a model approach based on shared opinions through Co-creation Workshops. The data collection focuses on those who directly operate in the club. Experienced working with members

continuously until see the working process be a listener of obstacles talked to members of the club, both those who participated in continuous and non-continuous activities. The researcher is called an expert in operation consisting of

1. Mr. Phuriwaj Akraponkrailert (MD.) Head of Geriatric Medical Center, Bang Khun Thian Geriatric Hospital
2. Mrs. Sakulna Khaopoom (Radiologist), Club Operator, delegated to the operator of the Elderly Club since the club was established.
3. Mrs. Aphinya Boonpheng (Registered Nurse) Club Operator

All three are representatives of the hospital and are responsible for the operation of the club, planning and organizing activities, and taking care of convenience, including being a coordinator between the elderly club from other hospitals in the network of hospitals under the provision of Bangkok Metropolitan Administration.

Stage 2, is the Ideation stage and the Prototype will be repeated through individual feedback. And they were brainstorming together again, as shown in Figure 3.7. Since each person has an idea from the problem that he sees from different angles, the researcher, therefore, gives freedom to express the opinions of each individual individually. The objective is to provide insights such as the club's vision and expectations. Projects with guidelines but not yet realized Projects that have been discontinued Obstacles that may be uncomfortable when expressing opinions together or different personalities, for example, some people are good at communicating, some of them may be quieter when sharing their views. This autonomy approach was, therefore, the first step in the researcher's view that it was appropriate in the context of small groups of staff directly involved because the researcher was able to spend time talking to each individual. However, the results from the first objective, various information, and experiences of each person will be used as a topic or issue in bringing the Co-creation Workshop activity again through the researcher, who has separated the problems so that the commentators can

express their opinions together on each issue completely or can add issues to build upon each other's ideas. Then, ideas can be grouped, chosen ideas or even ideas can be applied together in order to obtain a final model approach that is mutually agreed upon, the researcher then takes the information and the idea to analyze again to compile—design guidelines in a way that can be used and communicated together.

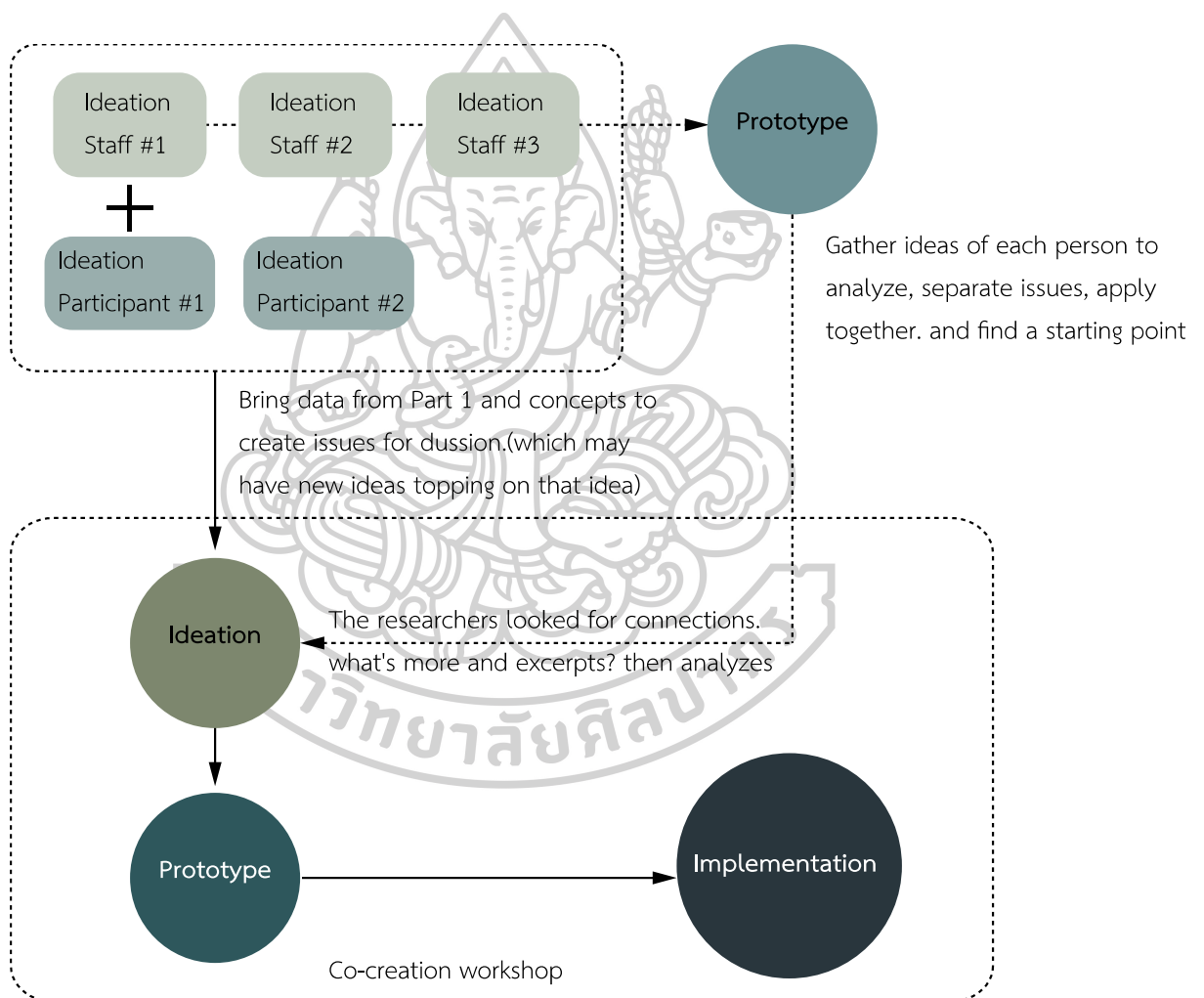


Figure 29 Process of the research in stage 2. (Ideation, Prototype, and Implementation)

Source: Author

3. Research Methodology: In Approach of Qualitative Research Process and Service Design Process

The research methodology of this research is collaborative and is a continuation of both the Qualitative Research and the Service Design process, which are core concepts of Design thinking. To find answers to each objective, it could be divided into two stages based on the principle of approach categorization, i.e., stage 1 into determining the solution to the first objective; the qualitative research approach was used to find answers because the desired data are the text, content, context, and specific story. This is the collection of data from a small data source that is the primary source, including documents researching that are secondary sources, including annual reports, articles, research papers, and information on the internet related to this research, which is characterized by presenting information in a descriptive form. After that, the second stage is to find answers to objectives 2 and 3 that use a service design approach cause the desired result is a service design guideline and principles of operation of the elderly club that wants members to participate in the club.

3.1 Research Methodology of State 1: Qualitative Research in Design Thinking Process

1. Exploration

Goal

Exploration is a process that requires studying and collecting data from research, articles, case studies, and documentary information relevant to this research and getting information directly from the target group to gain insights. There is a piece of exhaustive and comprehensive information until it can be considered a form connection and analyzed next.

Method

Documentary Research

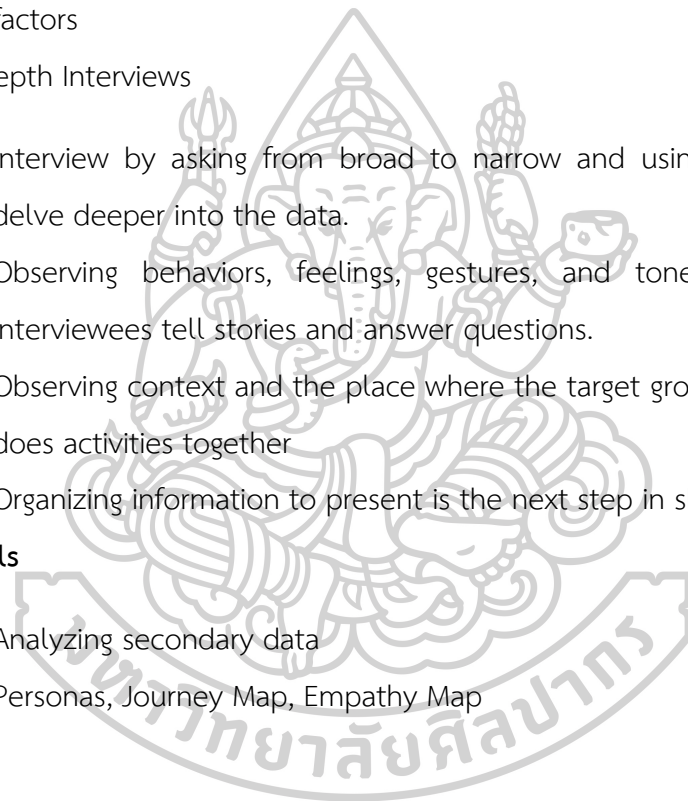
- Studying the information of the Bang Khun Thian Elderly Club from the annual report for the past 2-3 years to obtain preliminary data and points of interest or matters that are not yet clear and need additional information
- Studying both domestically and internationally on the participation of the elderly volunteering to look for patterns of connection and success factors

In-depth Interviews

- Interview by asking from broad to narrow and using why questions to delve deeper into the data.
- Observing behaviors, feelings, gestures, and tone of voice as the interviewees tell stories and answer questions.
- Observing context and the place where the target group uses to work and does activities together
- Organizing information to present is the next step in sharing opinions.

Tools

- Analyzing secondary data
- Personas, Journey Map, Empathy Map



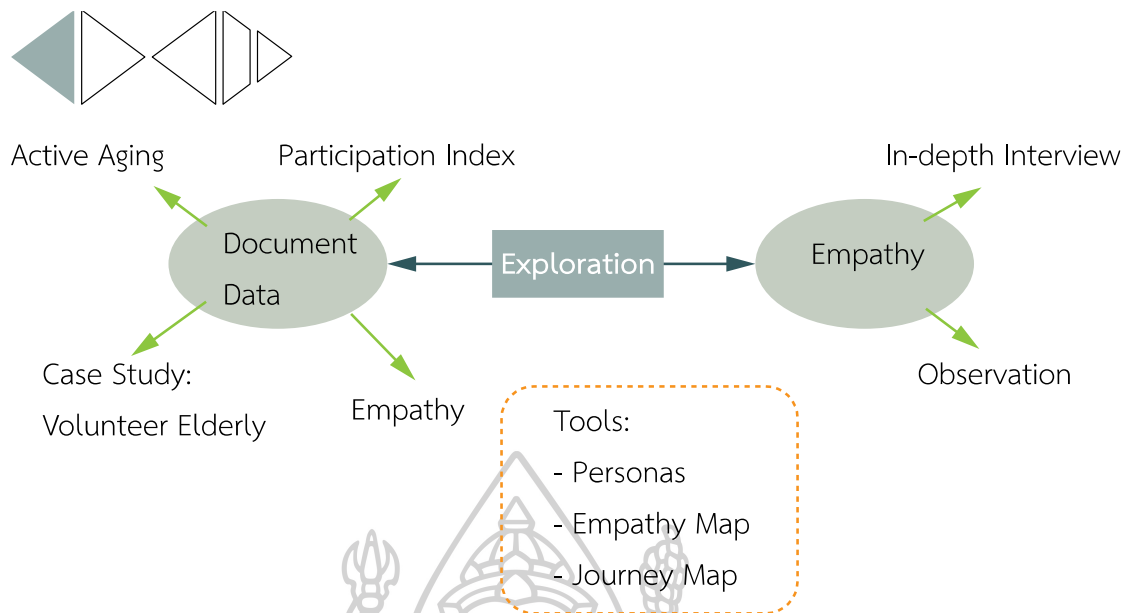


Figure 30 Exploration.

Source: Author

2. Define

Goal

This process is essential to verify the actual needs of the target group because people cannot directly identify what they want. Therefore, in interpreting survey data and understanding club members, staff, and experts, the researcher needs to take a variety of perspectives before stating an apparent problem according to the purpose of the work to determine the direction of research operations.

Method

Define method explores data to analyze three aspects: 1) target group, 2) needs, and 3) Insight that has gained in-depth understanding. 1) Analyzing the target group, the context of this group must be identified. 2) needs are to identify the target group's needs that come from what they want or do not want to do (Gain/Pain Point) that should be stated as a verb to make it more straightforward than a noun. 3)

Insight is about identifying a proper understanding of the target group's wants, which should consider feelings and reasons. This way, a wide variety of information can be organized into ideas.

Tools

- Point of View (POV)
- How might we...?

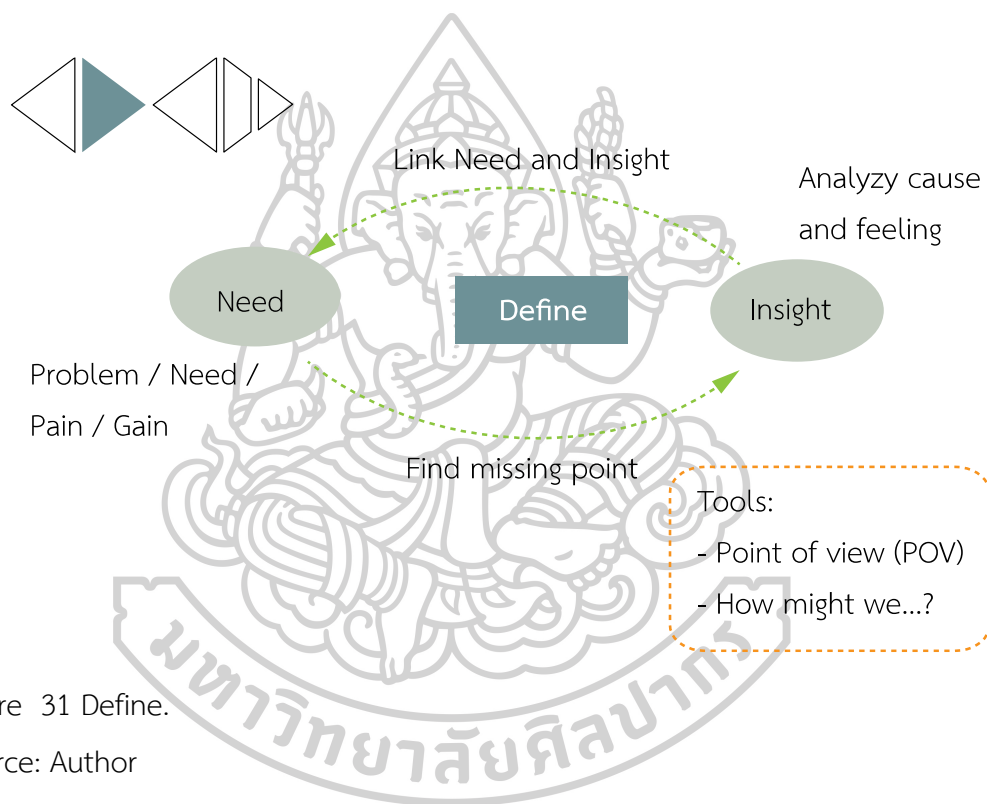


Figure 31 Define.

Source: Author

3.2 Research Methodology of State 2: Service Design Research in Design Thinking Process

3. Ideate

Goal

The goal of the Ideate process is to collectively create ideas and help develop the opinions of others by expressing that these ideas should come from various perspectives. Then jointly choose a solution without selecting a single solution. Instead, they bring different solutions to connect, integrate and analyze the possibilities.

Method

This step encourages participants to express their opinions freely and in the most significant amount, regardless of the possibilities during the brainstorming session, as some extreme or unusual ideas can spark and reinforce the other views. Therefore, a method to keep participants open-minded and unbiased would require examples and various tools. Limiting the time spent on each instrument will make the participants more active. For the ideal selection stage, a voting and commentary method was required for the top three/five highly rated ideas to bring the concepts to be connected and analyzed as a final solution.

Tools

- Idea generation (Divergent): "Yes, and..." questions, create a Touchpoint Card/Idea Card, create a Constraint and The Analogues Tool
- Idea selection (Convergent): QBD (Quick, Breakthrough, and Delight) concept grouping, Vote and Discussion

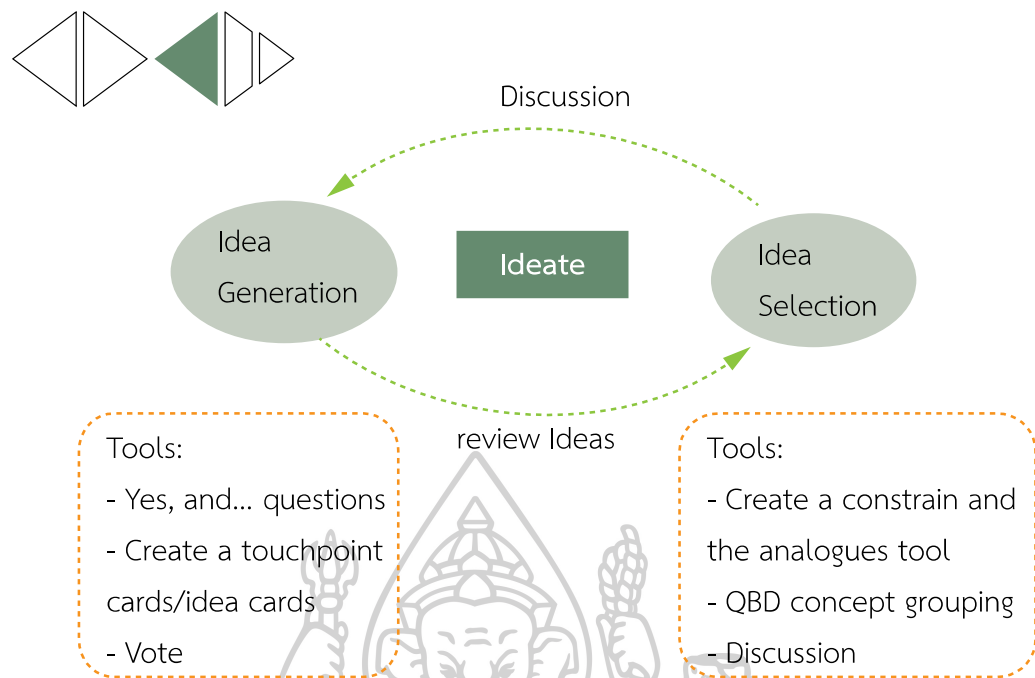


Figure 32 Ideate.

Source: Author

4. Prototype

Goal

This process in this study aims to bring solution concepts to create a tangible (Prototype). It is evident in use and can be presented to the target group to have a shared experience under the joint design of the researcher, expert, service provider, or staff and bring this prototype to find advantages, disadvantages, and suggestions to refine and develop this prototype.

Method

The implementation process analyzes the suitability of the prototype approach, which means that you want the prototype to come out in any form, such as workpieces, models, plans, digital artifacts, and software. During the operation, the target group's needs must always be considered to define clear boundaries and

optimize time and resources. The creation of this prototype will focus on synthesizing concepts to understand easily, fast, less expense without emphasizing the aspect of beauty and complexity because of the clinging reduction to what makes it the best, which may not see the limitations of work. After that, the presentation of the prototype and more suggestions would be offered.

Tools

- Business Model Canvas and Service Blueprint
- 7P+T (People, Process, Physical Evidence, Product, Price, Place, Promotion, and Technology)

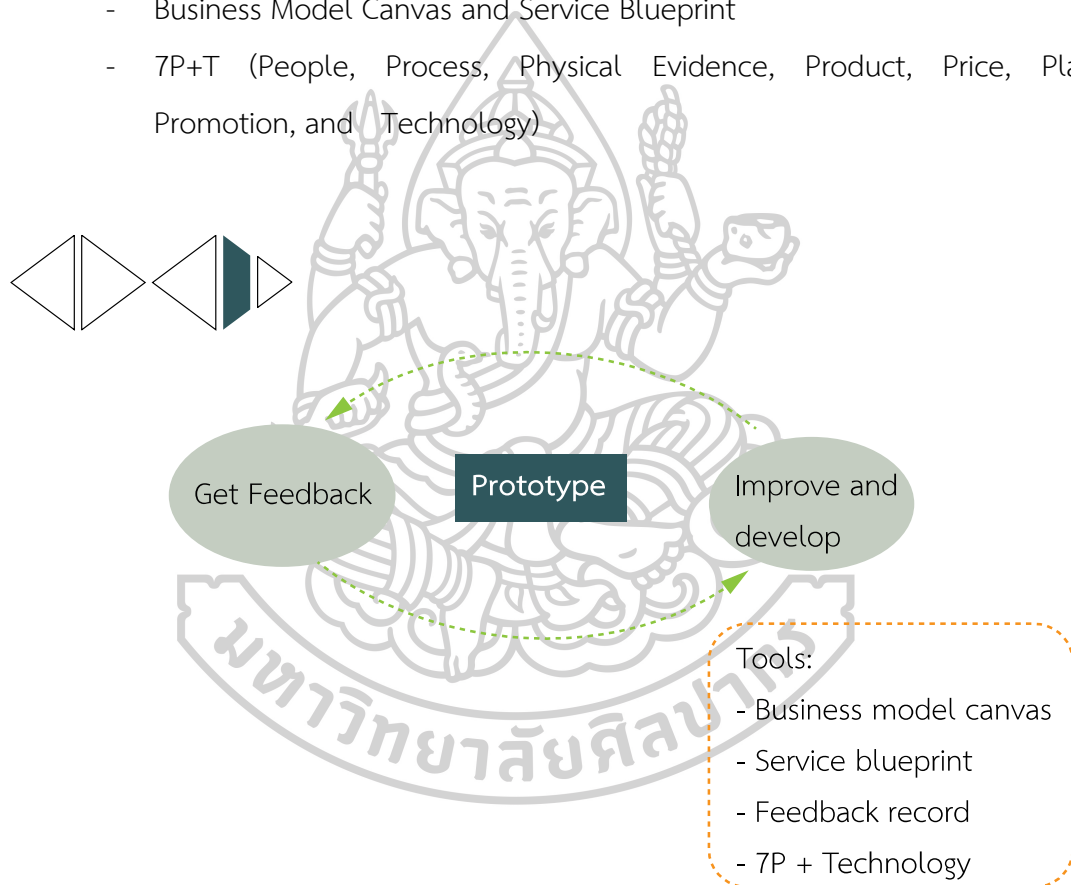


Figure 33 Prototype.

Source: Author

5. Implementation

Goal

The goal of this process is to analyze the prototype and organize the information to explain the hypothesis to the outcome in a format that is easy to understand and can be used as a pilot guideline for the Bang Khun Thian Elderly Club.

Method

The researcher is the designer of the data presentation by linking the data, validating the information, synthesizing the main issue, and compiled into a sequence of steps, easy to understand and designed to appropriate the target group who will be users. That means designers can show academic details if the user is the expert or the officer. However, if the user is an older adult with various physical and knowledge bases, designers must choose and adjust some information to understand.

Tools

- Graphic Design Diagram/Guidebook

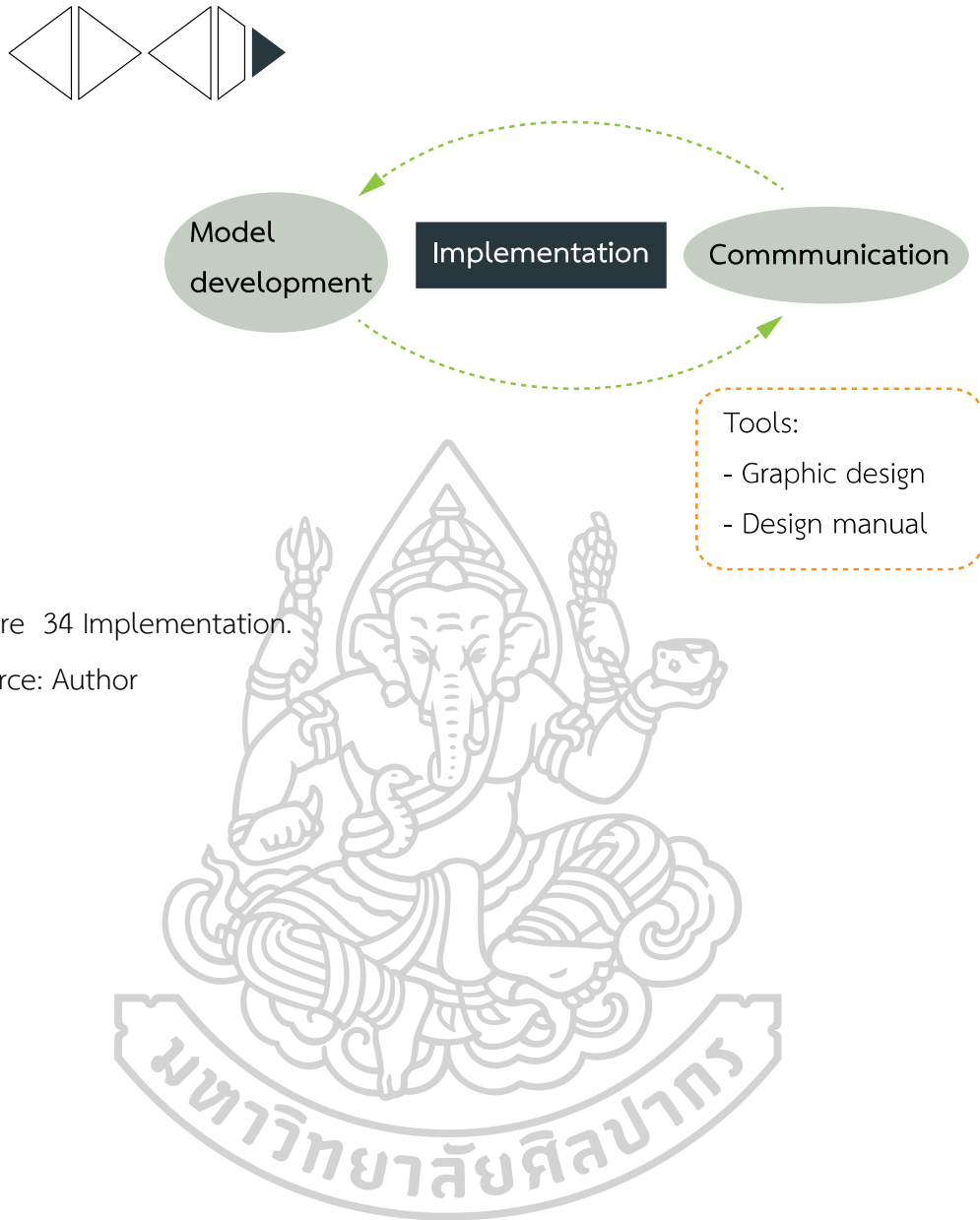


Figure 34 Implementation.

Source: Author

Chapter 4

Finding and Designing Services for Enhancing the Participation of Elderly People

This chapter presents the study's results following those described in Chapter Three. Additionally, to describe the results acquired following the dissertation's objectives. The purpose of this study is to ascertain the existing state and features of the elderly club at Bang Khun Thian Geriatric Hospital. To study the relationship between members' requirements and the elderly club via the use of service design in order to increase the elderly club's involvement in Bang Khun Thian Geriatric Hospital. To develop a guideline for increasing members of the Bang Khun Thian Geriatric Hospital's elderly club.

The research methodology's findings may be classified into two categories. The first section (Stage 1) is a qualitative analysis of the literature on senior volunteers who encourage active aging in older adults, followed by a study of Agingteer activities for the elderly and a study from the Bang Khun Thian Geriatric Hospital's Annual Report on the work of the Elderly Club.

The second part of the qualitative approach was on-site research, which included in-depth interviews with members of the elderly club and hospital personnel (doctor, radiologist, registered nurse) about the elderly club's operations and on-site observations at the hospital. Following that, the investigator evaluated the study's results. The service design workshop participants assessed and approved the correctness of the outcomes.

The conclusions in the second part (Stage 2) are the outcome of a service design workshop. The first step's analytical results would be used as a starting point for the evaluation when the researcher had finished presenting the inquiry findings. The participants then share their thoughts and ideas. Following the resolution of the difficulties in this stage, further information from the workshop was gathered,

assessed for correlation, and then put into the service design workshop until the process was completed by receiving the outcomes. This conclusion will serve as a guideline for the design of services.

1. Qualitative Research

1.1 Findings from the literature review

1.1.1 Survey of active aging research

Globally, the increasing number of older people raises awareness of the numerous older people arise, including labor shortages, travel, and any of the services necessary to sustain life, as well as problems specific to individual lives, such as financial planning, health, and mental health, that will occur in elderly living. As a result, the government and private sector have developed various strategies to address this issue. From Chapter 2, the study of activities from government actions for the elderly in the United States, Japan, and Thailand, It was found that the United States of America has an administrative advantage in that the state has the power to take action to support the elderly in their locality. And the government will mainly focus on the elderly who cannot help themselves.

As for Japan, it found that it is a country that places great importance on the problem of the increasing number of older people as it is the first affected country. The extension of working hours for the elderly and deductions for welfare benefits after retirement from the start of work support the agency set up to take care of the elderly especially and encourage the elderly to do activities in the community, both in tourist attractions and museums. As for Thailand, the support for the elderly will focus on helping by allocating the budget to the elderly's allowance. Provide primary health care budgets through local authorities. Medical treatment that uses welfare benefits of 30 baht for the activities of the elderly will be through the elderly club, where most of the local elders are the applicants. Think of activities and carry out

activities. However, no clear policy focuses on hiring the elderly and extending the retirement period.

The researcher would like to study further what issues should support the elderly to live a life of equal opportunities and enable the elderly to be vibrant and Active Aging and which topics the government agencies in Thailand still less support because it may be an issue that is not urgent but has long-term effects. Behavioral problems consisted of 1) having good health and 2) participation. (Participation) 3) having security and security (Security), and 4) the aspect conducive to Active Aging (Enabling Environmental). On the second aspect of participation, Thailand received the lowest score, especially in Bangkok. Make the researchers interested in this issue. In addition, the participation of the elderly in various activities also improved other competency aspects because participation acts as a coordinator and supporter. In addition, the study results showed that the elderly in Bangkok most often increased loneliness due to the death of their spouse. Being single from the start or their child going to work outside the area, the elderly often do various activities alone, mainly at home. They take much free time to sleep and rest, which may affect their health. Encouraging the elderly to participate in society will also benefit themselves and the community. Therefore, the potential development of the elderly who live alone with the concept of Active Aging (Wiphanun Muangsakul, 2015) must promote at the individual level, family, community, and country levels as follows:

- At the individual level, it encourages older people to self-care to be appropriate for disease and illness. Please enable them to do various activities on their own continually. There are social groups online and offline to avoid loneliness.
- Family level means family members respect the elderly who decide to live alone. Regardless of the cause of the decision and family members should visit the elderly.

- The community provides open space for activities for both the elderly and multi-age groups at the community level, enhancing capacity and income.
- The government must plan the work for all departments at the national level. There should be a concrete policy, especially in health and income.

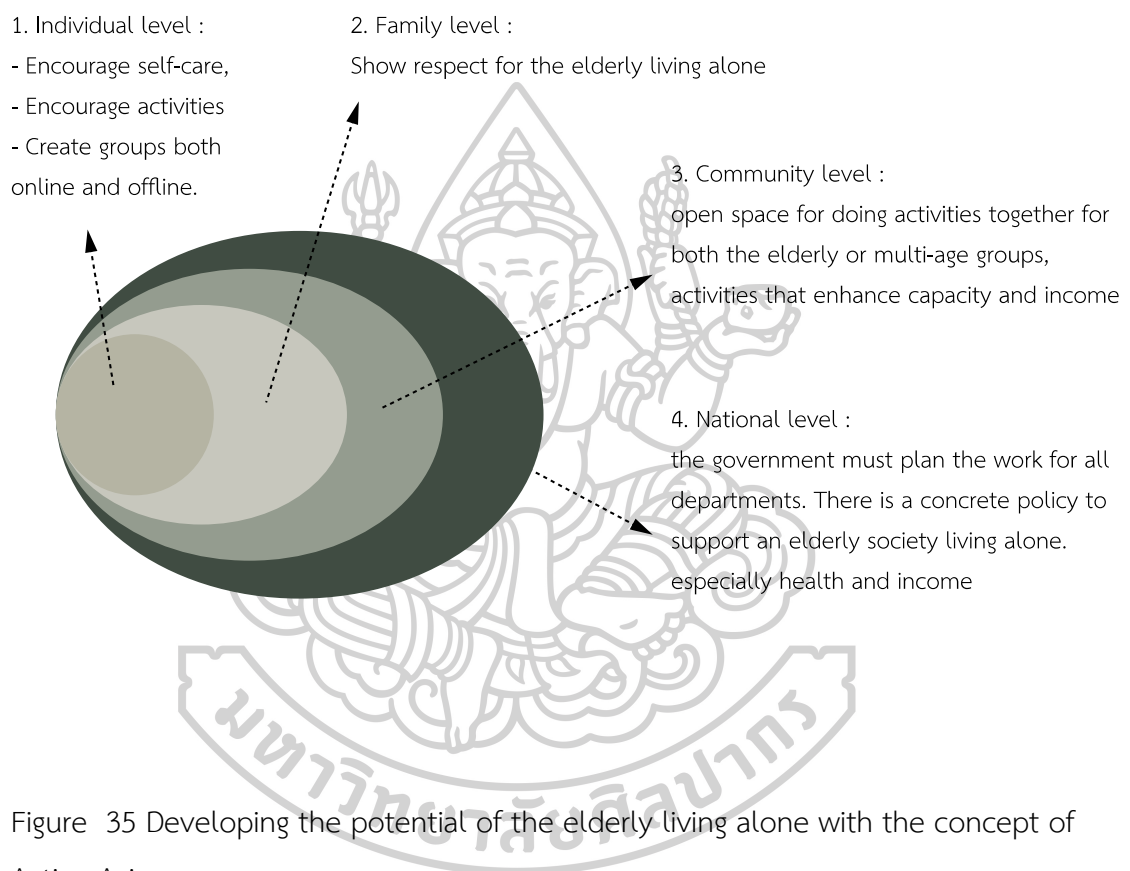


Figure 35 Developing the potential of the elderly living alone with the concept of Active Aging.

Source: (Wiphanun Muangsakul, 2015)

The literature review for the elderly who participated in the Bangkok community shows that the roles of the elderly in the society were committee members, volunteers, and facilitating health service arrangements. Moreover, public relations encourage seniors to participate in activities. The elderly prioritized activities that are beneficial to develop the body, mind, and emotions rather than focusing on

conservation activities and inheriting Thai wisdom. In terms of access to activities for the elderly, there are several factors, including (Pinij Fahamnuayphol, n.d.)

- The event organizer or service provider must demonstrate the importance of this event. It is a straightforward, easy-to-understand process, considering the constraints of resources and supporting factors such as policies, systems, and management. To create incentives for participants, including ongoing activities, there should be adjustments and development of services or actions to improve.
- Participants or service recipients will be accessible with the following factors: awareness of one's rights, public relations, and recognizing the importance of activities and the impact of one's self and constraints such as money, travel, time, and availability. Among other factors is the need to express opinions and participation in activities.

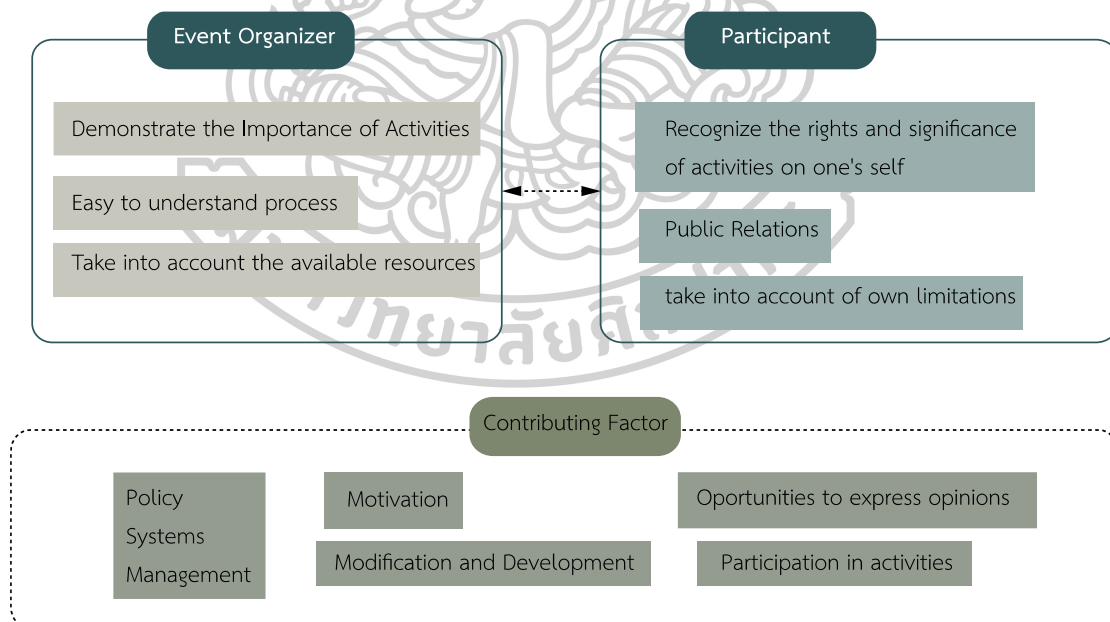


Figure 36 Factors for access to activities of the elderly.

Source: (Pinij Fahamnuayphol, n.d.)

1.1.2 Survey of activities by elderly volunteers

Review of case studies of older people participating in volunteer work, volunteer work for the elderly, and agencies related to volunteering for the elderly to look for patterns and approaches to develop activities or services that support various factors, including the elderly who are volunteers, service recipients from volunteer activities and agencies related to volunteer work from the summary of 10 cases studied, lessons learned both domestically and internationally. The analysis was summarized as follows:

Case Study 1: Elderly volunteers support Tai Lue cultural conservation tourism, Nong Bua Temple, Nan Province (Thai PBS, 2017d)

Wat Nong Bua, Tha Wang Pha District, Nan Province, is an ancient temple unique to the Tai Lue community and also is the center of about 220 members of a club who come to help the temple and their communities. Mr. Sawang Pimarn, the club chairman, said that any activities would be divided during the meetings for individual volunteer responsibilities.

Starting in 2006, being a volunteer with Tai Lue cultural conservation tourism at Wat Nong Bua, each older person had to be 60 years and over. The duty to perform local music by using northern-style music instruments for the tourists was considered the duty of male volunteers. They claimed that playing local music created a feeling of happiness in the Lanna (Northern region of Thailand) atmosphere. The second group of elderly ladies would be responsible for demonstrating the weaving of the unique Tai Lue patterned clothes to closely show tourists the weaving process, including dresses in traditional Tai Lue costumes to illustrate the beauty of the native Tai Lue dress. The third group would volunteer as a local guides for tourists showing the temple wall paintings and providing tribe-

related cultural information. Lastly would voluntarily work as the cleaning crew of the temple. They had been cleaning the temple since they were 65. They are currently at 76 and feel very healthy because of their routine workout by cleansing the temple.

They felt that not only doing these volunteer works would benefit their health and be proud of serving the temple and communities by doing all these activities. However, also they felt great about making merits in a way that was spiritually fruitful for them.

Summary from Case Study 1

Being united as an elderly group of volunteers made them feel teamwork in each aptitude to the same target of the temple and their community. Additionally, the income from tourists (selling textiles and donations) could prolong the elderly club for keeping the operation on its continuity up until now. The success of the club operation reflected the aspect of security, health, and participation in the Active Aging index. Meanwhile, this case study is about the cultural context in which the researcher needs to collect more cases regarding other issues, such as science or economics.

Case Study 2: The information service volunteer at the historical site (Tuek Dang, Old French military headquarters building) Laem Sing District, Chanthaburi Province. (Thai PBS, 2017c)

Mr. Chaisit Ngampoomngoen, or so-called "Loong Lek Tuek Dang," as the locals and tourists called him. He has been a tour guide at the Old French Military Headquarters Building (Red Building or Tuek Dang), Laem Sing District Chanthaburi Province. This building is next to ancient prison (chicken dung prison) that used to hold the anti-French local activists during that time.

Uncle Lek was a ship commander of the oil tank company. Once retired, he responded to the provincial officials' call for help in open-up this place after being shut down for more than 20 years. He was then invited to voluntarily provide the chronological information of this building and prison with the help of its officials in the beginning. He was working from 7 to 4 daily without pay. He only received the 30% cut from the merchandise sold by the homemaker's group and tourist's gratuity. Regardless of his leg problems at the age of 79, he was sitting and explaining via the speakers instead of long-standing. Despite the overwhelm of tourists on any given day, he still felt at ease and overly happy after receiving big applause. Uncle Lek has developed his tactics and techniques in his story-telling style to cope with adolescents. Some visitors praised him for being the icon of this place, and visiting this historical landmark with Uncle Lek as its narrator would make the visit more memorable and enjoyable.

Summary from Case Study 2

Working as a volunteer by being a speaker or information provider to tourists, one would not only be precise about the places but also need to earn income or enable the volunteers to admire the values of what is being done but would impact those volunteers by being proud and encouraging them to work willingly and to the fullest. In this case, the researcher found that providing additional knowledge to the elderly volunteers could have them utilize and make beneficial purposes in the workplace. Additionally, it would be a source of income and enable them to take care of their family with job opportunities. Therefore, providing information and knowledge to older people is compulsory regardless of how old they are and how necessary they are to society.

Case Study 3: Elderly group volunteering to play Thai music for patients in government hospitals (Supupkul, Kunalasiri, Pantewan, Chirdchupunseree, & Siriwong, 2016)

The social construction of meaning, source of sense, and forms of the volunteer mind, activity of elderly group played music for patients in hospital (Supupkul et al., 2016). In this study, nine elderly volunteers aged 55-75 years started looking for social support activities and found that playing music is accessible to everyone. Suitable for their group including members who do not know music can teach each other. This group of senior citizens works to believe that they can create good things for the benefit of society. However, volunteering still requires the organization's support. It recognizes the importance of volunteer activities to encourage the group members because the hospital supports the use of space coordinating equipment and food support to make members feel that this agency sees the good in what they are doing and makes them proud. Still, some hospitals have not yet realized the significance of music and the mind for senior volunteers and hospital patients. It deprives members of attention, identity, and self-esteem, decreasing membership. As for the elderly who participated in volunteer activities, it was found that continuing doing activities was beneficial and would cause no symptoms of forgetfulness and be more active.

Lesson from Case Study 3

From this case study, the researcher found that a group of volunteers who came together was ready to benefit others and had a mind of giving. Nevertheless, a lack of support from the agency will make it harder for the volunteer group to work. It can cause discouragement at work; therefore, various government and private agencies can see the connection of volunteering in music as not only aesthetic and fun value. However, it also helps to promote the body and mind of both the volunteers, who are elderly music players and the hospital patients themselves. As a

result, it will be able to reduce the number of patients or delay the elderly's treatment in the long run.

Case Study 4: An older person serving as a science lecturer in the Miraikan Museum, Japan. (Pathrathanond, 2021)

The National Museum of Emerging Science and Innovation (Miraikan Museum) is in Odaiba, Tokyo, Japan. It is a museum focusing on modern technology, including space, robots, science, math games, hands-on experiments, DNA labs, and many other tech-related spots where exhibits change over time to create excitement, allowing visitors to come regularly. The speakers responsible for the lectures are working age groups and older people. Seniors will be accountable for lecturing content in assigned areas with smiling faces welcoming them into their booths. The researcher obtained this data from interviews with those who had visited. A Japanese museum and a museum with older people found that the interviewees were highly impressed with the elderly speakers in the Miraikan Museum, especially the spacecraft section. Because when looking at the various components of the spacecraft, the older people from the space area will be greeted in Japanese. Moreover, try to use body language to explain to Thai people because they cannot communicate with people other than Japanese. The lecturer had a document describing the components of the craft in Chinese and English, but the speakers did not want visitors to read it. It has just used to notice which page the visitor opens. Instead, they use body language to make fun guesses for the audience, such as food for pilots.

Lesson from Case Study 4

The Miraikan Museum's seniors serve as speakers with deep care, often referred to in Japan as Ikigai, and offer a good hostess service called Omotenashi, which is different from conventional services. This example shows that although the

elderly have limited language, they are willing, caring, and happy to perform their duties to the best of their abilities. Therefore, the researcher believes that giving occupations, obligations, and responsibilities to the elderly is a good thing. Various agencies and their children should reduce the concerns regarding the difficulty in work, limitations in language, ability, and stress of the elderly at work. Because the elderly in Japan need work, and when it comes to making the elders have their own goals until they cause Ikigai. Able to work efficiently and happily It positively affects the public health system and Japan's economy.

Case Study 5: A group of elderly volunteers delivers food to older people who cannot walk and live alone. Japan (Thai PBS, 2016)

Yokosuka City, Kanagawa Prefecture, Japan, has a population of approximately 419,067 in the Kanto region. Yokosuka is home to the United States Naval Base in Japan. The city of Yokosuka consists of many older people who live alone. The municipal has provided the budget to make good food for the elderly, with the Elderly Home Nutrition Agency serving 600 bento boxes four times a week, each time. Therefore, there was a gathering of healthy older people to act as volunteers to distribute food to the elderly who had difficulty walking. And live alone. In addition to delivering food, they will also ask about their primary health and if the elderly who live alone can help themselves. In addition, the municipality has a system to call the elderly who live alone three times a week. And there is an emergency button that staff can rush to the elderly because there have been cases of older people living alone who have died without anyone's notice for several days. Yokosuka City has a warship museum that supports the employment of retirees back to work as an example of a former sailor who knows the history of warships well due to his long position, he was hired as a lecturer and guide. Even though his pension was reduced to 60% of its original amount, it was sufficient for his retirement.

Additionally, he was able to work close to his familiar workplace. However, seniors say that changing positions and reducing salaries was difficult in admitting to being an older person in the early days.

Lesson from Case Study 5

In this case study, the investigators saw that the volunteers were formed because the municipal authorities first provided nutritional support for food. Make the elderly feel that they have received good things. There is an agency to support and care for them. So they want other older people to get good food as well. However, there may be restrictions that cannot be picked up in person. And want to reduce the burden of staff who have to deliver food; therefore, a group of volunteer work was set up. Thus, the researcher found that volunteer participation can also occur anywhere and indirectly from the agency. In other words, the agency may not need to support the establishment of a club or attempt to assemble the elderly prior to creating a volunteer activity. However, it can assist in other areas, such as nutrition and a health check service. By making the elderly see that it benefits them, the volunteers show up, find ways to help others, and expand their participation, including developing partnerships with government agencies.

Case Study 6: A study of the elderly in Rangsit Municipality, Thailand, and Okinawa City, Japan (Thai PBS, 2017a, 2017b)

Ms. Jeeranan Pitirerk is a registered nurse. Head of Public Health Service Center 2 from Rangsit Municipality, straightforward to the elderly for more than ten years, she studied and visited Okinawa under the list to know to change the world to bring knowledge to transfer and develop work in Thailand further. Therefore, she is telling about caring for the elderly in Rangsit Municipality before telling about her study visit in Okinawa as follows:

Rangsit Municipality divides the elderly into three groups: home-stayed, bedridden, and socially connected, each group receiving different care. Social groups start by supporting groups to learn nutrition health courses. Changing society and occupation, and inserted with activities during the study taught among themselves according to that generation. One generation of seniors will spend one year studying. After completing one generation, this group will have a bond in the manner of classmates. And contact each other to talk, travel and do activities. For bedridden groups, routine home care is provided in collaboration with a volunteer group called Care Giver, healthy seniors who receive 70 hours of training in primary care for the elderly. There is practice at the hospital before going to work. Each caregiver will have 3-5 people to care for and community members together for bonding. The elderly volunteer group Care Giver said they want to do well for others when they are healthy. They may be patients as well. And at that time, if someone took care of it, it would make them feel at ease.

Mr. Teerawut Klinkusum, Mayor of Rangsit Municipality, said that the elderly in the municipality had reached 15%, which is considered high. Therefore, cooperation has been viewed by various agencies, including research. Currently, the office building itself has location support. It consists of classrooms, Thai dance rooms, dance rooms, and other activities rooms, and it also wants to support the operation of caring for the elderly. If a case study from Japan can apply to the context of Thailand, it will make the procedure more efficient.

Okinawa City is famous for its longevity. Climates, food, activities, and various systems that enable the elderly to be empowered. By having looked at the village of Ogimi, Starting from an interview with the village headman, Mr. Norimitsu Miyagi, 65 years old, he was revealed that in this village, there are 35% of the elderly in the town. There has a food delivery service for the elderly, and volunteers take the elderly out to buy things once a week. For the elderly who are bedridden, there will be caretakers by volunteers and the city's staff. The cost of care and money that the

elderly have to spend is social security payments deducted from their salary by 40% during working age. As for health care, it is essential to eat and work. That is to say, this village eats vegetables they grow, Chukwasa orange fruit, which is very high in vitamin C, with every meal. And there is a belief that the elderly can perform various tasks and be self-reliant, such as planting vegetables, gardening, lifting things, and even driving a pick-up truck at age 80. Take the road, others know, with seniors saying that working will make them physically active and cheerful and feel younger.

Longevity University, run by the state and employed by the private sector, is supported by Mr. Oki Yoichiro, Director of Longevity University. The university aims to enable the elderly to be excited about a new life, good health, and knowledge and apply knowledge to themselves or make money. The courses that are open for study are in 3 branches and are free of any fees as follows:

1. Learn about their community.
2. Learn about health
3. Learn about the environment and the law of the elderly.

Longevity university students comprised males with an average age of 73 years and females with a mean age of 69.3.

Elderly students said they realized that the knowledge gained had resulted in more interest in health when they came to school. And there will always be exciting activities in school, such as playing sports, cooking, and taking care of orphans. Points are also accumulated on passports to motivate seniors.

The Elderly Hospital has a Care Worker service that takes a car from the hospital to pick up older people who are difficult to travel to measure their blood pressure. And restore health by appointment; physical therapists design the rehabilitation activities according to the appropriateness of each individual. During this time, there are singing activities that consist of singing old songs and tapping

simple rhythmic instruments. Because it is aware of suffocation in the elderly, even if it is plain water, it is necessary to study the viscosity of the water by mixing the agar powder to create a density according to each person. Mrs. Nagamine Hidemasa, Director of the Okinawa Elderly Welfare Center, said that the elderly who come to the hospital would thoroughly assess their kind of patient. The cost per day to receive the service is 600 yen, or about 200 baht, with the number of daycare patients receiving 50 people per day and 100 patients receiving regular bedtime—the staff pays attention to the elderly. A government policy evaluate cities from that care for the elderly as well. It will get a bigger budget too. It is one of the reasons that the staff and everyone work together very well. This is in line with her opinion that Japan has a care system for the elderly and has staff who work in depth; this may be due to the number of sufficient personnel in service working more than in Thailand.

Lesson from Case Study 6

Rangsit Municipality provides care for the elderly, classified into appropriate groups and supported by the municipality. Including volunteers who are caregivers to solve the small number of staff problems. The appearance of viewing the elderly in Rangsit Municipality is minor than Okinawa, But Okinawa City offers convenient services for hospital trips. This daycare center provides personalized medical appointments and rehabilitation for senior citizens. Japan has an extensive and diverse system and network of elderly support agencies, including communities, villages, universities, and hospitals. The daycare center earns money from the older person's accumulated welfare since they began working. Including additional funding and recognition from the government if a daycare facility provides excellent care for the elderly. It is an incentive for officials. In addition, Japan believes in the right to equal life, making it easier for the elderly to travel. Being safe and promoting their career makes the elderly feel the importance of not being neglected in life and work.

Case Study 7 Senior volunteers teaching IT and technology knowledge, Singapore

Mr. Ling Lik Kwok (Kwok, 2017) Became a volunteer at RSVP, a charitable organization. Singapore (RSVP Singapore, 2012) Since his retirement in 2017, he has worked at the supermarket. And at work, there are many community projects that his workplace has participated in. Nevertheless, as a volunteer at RSVP, he became a team leader at Care Corner under the Enriching Lives of Seniors program and a certified trainer for the Healthy Aging Promotion Program For You (HAPPY) program, and also filmed and Videocast Activity Circle video editor at RSVP and is a Cyberguide instructor teaching IT for other seniors. Mr. Ling Lik Kwok said that people always avoid using computers when working. But now he has opened up about his IT knowledge. Even though he will not have much knowledge, he can help seniors communicate. Being in videocast helps to find a passion for video projects as well. By starting a video project with his family and grandson, Mr. Ling Lik Kwok said volunteering helps to stay active and fit and an opportunity to expand the network. Each day is entire with exciting social events. In addition to RSVPs, he joins a Ukulele group to perform at a nursing home and is an ad hoc Smart Nation ambassador for the National Library of Congress.

Lesson from Case Study 7

This case study found that the elderly were ready to receive new knowledge, such as technology after retirement, that they used to avoid while working. Learning new things is more challenging and exciting. The more that knowledge can be passed on to others, the faster the learning will be. Remember more and is even more proud of himself in terms of being helpful to others. Seeing the development of one's potential, It was found that learning, including passing on to others, would be the starting point for building confidence in the elderly to have leadership qualities.

And continue to play a role in society. Therefore, educating and creating opportunities for the elderly to see their abilities through volunteer work is crucial.

Case Study 8 Volunteer Tutors to Students at Washington University in St. Louis (USA) (Washington University, 2009)

The George Warren Brown School of Social Work at Washington University in St. Louis (USA) recruits senior volunteers over 55 years of age as student tutors. And follow these older people in terms of physical, mental, and social aspects to see if there is any change, including a study compared with the regular group. After a follow-up period of 2 years, it was found that the elderly felt they were helpful. They have goals to be active and longevity and invite friends to volunteer together. A study of 146 teaching and paid volunteers compared 117 unpaid subjects in the study titled "A Case for Stipends in Volunteer Service." (McBride, 2009)

In conclusion, the study found that the role of the compensation would be to increase diversity among volunteers, as older people with low incomes and a limited workforce had more opportunities to join the program. And to promote job creation as well. This study contrasts with the notion that compensation is less favorable to the public. In addition, payment also creates a positive experience. Commit, and increase the duration of joining as a volunteer.

Lesson from Case Study 8

This case study provides a new perspective on the compensation incentives offered to volunteers serving as tutors. That is, the compensation will provide more diverse volunteers. Get a group with low income but can teach various subjects than the existing program. It can be seen that older people who are volunteering or capable cannot participate if they are financially limited. Moreover, the study contradicts the idea that having wages will make people less for the common good.

The study also found that earning more volunteers' desire to persuade others to join. Therefore, the volunteering activities that need to be provided to the elderly with diverse and more persuading should be an appropriate compensation, so it is a sound support system for volunteering.

Case Study 9 Corporate Service Volunteers Age UK (Age UK, 2021) and The Silver Line Helpline (The Silver Line Helpline, 2021)

Age UK is a UK charity with social fundraising. It has information that can use for training to take care of self and the elderly. There are many services provided by volunteers and staff, including having a network distributed to many service areas such as Age UK Advice Line, Befriending service, Day Centre, Exercise and physical activity, Handyperson service, Information guide, and factsheets, IT training, and social activities.

Age UK Advice Line service will be an older person who will answer the phone from 8:00 a.m. to 7:00 p.m. The call has been received since the delivery man called to help the woman at the boilerhouse, but there was no money to fix the weather. It was freezing and could affect her health. Then when the Age UK Advice Line contacted the local Age UK, she was rescued. There are also calls from lonely or sad people from their dog's death that make people call to discuss pensions and house matters. The elderly who work here will get work training. Moreover, most older people act continuously and for a long time, so there is accurate information. In coordinating with agencies that provide further assistance, There is also a Befriending service where the elderly are volunteers who act as friends 24 hours a day, with a rotation of duties.

Lesson from Case Study 9

Volunteers answer phone calls to coordinate the needs of people in different areas, including answering the phone for people who are lonely at any time and enough. In addition to being a volunteer older person, there must also be an extensive network of supporters who can coordinate with the aid unit and have credibility as an actual charity. As for the elderly themselves, the longer they work, the more they can handle tasks quickly because they have a good relationship with people in other departments. Strong and able to help deal with emergencies As the relationship affects physical and mental health. Including happiness many different studies measure happiness indexes with relationship scores.

Case Study 10 Volunteer Tourism in Various Countries (Vandenberg, 2020)

Retirement age who are wealthy will like to travel. Therefore, traveling and being a volunteer is an idea that answers this group of older people, such as traveling and giving education in Nepal, teaching English, Working with local children, and providing medical and health care in Latin America. This volunteer tour takes a week or more. And there is a cost depending on the location

Lesson from Case Study 10

Traveling with volunteering is an exciting travel experience. Suitable for groups that want a challenge. Can travel for a long time self-reliant Have a budget for travel expenses but want to complete the experience that is not from a typical trip that goes by self with a group of friends or family. However, the elderly Thai people who like to travel will need rest. Visit nature to heal the mind, Or there will be challenges such as climbing, it can be done. However, they must inform the preparation in advance when completing such challenging missions; they will be proud and able to tell others. It usually takes about 3-5 days due to homesickness and family. The researchers themselves can see that tourism significantly affects the health of the elderly if adequately managed. Moreover, adding the challenge to the

feeling of excitement will make the elderly eager to practice before traveling, making their health noticeably better. This challenge can also be undertaken as a volunteer activity, such as switching from mountain climbing missions to collecting trash along tourist routes.

1.1.3 The conclusion from the case study

In conclusion of what we learn about these case studies, the researcher studied and used document analysis to conclusions. It was found that three factors were affecting the success of volunteering activities, which were:

1. Activity format
2. Inspiration
3. Support system

The researcher's success means the increased participation of the volunteers. Sustainable continuity and create value for operators. However, the form factor of activities is vital in creating involvement in various volunteer work. Suppose the activity pattern consists of all three characteristics, namely fun and enjoyment (Enjoyment), giving and transferring knowledge (Knowledge), and providing services to others (Service). In that case, it will create a variety to accommodate older groups with different interests and ideas. Including the activity and style will also affect the motivation of the elderly. Because volunteer groups are ready to do good for others and society, doing activities that they are good at, like, and having fun, will give them the power to perform their duties, create values, and be continually involved.

Volunteering inspirations consist of external and internal inspirations. In the volunteer group, there are internal motivations such as doing to want happiness and pride, but if there are external inspirations such as rewards, reward points, compensation (either direct salary such as wages, allowances or indirect

compensation such as dividends or share of the profits generated from the sale of goods) will also promote more excellent intrinsic value. Because being paid will make the elderly feel self-reliant. Having an income is not a burden on their descendant. And society gives importance to the value of the volunteers.

Another significant factor is having a system to support activities have management. The relevant departments have coordinated it to make activities and allow volunteers to participate continuously and sustainably. If the elderly continue to work as good volunteers, they should be respected so that they elderly can be proud and be role models for other seniors and have a beneficial effect on them. Wider society, Therefore, in implementing the participation of the Bang Khun Thian Elderly Club, it is necessary to study the forms of activities, motivations, and support systems that promote operations. To find ways to encourage participation within the club and take the lessons learned in each case to analyze how, if it is the context of Thailand, how it will be applied.

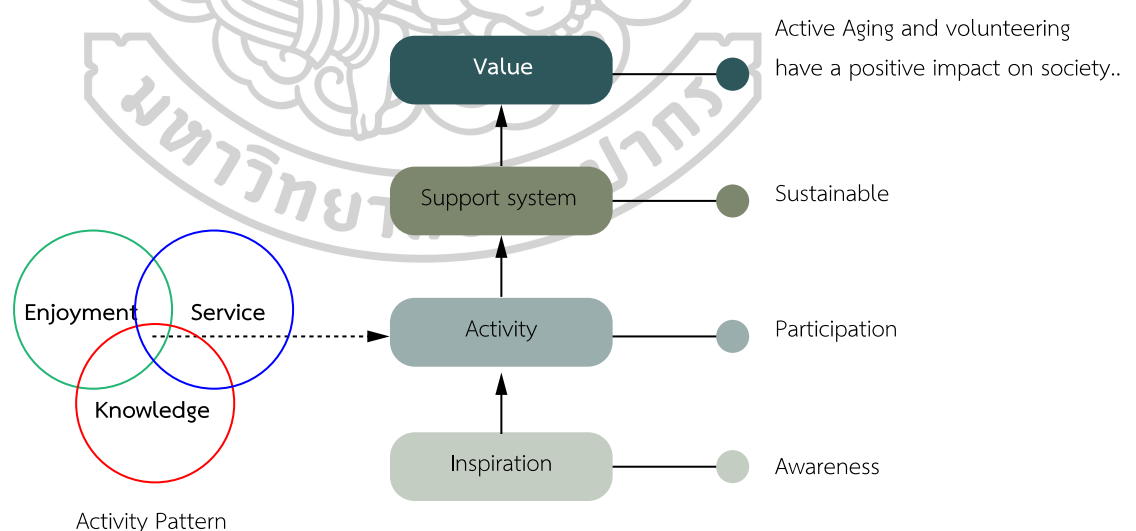


Figure 37 Supporting factors have a positive effect on volunteer work.

Source: Author

1.1.4 Review literature from the annual report of Bang Khun Thian Geriatric Hospital

From the literature review of the annual report of Bang Khun Thian Geriatric Hospital, the year 2017-2019 (Bang Khun Thian Geriatric Hospital, 2017, 2018, 2019) It shows that the established history of the hospital was to serve the elderly in Bangkok. Providing comprehensive services for the elderly and is a model hospital for elderly care with the first Geriatric Medicine Center in Bangkok. Can accept 100 beds overnight. The number of older people who come to receive services is increasing rapidly, with 35,743 people in 2017, 57,754 in 2018, and 77,590 in 2019. Benefits include health screening clinics—elderly Quality Elderly Clinic, Ophthalmology Clinic, Prosthodontics Clinic, Thai Traditional Medicine Rehabilitation Center, and Chinese medicine. In the beginning, Bang Khun Thian Elderly Hospital had Taksin Hospital as a mentor to assist in the management, including cooperation in various fields.

1.2 Findings from on-site data collection

1.2.1 On-site observation

The researcher met with the staff of Bangkhuntien Geriatric Hospital. to interview them about information and actions of the elderly club. The informant included Mr. Phuriwaj Akraponkrailert (MD.), Head of Geriatric Medical Center, Bang Khun Thian Geriatric Hospital, explaining that Geriatric Medical Center (GMC) opened on 9 November 2020. Care about the health of people aged 80 and over or hospital patients aged 65-80. Currently, 690 patients use the service at the center. Elderly patient Educating the elderly and their family members about health care Preparation for entering an aging society Training healthcare professionals or volunteers to become a caregiver. Daycare services for the elderly during the day. Although GMC regulates the elderly club, GMC's operations have not been planned directly for the elderly club. The attention of participation or membership in the elderly club will assist in healing, and the physician will recommend that the patient

applies for membership in the elderly club. GMC expects that if the elderly club has been planned for operations or planning activities that support the operation of the GMC, it will make the procedure go so well. Volunteers from the elderly club participated in supporting the work. And the effective system of the club will help keep the benefits of both GMC and the Elderly club.

Another in-depth interview was with two other staff members, Mrs. Sakulna Khaopoom (Radiologist) and Mrs. Apinya Boonpheng (Registered nurse). Mrs. Sakulna, in particular, was assigned to run up the elderly club. She began in October 2013 with the annual community flu vaccination event. Liaise with local leaders to promote and gather members. and jointly coordinate between the hospital and the community

The Elder's Club began in 2013 with 23 members, primarily for health activities. The event will be held monthly on the 3rd Thursday from 10:00 a.m. to 12:00 noon. The number of members in the club kept increasing until, in 2018, there were 304 members. The format of the activity is to educate. Health, such as preventing dementia exercise for the elderly with various departments In the hospital, the rotation comes to educate. There will be a healthy elderly contest and sporting events of the elderly clubs from various hospitals each year. Under the Medical Service Department, Bangkok Metropolitan Administration of Vocational training is also available. Study trips in other provinces and volunteer activities, However, external organizations such as the Department of Elderly Affairs Construction Institute of Thailand and the Dermatology Institute of Thailand.

For subscription, applicants must have aged 45 years and over. The application fee is 100 baht annually and 500 baht for a lifetime. The benefits of membership include the following:

- Come to do activities together with members of the club
- Receive health information from medical personnel monthly

- Receive a free screening service once a year
- Each year, there have activities with the elderly club from other hospitals.
- Sharing knowledge and skills to benefit other members

Because Bang Khun Thian Geriatric Hospital is a new hospital that opened in December 2012, the hospital's premises are a temporary building. The Elderly Club was established in October 2013. The venue for each club's activities is a basement floor that can accommodate a limited amount of members and activities. An open space causes little convenience in organizing activities and privacy, including convenience equipment. Management style Planning activities within the club is also the responsibility of the hospital staff, which is a workload outside the routine work in the area of responsibility. The event's budget is the money from the subscription fee, and writing a project proposal on a case-by-case basis for the hospital's support is limited; as a result, the activities are limited. The annual fundraising event on the hospital's anniversary is an opportunity to raise money for the club. And this money will be used for activities throughout the year. In addition, the guidelines for organizing each activity are not clearly defined. It is just a brainstorming session from some staff and members. or a short-term activity planning. Depending on the available activity, it will be taken as that month's activity—alternatively, just short-term planning, such as organizing activities to prepare for the annual sporting event. Organizing activities to schedule a show for the hospital's anniversary.

In addition, the staff of the hospital is the main event organizer. Later, a club committee was established. The establishment of this club committee is caused by a group of members who regularly participate in activities until they become intimate. And it was agreed that a group should be established to continue the exercises. The formation of this club committee starts with nominating a list of members for voting. Selected to be on the club committee of 15 people and has a working term of 2 years. Recently, there has been a third club committee.

1.2.2 Interview with elderly club members.

Membership is one of the critical elements of the Elderly club. Members from each club are both similar and different. Therefore, a study to identify the characteristics of the Bang khun thian Elderly Club members is necessary. Because it will be important information that will be used to analyze problems, and it allows the researcher to get to know the actual situation of the elderly club. The population group used in this study was the Bang khun thian Elderly Club members. Out of the total number of club members, about 300 people, the average number of participants in the club's activities is about 30 people at a time. And there may be up to 50 people in the event of a big event, such as hospital anniversaries or organizing activities on important official days (data from interviews with hospital staff). The selection criteria are members of a club that regularly participates in club activities (at least ten times a year). It is a member who has been certified by the hospital staff having sound knowledge about the elderly club. Therefore, members who can provide information are club members and members of the club's board. Also, an essential factor is that because this study is in the midst of the COVID-19 epidemic, it is a limitation that prevents collecting data from all members. Therefore, collecting data from representatives of the populations used in the study according to the established criteria. The researcher requested an appointment from the hospital staff for a visit, and then the hospital staff let the researcher meet with the elderly club committee for an interview. The information obtained from the interview is as follows:

In a normal situation, the club committee is primarily responsible for the activities of the elderly club. By coordinating with the hospital staff to plan the club's activities, the club committee will meet to schedule activities. The nature of each activity is due to the decision of the club committee. When the activities are concluded, the responsibilities will be divided among the directors as they

voluntarily. The nature of activities organized by the Elderly Club can be classified as follows:

1. Activities to educate members, such as a lecture on health care and diseases common in the elderly, teach aerobic exercise.
2. Skill training activities include cooking lessons, desserts or souvenirs, and handicrafts.
3. Recreational activities include playing music, singing, age-appropriate sports, and folk show.
4. Volunteer activities such as visiting members from home hospital assistance.
5. Special activities Such as cheering practice to participate in the annual sporting event of the elderly club under the hospital network of the Bangkok Metropolitan Administration and rehearsal for the performance of the hospital's yearly event or field trips in other provinces.

The club's primary income comes from the membership fee. In addition, receiving donations and organizing a fundraising event on the hospital's anniversary, which is held only once a year, is another way to earn extra income for the club.

If it is an activity, there is a fee. The funds are obtained from the club's membership fee to pay for speakers from outside the hospital's departments, prepare ingredients for cooking or dessert, and provide sports equipment or display props. If the club does not want to spend money on the preparation of activities, it will be inviting speakers in a request for courtesy and finding raw materials by members jointly procuring or carrying out activities under the hospital's budget-allocated project

During the COVID-19 outbreak, citizens must act to prevent infection under government regulations. This resulted in the club's operations and all activities coming to a halt. Moreover, Bang Khun Thian Geriatric Hospital is the responsible

agency for health. This is one of the field hospitals where patients are treated. Some club committees come to work as volunteers to help hospitals by working in the reception. Provide information on vaccination registration for citizens and assist in various stations such as screening points, registration points, and queuing for vaccination recipients. Demonstrate a willingness to work for the public interest, and this is another case study of volunteer work in this research. Only these volunteers must have received the vaccine before entering the area to do volunteer work. And the visits for interviews to gather information in the research required waiting for the internal situation of the hospital to be safe from the epidemic. To be able to enter the area, everyone must strictly comply with safety requirements. The research population of these interviews is representatives of members of the elderly club. The researcher chose the group interview method because the optimal time is 20-30 minutes if the individual interview takes too much time.

Moreover, because the group interview has the advantage of being a friendly atmosphere, the club members' information can be done smoothly. Everyone helps each other answer questions and adds answers to each other. Group interviews allow the researcher to get real answers and multiple perspectives from a single question. This group interview can be appropriate for collecting data because the researcher wants to know the frame insight and already has a fair amount of information about the elderly club and hospital context. (Curedale, 2013)



Figure 38 Collecting data from elderly club members under the hospital's regulation of preventing infection.

Source: Author

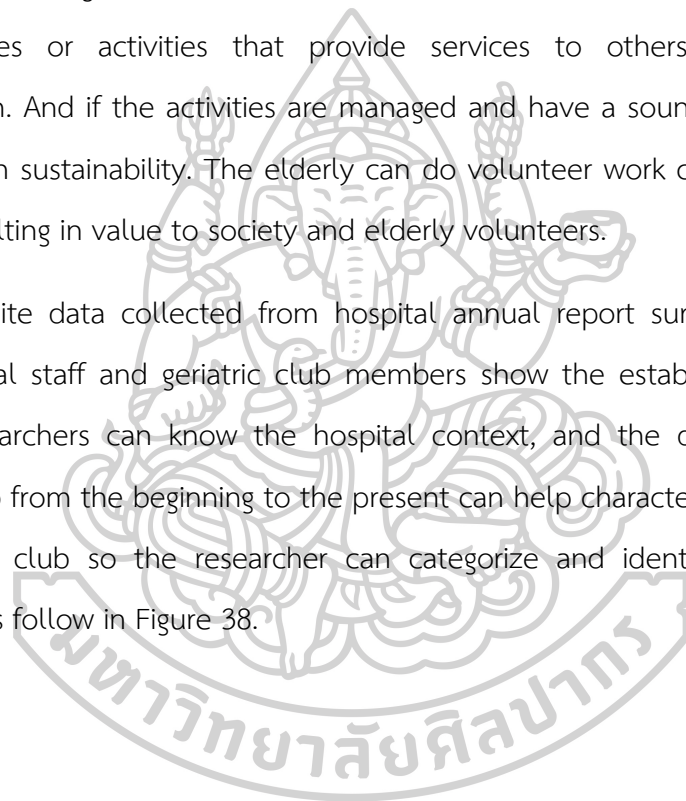
1.3 Summarize the qualitative research

Based on the research survey on the development of the elderly's potential with the concept of Active Aging (Wiphanun Muangsakul, 2015), there are four levels of the elderly potential development guidelines. When applied to this study, the development guidelines at the community level are suitable for use because the elderly participating in club activities develop the potential of the elderly at the community level. The recommendation should open an area for the elderly to participate in activities with various people at the community level. And activities should benefit the elderly such as activities that make the elderly earn income. A study of factors promoting the elderly access to club activities (Fahamnuayphol, 2015) consisted of three elements. As the Elderly club manages the activities, this research recommends that older members of the club should be shown to be aware

of the importance of activities organized by the club and give inspiration to members to feel like participating in activities. The advice from these researchers will be a guideline for the next step in the design of the service design workshop.

A case study of elderly volunteers shows that volunteer activities benefit society and older volunteers. The way to encourage the elderly to volunteer work starts with inspiration. Older people feel aware of the benefits of what they are doing. When doing activities such as volunteer activities in the field of knowledge, fun activities or activities that provide services to others all contribute to participation. And if the activities are managed and have a sound support system, it will result in sustainability. The elderly can do volunteer work continuously and are happy, resulting in value to society and elderly volunteers.

On-site data collected from hospital annual report surveys and interviews with hospital staff and geriatric club members show the establishment of geriatric clubs. Researchers can know the hospital context, and the development of the elderly club from the beginning to the present can help characterize the members of the elderly club so the researcher can categorize and identify the personas of members as follow in Figure 38.



Exploration
Application fee
100: temporary, yearly
500: permanent
(lifetime membership)

	Group C: as member (Loose participation)	Group B: as partner (Regularly participation)	Group A: as partner (Commitment)	Group H: as honor (Dedicated, Devoted)
Characteristic	<ul style="list-style-type: none"> ○ Join when ready ○ Join when some benefits are worthy 	<ul style="list-style-type: none"> ○ At least 10 times/year ○ Support in each activity ○ Be a part of activity 	<ul style="list-style-type: none"> ○ Join every meeting or activity ○ Be a member of panel in club ○ Be a planner of activity ○ Be a leader of activity ○ Volunteer 	<ul style="list-style-type: none"> ○ Devote themselves in many way to make community better
Benefits	<ul style="list-style-type: none"> ○ Yearly health check ○ Free vaccine ○ Gift or souvenir ○ Knowledge ○ Enjoy (not lonely etc.) 	<ul style="list-style-type: none"> ○ Meet friends ○ Permission to join yearly fieldtrip study tour 	<ul style="list-style-type: none"> ○ Proud of oneself ○ Acceptance 	<ul style="list-style-type: none"> ○ Be a role model, inspiration to others ○ Mental health
Obstacle	<ul style="list-style-type: none"> ○ Household work ○ Taking care for family ○ Need to work for money (no time) ○ No attracting activity ○ Distancing issue ○ Move to otherwhere 	<ul style="list-style-type: none"> ○ Conflict to other ○ Chance to show their potential ○ System to encourage to get more role in club 	<ul style="list-style-type: none"> ○ Management system limitation may decrease they role 	

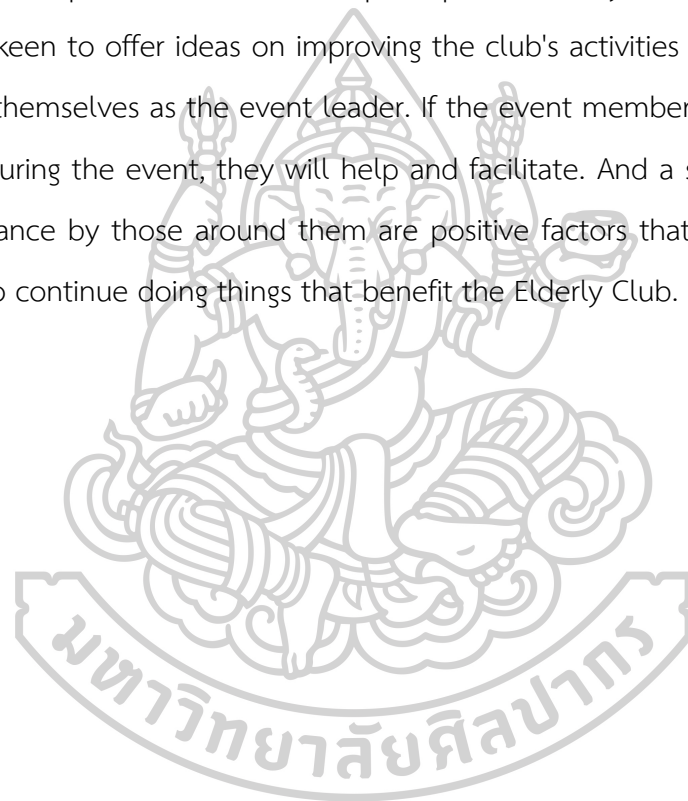
Figure 39 Identifying the Personas of each group of members in the elderly club.

Source: Author

Collecting data from hospital staff and elders club committees led the researcher to divide the members. The elderly club can be divided into three groups. The first group (Group C) is the elderly who apply for membership. However, they attend very few club activities; they join club activities when conditions allow or feel it is worth traveling to join club activities, such as earning items by participating in activities. But if some situations or needs impede or the form of activity is not attractive enough, they will easily refuse to participate. The incentives for participating in this activity include being eligible for annual health checks. Activities that they thought were beneficial to themselves then participated, such as receiving a gift or craft activities that they could take home once they were done. Factors that hinder participation in the activities are travel problems. Some older people have to take care of family members, such as grandchildren, or work to earn money to support their families. The second group (Group B) is a club member who regularly participates in activities. During the activities, they cooperate and support the

activities to continue. The motivation of the members of this group is to be considered for field trips in the provinces, which is an annual activity. In addition, this group of people also has feelings of wanting to meet friends, which is the primary motivation for joining the club each time.

Moreover, the same reason that may become a barrier to joining the club if their friends cannot participate in that event is why seniors refuse to participate. The third group (Group A) is a member who participates in every activity of the club. They are always keen to offer ideas on improving the club's activities and did not hesitate to present themselves as the event leader. If the event members need help or have problems during the event, they will help and facilitate. And a sense of self-esteem and acceptance by those around them are positive factors that encourage Group A members to continue doing things that benefit the Elderly Club.



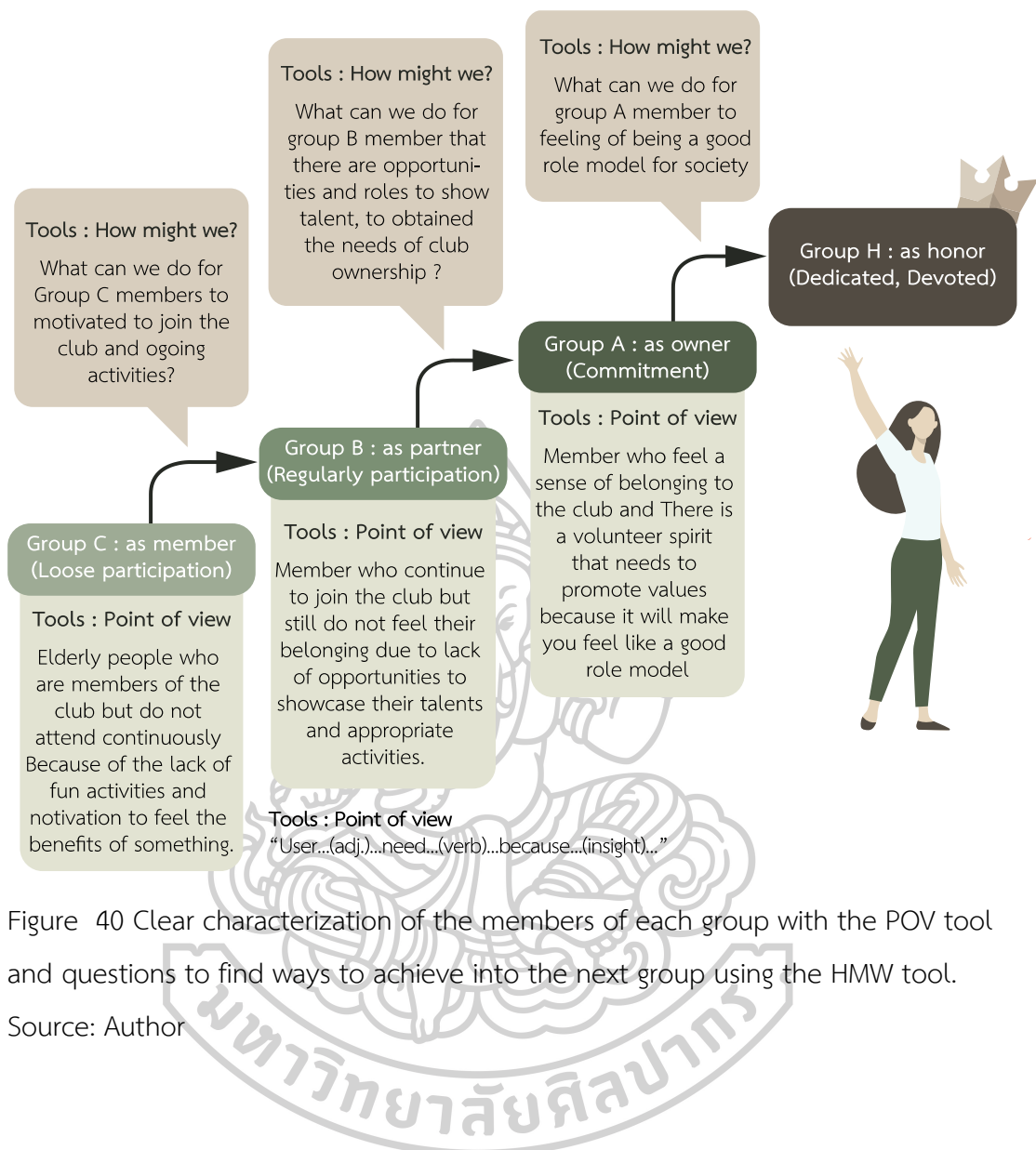


Figure 40 Clear characterization of the members of each group with the POV tool and questions to find ways to achieve into the next group using the HMW tool.

Source: Author

To clarify the definition of the personas of club members. The analysis results should be reviewed systematically, and reliable instrumentation should be used. The researchers, therefore, used a tool called Point of View (POV), which is a tool commonly used by designers for determining the personality and characteristics of the research sample. The main feature of this tool is that it describes and describes the details that characterize it. The actual need and the reason for that need, each person's reasoning affects different behaviors and decisions depending on conditions.

The form of the sentence determines how different each person's character is portrayed.

Using the POV tool, the researchers were able to describe the characteristics of the members of the three elderly clubs as follows: Group C is an older person who is a club member but rarely participates in activities. They want club activities that feel interesting. It is helpful and worthwhile to join the event. Because they still do not feel the need, and there may be something that prevents them from entering the club. Group B is a member who participates almost always and continuously. They need a system that can allow them to develop their abilities. Alternatively, they have been responsible for the club's activities because they feel they want to be a part of helping to develop the club. Group A is the board member of the Elderly club and is responsible for the club's operations. They feel happy doing volunteer work for the elderly club. They want others to receive good things from their activities because they make them feel valued and pass on their values to others. And if others feel aware of the value they provide, this will gain them recognition. Honoring and being recognized as a role model in volunteer work

Setting goals for the development of members in each group is a way to discover how to implement a method or idea for service design as a tool to encourage engagement. The grouping was based on the criterion of the level of participation in the elderly club. The promotion of participating in elderly clubs aims to achieve membership in the next group (Group C goes to Group B, goes to Group A, sequentially). Achieving a sense of self-esteem and dignity is a goal beyond what members of Group A (Group A) can achieve higher than that. Thus, the elderly club can be added to a fourth group (Group H) where members of the Elderly Club can be role models and inspire others in terms of devoting themselves to the public interest.

Therefore, the researcher chose to use a tool named "How might we?" (HMW) as a tool in the form of a question sentence. It is a question to encourage thinking and answering. And the answers will be a guideline for promoting and developing each group's members to reach the next group.

1. Questions aimed at developing guidelines for enhancing membership from Group C go for Group B: "What can we do for group C members to be motivated to join the club and ongoing activities?"
2. Questions aimed at developing guidelines for enhancing membership from Group B go for Group A: "What can we do for group B members that there are opportunities and roles to show potential, to obtain the needs of club ownership?"
3. Questions aimed at developing guidelines for enhancing membership from Group A go for Group H is "What can we do for group A members to feel of being a good role model for society?"

2. Service Design Workshop

To summarize and confirm the validity of the results obtained from the Stage 1 Qualitative Research Approach, the researchers analyzed the characteristics of elderly club members divided into three groups. Data were collected from hospital staff at this stage a second time after interviewing them in the Stage 1 Qualitative Research Approach. The results obtained from the first interview are diverse and sufficient for analysis. Methods and analysis methods This includes summarizing the data as the subject of the second interview, as shown in Figure 40.)

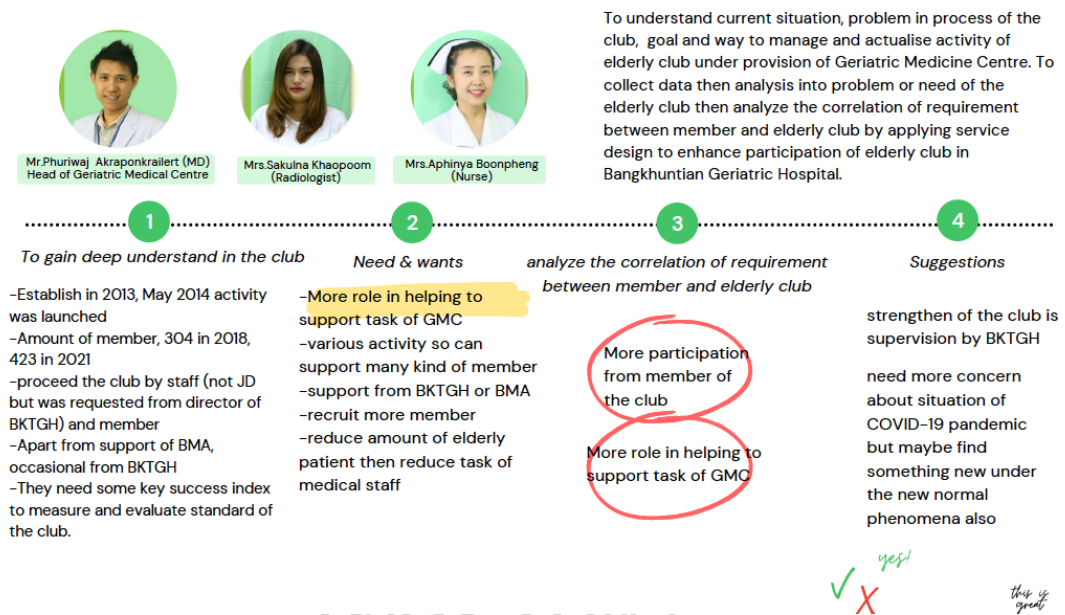


Figure 41 Diagram of data analysis derived from Stage 1 Qualitative Research Approach using an in-depth interview with hospital staff.

Source: Author

Up to this point, the data confirmed by hospital staff allowed the investigators to know the correlation of requirements between the member and the elderly club.

- The member's participation in supporting the Geriatric Medical Center.
- Need systematic management.
- Clear measurement and evaluation of the success of the operation.
- A system to earn enough income for the operation of the club.

This information regarding the needs of the elderly club members and hospital staff comes from both the elderly club and the elderly side. Because the data obtained from the in-depth interviews come from real people who have

experience and have worked for a long time in the affairs of the senior club. Therefore, the information they provide is reliable. In addition to the information, the researcher received from members of the elderly club and hospital staff. They also commented on the solutions that address the needs of the elderly. Giving feedback is something they can do. These comments will be brought into the service design workshop process. It is a type of information that is important to use as raw materials in this workshop, as shown in Figure 41.

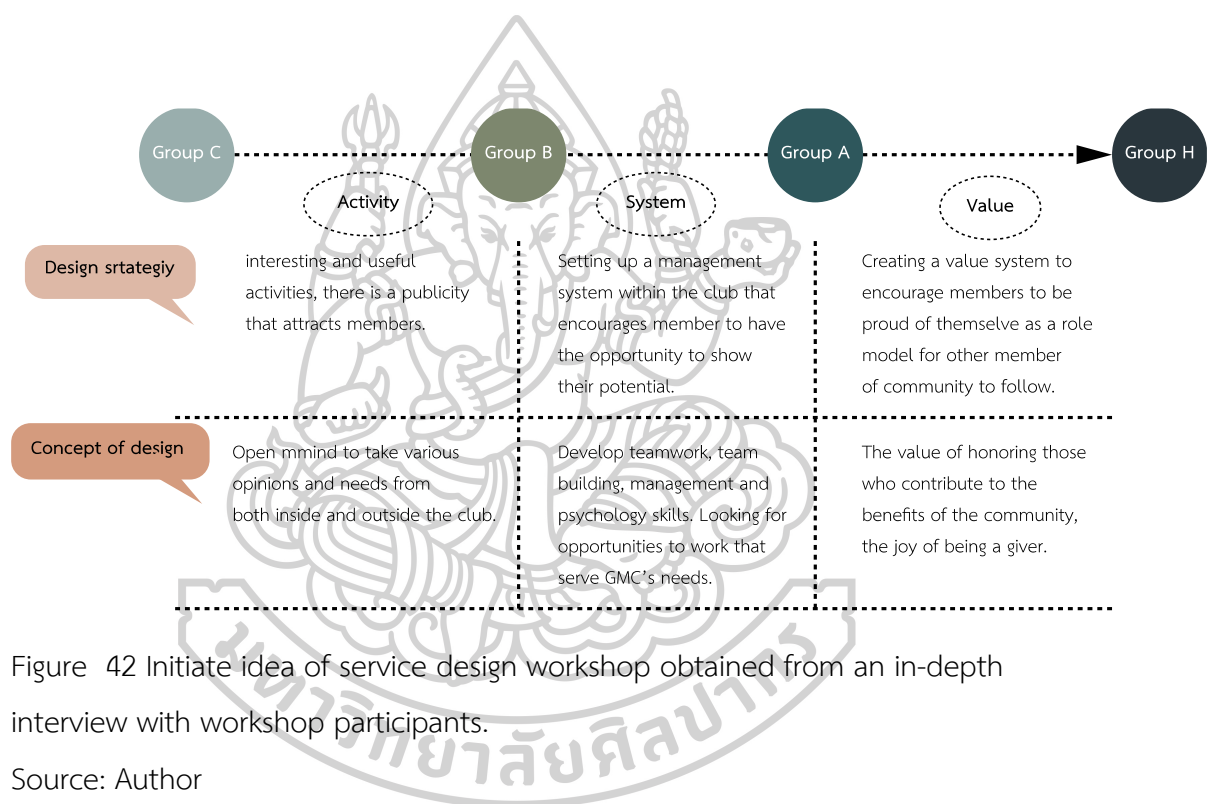


Figure 42 Initiate idea of service design workshop obtained from an in-depth interview with workshop participants.

Source: Author

Continuing the service design workshop

Ideation

This brainstorming session is to look for new ideas from various perspectives or find a solution to a problem or need from the Define step by bringing the

problem to be written in the form of How might we...? To come up with questions to brainstorm ideas and use tools like Yes, and... Idea Cards, and Touchpoint Cards to expand the horizons of ideas. Then, the views are sorted and grouped into three broad groups. The first group is ideas that can execute immediately, not complicated, called Quick Ideas (Q). The second group is new ideas likely to cause the changes, called Breakthrough Ideas (B), and the third is Delight Ideas (D), then chooses the final idea or will it be combining and applying concepts together to be used in the design of this service. However, design participants will be asked questions about Personas while brainstorming ideas to ensure they understand them correctly. Therefore, the researcher will explain the target audience for each topic to the co-designers before the idea and during the brainstorming period. However, in the research, the problem was created How might we...? All three problems for all three groups of Personas details are as follows.

**1. How do we keep group C seniors motivated to join the club regularly?
(C goes for B)**

From brainstorming ideas to the Persona C group in response to the above questions, it was found that the participants came up with various views. There is an extension of ideas between the participants. Moreover, when the examiner saw that the participants were beginning to repeat their arguments, Idea Cards and Touchpoint Cards were used to encourage participants to see more diverse perspectives without limiting their thinking. The initial idea was to focus Persona C members on membership benefits, such as annual health checks. See a doctor. There are already public relations and granting these rights to members. Therefore, participants came up with ideas to focus mainly on the activity. Since most of the club's activities are solely for health purposes, the members came up with other exciting, diverse, and entertaining activities. If the activity satisfies them, provides them with a memento to take home, and imparts knowledge, their motivation to participate will increase. In

addition, the club's atmosphere is essential: those who register and attend the event for the first time should feel safe expressing their opinions and engaging in various activities in the area without being treated unequally by older members. A welcoming environment created by the club's members will leave a lasting impression and encourage new members to return. Including if there is convenient transportation, it will increase club activity participation even further.

Participants have arranged ideas as shown in table 9. The purpose of Quick Ideas (Q) is to offer clubs the possibility of direct action discrimination based on the time, circumstances, and resources currently available for Breakthrough Ideas (B) and Delight Ideas (D). Participants and researchers choose or combine ideas that are innovative and relevant to Target C and are ideas that answer the original question. Then analyze the chosen concept, create a guideline, and get advice on the next step.

Breakthrough Ideas (B): Host a fancy theme park event with haunted houses, dart throws, dunk tank girls, and traditional dancing. Eat ice cream and meatballs and sell balloons at the fair, and there is also a contest for booths and fancy dressers. It is to change the atmosphere to be different from the normal perception.

Delight Ideas (D): The club provides space using the third home principle (similar to Starbucks) to give a sense of security. Activities include karaoke, classroom, meeting room, movie room, kitchen, tree planting area, spa room, massage, sauna, and reading corner. And the elderly may sell coffee, bring snacks, food, and handicrafts created in the club to sell to generate income for the club continuously. Because, in the future, the hospital will have more older people and relatives come to see the doctor. These areas will help attract seniors to subscribe and come regularly. However, the front of the coffee shop should have an information board located in an easy-to-read spot, offering a weekly schedule of activities and then allowing interested parties to ask for details and apply for the event immediately.

Table 9 Using the QBD tool for member of Group C.

Quick Ideas (Q)	Breakthrough Ideas (B)	Delight Ideas (D)
<p>There is a public relations that the content design is attractive, modern, and suitable for the target group.</p> <p>Exclusive doctor consultation activities</p> <p>health privileges</p> <p>made food/snacks/singing/music</p> <p>There are exercises together, such as aerobics, dance, and yoga.</p> <p>There was a sporting event and cheering.</p> <p>Personal goals were created together, such as running for 100 kilometers and eating vegetarian for a month.</p> <p>There is an annual tourism</p>	<p>😊 Organize a fancy theme park event that includes a haunted house, balloon throwing, a girl falling into the water, dancing, selling ice cream, meatballs, and balloons in the event, and there is a contest for booths and people dressed in various fancy aspects.</p> <p>Organize competitive games such as board games or childhood games such as crystal ball games, collecting pieces (similar to the Squid game series)</p> <p>Run or walk a marathon, especially for seniors. (This is a long-term activity that requires a doctor's consultation for the person applying. There is a step-by-step training plan. And during the competition, there must be more maintenance</p>	<p>Organize singing competitions and play music (similar to The Voice)</p> <p>Organize a cooking competition similar to Iron Chef</p> <p>The club has a check call service or home visits for fellow members, especially members who live alone and have congenital disease</p> <p>The club provides services for young people who want extra income and credibility to service seniors who are members at home, such as lifting, fixing things, and feeding pets while away from home. Take the dog for a walk cause seniors cannot take them.</p>

Quick Ideas (Q)	Breakthrough Ideas (B)	Delight Ideas (D)
<p>seminar.</p> <p>Do activities and get souvenir rewards from the event hour count.</p> <p>Training to provide knowledge in various fields, including health, finance, technology</p> <p>Invite influencers to speak for inspiration.</p> <p>There are activities to create various crafts, such as scented candles, tie-dye, drawing and writing, crocheting, and planting trees and cacti.</p> <p>Invite monks to talk about a religious issue and make merit</p> <p>Watch movies and dramas together and bring Discuss</p>	<p>teams at various points)</p> <p>Shuttle buses to various communities are available at different points and times. And the shuttle must consider the elderly, who are inconvenient to get on and off the car. For example, a ramp may protrude from the car door. There is an island that is easy to climb and a car that drives carefully.</p>	<p>❤️ The club has allocated space using the third home principle (similar to Starbucks) to give a sense of security. There are areas for activities, such as a Karaoke room, classroom, meeting room, movie room, kitchen, tree planting area, spa room, massage, sauna, and reading corner. And the elderly may serve to sell coffee. The front of the coffee shop has a prominent, easy-to-read bulletin board and a weekly schedule of activities. As well as being able to inquire and apply for activities by placing them at the coffee shop, there will be people waiting to answer questions and accept applications. In addition, the elderly can bring</p>

Quick Ideas (Q)	Breakthrough Ideas (B)	Delight Ideas (D)
to build relationships.		snacks and food they make together for sale, including those invented To generate income for the club continuously Because, in the future, the hospital will have more older people and their relatives come to see the doctor. These areas will help attract seniors to subscribe and come regularly.

Source: Author



Figure 43 Using the Brainwriting tool and brainstorm tool for Personna C groups.

Source: Author

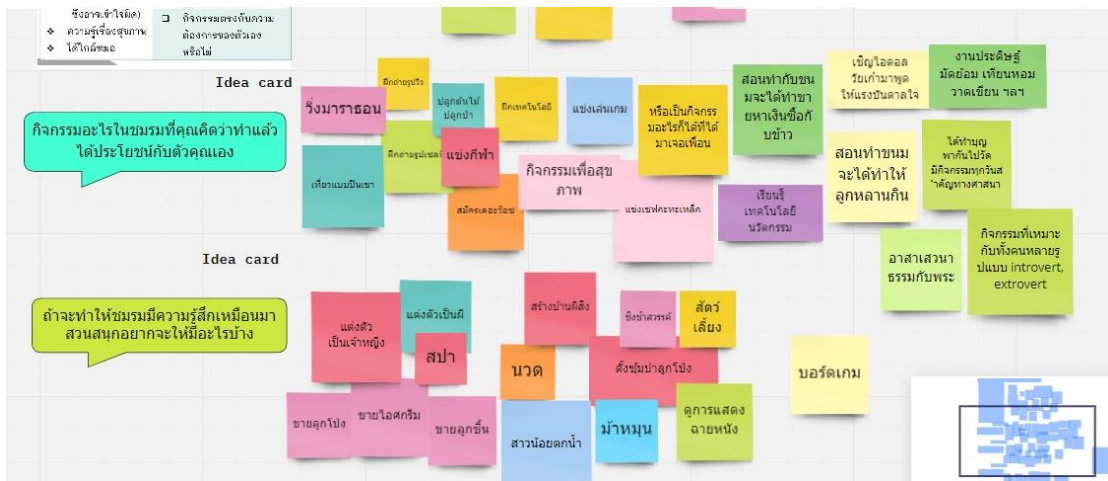


Figure 44 Using the Idea cards tool for the Persona C group.

Source: Author

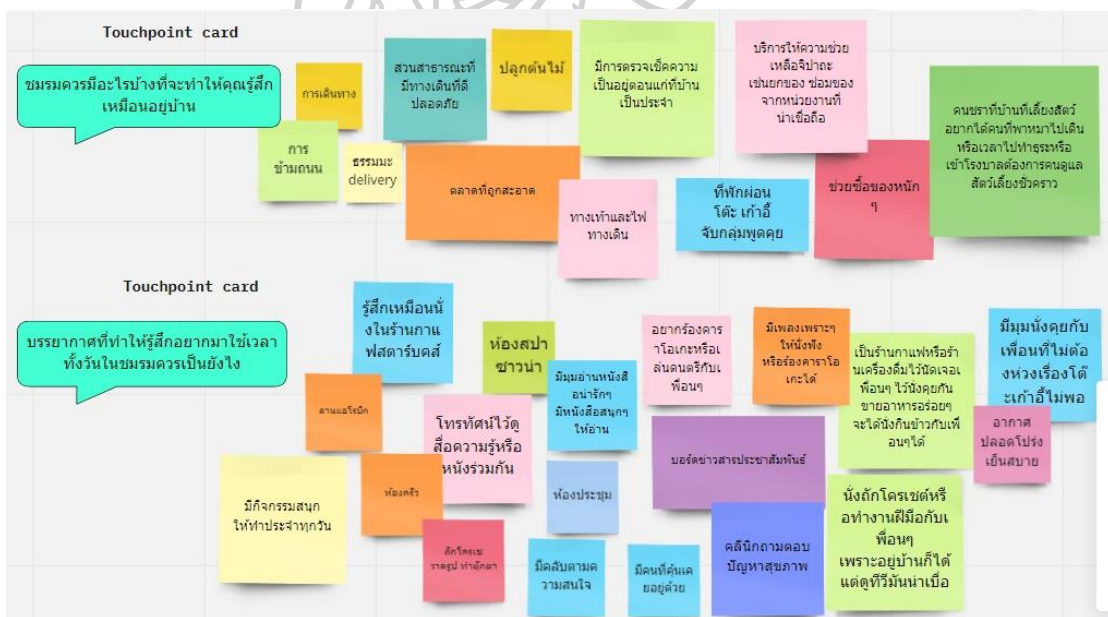


Figure 45 Using the Touchpoint cards tool for the Persona C group.

Source: Author

2. What should be the system to support group B seniors to have the opportunity to show their abilities and feel like a club owner? (B go for A)

In brainstorming with the Persona B target group, which focuses on looking for a system that supports this group of members to have a role and use their knowledge and leadership skills to make the elderly become Active Aging and benefit society, Besides, the club can continue to operate sustainably. Examples of systems that have been brainstormed include a database system about general information, occupation, abilities, interests, and health to analyze the group of club users. Today, this information is of great value if stored in a digital format that can be analyzed more quickly than past paperwork. Furthermore, the elderly must be aware of things beneficial to them when they come to work and have greater responsibilities in terms of self-improvement, physical and mental health, income, and for the greater good of society. This group of seniors will be prepared to perform tasks and solve problems if they comprehend their requirements and the organization's objectives. The participants agreed that the leadership cultivation and incubation system was the system they wished to propose as a new system and an idea that should be analyzed to develop service design guidelines, which is the acquisition of QBD's basic ideas. Through this leadership cultivation and incubation system, members who regularly participate in activities can work in groups of 15 to 20 individuals. It is the development of potential and responsibility through participation in club activities under the guidance of hospital staff as mentors. One mentor may be in charge of between three and five groups and is responsible for identifying and promoting group leaders. Alternately, if a group lacks members who have demonstrated leadership qualities, they may encourage and contribute knowledge to members' uncertainties. Each group will be nominated as a committee to develop the club's annual plan and present it to the team to develop activities in response to the club's strategy upon obtaining the team leader. Each activity may be something that each group is interested in, can confidently organize, or wants to try.

During the activities, the mentor will be a consultant regarding resources, budget, time, and location.

Table 10 Using the QBD tool for members of Group B.

Quick Ideas (Q)	Breakthrough Ideas (B)	Delight Ideas (D)
<p>There is a member identification system. (card/shirt model)</p> <p>Make a symbol such as a club shirt. Club hat to reinforce ownership (Limited)</p> <p>Prepare aptitude database</p> <p>Guidance for being a speaker from beginner from aptitude but may not dare to communicate</p> <p>Get paid by lecturers for giving lectures on topics in which they specialize.</p> <p>There is a membership promotion system.</p>	<p>Participate in the direction of the club</p> <p>See the goals of the organization be part of the organization</p> <p>See the importance of inviting friends to come and know that they will benefit Better body and mind, not a burden</p> <p>A system that encourages self-love and self-care sees the value of finding something good in the club.</p> <p>There is a system that encourages everyone to participate in the responsibility of the activities.</p> <p>by giving responsibility according to preferences, preferences, and sensitivity</p>	<p>There is an application to collect hours (like accumulating walking steps)</p> <p>There are rewards in stages, such as completing 50 hours, getting a bag, completing 100 hours, getting an umbrella, completing 1,000 hours, and getting a discount on medical expenses.</p> <p>There is a system to build a network of direct sales. Whoever helps a friend a lot may get some reward.</p> <p>There is a friend invite system. There is a system to encourage people to</p>

3. How do we make group A seniors feel valued by working for the club and being role models for others? (A go for H)

By generating ideas for Persona A, volunteer members have empirically demonstrated their value to society. Build pride for themselves and those around them. Be a role model for others by using their experience and abilities to help guide others as a mentor. In this regard, the participants assisted in synthesizing the concepts into a procedure that must begin with a solid, dependable, and broad-based selection system. Following the selection of award recipients in various fields, there must be prizes in all three categories: One prestigious reward, such as a certificate and a medal of honor. Two, recommendations for benefits such as treatment rights and VIP health screenings. Three prestigious awards, such as video production, recognize interviews about what they do, attitudes, ideas, and life principles published to influence society and encourage the elderly to participate in Active Aging until they become the next model volunteer.

Table 11 Using the QBD tool for members of Group A.

Quick Ideas (Q)	Breakthrough Ideas (B)	Delight Ideas (D)
Master team contest Reward the right to treat honor award Handing out annual certificates There is an honorary volunteer history edition book. Give rewards like a Nobel Prize. Such as outstanding	Create a mentor position for people who want to volunteer in that field to consult. Invitation to the show for an interview Both the club and the medical office Make a video interview to	Create a system for selecting outstanding members to be broad. A sound selection system will create pride for volunteers and pass on values to impact others.

<p>coordination, creative side, and community gift.</p> <p>create an honorable opportunity, such as meeting the leader</p>	<p>make them proud. And can be shared with children's groups and friends, and the club can bring the video to spread to encourage others to see a good role model.</p>	
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Source: Author

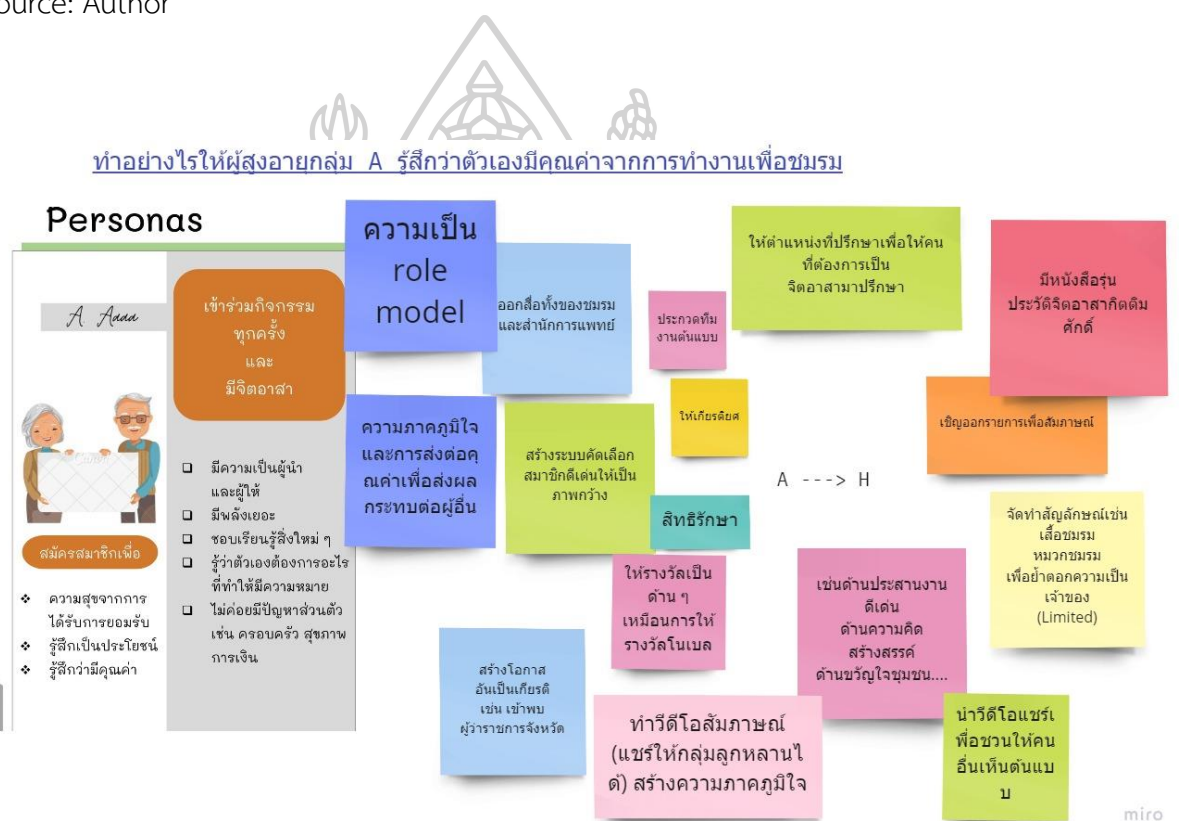


Figure 47 Using the Brainwriting and brainstorm tool for Persona A groups.

Source: Author

Prototype

Combining ideas generated through Co-creation Using Business Model Canvas (BMC) and Service Blueprints, workshop participants will bring clarity to service

design, have a step-by-step process, and identify the strengths and weaknesses of ideas. Let the designer know where to add, subtract, or modify the service to meet the target audience's needs and encourage their participation in the club. It is also a process consistent with the present circumstance. In addition, designers can differentiate and develop innovations when they recognize the value they wish to provide. Business Model Canvas and Service Blueprint are popular because they facilitate team communication. Assist one another in formulating a strategy by providing a broad perspective that can be used to divide the work responsibilities.

Participants brought their ideas to write a Business Model Canvas and Service Blueprint for seniors Group C, B, and A based on Personas and their needs above. The details are divided into three groups as follows:

1. Business Model Canvas and Service Blueprint for members of Elderly Club Group C

From observing the concepts from the Ideation process, it was seen that the Things that caused the elderly who were group C members to engage in more activities in the club consisted of activities, atmosphere, and public relations. This is the value (Value proposition) offered to customers in the Business Model Canvas, as shown in Figure 48.

1) Activities

A variety of activities will encourage older people to attend the event. The enjoyable, educational, and valuable activities for the participants will increase the event's value. Alternately, at least one purpose, action, and time; for instance, if the relationship needs to be strengthened, engaging in a recreational activity can foster intimacy. However, if they want to generate income and educate, the activity should

take the form of training to create jobs, and the product should be brought to a contest or sold to generate income.

2) Atmosphere

The environment of activities must be both physically and psychologically secure. Physical implies that the environment will be comfortable and well-ventilated. Have senior-friendly amenities such as restrooms, restaurants, waiting areas, and areas for chatting with friends, as well as well-lit sites with appropriate pathways. For the mind, it means a comfortable atmosphere. It is safe to comment; feel free to experiment until they become accustomed to the format and desire to visit frequently.

3) Public relations

Publicity with high-quality online and offline content, format, style, and channel elements can significantly increase participation in club activities; therefore, media is essential for every activity.

The other seven steps of Business Model Canvas will help realize the value (Value Proposition) of the elderly group B (Customer Segment). By considering both the relationship the club has with the elderly (Customer Relationship), a channel of contact (Channel), the main activities that must be done to create the value proposition and the relationship (Key Activities). These primary resources must be used, such as people and places (Key Resources), government agencies, private communities, communities, and families that can support the success of operations (Key Partners), including income and expenses that are necessary to understand the business and create a strategy (Cost and Revenue)

The Service Blueprint outlines the process and steps of what the elderly must do (Customer Action), the support system, and what is visibly present when designing a service. As depicted in Figure 48, the designer of this Service Blueprint

recognizes that clubs should have a system for collecting member data in digital format so that the data can be used in the future to support services and transfer registration systems in a manner that is efficient and convenient. After participating in the event, information gathering, suggestions, and problems are included. It will make Value Proposition's activities, atmosphere, and publicity effective and meet the needs of the elderly. In addition, the elderly use the area after the activity to converse with new and old friends, enabling them to exchange information and make plans to encourage them to participate in additional activities, forming an excellent network.



Figure 48 Business Model Canvas for members of Elderly Club Group C.

Source: Author

Physical Evidence	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
Physical Evidence	Event schedule board, publicity poster	Form to fill out to apply for membership	vehicle				canteen / cafeteria	vehicle
Customer Actions	Observe, check, ask for details	Register	travel to participate in activities	Do Activity	Get results from activities	discuss and summary of the activity	free time (drinking, eating, chatting with friend while waiting for the shuttle bus)	return home
Front of Stage Interactions	Website, public relations board in front of the club	Provide information, make appointments and publicize activities	Welcome members and take them to the event venue	Proceed Activity	Facilitators	Record, summary of activities (take pictures)	Follow up	
Back of Stage Interactions	Set up policies on activities	Registration system such as google form / registration on officer	Receive travel details / go to pick member	จัดเตรียมวัสดุ และสถานที่ Prepare activities				Shuttle service
Support Infrastructure and System Processes	public relations system	Member database storage system	Shuttle service systems	ระบบพิมพ์ของ จองสถานที่		Activity Recording System	Club management plans and strategies	

Figure 49 Service Blueprint for members of Elderly Club Group C..

Source: Author

2. Business Model Canvas and Service Blueprint for members of Elderly Club Group B

Group B consists of seniors who frequent the club to socialize. They have engaged in activities to get souvenirs and collect event hours to earn rewards. Based on an analysis of multiple data points, according to their aptitude, this group of elders should be encouraged to assume roles as a working group, including leadership, coordinator, welfare department, location department, and public relations department. A mentor system will assist, advise, and support the elderly in their internships until they become proficient. At that point, the mentor's role will gradually reduce, and this group of seniors will assist new members in their transition to the workplace. Consequently, the mentioned mentor system is the value that will be delivered to Group B (Value Proposition) through establishing a customer relationship. However, the club will have personnel who are the driving force for the

club's continuous and sustainable operation, and the activities will be diverse following the increasing number of senior citizens' expertise and power (Revenue). — much of the cost on education and incentives that cultivate Soft Skills and the ability to collaborate.

Writing Customer Action in Figure 51 demonstrates to the designer that group B of older people must participate in planning and coordination. Moreover, during the activities, they will encourage participants to participate by assisting in resolving immediate issues while a mentor provides guidance. Moreover, after the activity, group B seniors will share their problems and suggestions with the mentor to improve the next activity. Therefore, the Business Model Canvas and Service Blueprint must be forwarded to the club's staffing planners for further review.

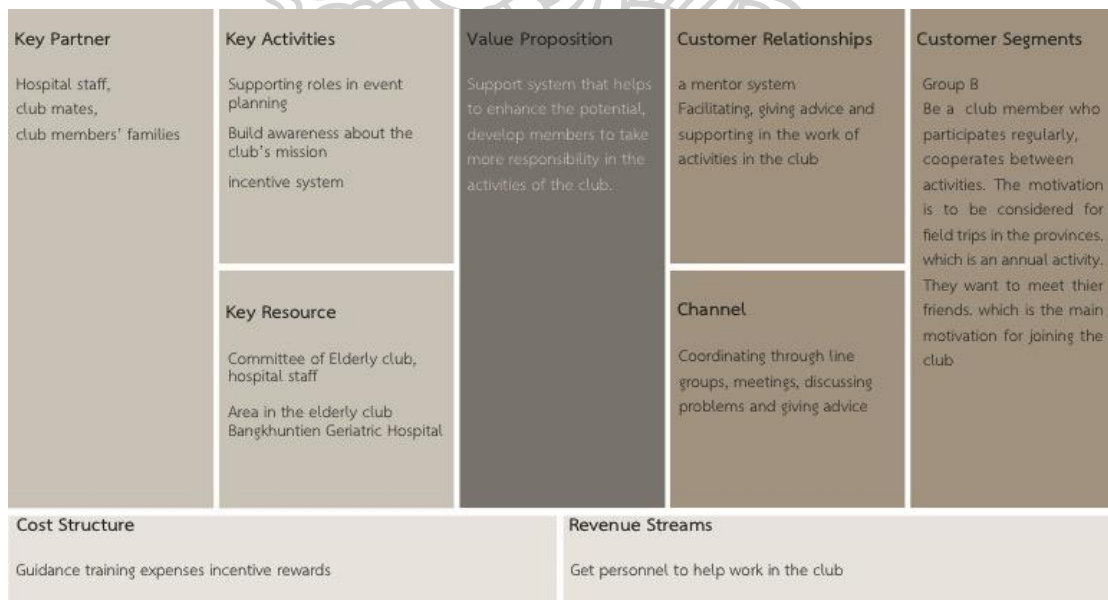


Figure 50 Business Model Canvas for members of Elderly Club Group B.

Source: Author

Physical Evidence	Step 1	Step 2	Step 3	Step 4	Step 5
Physical Evidence	communication equipment				meeting place
Customer Actions	Coordinate and prepare activities	Participate in Activities and help to keep a good atmosphere in the activities	advocate and encourage in discuss about summary of th activity	casual meeting committee or staff	see staff or committee or evaluate and prepare for next activity
Front of Stage Interactions	assign taks	Proceed Activity	Proceed Activity	Giving awards to volunteers	follow up
Back of Stage Interactions					
Support Infrastructure and System Processes	Club management plans and strategies	Equipment and venues for th event	Equipment and venues for th event		

Figure 51 Service Blueprint for members of Elderly Club Group B.

Source: Author

3. Business Model Canvas and Service Blueprint for members of Elderly Club Group A

Figure 52 of the Business Model Canvas shows that the value for the elderly of group A (Value Proposition) is to honor and reward with publicity to society in a broader area. For the elderly to see that what they have done is practical, can be a role model and inspiration for others, and create benefits for society, and that they can use their own experience to guide others.

This honor must have a credible selection system. There is a transparent award judging criterion that will make seniors proud of receiving this reward. Figure 53 of the Service Blueprint depicts the selection system as the default system. In addition, there is a data collection system for the winners, including public relations with society. This honor will make the elderly proud, and their family and friends will recognize their contributions to society. This honor system will foster mutual encouragement, support, and understanding among the elderly who participate in volunteer activities. The honoring system for older people encourages government and private organizations to recognize the significance of the elderly society and support the Elderly Club in Thailand to promote Active Aging among the elderly who can benefit society.

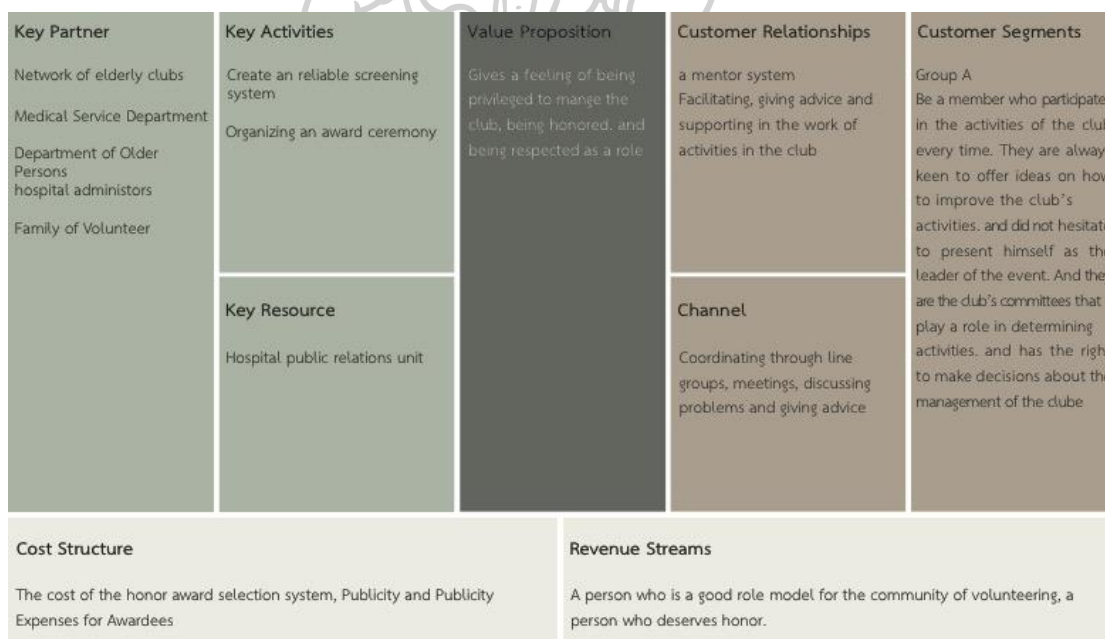
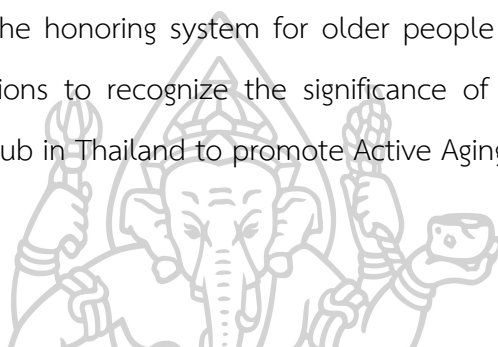


Figure 52 Business Model Canvas for members of Elderly Club Group A.

Source: Author

Physical Evidence	Step 1	Step 2	Step 3	Step 4	Step 5
Physical Evidence			poster to announce and recruit qualified candidates	certificates, trophies, honor plaques	
Customer Actions	Do activities for the Elderly Club continuously	Do activities for the Elderly Club continuously	Participate in the assessment system and be considered for selection	receive an honorary award	Share and forward to other agencies
Front of Stage Interactions			select or nominate qualified candidates	Giving awards to volunteers	Build the Value of Volunteering
Back of Stage Interactions	Create qualifying selection criteria	Follow up, observe and record the volunteer work			
Support Infrastructure and System Processes	Screening system for those who qualify	Data Collecting System			Project to support social volunteer activities

Figure 53 Service Blueprint for members of Elderly Club Group A.

Source: Author

Implementation

When entering the Implementation phase, it employs concepts and methods derived from the Prototype process in service design to rank and categorize them in search of design clarity and will be the planning and conclusion of the strategy, leading to the next step's final design process. This prototype must consist of activities, systems, or services. During the Prototype phase, researchers and workshop participants were able to understand the overview and specifics of the services that should be designed for each group of elderly club members. By developing a

Business Model Canvas, it will be easy to determine the characteristics of each member group. The desired responsive approach will provide members with activities and services, channels and forms of interaction, and elements that may affect members. Service Blueprints also enable the identification of individual group members' behaviors in elderly clubs, allowing them to learn how to grow as contributors and how to select tools, activities, personnel, or systems.

At this stage, the researcher utilizes a 7P+1T table to describe the design strategies that establish connections between community members and design tools. In addition to providing an overview of the club's operations, it explains which activities suit its members. Additionally, the dissemination of information fosters cohesion and facilitates the process between groups.

Table 12 7P+1T table to describe the design strategies for the elderly club.

7P+1T	C	B	A
P 1 people	Some members help take care of and follow up. There are friends in the club.	Officers and club committees in charge as a mentor and facilitators	Hospital staff responsible for evaluation to honor those who devote themselves to volunteer work.
P2 process	Member care system	administrative system Assigning a position in the club	Data Collection, Selection System, and Award Ceremony
P3 physical evidence	Decorating the club to be pleasant	Getting a position in the club having a uniform or club shirt	an award ceremony honoring events
P4 product	Activities that are designed to be helpful meet the needs of the members	A system that empowers To take more responsibility in the club	Value concept of giving value to people with volunteer spirit
P5 price	the publicity that	Counseling and facilitating	

	generates interest	volunteer work	
P6 place	Decorating the club to be pleasant	A suitable and convenient workplace with enough equipment such as office equipment, activity preparation equipment	
P7 promotion	travel facilitation	Activities to collect points to receive special privileges.	
Technology	online networking	online networking Knowledge of computer work	

Source: Author

The conclusion from the service design workshop

It is crucial to determine each group member's characteristics based on the personality survey results. In addition, the following members of each group can be identified with assistance from hospital staff via Service design workshops:

- Group C, "The Observer," comprises senior people who are not yet club members. They require stimulation from the club's activities. They desire engaging events that will entice them to attend until they decide to subscribe. Participating in a variety of activities will earn them souvenirs, which are activities that can satisfy them. Additionally, the elderly club must have adequate facilities to meet the needs of the elderly to encourage their participation in all club activities. Regular participation in activities and membership applications will encourage the involvement of this group of seniors, which is what the elderly club expects will bring them together. Therefore, clubs should tailor their services for managing activities to each individual's preferences. This will enable members of this group to see the club's benefits and encourage them to apply for membership. The increased

number of subscriptions in club membership measures the success of designing services for this group.

- Group B, "The Member," consists of seniors who have applied for membership in the club and participate in club activities regularly, making them feel like part of the club. Nevertheless, participating in activities as members alone, without contributing to the activity's development or taking part in the activities, may eventually lead them to boredom and a desire to engage in other activities or prefer to stay at home instead. To prevent these issues, clubs should design a support system service that enables them to assume the role of event organizers rather than merely being participants. The club should offer them incentives such as delegating tasks to lead activities, giving compliments, fostering a sense of teamwork, and promoting the support of other club members. Consistent participation in activities was the success indicator for the service design for this group of seniors and the members' transition from passive observers to active participants in leading activities.
- Group A, "The Associater," is a member who is the vital operating force of the club. They participate in all activities, and some even take on the role of leading them. Each has a role and responsibility within the club. The club should design services that facilitate the operations of its members conveniently and systematically. The effectiveness of the club's systematic procedure is an indicator of the success of the service design for this group. Every activity can meet the needs of members comprehensively and strengthen members both physically and mentally. And members of this group can work happily and efficiently for the club to instill a sense of self-worth and appreciation in their work.
- Group H, "The Honor," consists of members demonstrating a positive example for the rest of the group. They play a crucial role in the club's operation. Being a member and participating in the club's management assists them in achieving Active Aging and enables them to serve as role models for other club members, society, and their families. These qualities are what the club

desires for all of its members. Therefore, designing services for members of this group should prioritize empowering and supporting them by recognizing, appreciating, and supporting their contributions. The success of designing services for this group is measured by the development of their self-esteem and the perception that the work they perform for the club is beneficial.



Figure 54 Steps of encouraging participation in elderly club.

Source: Author

Designing services to promote club participation should be applied to all three groups of members. Organizing activities or club management requires participation from members of all groups. They connect, support, and impact each other; Therefore, the design of services to promote the participation of members of the elderly club must consider all club elements. The overall picture and subtleties must be regarded as whether a system, an activity, or a service.

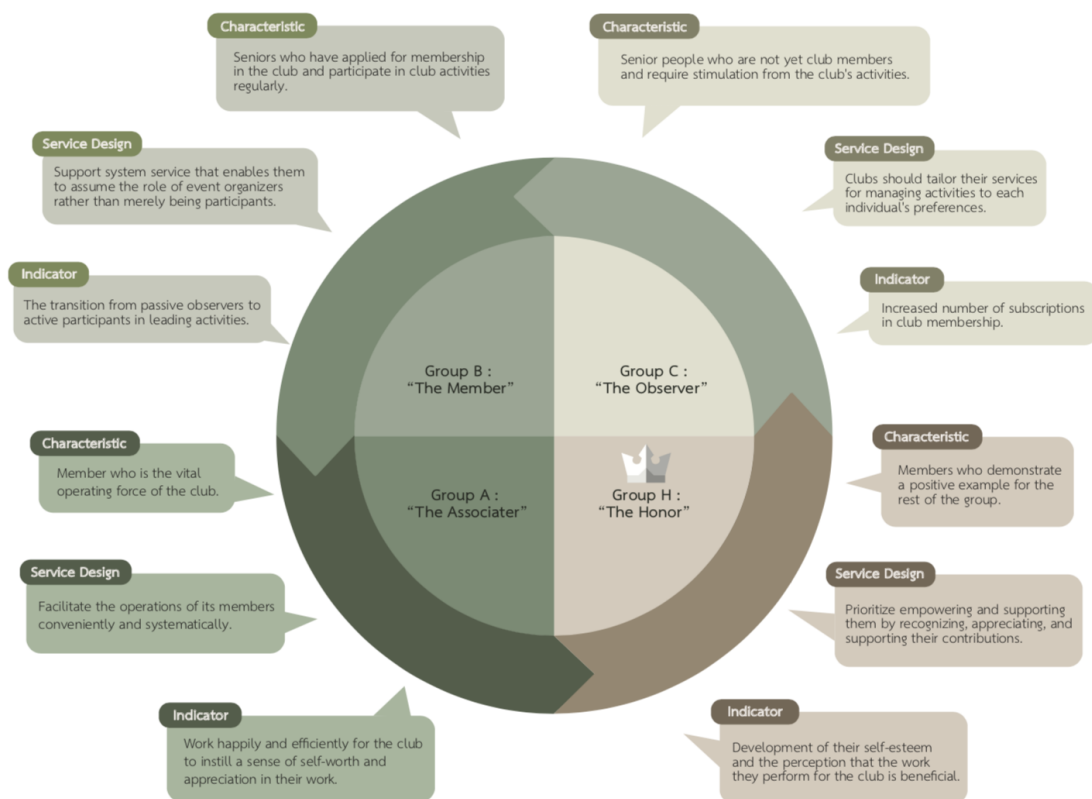


Figure 55 An overview of the service design system to promote participation in the elderly club.

Source: Author



Chapter 5

Conclusions and Recommendations

The rapid growth of the elderly population threatens every nation, affecting all economic, social, and medical aspects. Promoting Active Aging will assist the elderly in maintaining a healthy body, mind, stability, and a favorable environment. The significant finding of this study is that the participation of the elderly in various activities will promote more Active Aging among the elderly, generate income, and inspire them to contribute to society as volunteers. In addition, when studying the promotion of Active Aging in the Thai context, elderly clubs play an essential role in promoting Active Aging; however, many elderly clubs fail and are unable to maintain operational continuity due to a lack of personnel or supporting activities. Alternately, some successful clubs in membership growth and activities lack management and communication expertise.

Consequently, they cannot maintain the continuity of membership levels and provide activities uniquely suited to all members. The researcher believes that encouraging participation in elderly clubs throughout Thailand will enable all club members to contribute to developing activities that benefit and satisfy the needs of all club members. Such as educational, recreational, and member services for convenience. Until each club can create an identity based on its context and the spatial interests of its members to support an aging society and reduce the incidence of physical and mental diseases.

The results of providing information from club members and hospital staff in the qualitative research process and service design workshop show the current situation of the elderly club of Bang Khun Thian Geriatric Hospital, including the need to be used to solve problems about developing participation of the club. The problem with senior clubs is the need for more systematic management. Suppose a sound management system will increase the number of members. Members benefit

from the knowledge, entertainment, and service of senior activities and are encouraged to develop and demonstrate their potential through participation in the club's operations. What members made to create and devote themselves to the process of the club has been honored. The Geriatric Medical Center has a systematic operation plan for the elderly club. In addition to causing the participation of members of the elderly club, it also helps the Seniors Club contribute to GMC's work.

The researcher studied the Elderly Club at Bang Khun Thian Geriatric Hospital, intending to explore the characteristics of the club members, their needs, and various contexts to connect them with the club's needs for the elderly to participate more. However, it is just a possible direction. Therefore, exploring and linking the findings and results into a Guideline Model will provide guidance and proposals for clubs, members, and stakeholders. Communicate in the same direction and apply them to realize shared goals. The researcher summarizes what was studied as follows:

1. Characteristics and needs of the elderly members in the club

It is crucial to identify the distinctive characteristics of each group member. Each group member can be determined by defining the personas in the exploration stage and assisting the hospital staff in the service design workshop. The researchers can divide each group according to what they wanted as follows:

- Group C is group members who need stimulation and should have enjoyable activities. It can make them satisfied with the good things they can get from participating in activities. As well as having adequate facilities to meet their needs can motivate them to want to participate in every activity.

- Group B is the group member who needs challenges, and there should be a system to support them to be held accountable. Challenging them with various

incentives such as rewards, feeling of teamwork or support from other people in the club.

- Group A is a group member who needs honor and should have a follow-up system. Valuing what they do and glorify at the right time. Even if they do not expect a reputation for what they do, if the club appreciates them, it will foster a sense of self-esteem until it can be attained to become a member of the H group.

- Group H is an ideal character of the group member who would be a role model for another member, family, and society.

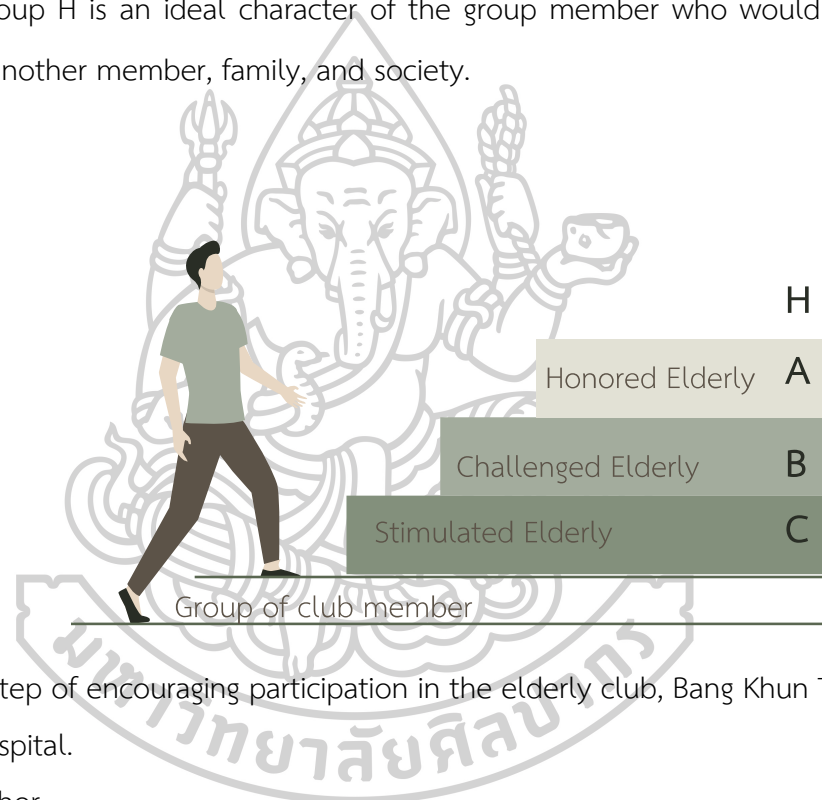


Figure 56 Step of encouraging participation in the elderly club, Bang Khun Thian Geriatric Hospital.

Source: Author

2. The correlation between the needs of the elderly club members and the club's expectations

After interviewing members and club staff to gain an in-depth understanding, the researchers concluded that the club for the elderly not only wanted to establish a club to provide a space for the elderly to participate in activities and be educated about health. However, the club also wanted to develop the club member to

participate in the working group and carry out activities that generate income for the elderly. The club believes that when the elderly come to the club, they can generate income for themselves. Assessing the club's performance and assessing the members' Active Aging is very important. In addition to showing the efficiency of the operation, it also makes the stakeholders and relevant agencies see the importance of the elderly club and support resources, including staffing, location, and appropriate budget.

Club members' needs include visual and emotional benefits, such as health check-up benefits. Health knowledge from the caring doctor Space and facilities, income, fun, friendliness, confidence, not being judged by trial and error. including being respected feel that they have value in society

Therefore, when the researchers linked the needs of the club members and the club's needs, it was possible to set goals. that will be a guideline for determining the strategy for the operation of the elderly club as follows

1. Want to increase the participation of members more and more continuously.
2. Want to develop skills and build elderly personnel in the operation of the club
3. Need for a system to generate income for the club for sustainability
4. Need for a system for measuring and evaluating performance and being Active Aging as a standard for being a model older person and a model club.

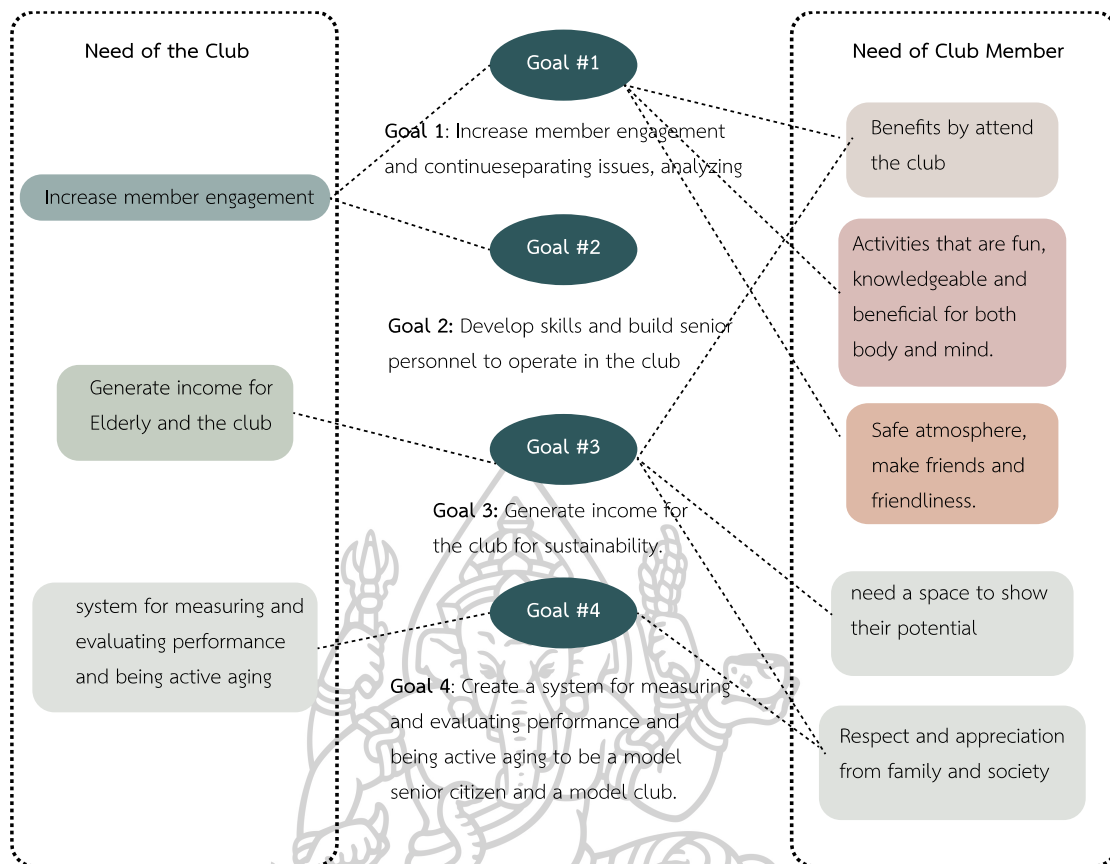


Figure 57 Creating club goals by analyzing the needs of the club members and the club.

Source: Author

3. Creating the direction and strategic plan of the Bang Khun Thian Elderly Club obtained from the data analysis.

The researcher considered the above four goals and the data obtained from the Design Thinking workshop, case studies of elderly volunteers, interviews, contextual observations in hospitals while the elderly volunteer, co-creative workshops with participants brainstorming, and designing a Business Model Canvas and Service Blueprints. All of them are analyzed into strategies, action plans, and indicators, as shown in Table 5.1.

Table 13 Strategies for developing the Elderly Club from the analysis of the needs of the club members and the needs of the club

<p>Goal 1: Increase member engagement and continue</p> <p>Strategy 1: Encourage member participation</p> <p>Action plan: Add interest-based and diversified activities. Create a good and safe atmosphere for expressing of their opinions, and effective public relations</p> <p>Indicator: Number of members who attended the event.</p>
<p>Goal 2: Develop skills and build senior personnel to operate in the club</p> <p>Strategy 2: Promote knowledge, competence, teamwork, and management skills.</p> <p>Action plan: Create a working system with a group of older people helping each other and having opportunities to work in their fields.</p> <p>Indicator: Number of members who attended skill development training and worked as a working group</p>
<p>Goal 3: Generate income for the club for sustainability.</p> <p>Strategy 3: Promote the creation of revolving income to create value for the elderly and for the club to operate sustainably.</p> <p>Action plan: Create a club product or service. Improve the environment suitable for organizing activities, including Branding, storytelling, and public relations.</p> <p>Indicator: Income and expenses circulate in the club.</p>
<p>Goal 4: Create a system for measuring and evaluating performance and being Active Aging to be a model senior citizen and role model for the club.</p> <p>Strategy 4: Raise values and create values for the elderly and the club to become a societal role model.</p> <p>Action Plan: Building Elderly People with Wide Volunteer Spirit There is an appropriate selection and reward system.</p> <p>Indicators: Data were analyzed from lessons learned in each activity and the number of model elders.</p>

Source: Author

An important thing to consider, along with goals and directions in creating a strategic plan, is the beginning's time, resources, and step-by-step components. Moreover, focus on the importance of the following strategy because each organization's context is different. A senior club has a specific context, starting with what the club has: location, staff, although small in number, but with high experience working with seniors. Including the elderly, who can create activities according to what they are good at and, like the strategic plan in the first step, focuses on the potential but diversified activities and expands to larger ones. Therefore, there must be reasonable and continuous team building at this stage. Causing strength in the organization, and there is support for each other when there are obstacles. Furthermore, if activities generate income, they should consider managing income and expenses, marketing, and distribution channels. Therefore, in the first and second years, the focus is on motivation, activities, team building, PR, and marketing.

Then when the club can create its distinctive point, it should build Branding to generate awareness and recognition in society. The strength point can be a product, service, or organization that can manage the organization well. When Branding and storytelling are remembered and conveyed, reputation leads to other revenue streams and not just merchandising revenue as it was in the first two years. Therefore, in the third and fourth years, the focus is on the distinctive point of sustainable income-generating strength. Moreover, bring systems and technology to help facilitate and adjust the environment to suit the work with more members and teams and expand marketing.

These four strategies are the direction that the club and its members want to develop, that is, being a role model for society, being an organization that can work with other departments in the league, being a knowledge transferer, community service, and design helping to improve the quality of life for the elderly today and those who are going to be older people in the future.



Figure 58 Strategic plan hierarchy, considering the context and potential of the elderly club.

Source: Author

4. Recommendations from the research

4.1 Recommendation for application

For the action plan, activities should be carried out weekly in the first year. And it is a health- and fun-focused activity to attract seniors. Group C may be a suitable exercise activity for seniors, playing music and singing. Due to volunteering case studies and interviews with the elderly, the researchers found that fun activities create initial interest and keep members engaged and engaged again. As for knowledge-related activities, it is an activity that makes the elderly realize their benefits, that is, obtaining health knowledge from specialized doctors.

Moreover, the staff in the hospital, including the dental department and Thai massage, may be additional activities to promote careers, finances, and laws, the atmosphere at the event should allow the elderly to share their healthcare knowledge with other members. In the group, make the activity a lecture and give opinions to make the elderly feel that they are part of the club. The educational

activities plan will run every two weeks to ensure continuity because the older people interested in this knowledge may differ from those interested in playing music in the above exercise. Therefore, continuing activities to follow the members will prevent them members from disappearing.

The monthly activities planned in detail with the principle that they should be activities that 1) members build relationships with each other to instill the idea of teamwork, 2) activities where members bring their talent, 3) This is an activity that allows members to earn income or have a contest and prizes are awarded based on the Thai New Year, Songkran and Loi Krathong festivals or large-scale activities that require long-term preparation or heavy workforce. Therefore, the activities can switch to suit any festival. The activities set up are member-interested activities that the researcher obtains from the Ideation process. Various activities according to the offers and needs of members.

A Mentor System should be launched during the weekly, biweekly, and monthly activities to provide support and mentoring. As well as facilitate the event organizers, including creating assessment criteria to select people who have the qualifications to be role models on an annual basis by submitting a name from a mentor; it is not necessary to enter only one aspect of the contest. Many selection criteria, such as leadership, outstanding coordination, and popularity, come from voting. The selection system for the award in the first year may be initiated within the club first. Then expand to other clubs or related agencies to join the selection to have more impact on society.

For other year's strategies that follow this approach. It also has weekly activities, monthly continuously. But there will be a focus to cause development in other areas. As described above, In the details of creating Branding Storytelling, sustainable income generation, applying technology to various systems (e.g., analyzing member data, transportation systems), and creating model clubs to pass

on knowledge to that community. Must focus on keeping records from the first year, including general information, health information, abilities, member attendance record, suggestions after the event, suitability of time, location, and facilities. The situation at that time and others will be used as a factor for analysis to find distinctive point and promote it as the right marketing direction and which channel is suitable for the target audience. That means the Design Thinking process analyzes requirements, concepts, prototypes, and business plans and rebuilds the following strategy guideline. It shows the importance of design work inserted and is an element in each stage of product design, service, location, planning, and policy to meet users' needs truly. Issues from creating services for the elderly club can summarize into essential strategies.

1. Understanding the needs of the target audience
2. Goal setting
3. Creating a strategic plan, action plan, and business plan
4. Looking for identity and finding identity
5. Creating Marketing, Branding, and Storytelling
6. Job performance analysis
7. Looking for Challenges and Opportunities

The researcher was able to summarize an overview of service design principles to promote the participation of elderly club members at Bang Khun Thian Geriatric Hospital, as shown in Figure 5.4

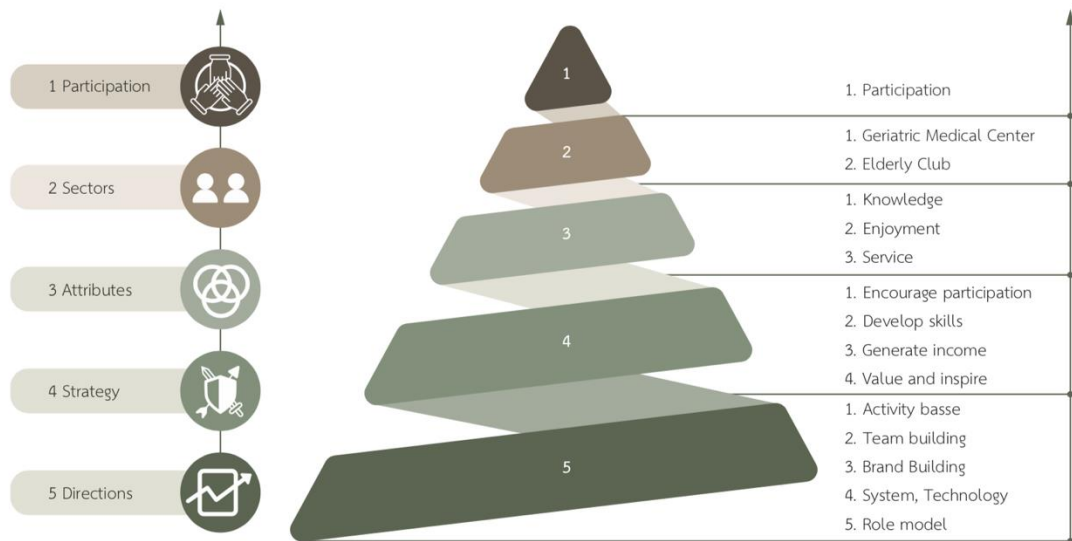


Figure 59 Service design principles to promote the participation of elderly club members, Bang Khun Thian Geriatric Hospital.

Source: Author

Based on Figure 58, the service design principles for promoting participation in the elderly clubs of Bang Khun Thian Geriatric Hospital consist of five directions in the operation of activities in the club, four strategies for managing the club, and three attributes that are unique to the Bang Khun Thian Geriatric Hospital elderly club for the development of club members' quality of life, two important sectors that are the driving force behind the elderly club, and one objective that is a necessary condition for enhancing the quality of life of the elderly club members, namely participation, can be explained as follows.

Five directions for club activities that can be applied to event management, event objectives, or the anticipated outcome of each event.

1. It should be an activity that encourages physical movement and mental and physical agility training.

2. Participants are encouraged to work as a team, get to know one another, and assist others throughout the activities.
3. All activities must consistently promote the organization's image, creating recognition for members and outsiders if these activities are publicized.
4. Activities should be organized with clear patterns and procedures, including using technology to facilitate publicizing, coordinating, organizing, and evaluating activities.
5. They are conducting activities with the participation of diverse member groups, including new members who observe the activities, members who lead the activities, and members who are the club's primary leaders so that every member of the group has the opportunity to become acquainted and close.

Four strategies are commonly employed in club management, whether club activities or club management, to achieve the elderly club's goal and hospitals regarding enhancing the quality of life of the elderly. These four strategies should serve as the primary policy—the club's operation under the direction of the club's key members and hospital staff.

1. Support for Participation: Designing activities for the elderly club, establishing the management structure within the club, and jointly establishing guidelines for the club's operations require cooperation from many parties, such as hospital staff and members at both administrative and operational levels. They encourage everyone to freely express their opinions and suggestions for the club's development and to participate in the club's operation to the best of their ability. It encourages everyone to have a sense of club membership and belonging.
2. Skill Development: When all members are involved in the club's operations, everyone can work according to their abilities and interests. Transferring skills and knowledge through experimentation will help them

develop managerial, interpersonal, and teamwork skills. In addition, the design of activities in the elderly club that emphasize learning, experimenting with practical activities, and being able to apply that skill in daily life, such as cooking, handicraft, practical skills technicians, knowledge of elderly health care, or expertise in technology, will help members apply their knowledge and skills to their own and others' benefit. For instance, it can be used to pursue a second career or to impart knowledge to others.

3. Earning income: When senior club members gain skills by working in clubs and participating in activities organized by clubs, they earn income. They can use this skill to generate additional income as a second occupation, thereby increasing their likelihood of providing for their families. The elderly clubs may also propose activities to obtain financial support from hospitals, external agencies; and the private sector in order to generate income. Organizing training activities also enables clubs to generate income from third-party application fees and the sale of products derived from activities such as handicrafts and community services, such as folk shows or massage booths in fairs. The event proceeds may also be used as a fund for future events and distributed to event participants.
4. Creating value and influencing motivation: older individuals with the necessary knowledge and skills will develop self-esteem that can be leveraged to generate income and maximize their potential. They can also be a role model and aid others. In addition, well-organized club members with management expertise, beneficial activities, and sustainable income generation will contribute to the club's and its members' growth and be confident and appreciative of themselves. These values will enhance one's ability to serve as a societal role model.

Three attributes of the Elderly Club at Bang Khun Thian Geriatric Hospital are utilized to enhance the quality of life of the club's members and make society aware

of the club's unique identity. Currently, there is amount number of clubs for the elderly in Thailand that aims to improve the situation of the elderly population. And the goal of each club is to enhance the quality of life for the elderly. However, the characteristics of each club are distinct. The distinctiveness will generate brand recognition for the club, distinguish the elderly club of Bang Khun Thian Geriatric Hospital from other elderly clubs, and make it remarkable and straightforward to build a corporate brand in the future. The Elderly Club of Bang Khun Thian Geriatric Hospital includes the following attributes:

1. Knowledge: The club is under the jurisdiction of the Geriatric Medical Center, a source of information about health care, and provides treatment services for elderly patients by medical personnel, including physicians, nurses, physiotherapists, and dietitians. As well as organizing activities to provide knowledge services to members, such as health knowledge, professional knowledge, technological knowledge, or other knowledge based on the needs of the members, the club's primary management strategy is also to organize such activities.
2. Enjoyment, Since the elderly, are at an age when they are no longer required to work or where their duties are lessened, some retire from their jobs, reducing the importance of employment and the function of being the family's primary source of income. In addition, life's bustle and daily activities are diminished, so they have more leisure. These variables will cause gradual sluggishness, low self-esteem, and lack of confidence among the aged. The participation of senior citizens in club activities will create a new age-specific community. Spending their leisure time together reduces their sense of isolation. In addition, skill-building activities will generate new possibilities that can be leveraged to advance a job and generate income. Members allowed to lead activities and assume responsibility for club operating get a sense of purpose and esteem. The club members will be happy and have a purpose in life, and the club will be a gathering place for elderly persons who are content with their lives.

3. Service, The administrators of Bang Khun Thian Geriatric Hospital had the vision to create a community that improves the quality of life for the elderly, which resulted in establishing an elderly club. In addition to providing health services to the hospital's patients and club members, it also serves the neighborhood's general population. In addition, the club organizes activities by volunteer members, resulting in a community where volunteerism and a spirit of service are transmitted through various activities. Moreover, the club's operating guidelines emphasize enhancing the quality of life of the elderly through various activities and services.

Two influential organizations are the driving force behind the elderly club. The Elderly Club's success would not have been possible without the cooperation and collaboration of critical entities, specifically the Geriatric Medical Center and the Elderly Club. Both of these organizations must collaborate effectively. Because these two organizations manage and coordinate in unison, they cannot function independently. Each has a distinct function and complements the others as follows:

1. The Geriatric Medical Center is a hospital entity responsible for the budget for operating the Geriatric Club, applying the hospital's policy as the direction of the club's operations for the elderly, and providing support for the process of the elderly club to achieve results that meet the requirements of the hospital's operation policy for the quality of life of the elderly. Additionally, the Geriatric Medical Center provides members with health services, health counseling, and health education, including wellness approaches, exercise, and disease services. Including treatment services for the elderly patient. Through the operation of the Elderly Club, the Geriatric Medical Center hopes to develop and improve the quality of life for the elderly.
2. The Elderly Club is an organization that, despite being governed by the Geriatric Medical Center, must be managed primarily by its members.

They run the club with a sense of cohesion among fellows, value their work, and have a healthy sense of self-worth. They require financial support, infrastructure, government coordination facilitation, and the hospitals' cognitive support for health and health services.

One of the components of the standard for the elderly Active Aging of the Thai elderly is promoting participation (National Statistical Office, n.d.) It is one of the club's primary objectives and a necessary condition for enhancing the quality of life of the club's members. Participation of members is an essential condition for every community's existence. When community members participate, they will not feel alone when sharing, assisting, and caring for one another.

4.2 Recommendation for further research

1. **Considering internal factors:** Bang Khun Thian Geriatric Hospital is a hospital that started to open fully recently. While the Elderly Club has been established and operated since the hospital's inception. The hospital staff and some members of the Elderly Club are highly experienced people in elderly club management. Therefore, research to create a service model and management system within the elderly club in preparation for developing and promoting the participation of the elderly club members. Nevertheless, shortly, the hospital will have more patients. The operating model and size of the organization expand. As the number of people increases, the hospital system becomes more complex. Therefore, the researcher recommends having research to support the changes in other areas of study. In addition, the elderly club will have to grow and expand according to the size of the hospital's organization. Therefore, there should be prepared in the body of knowledge to cope with changes.

2. **Considering external factors:** Considering outside influences: The rapid advancement of technology and the aging of the population are indicators that preparations for future change should be accelerated. If there is insufficient preparation for this change, it may impede the operation of the senior club and the improvement of the quality of life for the elderly. Following the rapid societal transformations, policies about the elderly should also be enhanced. Therefore, additional research should be conducted in the context of various variables to study, compare, and expand knowledge on Active Aging to improve the quality of life for the elderly and all future humans who will reach old age.



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